

# **ROUTE 1 IMPROVEMENTS AT FORT BELVOIR**

**Fort Belvoir**  
Fairfax County, Virginia

## **NOISE IMPACT ANALYSIS TECHNICAL REPORT**

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

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*Cooperating Agencies*

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

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## 1.0 Executive Summary

Potential traffic noise impacts associated with the proposed Route 1 Improvements at Fort Belvoir project in Fairfax County, Virginia, were assessed in accordance with the procedures and criteria approved by the Federal Highway Administration (FHWA) and the Virginia Department of Transportation (VDOT). The proposed project would improve deficiencies in the 3.4-mile section of U.S. Route 1 (Route 1) between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County, Virginia.

The purpose of the proposed project is to address the traffic capacity deficiencies in the Route 1 corridor between Telegraph Road and Mount Vernon Memorial Highway and to satisfy operational, safety, and multi-modal transportation needs. The No-Build Alternative (Alternative A) is used as a baseline for comparison with two build alternatives: Alternative B (the Preferred Alternative)<sup>1</sup> and Alternative C.

The study area consists of lands surrounding the proposed project on which there are human or natural resources that could potentially be affected by the project. Traffic noise impacts were evaluated for the entire project area for Alternative B but only the area east of Belvoir Road was analyzed for Alternative C as the remainder of the project area would be the same as Alternative B. Two flyover structures would be part of Alternative C but their effects were not included in this noise study because it is highly unlikely that these two structures would be constructed due to their cost.

A total of 112 representative noise sensitive sites were modeled in the project study area for Alternative B representing 188 outdoor human use areas and four interior use areas. Noise impacts are predicted to occur at 45 representative noise sensitive sites representing 42 residences, one pool area, three areas of a cemetery, four locations of a sports area, one church, 10 open areas used for gardening, a horse stable, and five horse riding practice areas as a result of approaching or exceeding the Noise Abatement Criteria (NAC) in the design year (2040) build condition. No sites are predicted to be impacted due to substantial noise increases. For all sites studied, the existing year noise levels range from 53 to 72 dBA at outdoor human use areas and from 35 to 51 dBA for interior use areas. The design year build noise levels range from 54 to 71 dBA at outdoor human use areas and from 35 to 49 dBA for interior use areas.

Traffic noise impacts were evaluated at 49 representative noise sensitive sites for Alternative C, which represent 47 outdoor human use areas and two interior use areas. Noise impacts are predicted to occur at 29 representative noise sensitive sites representing one church, one place of worship, six sports areas, 16 open areas used for gardening, and five horse riding practice areas as a result of approaching or exceeding the NAC in the design year (2040) build condition. No sites are predicted to be impacted due to substantial noise increases. For all sites studied, the existing year noise levels range from 57 to 71 dBA at outdoor human use areas and from 35 to 51 dBA for interior use areas. The design year build noise levels range from 58 to 73 dBA at outdoor human use areas and from 35 to 55 dBA for interior use areas.

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<sup>1</sup> In response to comments and ongoing coordination with stakeholders, Alternative B was refined following completion of the June 1, 2012 EA and this noise analysis. The refinements are described in the subsequent Finding of No Significant Impact (FONSI) and associated Memo-to-File. The findings presented herein are not expected to substantially change due to the minor shifts in alignment. As noted in the Executive Summary, this analysis represents a preliminary noise evaluation and a more detailed review will be completed during final design.

Noise abatement was evaluated where future traffic noise impacts are predicted to occur. A preliminary noise evaluation was performed with a more detailed review to be completed during final design. As such, noise barriers that are determined to be feasible and reasonable during the preliminary noise analysis may not be feasible and reasonable during the final design noise analysis. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction.

Ten barriers were evaluated and eight of them were determined to be feasible and reasonable for Alternative B. Four barriers were evaluated and two of them were determined to be feasible and reasonable for Alternative C.

Construction activity may cause intermittent fluctuations in noise levels. During the construction phase of the project, all reasonable measures will be considered to minimize noise impact from these activities.



## 2.0 Introduction

In the Environmental Assessment (EA), the Federal Highway Administration (FHWA) Eastern Federal Lands Highway Division, in cooperation with Fairfax County, U.S. Army Garrison Fort Belvoir, and the Virginia Department of Transportation (VDOT), presents alternatives for the improvement of deficiencies in the 3.4-mile 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 project.

This section of Route 1 is one of two sections that have yet to be widened to six lanes to match the cross-section of Route 1 in the surrounding area. The project termini are logical because Telegraph Road and Mount Vernon Memorial Highway are major decision points for turning traffic, and this section serves U.S. Army Garrison Fort Belvoir via Pohick Road (Tulley Gate) and Belvoir Road (Pence Gate), with a third gate to access North Post currently undergoing design. Funding for this project has been approved by the U.S. Office of Economic Adjustment (OEA) within the Department of Defense to improve patient access to the new Fort Belvoir Community Hospital, constructed under the 2005 Base Realignment and Closure (BRAC) legislation, and to accommodate the increase in traffic resulting from other BRAC-related traffic and growth in Fairfax County.

The study area consists of lands surrounding the proposed project on which there are human or natural resources that could potentially be affected by the traffic noise. The objective of this analysis is to assess the potential traffic noise impact associated with the proposed roadway improvement project and to evaluate possible noise abatement measures wherever impact is predicted to occur.

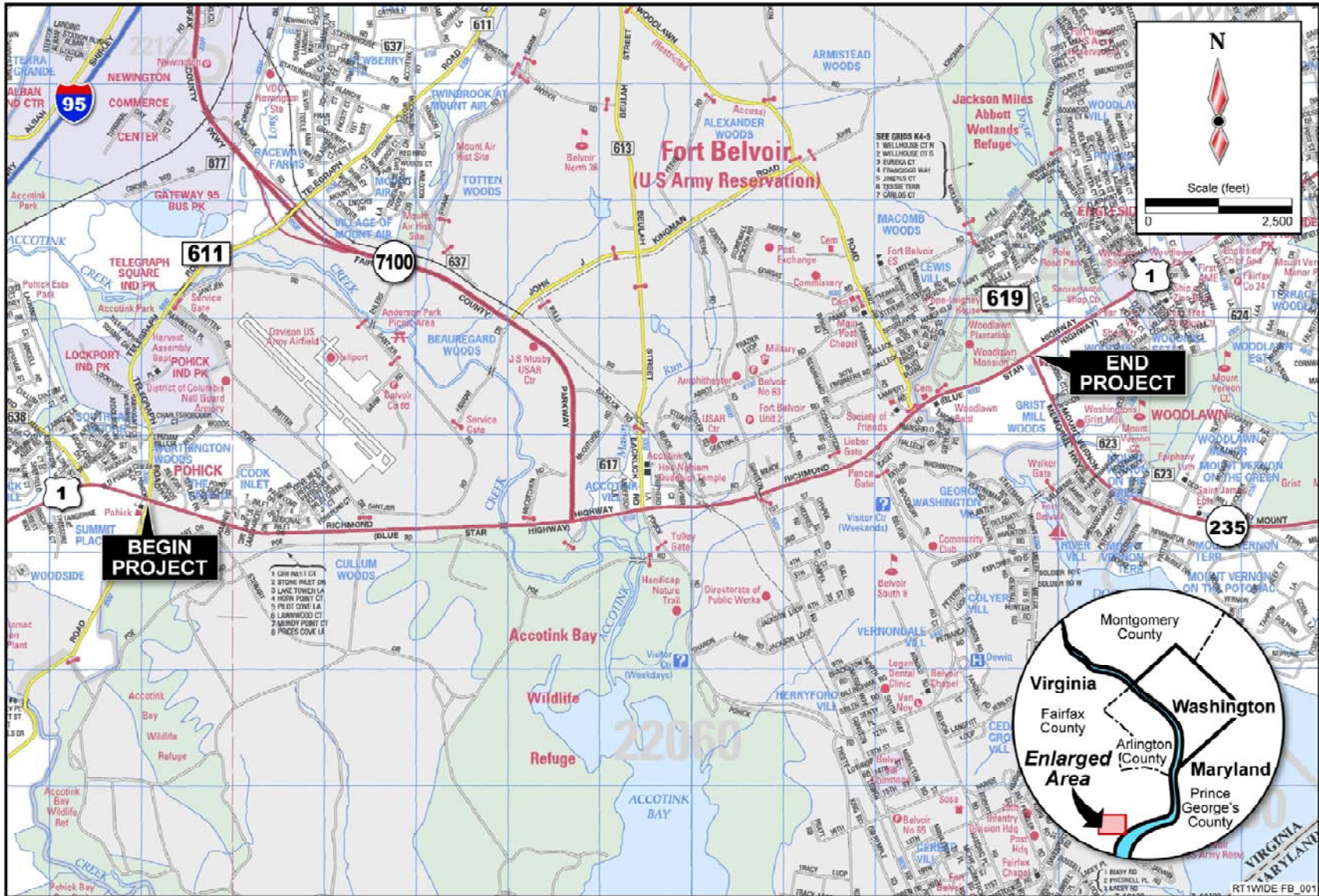
Traffic noise levels in the study area were predicted for the existing conditions as well as design year (2040) for Alternative A (No-build Alternative), Alternative B (the Preferred Alternative)<sup>2</sup>, and the eastern portion of Alternative C (widening existing Route 1 through Woodlawn Historic District).

This report documents description of noise terminology, the applicable standards and criteria, description of the computations of existing and future noise levels, projection of future noise levels, identification of potential noise impacts, evaluation of measures to abate noise impacts, noise abatement measures, and a discussion of construction noise.

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<sup>2</sup> In response to comments and ongoing coordination with stakeholders, Alternative B was refined following completion of the June 1, 2012 EA and this noise analysis. The refinements are described in the subsequent Finding of No Significant Impact (FONSI) and associated Memo-to-File. The findings presented herein are not expected to substantially change due to the minor shifts in alignment. As noted in the Executive Summary, this analysis represents a preliminary noise evaluation and a more detailed review will be completed during final design.

Figure 1 – Project Location



## **3.0 Legislation and Noise Fundamentals**

This section provides a description of the applicable Federal and State regulations as well as traffic noise related terminology.

### **3.1 Regulatory Requirements**

The Noise Control Act of 1972 gives the US Environmental Protection Agency (USEPA) the authority to establish noise regulations to control major noise sources, including motor vehicles and construction equipment. Furthermore, the USEPA is required to set noise emission standards for motor vehicles used for interstate commerce and the FHWA is required to enforce the USEPA noise emission standards through the Office of Motor Carrier Safety. The National Environmental Policy Act (NEPA) of 1969 gives broad authority and responsibility to Federal agencies to evaluate and mitigate adverse environmental impacts caused by Federal actions. FHWA is required to comply with NEPA including mitigating adverse highway traffic noise effects.

The Federal-Aid Highway Act of 1970 mandates FHWA to develop standards for mitigating highway traffic noise. It also requires FHWA to establish traffic noise level criteria for various types of land uses. The Act prohibits FHWA approval of federal-aid highway projects unless adequate consideration has been made for noise abatement measures to comply with the standards. FHWA regulations for highway traffic noise for federal-aid highway projects are contained in 23 Code of Federal Regulations (CFR) Part 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2011). The regulations contain noise abatement criteria, which represent the threshold at which abatement of highway traffic noise must be considered for specific types of land uses. The regulations do not mandate that the abatement criteria be met in all situations, but rather require that reasonable and feasible efforts be made to provide noise mitigation when the abatement criteria are approached or exceeded.

The State Noise Abatement Policy was developed to implement the requirements of 23 CFR 772, FHWA's Highway Traffic Noise Analysis and Abatement Policy and Guidance (January, 2011), and the noise related requirements of The National Environmental Policy Act of 1969. The current VDOT State Noise Abatement Policy became effective on July 13, 2011 and was updated on September 16, 2011. This policy is applicable to Type I federal-aid highway projects which involve the physical alteration of an existing highway that substantially changes either the horizontal or vertical alignment.

### **3.2 Traffic Noise Descriptors**

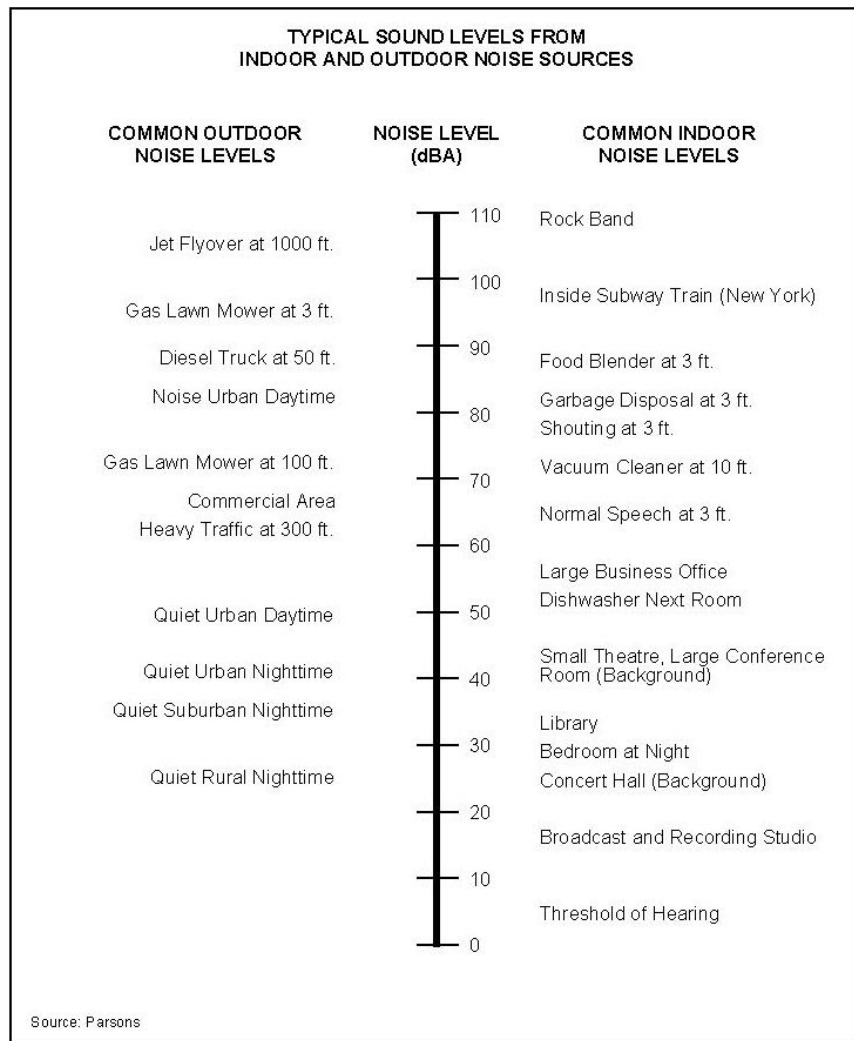
Noise is generally defined as unwanted or annoying sound. Airborne sound occurs by a rapid fluctuation of air pressure above and below atmospheric pressure. Sound pressure levels are usually measured and expressed in decibels (dB). The decibel scale is logarithmic and expresses the ratio of the sound pressure unit being measured to a standard reference level.

Most sounds occurring in the environment do not consist of a single frequency, but rather a broad band of differing frequencies. The intensities of each frequency add to generate sound. Because the human ear does not respond to all frequencies equally, the method commonly used to quantify environmental noise consists of evaluating all of the frequencies of a sound according to a weighting system. Results of studies have indicated that the A-weighted filter on a sound level meter, which includes circuits to differentially measure selected audible frequencies, best

approximates the frequency response of the human ear.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources, creating a relatively steady background noise in which no particular source is identifiable. A statistical noise descriptor called the equivalent hourly sound level, or  $Leq(h)$ , is commonly used to describe the time-varying character of traffic noise.  $Leq(h)$  describes a noise sensitive receiver's cumulative exposure from all noise-producing events over a one-hour period.  $Leq(h)$  is used by FHWA and VDOT to evaluate noise impacts. **Figure 2** provides typical A-weighted noise levels for various noise sources.

**Figure 2 – Typical Noise Levels**



Because decibels are logarithmic units, sound levels cannot be added by ordinary arithmetic means. The following general relationships provide a basic understanding of sound generation and propagation:

- An increase, or decrease, of 10 dB will be perceived by a receiver to be a doubling, or halving, of the sound level
- Doubling the distance between a highway and receiver will produce a 3 dB sound level decrease
- A 3 dB sound level increase is barely detectable by the human ear

## 4.0 Impact Criteria and Methodology

### 4.1 Noise Abatement Criteria

The State Noise Abatement Policy has adopted the Noise Abatement Criteria (NAC) that have been established by FHWA (23 CFR 772) for determining traffic noise impacts for a variety of land uses. The NAC, listed in *Table 1* for various activities, represent the thresholds at which noise abatement measures must be considered. The NAC apply to areas having regular human use and where lowered noise levels are desirable. They do not apply to the entire tract of land on which the activity is based, but only to that portion where the activity takes place. The NAC are given in terms of the hourly, A-weighted, equivalent sound levels in decibels (dBA). Noise-sensitive sites potentially affected by this project are classified as Category B and Category C.

### 4.2 Definition of Noise Impact

Traffic noise impacts occur if either of the following two conditions is met:

- The predicted traffic noise levels approach or exceed the NAC, as shown in *Table 1*. The VDOT State Noise Abatement Policy defines an approach level to be used when determining a traffic noise impact. The approach level shall be at least 1 dB less than the Noise Abatement Criteria for Activity Categories A to E. For example, for a Category B receiver, 66 dBA would be approaching 67 dBA and would be considered an impact. If design year noise levels “approach or exceed” the NAC, then the activity is impacted and abatement measures must be considered.
- The predicted traffic noise levels are substantially higher than the existing noise levels. The VDOT State Noise Abatement Policy defines a substantial noise increase as when predicted highway traffic noise levels exceed existing noise levels by 10 dB or more. For example, if a receiver’s existing noise level is 50 dBA, and if the future noise level is 60 dBA, then it would be considered an impact. The noise levels of the substantial increase impact do not have to exceed the appropriate NAC.

If traffic noise impact is identified as a result of the project, then noise abatement measures must be considered. The final decision on whether or not to provide noise abatement along a project corridor will take into account the feasibility of the design, the reasonableness or cost-effectiveness, and input from benefited property owners.

**Table 1: FHWA Noise Abatement Criteria**

Hourly A-Weighted Sound Level Decibels (dBA)			
Activity Category	Activity Leq(h)	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B*	67	Exterior	Residential
C*	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E*	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	Exterior	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing
G	--	--	Undeveloped lands that are not permitted

Source: 23 CFR Part 772

\*: Includes undeveloped lands permitted for this activity category

### 4.3 Highway Noise Computation Model

A review of the project corridor has established roadway traffic as the dominant source of noise for the build alternative. Since traffic noise can be determined accurately through computer modeling techniques for areas that are dominated by road traffic, design year traffic noise calculations have been performed using the FHWA’s Traffic Noise Model (TNM) Version 2.5, which is the latest approved version. TNM was developed and sponsored by the U. S. Department of Transportation and John A. Volpe National Transportation Systems Center. The TNM estimates vehicle noise emissions and resulting noise levels based on reference energy mean emission levels.

The existing and proposed alignments (horizontal and vertical) are input into the model, along with the receiver locations, traffic volumes of cars, medium trucks (vehicles with 2 axles and 6 tires), and heavy trucks, average vehicle speeds, pavement type, as well as any traffic control devices. The TNM uses its acoustic algorithms to predict noise levels at the selected receiver locations by taking into account sound propagation variables such as, atmospheric absorption, divergence, intervening ground, barriers, building rows, and heavy vegetation, where appropriate.



## **4.4 Data Sources**

### **4.4.1 Roadways and Alignments**

Representative roadway segments were mapped on the project alignment CAD files for various roadways. Based on the endpoints of these segments, line strings were created for each roadway. Then these line strings were used to drape onto the three dimensional (3D) files. The line strings are then extracted from the design files and imported into the TNM with elevations already included. The statewide Geographic Information System (GIS) files were used to supplement the project file where coverage was needed. Elevations for the future proposed roadway were extracted from the appropriate plan and profile sheets.

### **4.4.2 Traffic Volumes and Flow Control**

Traffic volumes, speeds, and truck percentages were calculated by Parsons using Environmental Traffic Data (ENTRADA) for different roadway segments for the existing condition (2011) as well as future no-build and build conditions (2040). Truck percentages were based on an actual count and it was assumed that these truck percentages would not change in the future. Medium and heavy truck percentages were calculated based on the number of axles that were identified by the traffic count. As required by FHWA and VDOT, the noise analysis was performed for the loudest hour of the day. Noise levels have been predicted for that hour of the day when the vehicle volume, operating speed, and number of trucks combine to produce the worst noise conditions. According to FHWA guidance, the “worst hourly traffic noise impact” occurs at a time when truck volumes and vehicle speeds are the greatest, typically when traffic is free flowing.

The worst noise hour was determined first by establishing the existing peak noise hours from the 24-hour noise monitoring results. The morning and afternoon peak hours were then compared to the hourly volumes and associated speeds and truck percentages. The worst noise hour used in this study is from 4 to 5 pm. To further determine the worst noise hour for the entire corridor, the 4 to 5 pm volumes of each roadway segment were modeled to establish the roadway segment which produced the highest traffic noise levels. The roadway segment which yielded the highest noise level for the 4 to 5 pm hour was determined to be between Fairfax County Parkway and Pohick Road. The traffic data for the noise modeling is presented in *Appendix B*.

Traffic speeds were modeled based on the projected limits varied depending on which case was being analyzed. The speed limits used for northbound traffic were 47, 45, and 49 mph while the southbound speed limits used were 28, 30, and 37 mph for the existing, future no build, and future build cases, respectively. These speeds were used for all cars, medium trucks, and heavy trucks. A traffic signal was modeled for the existing, no-build, and build condition scenarios at the Pohick Road (West), Telegraph Road, Cook Inlet Drive, Fairfax County Parkway, Backlick Road/Pohick Road, Belvoir Road, Woodlawn Road, and Mount Vernon Memorial Highway intersections. A traffic signal was also modeled along Telegraph Road at the Belvoir Woods Parkway intersection.

### **4.4.3 Receivers**

Specific receiver placement in the model is based on interior and exterior areas where there is frequent human use. A total of 112 noise sensitive receivers were modeled in the project study area for Alternative B representing 188 outdoor human use areas and four interior use areas.

These sites include residential units (Category B), the pool area associated with a residential subdivision (Category C), Pohick Cemetery (Category C), Pohick Episcopal Church (Category D), Eleanor Kennedy Homeless Shelter (Categories C and D), Woodlawn Quaker Meetinghouse, (Category D), Woodlawn Baptist Church (Categories C and D), an open area on the grounds of the Woodlawn Plantation, as well as the Woodlawn Stables and associated horse riding area (Category C). An additional 20 noise sensitive receivers were modeled in the project study area for Alternative C (widening existing Route 1 through Woodlawn Historic District) representing 20 areas not accounted for in Alternative B. These areas include an existing baseball diamond, and a different section of the horse riding area. Figures in *Appendix A* show the locations of the receivers modeled in TNM. Receiver locations were identified based on an aerial photo review and site visit. A default height of 5 feet above the base ground elevation was used for all first floor receivers. Second story receivers on elevated decks were modeled using 15 feet above ground. Second story receivers were modeled because several residences had outdoor decks on the second story which are the primary outdoor use area for these residences.

#### **4.4.4 Terrain Lines**

Terrain lines were used in the model to represent important and intervening terrain features associated with the proposed project, such as drainage ditches, retaining walls, and general changes in elevation. Terrain lines input into the TNM were derived from the surveyed elevation lines and topographic information on GIS files.

#### **4.4.5 Barriers**

Barriers were evaluated in the project corridor as noise abatement measures. *Section 7.1* provides a detailed description of the barriers for Alternatives B and C.

### **5.0 Existing Noise Environment**

Short term and long-term noise monitoring was conducted in the vicinity of noise-sensitive land uses near the proposed project alignment to assess existing noise conditions within the project study area. The short-term noise monitoring characterized existing noise levels in the study area but were not necessarily conducted during the loudest hour of the day. The long-term noise monitoring characterized the existing noise profile throughout the day identifying peak noise hours. A summary of the long-term noise monitoring results are presented in *Figure 3*. The main purpose of the short-term measurements was to validate the accuracy of the noise prediction model.

#### **5.1 Short Term and Long-Term Noise Monitoring**

The purpose of noise monitoring is to gather data that is used to develop a comparison between the monitored results and the output obtained from the noise prediction model. This exercise is performed to validate the model so that it can be used with confidence to predict the worst hour traffic noise levels for the existing and future conditions.

Short-term noise measurements of 20 minutes duration were conducted at a total of seven sites on April 20, 2012 within the project corridor. A long-term measurement of 24-hour duration was conducted at one site from April 19 to April 20, 2012. These measurements were conducted using Larson Davis Systems 812 Type I (precision) sound level meters. Prior to noise monitoring, the noise meters were calibrated to 114 dB using a CAL200 precision



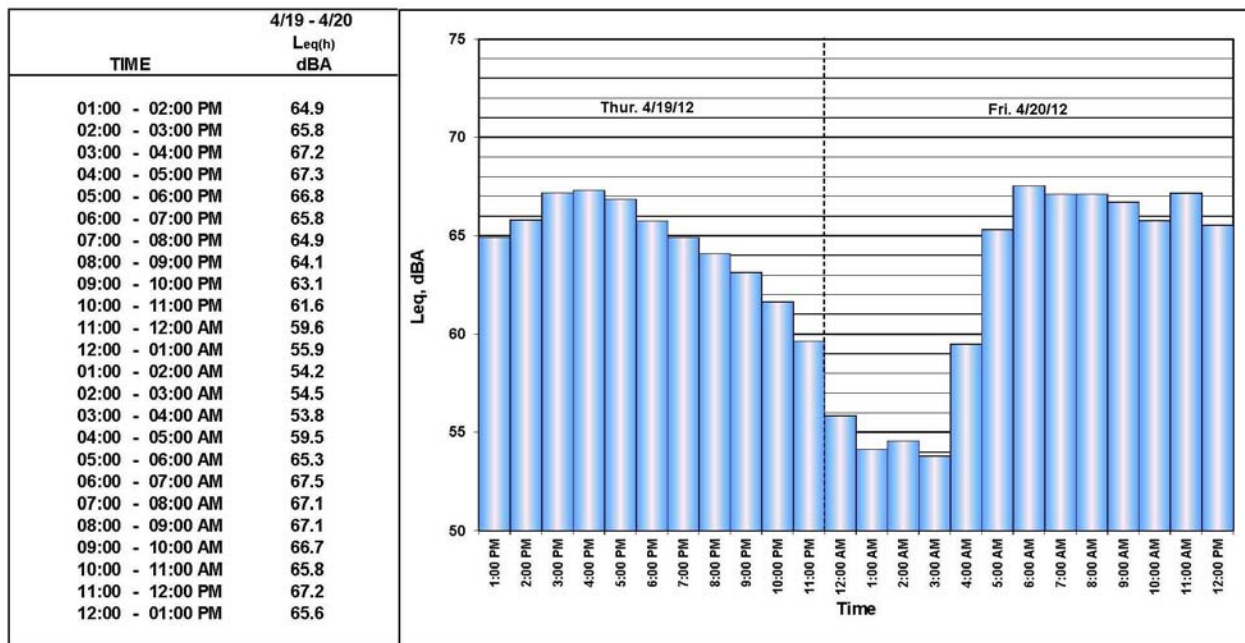
acoustic calibrator. Readings were in the A-weighted scale and were reported in decibels (dBA). Data collected by the noise meter included time, average noise level ( $L_{eq}$ ), maximum noise level ( $L_{max}$ ), and percentiles ( $L_n$ ) for each interval. Existing noise measurements were collected under meteorologically acceptable conditions when the pavement was dry and winds were calm or light. Measurements were conducted according to the FHWA Report, FHWA-PD-96-046, "Measurement of Highway Related Noise."

**Figure 3 – Long-Term Noise Monitoring Summary**

**Site 3 Hourly Noise Levels,  $L_{eq}(h)$**

**Location:** 9242 Point Replete Drive  
**Position:** Patio  
**Sources:** Rte 1 Traffic  
**Date:** 4/19/12 - 4/20/12

**Notes:** See attached Noise Measurement Form.



The short-term data collection procedure included the  $L_{eq}$  measurements in consecutive 1-second intervals in addition to the 20-minute measurement interval while the long-term procedure included the collection of 20-minute measurement intervals. This method allows individual time intervals that include noise events unrelated to traffic noise (such as aircraft over flights) to be excluded from consideration if necessary. Hourly average noise levels ( $L_{eq}(h)$ ) were derived at each location from the 20 minute  $L_{eq}$  values. Additional data collected at each monitoring location included atmospheric conditions such as wind speed, humidity, and ambient temperature. **Table 2** presents a summary of the short-term noise monitoring results. For each site, the table lists the assigned site number, the location and a description of the associated land use for each site, as well as the monitored sound level.

**Table 2: Short-Term Noise Monitoring Summary and Noise Model Validation**

Common Noise Environment	Monitor Site / Receptor Site	Location	Land Use	Monitored Noise Level (dBA)	Modeled Noise Level (dBA)	Difference (Modeled - Monitored)
CNE 2	M 1 / R 12 <sup>1</sup>	7353 Old Pohick Way	Residential	57.0	55.8	-1.2
CNE 4	M 2 / R 24 <sup>2</sup>	8208 Point Replete Drive	Residential	61.9	64.1	2.2
	M 3 / R 32 <sup>2</sup>	9242 Point Replete Drive	Residential	65.9	64.9	-1.0
CNE 5	M 4 / R 37 <sup>1</sup>	9158 Ciri Lake Lane	Residential	71.9	69.8	-2.1
	M 5 / R 45 <sup>1</sup>	7054 Regional Inlet Drive	Pool Area	62.9	64.3	1.4
CNE 6	M 6 / R 47 <sup>1</sup>	7023 Regional Inlet Drive	Residential	67.7	66.4	-1.3
CNE 7	M 7 / R 51	9127 Anderson Lane	Residential	53.8	54.3	0.5

Notes:

1 - Measurement site was not an outdoor use area; however, is representative of nearby outdoor use areas.

2 - Measurement was conducted on a second story deck.

Twenty minute traffic data (vehicle volume composition and speed) were also recorded on Route 1 simultaneously with the noise measurement. Traffic was grouped into one of the three categories: automobiles, medium trucks, and heavy trucks, per VDOT procedure. The 20-minute traffic data was converted to one hour traffic data for validation of the noise model.

Figures in *Appendix A* show the location of each noise monitoring site in relation to the project roadway. *Appendix C* includes the field data forms and *Appendix D* contains pictures of the noise measurement sites. The monitored  $L_{eq}$  in the study corridor ranged from 53.8 to 67.7 dBA. Traffic noise from Route 1 was the dominant source of noise within the study area.

NOTE: Short-term noise monitoring is not a process to determine design year noise impacts or barrier locations. Short-term noise monitoring provides a level of consistency between what is present in real-world situations and how that is represented in the computer noise model. Short-term monitoring does not need to occur within every CNE to validate the computer noise model.

## 5.2 Noise Model Validation

The modeling process began with model validation, as per VDOT requirements. This was accomplished by comparing the monitored noise levels and the noise levels generated by the computer model, using traffic volumes and speeds that were encountered during the monitoring process. This validation ensures that reported changes between the existing and future design-year conditions are due to changes in traffic, and not discrepancies between monitoring and modeling techniques. A difference of 3 dB or less between the monitored and modeled levels is considered acceptable, since this is the limit of change detectable by a typical human ear.

The model validation was performed for the existing traffic conditions and the existing noise levels obtained during the 20 minute monitoring sessions. *Table 3* provides a summary of the model validation results. The difference between the modeled and monitored noise levels ranges from -2.1 to +2.2 dB. However, the validated noise levels are within the acceptable  $\pm 3$  dB. With the sites validated, the existing condition model is considered to be calibrated for the observed site conditions.

### 5.3 Modeled Existing Environment

The project area was divided into areas of Common Noise Environments (CNE) for reporting purposes. CNEs are defined as a group of receivers within the same Activity Category that are exposed to similar noise sources and levels; traffic volumes, traffic mix, and speed; as well as topographic features. In accordance with VDOT guidance, noise sensitive receivers within 500 feet of the construction limits should be considered for the traffic noise impact evaluation.

Presently traffic noise impacts are anticipated at 21 noise sensitive sites representing 22 residences, one place of worship, one area of a cemetery, one area of a baseball field, one horse riding area, and eight areas of a garden under the existing condition due to levels approaching or exceeding the NAC. The existing year noise levels range from 53 to 72 dBA at the outdoor human use areas and from 35 to 51 dBA at the interiors of buildings along the project alignment. The following is a description of the CNEs and figures in *Appendix A* shows their locations:

#### *CNE 1*

CNE 1 is located in the northwest quadrant of the Route 1/Pohick Road (West) intersection and contains 29 multi-family residential properties (Category B), represented by eight noise sensitive sites, R1 to R8. These residences are generally at grade with respect to Route 1 with one site, R8, representing two units, positioned on a second story deck. CNE 1 is currently protected from traffic noise by an existing 12-foot high soundwall. Existing noise levels within CNE 1 range from 53 to 61 dBA. No noise sensitive sites are predicted to experience noise impacts under the existing condition. Figure 1 in *Appendix A* shows the receiver and existing soundwall locations in CNE 1.

#### *CNE 2*

CNE 2 is located between Pohick Road (West) and Telegraph Road along southbound Route 1 and contains 20 multi-family residences (Category B), represented by nine noise sensitive sites, R9 to R11 and R13 to R18. Five of the nine sites representing 14 units have been positioned on second story decks. Monitoring site M1 was conducted adjacent to one of the residences in a grassy area within CNE 2, and is represented by receiver R12. Existing noise levels within CNE 2 range from 54 to 63 dBA. No noise sensitive sites are predicted to experience noise impacts under the existing condition. Receivers located in CNE 2 are shown in Figure 1 of *Appendix A*.

#### *CNE 3*

CNE 3 is located in the southwest quadrant of the Route 1 / Old Colchester Road intersection. CNE 3 contains the Pohick Cemetery (Category C) and Pohick Episcopal Church (Category D) represented by noise sensitive sites R19 to R21B. There is an existing brick wall between Route 1 and the cemetery lots and church providing some traffic noise shielding. Existing noise levels at outdoor use areas within CNE 3 range from 61 to 66 dBA. Since the exterior of the church is composed of masonry with single-pane windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 25 dB (FHWA "Highway Traffic Noise: Analysis and Abatement Guidance" December, 2011). Therefore, the existing interior noise level for the church is approximately 42 dBA base on an exterior noise level of 67 dBA. One noise sensitive site, representing one outdoor use area is predicted to experience noise impacts due to levels approaching the NAC, under the existing condition. Figure 1 in *Appendix A* shows the receiver locations in CNE 3.

#### ***CNE 4***

CNE 4 is located between Belvoir Woods Parkway and Inlet Cove Drive along southbound Route 1. CNE 4 contains 27 multi-family residences (Category B) represented by 11 noise sensitive sites R22 to R32. Noise monitoring was conducted on the second story decks of two of the residences represented by sites M2 and M3 within CNE 4, and are represented by receivers R24 and R32, respectively. The primary outdoor use areas of 21 of the 27 residences are the second story decks. Ten residences represented by Receivers R22 to R24, which are located on the second story decks, are roughly at the same elevation as Route 1 while their backyards are depressed compared to Route 1. The remaining 17 residences represented by Receivers R25 to R32 are at grade with Route 1. Based on the field observations, it was concluded that these decks are the frequent human use areas and not the sloped backyards. Existing noise levels within CNE 4 range from 56 to 67 dBA; therefore, two noise sensitive sites representing five residences are predicted to experience noise impacts due to levels approaching or exceeding the NAC under the existing condition. Figure 2 in ***Appendix A*** shows the receiver locations in CNE 4.

#### ***CNE 5***

CNE 5 is located between Inlet Cove Drive and Cook Inlet Drive along southbound Route 1 and contains 26 single-family residential properties (Category B) and one pool area of a multi-family residential subdivision (Category C), represented by 11 noise sensitive sites, R33 to R36 and R38 to R44. Outdoor use areas of about half of these residences are at grade with respect to Route 1 but six sites representing 14 units are positioned on a second story deck. Noise monitoring was conducted at site M4 adjacent to a single-family resident within CNE 5 and is represented by receiver R37. Noise monitoring site M5 was adjacent to the pool area which is represented by receiver R45. Existing noise levels within CNE 5 range from 54 to 69 dBA. Three noise sensitive sites, representing eight residences are predicted to experience noise impacts due to levels approaching or exceeding the NAC, under the existing condition. Figure 2 in ***Appendix A*** shows the receiver locations in CNE 5.

#### ***CNE 6***

CNE 6 is located north of Route 1 and east of Cook Inlet Road and contains eight single-family residences (Category B) represented by four noise sensitive sites R46 and R48 to R50. These residences are generally at grade with respect to Route 1. Noise monitoring site M6 was located adjacent to one of the residences in a grassy area within CNE 6 and is represented by receiver R47. Existing noise levels within CNE 6 range from 61 to 68 dBA. Two noise sensitive sites, representing four residences are predicted to experience noise impacts due to levels exceeding the NAC, under the existing condition. Figure 2 in ***Appendix A*** shows the receiver locations in CNE 6.

#### ***CNE 7***

CNE 7 is located between Route 7100/Fairfax County Parkway and Belvoir Court along southbound Route 1 and contains six single-family residences (Category B) represented by four noise sensitive sites R51 to R54 and an apartment building that is represented by noise sensitive site R54A. These residences are currently shielded from traffic noise by buildings which will be demolished as a result of the project. There are also two large multifamily buildings within this area. One of the buildings that is closer to Route 1 would be demolished as part of the proposed project. The second building that is presently protected with the building closer to Route 1 is

represented by noise sensitive site R51A. Noise monitoring site M7 was located in the backyard of the residences represented by receiver R51. Existing noise levels within CNE 7 range from 56 to 60 dBA. The two story apartment building represented by site R54A has no outdoor use areas. The three story building represented by site R51A has outdoor use areas that are located behind the building to that will not be demolished and is protected from the traffic noise by the building itself. No outdoor noise sensitive sites are predicted to experience noise impacts under the existing condition. Receivers located in CNE 7 are shown in Figures 4 and 5 in *Appendix A*.

### ***CNE 8***

CNE 8 is located in the southwest quadrant of the Route 1/Pohick Road intersection and contains the Eleanor Kennedy Homeless Shelter (Categories C and D) represented by one noise sensitive site R55. Existing exterior noise level at outdoor use areas within CNE 8 is 63 dBA. Since the exterior of the shelter is composed of brick with storm windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 25 dB (FHWA “Highway Traffic Noise: Analysis and Abatement Guidance” December, 2011). Therefore, the existing interior noise level for the shelter is approximately 38 dBA. There are no impacts in this area under the existing condition. Figures 4 and 5 in *Appendix A* show the receiver location in CNE 8.

### ***CNE 9***

CNE 9 which contains the Woodlawn Quaker Meetinghouse represented by noise sensitive site R56 is located west of Woodlawn Road and north of Route 1. The meetinghouse has no regular outdoor activities. Indoor noise levels for the meetinghouse were evaluated under Activity Category D. The existing noise level for the exterior is 61 dBA. Since the exterior of the meetinghouse is composed of wood with single-pane windows that are open several times a year, the reduction in noise level in the interior as a result of the building is assumed to be 10 dB (FHWA “Highway Traffic Noise: Analysis and Abatement Guidance” December, 2011). Therefore, the existing interior noise level for the meetinghouse within CNE 9 is approximately 51 dBA. Therefore, the interior of the meetinghouse is predicted to experience noise impacts due to levels approaching or exceeding the NAC, under the existing condition. Figure 6 in *Appendix A* shows the receiver location in CNE 9.

### ***CNE 10***

CNE 10 does not currently exist as an outdoor use area but would be a sport area within Fort Belvoir under Alternative B conditions. Under the build conditions of Alternative B, CNE 10 would become a sports area (Category C) which would include a baseball diamond and soccer field represented by 11 sensitive sites, R57 to R67. Existing noise levels within CNE 10 range from 56 to 60 dBA and is not impacted under existing conditions. Figures 6 and 7 in *Appendix A* show this area.

### ***CNE 11***

CNE 11 is located between Belvoir Road and Mount Vernon Memorial Highway along northbound Route 1 and contains the Woodlawn Baptist Church (Categories C and D) represented by noise sensitive sites R68, R68A, and R69. Site R68 represents an area where it is used for certain outdoor social gatherings. Existing exterior noise levels within CNE 11 range from 54 to 64 dBA. Since the exterior of the church is composed of brick with double-pane windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 35 dB (FHWA “Highway Traffic Noise: Analysis and

Abatement Guidance” December, 2011). Therefore, the existing interior noise level for the church is calculated to be 19 and 29 dBA based on exterior noise levels of 57 and 64 dBA. However, interior noise levels of 19 and 29 dBA are not realistic; therefore, the minimum interior noise levels used for this study has been set to 35 dBA. Therefore, there are no traffic noise impacts under existing conditions. Figure 7 in *Appendix A* shows this church.

### ***CNE 12***

CNE 12 is located in the northwest quadrant of the Route 1 / Mount Vernon Memorial Highway intersection and contains an open area (Category C) of the Woodlawn Plantation represented by 23 noise sensitive sites, R70 to R92. Existing noise levels within CNE 12 range from 61 to 72 dBA. Eight noise sensitive sites, representing eight areas are predicted to experience noise impacts due to levels approaching or exceeding the NAC, under the existing condition. Figure 7 in *Appendix A* shows the receiver locations in CNE 12.

### ***CNE 13***

CNE 13 covers the Woodlawn Horse Stables and its immediate surrounding areas represented with sites R93 and R94 (Category C). This stable is located south of Route 1 and west of Mount Vernon Memorial Highway. Existing noise levels within CNE 13 range from 59 to 62 dBA. There are no impacts in this area under the existing condition. Figure 7 in *Appendix A* shows the receiver locations in CNE 13.

### ***CNE 14***

CNE 14 which is located south of Route 1 and west of Mount Vernon Memorial Highway covers the horse riding field associated with Woodlawn Horse Stables. Sites R95 through R102 (Category C) are in this CNE. Existing noise levels within CNE 14 range from 56 to 60 dBA and is not impacted under existing conditions. Figure 7 in *Appendix A* shows the receiver locations in CNE 14.

### ***CNE 15***

CNE 15 is located west of Telegraph Road and north of Route 1 and contains one single-family residences (Category B) represented by noise sensitive site R103 and nine multifamily residences (Category B) represented by noise sensitive sites R104 to R110. Primary outdoor use areas of sites R104 to R110 are on second story decks. These residences are exposed to the traffic noise from Telegraph Road. Existing noise levels within CNE 15 range from 61 to 65 dBA. No noise sensitive sites are predicted to experience traffic noise impacts under the existing condition. Receivers located in CNE 15 are shown in Figure 1 in *Appendix A*.

### ***CNE 16***

CNE 16 is located east of Telegraph Road and north of Route 1 and contains several single-family residences (Category B) represented by noise sensitive sites R111 to R113. These residences are exposed to the traffic noise from Telegraph Road. Existing noise levels within CNE 16 range from 63 to 68 dBA. Five houses close to Telegraph Road are predicted to experience traffic noise impacts under the existing condition. Figure 1 in *Appendix A* shows CNE 16.

### ***CNE 17***

CNE 17 is located along northbound Route 1 east of Belvoir Road and contains an existing baseball diamond (Category C) within Fort Belvoir represented by noise sensitive sites R114

to R122. This baseball diamond remains under Alternative C conditions but would be relocated under Alternative B conditions. Existing noise levels within CNE 17 range from 61 to 69 dBA. One noise sensitive site representing one area is predicted to experience noise impacts due to levels approaching or exceeding the NAC under the existing condition. Figures 8 and 9 in *Appendix A* shows the receiver locations for CNE 17.

### ***CNE 18***

CNE 18 which is located south of Route 1 and west of Mount Vernon Memorial Highway covers the horse riding field associated with Woodlawn Horse Stables adjacent to the Alternative C alignment. Most of this area will be inside the proposed project right-of-way under Alternative B. CNE 14 represents the horse riding area under Alternative B. Sites R123 through R133 (Category C) are located within this CNE and existing noise levels range from 58 to 66 dBA. One noise sensitive site representing one area would be impacted under existing conditions. Figure 9 in *Appendix A* shows the receiver locations in CNE 18.

## **6.0 Future Noise Environment**

Traffic noise levels in the study area were predicted for the design year (2040) for Alternative A (No-build Alternative), Alternative B (the Preferred Alternative), and the eastern portion of Alternative C (widening existing Route 1 through Woodlawn Historic District) using TNM. Design year no-build noise levels are required for this traffic noise study because the project does involve a “direct use” 4(f) determination, as stated in the VDOT State Noise Abatement Policy. Noise sensitive sites were modeled under NAC Category B (residential), Category C (active sport areas, cemeteries, places of worship, recreational areas, etc.) with outdoor activity areas and Category D (places of worship) where interior noise is of concern.

Alternative C includes a flyover that was developed to accommodate the heavy northbound Route 1 to northbound Telegraph Road movement in the AM peak period. With the flyover in place, overall intersection LOS would improve to LOS C during both the AM and PM peak hours. This benefit in terms of improving traffic flow is offset by higher costs and the potential physical and visual impacts to Pohick Church, a National Register of Historic Places-listed site, and the Pohick Church Historic Overlay District (a Fairfax County Zoning entity). Accordingly, while the option remains as part of Alternative C for purposes of the Environmental Assessment, detailed noise analyses were not conducted for it. It could be generally assumed that implementation of this option may result in somewhat greater noise impacts. If this option is selected as part of the preferred alternative, additional noise analysis will be conducted as appropriate. In contrast, traffic operations analysis suggests that in lieu of a flyover, an at-grade triple left-turn lane from northbound Route 1 to northbound Telegraph Road (as proposed in Alternative B) also would improve operations during the morning and afternoon peak periods, albeit to a lesser degree, while minimizing impacts to adjacent properties. [Note: The Fairfax County Comprehensive Plan calls for an interchange at this location, and the improvements under Alternative B would not preclude its development in the future.]

Alternative C also includes a flyover that was developed to accommodate the heavy movement between the Fairfax County Parkway and Pohick Road (Tulley Gate) in the morning and afternoon peak periods. However, based on a review of cost versus benefit from a traffic operations standpoint, the high cost to construct the flyover may not be

justified given the minor change in traffic operations at the Route 1/Fairfax County Parkway intersection with the flyover in place. The level of service at the intersection was found to be acceptable with the provision of triple lefts from Fairfax County Parkway to northbound Route 1, which are already proposed as part of Alternative B. Accordingly, while the option remains as part of Alternative C for purposes of the Environmental Assessment, detailed noise analyses were not conducted for it. It could be generally assumed that implementation of this option may result in somewhat greater noise impacts. If this option is selected as part of the preferred alternative, additional noise analysis will be conducted as appropriate. [Note: The Fairfax County Comprehensive Plan calls for an interchange at this location, and the improvements under Alternative B would not preclude its development in the future.]

Assessment of traffic noise impact requires these comparisons:

- (1) The noise levels under existing conditions must be compared to those under design year build conditions. This comparison shows the change in noise levels that would occur between the existing year and the design year if the project is constructed, to determine if the substantial increase impact criterion has been met.
- (2) The noise levels under design year no-build conditions must be compared to those under design year build conditions. This comparison shows how much of the change in noise levels can actually be attributed to the proposed project.
- (3) The noise levels under design year build conditions must be compared to the applicable NAC. This comparison determines if the impact criteria has been met under future build conditions.

## 6.1 Alternative B

Noise impacts are predicted under the design year build condition (2040) due to noise levels approaching or exceeding the NAC. Calculated noise levels for the noise sensitive sites and conditions for Alternative B are listed in **Table 3**. Figures in **Appendix A** show each CNE and receiver locations.

Traffic noise impacts are predicted to occur at 45 noise sensitive sites representing 42 residences, one pool area, three areas of a cemetery, six areas of a sports field, one church, one horse stable area, five areas of a horse riding field, and 10 open areas under the design year (2040) build noise levels. Noise levels are predicted to range from 54 to 71 dBA at the outdoor human use areas and from 35 to 49 dBA at the interior of buildings.

**CNE 1** - Design year build noise levels within CNE 1 are predicted to range from 59 to 64 dBA. No noise sensitive sites are predicted to experience traffic noise impacts due to levels approaching or exceeding the NAC under the design year build condition.

**CNE 2** - Design year build noise levels within CNE 2 are predicted to range from 57 to 70 dBA. Three noise sensitive sites, R13, R15, and R17 representing the second story decks of 10 residences are predicted to experience noise impacts due to levels exceeding the NAC.

**CNE 3** - Design year build noise levels at the outdoor use areas within CNE 3 are predicted to range from 63 to 66 dBA. Since the exterior of the church is composed of masonry with single-pane windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 25 dB (FHWA "Highway Traffic Noise: Analysis and Abatement Guidance" December, 2011). Therefore, the predicted interior noise level for the church would be approximately 44 dBA. Three noise sensitive areas represented by sites R19A,



R20, and R20A are predicted to be impacted by traffic noise under the future design year build condition.

**CNE 4** - Design year build noise levels within CNE 4 are predicted to range from 58 to 70 dBA. Three noise sensitive sites, R24, R31, and R32, representing the second story decks of seven residences are predicted to experience noise impacts due to levels exceeding the NAC.

**CNE 5** - Design year build noise levels within CNE 5 are predicted to range from 58 to 71 dBA. Seven noise sensitive sites, R33, R38, and R40 to R44, representing the backyards of four residences, the second story decks of 10 residences, and a pool area are predicted to experience noise impacts due to levels approaching or exceeding the NAC.

**CNE 6** - Design year build noise levels within CNE 6 are predicted to range from 64 to 71 dBA. Three noise sensitive sites, R46, R48, and R49 representing six residences are predicted to experience noise impacts due to levels exceeding the NAC.

**CNE 7** - Design year build noise levels within CNE 7 are predicted to range from 61 to 69 dBA. This area is not predicted to be impacted by traffic noise except for the apartment building that is represented by noise sensitive site R54A. However, this apartment building has no outdoor use areas exposed to the traffic noise.

**CNE 8** - Design year build noise level at the outdoor use area within CNE 8 is predicted to be 64 dBA. Since the exterior of the shelter is composed of brick with storm windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 25 dB (FHWA "Highway Traffic Noise: Analysis and Abatement Guidance" December, 2011). Therefore, the predicted interior noise level for the shelter would be approximately 39 dBA, which means this church is not predicted to be impacted by traffic noise.

**CNE 9** - The meetinghouse has no regular outdoor activities. Indoor noise levels for the meetinghouse were evaluated under Activity Category D. The design year build noise level for the exterior is 59 dBA. Since the exterior of the meetinghouse is composed of wood with single-pane windows that are open several times a year, the reduction in noise level in the interior as a result of the building is assumed to be 10 dB (FHWA "Highway Traffic Noise: Analysis and Abatement Guidance" December, 2011). Therefore, the design year build interior noise level for the meetinghouse within CNE 9 would be approximately 49 dBA. As a result, the interior of this meetinghouse is not predicted to be impacted by traffic noise under design year build conditions.

**CNE 10** - Design year build noise levels within CNE 10 are predicted to range from 63 to 69 dBA. Four noise sensitive areas represented by sites R57 to R62 are predicted to experience noise impacts due to levels approaching or exceeding the NAC.

**CNE 11** - Design year build noise levels at outdoor use areas within CNE 11 are predicted to range from 54 to 68 dBA. Since the exterior of the church is composed of brick with double-pane windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 35 dB (FHWA "Highway Traffic Noise: Analysis and Abatement Guidance" December, 2011). Therefore, the existing interior noise level for the church is calculated to be 19 and 32 dBA based on the predicted exterior noise levels of 54 and 67 dBA. However, interior noise levels of 19 and 32 dBA are not realistic; therefore, the minimum interior noise levels used for this study has been set to 35 dBA. One noise sensitive site, R68, representing the exterior of the Woodlawn Baptist Church is predicted to experience noise impacts due to levels exceeding the NAC and substantial noise increase.

**CNE 12** - Design year build noise levels within CNE 12 are predicted to range from 60 to 71 dBA. Ten noise sensitive areas represented by sites R71 to R76 and R81 to R84 are predicted to be impacted by traffic noise.

**CNE 13** - Predicted design year build noise levels within CNE 13 range from 63 to 69 dBA. One noise sensitive area near Woodlawn Stables represented by site R94 is predicted to be impacted by traffic noise.

**CNE 14** - Design year build noise levels within CNE 14 are predicted to range from 64 to 70 dBA. Sites R95 to R98 and R102 representing five areas in the horse riding field associated with the Woodlawn Stables are predicted to be impacted by traffic noise.

**CNE 15** - Predicted design year build noise levels within CNE 15 range from 60 to 65 dBA; therefore, this area is not predicted to be impacted by traffic noise.

**CNE 16** - Design year build noise levels within CNE 16 are predicted to range from 64 to 68 dBA. Two noise sensitive sites, R111 and R112 representing five residences are predicted to experience noise impacts due to levels exceeding the NAC.

**Table 3: Predicted Noise Levels – Alternative B**

Common Noise Environment	Receptor Site	Land Use	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Abatement Criteria
CNE 1	R 1	Residential	4	59	59	61	66
	R 2	Residential	5	58	58	60	66
	R 3	Residential	5	57	57	59	66
	R 4	Residential	4	58	58	59	66
	R 5	Residential	2	58	59	60	66
	R 6	Residential	3	55	56	57	65
	R 7	Residential	4	53	54	55	63
	R 8 <sup>3</sup>	Residential	2	61	62	64	66
CNE 2	R 9	Residential	2	57	57	60	66
	R 10	Residential	2	54	54	57	64 <sup>1</sup>
	R 11 <sup>3</sup>	Residential	2	61	62	63	66
	R 12 <sup>2</sup>	Monitor Location	0	58	59	69	--
	R 13 <sup>3</sup>	Residential	4	63	63	<b>70</b>	66
	R 14	Residential	1	57	58	64	66
	R 15 <sup>3</sup>	Residential	4	60	61	<b>67</b>	66
	R 16	Residential	1	57	58	62	66
CNE 3	R 17 <sup>3</sup>	Residential	2	60	61	<b>66</b>	66
	R 18 <sup>3</sup>	Residential	2	63	63	65	66
	R 19	Cemetery	1	65	65	65	66
	R 19A	Cemetery	1	<b>66</b>	<b>66</b>	<b>66</b>	66
	R 20	Cemetery	1	64	64	<b>66</b>	66
	R 20A	Cemetery	1	64	64	<b>66</b>	66
	R 21	Cemetery	1	61	61	63	66
	R 21A	Cemetery	1	61	62	63	66
R 21B	Church	1	Ext	67	68	69	--
			Int	42	43	44	51

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.

3 - Receptor is located on a second story deck.

4 - Calculated interior noise has been capped at 35 dBA for purpose of analysis.

Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.

**Bold** - Indicates noise impacts.

**Table 3: Predicted Noise Levels – Alternative B (Cont'd)**

Common Noise Environment	Receptor Site	Land Use	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Abatement Criteria
CNE 4	R 22 <sup>3</sup>	Residential	4	59	60	61	66
	R 23 <sup>3</sup>	Residential	4	61	61	64	66
	R 24 <sup>3</sup>	Residential	2	65	65	<b>68</b>	66
	R 25 <sup>3</sup>	Residential	2	58	58	61	66
	R 26 <sup>3</sup>	Residential	1	60	60	63	66
	R 27	Residential	3	59	59	61	66
	R 28	Residential	1	56	56	58	66
	R 29 <sup>3</sup>	Residential	3	63	63	64	66
	R 30	Residential	2	62	62	65	66
	R 31 <sup>3</sup>	Residential	4	<b>67</b>	<b>67</b>	<b>70</b>	66
R 32 <sup>3</sup>	Residential	1	<b>66</b>	<b>66</b>	<b>70</b>	66	
CNE 5	R 33 <sup>3</sup>	Residential	2	65	65	<b>69</b>	66
	R 34	Residential	4	56	55	58	66
	R 35	Residential	2	59	59	62	66
	R 36	Residential	2	54	56	58	64 <sup>1</sup>
	R 37 <sup>2</sup>	Monitor Location	0	69	70	73	--
	R 38 <sup>3</sup>	Residential	2	65	65	<b>67</b>	66
	R 39 <sup>3</sup>	Residential	4	56	56	58	66
	R 40	Residential	4	<b>67</b>	<b>67</b>	<b>67</b>	66
	R 41 <sup>3</sup>	Residential	2	<b>69</b>	<b>69</b>	<b>71</b>	66
	R 42 <sup>3</sup>	Residential	2	<b>67</b>	<b>67</b>	<b>69</b>	66
R 43 <sup>3</sup>	Residential	2	65	65	<b>67</b>	66	
R 44	Pool Area	1	64	64	<b>66</b>	66	
R 45 <sup>2</sup>	Monitor Location	0	66	66	68	--	
CNE 6	R 46	Residential	2	<b>67</b>	<b>67</b>	<b>69</b>	66
	R 47 <sup>2</sup>	Monitor Location	0	68	68	70	--
	R 48	Residential	2	<b>68</b>	<b>68</b>	<b>71</b>	66
	R 49	Residential	2	65	65	<b>67</b>	66
	R 50	Residential	2	61	61	64	66
CNE 7	R 51A	Residential	1	56	56	65	66
	R 51	Residential	2	57	57	64	66
	R 52	Residential	2	59	59	63	66
	R 53	Residential	1	56	57	61	66
	R 54	Residential	1	57	57	64	66
R 54A	Residential	1	60	61	<b>69</b>	66	
CNE 8	R 55 <sup>Ext/Int</sup>	Shelter	1	63	63	64	66
				38	38	39	48 <sup>1</sup>
CNE 9	R 56 <sup>Ext/Int</sup>	Place of Worship	1	61	61	59	--
				<b>51</b>	<b>51</b>	49	51

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.
  - 3 - Receptor is located on a second story deck.
  - 4 - Calculated interior noise has been capped at 35 dBA for purpose of analysis.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.

**Table 3: Predicted Noise Levels – Alternative B (Cont'd)**

Common Noise Environment	Receptor Site	Land Use	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Abatement Criteria
CNE 10	R 57	Sport Area	1	60	60	<b>69</b>	66
	R 58	Sport Area	1	59	60	65	66
	R 59	Sport Area	1	59	59	65	66
	R 60	Sport Area	1	59	59	<b>66</b>	66
	R 61	Sport Area	1	58	58	<b>66</b>	66
	R 62	Sport Area	1	58	58	<b>67</b>	66
	R 63	Sport Area	1	57	57	63	66
	R 64	Sport Area	1	57	57	63	66
	R 65	Sport Area	1	56	57	63	66
R 66	Sport Area	1	56	56	64	66	
R 67	Sport Area	1	56	56	65	66	
CNE 11	R 68A <sup>Ext</sup> Int	Church	1	54	54	67	--
				35 <sup>4</sup>	35 <sup>4</sup>	35 <sup>4</sup>	45 <sup>1</sup>
	R 68	Church		57	57	<b>68</b>	66
	R 69 <sup>Ext</sup> Int	Church		64	64	54	66
	35 <sup>4</sup>		35 <sup>4</sup>	35 <sup>4</sup>	45 <sup>1</sup>		
CNE 12	R 70	Open Area	1	<b>72</b>	<b>72</b>	64	66
	R 71	Open Area	1	<b>71</b>	<b>71</b>	<b>66</b>	66
	R 72	Open Area	1	<b>70</b>	<b>70</b>	<b>67</b>	66
	R 73	Open Area	1	<b>69</b>	<b>69</b>	<b>68</b>	66
	R 74	Open Area	1	<b>69</b>	<b>69</b>	<b>70</b>	66
	R 75	Open Area	1	<b>69</b>	<b>69</b>	<b>71</b>	66
	R 76	Open Area	1	<b>69</b>	<b>69</b>	<b>71</b>	66
	R 77	Open Area	1	<b>66</b>	<b>66</b>	62	66
	R 78	Open Area	1	65	65	63	66
	R 79	Open Area	1	65	65	63	66
	R 80	Open Area	1	64	64	64	66
	R 81	Open Area	1	64	64	<b>66</b>	66
	R 82	Open Area	1	64	64	<b>67</b>	66
	R 83	Open Area	1	64	64	<b>67</b>	66
	R 84	Open Area	1	64	64	<b>67</b>	66
	R 85	Open Area	1	62	62	60	66
	R 86	Open Area	1	62	62	61	66
	R 87	Open Area	1	61	61	61	66
	R 88	Open Area	1	61	61	61	66
	R 89	Open Area	1	61	61	62	66
R 90	Open Area	1	61	61	63	66	
R 91	Open Area	1	62	62	64	66	
R 92	Open Area	1	62	62	64	66	
CNE 13	R 93	Stable	1	59	59	63	66
	R 94	Stable	1	62	61	<b>69</b>	66

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.
  - 3 - Receptor is located on a second story deck.
  - 4 - Calculated interior noise has been capped at 35 dBA for purpose of analysis.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.

**Table 3: Predicted Noise Levels – Alternative B (Cont'd)**

Common Noise Environment	Receptor Site	Land Use	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Abatement Criteria
CNE 14	R 95	Horse Riding Area	1	57	57	<b>66</b>	66
	R 96	Horse Riding Area	1	58	58	<b>69</b>	66
	R 97	Horse Riding Area	1	59	59	<b>70</b>	66
	R 98	Horse Riding Area	1	60	60	<b>70</b>	66
	R 99	Horse Riding Area	1	56	56	64	66
	R 100	Horse Riding Area	1	57	56	65	66
	R 101	Horse Riding Area	1	57	57	65	66
	R 102	Horse Riding Area	1	58	58	<b>66</b>	66
CNE 15	R 103	Residential	1	65	65	65	66
	R 104 <sup>3</sup>	Residential	1	65	65	64	66
	R 105 <sup>3</sup>	Residential	1	63	63	62	66
	R 106 <sup>3</sup>	Residential	1	62	62	61	66
	R 107 <sup>3</sup>	Residential	1	61	61	60	66
	R 108 <sup>3</sup>	Residential	2	62	62	62	66
	R 109 <sup>3</sup>	Residential	1	63	63	63	66
	R 110 <sup>3</sup>	Residential	2	65	65	64	66
CNE 16	R 111	Residential	2	<b>68</b>	<b>68</b>	<b>68</b>	66
	R 112	Residential	3	<b>68</b>	<b>68</b>	<b>68</b>	66
	R 113	Residential	2	63	63	64	66

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.
  - 3 - Receptor is located on a second story deck.
  - 4 - Calculated interior noise has been capped at 35 dBA for purpose of analysis.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.

## 6.2 Alternative C

Noise impacts are predicted for design year condition (2040) due to noise levels approaching or exceeding the NAC. Noise analysis was conducted for area west of Belvoir Road where Alternative C is on a different alignment than Alternative B. This alternative is following the existing Route 1 alignment. Calculated noise levels for the noise sensitive sites and conditions for Alternative C are listed in **Table 4**. Figures in **Appendix A** show each CNE and receiver locations.

Traffic noise impacts are predicted to occur at 29 noise sensitive sites representing one place of worship, one church, 16 open areas, six areas of a sports field, and five areas of the horse riding field under the design year (2040) build noise levels. Noise levels are predicted to range from 58 to 73 dBA at the outdoor human use areas and from 35 to 55 dBA at the interior of buildings.

**CNE 9** - The meetinghouse has no regular outdoor activities. Indoor noise levels for the meetinghouse were evaluated under Activity Category D. The design year build noise level for the exterior would be 65 dBA. Since the exterior of the meetinghouse is composed of wood with single-pane windows that are open several times a year, the reduction in noise level in the interior as a result of the building is assumed to be 10 dB (FHWA “Highway Traffic Noise: Analysis and Abatement Guidance” December, 2011). Based on outdoor noise levels, the design year build interior noise level for the meetinghouse within CNE 9 would be approximately 55 dBA. Therefore, the interior of the meetinghouse is predicted to experience noise impacts due to levels approaching the NAC.

**CNE 11** - Design year build noise levels for outdoor use areas within CNE 11 are predicted to range from 58 to 66 dBA. Since the exterior of the church is composed of brick with double-pane windows and modern air conditioning is installed, the reduction in noise level in the interior as a result of the building is assumed to be 35 dB (FHWA “Highway Traffic Noise: Analysis and Abatement Guidance” December, 2011). Therefore, the predicted future interior noise level for the church is calculated to be 20 and 31 dBA based on the predicted exterior noise levels of 55 and 66 dBA. However, interior noise levels of 20 and 31 dBA are not realistic; therefore, the minimum interior noise levels used for this study has been set to 35 dBA. One noise sensitive site, R68, representing the exterior of the Woodlawn Baptist Church is predicted to experience noise impacts due to levels approaching the NAC.

**CNE 12** - Design year build noise levels within CNE 12 are predicted to range from 65 to 73 dBA. Sixteen noise sensitive areas represented by sites R70 to R85 are predicted to be impacted by traffic noise.

**CNE 13** - Predicted design year build noise levels within CNE 13 near Woodlawn Stables range from 60 to 62 dBA; therefore, this area is not predicted to be impacted by traffic noise.

**CNE 17** - Design year build noise levels within CNE 17 are predicted to range from 62 to 69 dBA. Six noise sensitive areas represented by sites R114 to R119 are predicted to experience noise impacts due to levels approaching or exceeding the NAC.

**CNE 18** - Design year build noise levels within CNE 18 are predicted to range from 60 to 68 dBA. Sites R123 to R127 representing five areas in the horse riding field associated with the Woodlawn Stables are predicted to be impacted by traffic noise.

**Table 4: Predicted Noise Levels – Alternative C**

Common Noise Environment	Receptor Site	Land Use	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Abatement Criteria
CNE 9	R 56 <small>Ext Int</small>	Place of Worship	1	61	61	65	--
				<b>51</b>	<b>51</b>	<b>55</b>	51
CNE 11	R 68A <small>Ext Int</small>	Church	1	54	54	55	--
				35 <sup>2</sup>	35 <sup>2</sup>	35 <sup>2</sup>	45 <sup>1</sup>
	R 68 <small>Ext Int</small>			57	57	58	66
	R 69 <small>Ext Int</small>			64	64	<b>66</b>	66
				35 <sup>2</sup>	35 <sup>2</sup>	35 <sup>2</sup>	45 <sup>1</sup>
CNE 12	R 70	Open Area	1	<b>71</b>	<b>71</b>	<b>73</b>	66
	R 71	Open Area	1	<b>71</b>	<b>71</b>	<b>73</b>	66
	R 72	Open Area	1	<b>70</b>	<b>70</b>	<b>72</b>	66
	R 73	Open Area	1	<b>69</b>	<b>69</b>	<b>72</b>	66
	R 74	Open Area	1	<b>69</b>	<b>69</b>	<b>72</b>	66
	R 75	Open Area	1	<b>69</b>	<b>69</b>	<b>72</b>	66
	R 76	Open Area	1	<b>69</b>	<b>69</b>	<b>72</b>	66
	R 77	Open Area	1	<b>66</b>	<b>66</b>	<b>69</b>	66
	R 78	Open Area	1	65	65	<b>69</b>	66
	R 79	Open Area	1	65	65	<b>68</b>	66
	R 80	Open Area	1	64	64	<b>68</b>	66
	R 81	Open Area	1	64	64	<b>68</b>	66
	R 82	Open Area	1	64	64	<b>68</b>	66
	R 83	Open Area	1	64	64	<b>68</b>	66
	R 84	Open Area	1	64	64	<b>69</b>	66
	R 85	Open Area	1	62	62	<b>66</b>	66
	R 86	Open Area	1	62	62	65	66
	R 87	Open Area	1	61	61	65	66
	R 88	Open Area	1	61	61	65	66
	R 89	Open Area	1	61	61	65	66
R 90	Open Area	1	61	61	65	66	
R 91	Open Area	1	62	62	65	66	
R 92	Open Area	1	62	62	65	66	
CNE 13	R 93	Stable	1	59	59	60	66
	R 94	Stable	1	62	61	62	66
CNE 17	R 114	Sport Area	1	<b>69</b>	<b>69</b>	<b>69</b>	66
	R 115	Sport Area	1	63	63	<b>66</b>	66
	R 116	Sport Area	1	64	64	<b>66</b>	66
	R 117	Sport Area	1	64	64	<b>66</b>	66
	R 118	Sport Area	1	64	64	<b>66</b>	66
	R 119	Sport Area	1	64	64	<b>66</b>	66
	R 120	Sport Area	1	61	61	62	66
	R 121	Sport Area	1	61	61	63	66
R 122	Sport Area	1	61	61	63	66	
CNE 18	R 123	Horse Riding Area	1	<b>66</b>	<b>66</b>	<b>66</b>	66
	R 124	Horse Riding Area	1	65	65	<b>68</b>	66
	R 125	Horse Riding Area	1	65	64	<b>67</b>	66
	R 126	Horse Riding Area	1	65	65	<b>68</b>	66
	R 127	Horse Riding Area	1	65	65	<b>68</b>	66
	R 128	Horse Riding Area	1	61	60	63	66
	R 129	Horse Riding Area	1	61	61	64	66
	R 130	Horse Riding Area	1	61	61	64	66
	R 131	Horse Riding Area	1	58	58	60	66
R 131	Horse Riding Area	1	58	58	61	66	
R 131	Horse Riding Area	1	59	58	61	66	

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 - Calculated interior noise has been capped at 35 dBA for purpose of analysis.

Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.

**Bold** - Indicates noise impacts.

## **7.0 Noise Abatement**

Future traffic noise impacts were predicted for the design year (2040) build condition due to levels approaching or exceeding the NAC. Therefore, per VDOT's State Noise Abatement Policy, noise abatement considerations are warranted for these impacted outdoor human use areas.

### **7.1 Abatement Measures Evaluation**

VDOT guidelines recommend a variety of abatement measures that should be considered in response to traffic noise impacts. While noise barriers and/or earth berms are generally the most effective form of noise mitigation, additional mitigation measures exist which have the potential to provide considerable noise reductions, under certain circumstances such as quieter pavements. However, these additional mitigation measures have not been considered in this study. Noise barriers are the main abatement measure that is considered for this project. Noise barriers may be replaced by earth berms if there is sufficient room for constructing them.

Section 33.1-223.2:21 of the Code of Virginia requires VDOT to consider other mitigation measures besides noise barriers as part of its project development processes. This mandate is expressed in the State Noise Abatement Policy which states: Whenever the Commonwealth Transportation Board or the Department plan for or undertake any highway construction or improvement project and such project includes or may include the requirement for the mitigation of traffic noise impacts, first consideration should be given to the use of noise reducing design and low noise pavement materials and techniques in lieu of construction of noise walls or sound barriers. Vegetative screening, such as the planting of appropriate conifers, in such a design would be utilized to act as a visual screen if visual screening is required. A 2011 amendment to this statute requires VDOT to expedite development of "quiet pavement" technology so that future paving contracts can include specifications for such technology when sound mitigation is a consideration. VDOT is directed to assess this technology through demonstration projects, the results of which will be reported to the Governor and General Assembly over a two-year period ending in 2013. However VDOT is not authorized by the Federal Highway Administration to use "quiet pavement" as a form of noise mitigation. A Quiet Pavement Pilot Program is required by FHWA. Upon the Department's completion of the Quiet Pavement Pilot Program and approval from FHWA, the use of "quiet pavement" will be given additional consideration.

### **7.2 Construction of Noise Barriers/Berms**

Construction of noise barriers can be an effective way to reduce noise levels at areas of outdoor activity. Noise barriers can be wall structures, earthen berms, or a combination of the two. The effectiveness of a noise barrier depends on the distance and elevation difference between roadway and receiver. Gaps between overlapping noise barriers also decrease the effectiveness of the barrier, as opposed to a single connected barrier. The barrier's ability to attenuate noise decreases as the gap width increases.

Soundwalls and earth berms are often implemented into the highway design in response to the identified traffic noise impacts. The effectiveness of a freestanding (post and panel) noise barrier and an earth berm of equivalent height are relatively consistent; however, an earth berm is perceived as a more aesthetically pleasing option. The use of earth berms is not always an



option due to the excessive space they require adjacent to the roadway corridor. At a standard slope of 2:1, every 1-foot in height would require 4 feet of horizontal width. This requirement becomes more complex in urban settings where residential properties often abut the proposed roadway corridor. In these situations, implementation of earth berms can require significant property acquisitions to accommodate noise mitigation. The cost associated with the acquisition of property to construct a berm can substantially increase the total costs to implement this form of noise mitigation.

Availability of fill material to construct the berm also needs to be considered. On proposed projects where grading yields excess waste material, earth berms are often cost effective mitigation options. On balance or borrow projects the implementation of earth berms is often an expensive solution due to the need to identify, acquire, and transport the material to the project site. Earth berms may be considered at few locations for this project and would be evaluated further where practical during the final design stage.

As a general practice, noise barriers are most effective when placed at a relatively high point between the roadway and the impacted noise sensitive land use. To achieve the greatest benefit from a potential noise barrier, the goal of the barrier should focus on breaking the line-of-sight (to the greatest degree possible) from the roadway traffic to the receiver. In roadway fill conditions, where the highway is above the natural grade, noise barriers are typically most effective when placed on the edge of the roadway shoulder or on top of the fill slope. In roadway cut conditions, where the roadway is located below the natural grade, barriers are typically most effective when placed at the top of the cut slope. Engineering and safety issues have the potential to alter these typical barrier locations.

The effectiveness of a noise barrier is measured by examining the barrier's capability to reduce future noise levels. Noise reduction is measured by comparing design year pre- and post-barrier noise levels. This difference between unabated and abated noise levels is known as insertion loss (IL).

According to VDOT guidelines, potential mitigation measures must also be assessed for feasibility and reasonableness. Noise barrier feasibility deals specifically with acoustical and engineering considerations such as:

- Noise barriers must reduce design year noise levels by 5 dB (or more) for fifty percent (50%) (or more) of impacted sites;
- The barrier must be possible to design and construct, based on factors such as safety, barrier height, topography, drainage, utilities, maintenance, and access to adjacent properties.

Noise barrier reasonableness is determined by assessing multiple issues including:

- The viewpoints of the benefited receivers
- Cost effectiveness value, based on a square foot cost ceiling (maximum square footage of abatement per benefited receiver)
- Noise reduction design goal of 7 dB of insertion loss for at least one impacted receiver

Typically, the limiting factor related to barrier reasonableness is the cost effectiveness value, where the total surface area of the barrier is divided by the number of benefited receivers receiving at least a 5 dB reduction in noise level. VDOT's approved cost is based on a maximum square footage of abatement per benefited receiver, a value of 1,600 square feet per benefited receiver.

For non-residential properties such as parks and public use facilities, a special calculation is preformed in order to quantify the type and duration of activity and compare to the cost effectiveness criterion. The determination is based on cost, severity of impact (both in terms of noise levels and the size of the impacted area and the activity it contains), and amount of noise reduction.

## **Alternative B**

Noise barriers were evaluated in areas predicted to experience traffic noise impacts in the build condition. Ten noise barriers were evaluated and eight of the evaluated barriers were determined to be feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. Figures in *Appendix A* show barrier locations. An overview of the evaluated barrier parameters is shown in *Table 5*. Details of the barrier analysis including barrier insertion losses are listed in *Table 6* for all CNEs. Barriers will be re-evaluated and further refined during final design. The following discussion presents potential mitigation measures for each of the impacted noise sensitive land uses:

### ***Barrier 1***

Barrier 1 would provide abatement for CNE 2 and extends along the shoulder of southbound Route 1, approximately from Station 8+00 to 16+00. Barrier 2 has a uniform height of 12 feet and a total length of approximately 830 feet, resulting in a surface area of 9,960 square feet. The barrier would benefit all eight of the impacted residences (sites R13 and R15). The barrier would also benefit one additional non-impacted residence, represented by site R14. This results in a ratio of 1,107 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. Site R12 was a noise measurement location that does not represent an outdoor use area; therefore, was not considered for noise abatement. A unit cost of \$45 per square foot was used for this barrier. Barrier 1 is shown in Figure 1 of *Appendix A*.

### ***Barrier 2***

Barrier 2 would provide abatement for CNE 4 and extends along the shoulder of southbound Route 1, approximately from Station 27+35 to 35+35. Barrier 4 has a uniform height of 12 feet and a total length of approximately 800 feet, resulting in a surface area of 9,600 square feet. The barrier would benefit five of the seven impacted residences (sites R31 and R32). The barrier would also benefit 12 additional non-impacted residences, represented by sites R25 to R30. This results in a ratio of 565 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable. A unit cost of \$45 per square foot was used for this barrier. Barrier 2 is shown on Figure 2 of *Appendix A*.

### ***Barrier 3***

Barrier 3 would provide abatement for CNE 5, and extends along the shoulder of southbound Route 1, approximately from Station 36+00 to 48+85. Barrier 3 has heights of 12 and 14 feet and a total length of approximately 1,250 feet, resulting in a surface area of 15,000 square feet.

The barrier would benefit all 14 impacted residences and a pool area (Sites R33, R38, and R40 to R44). The barrier would also benefit 12 additional non-impacted residences, represented by sites R34 to R36 and R39. This results in a ratio of 556 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable. Sites R37 and R45 were noise measurement locations that do not represent outdoor use areas; therefore, were not considered for noise abatement. A unit cost of \$45 per square foot was used for this barrier. Figure 2 of *Appendix A* shows the location of Barrier 3.

#### ***Barrier 4***

Barrier 4 would provide abatement for CNE 6 and extends along the shoulder of southbound Route 1, approximately from Station 50+15 to 56+00. Barrier 4 has a uniform height of 14 feet and a total length of approximately 590 feet, resulting in a surface area of 8,260 square feet. The barrier would benefit four of the six impacted residences (sites R48 to R49). The barrier would also benefit two additional non-impacted residences, represented by site R50. This results in a ratio of 1,377 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. Site R47 was a noise measurement location that does not represent an outdoor use area; therefore, was not considered for noise abatement. A unit cost of \$45 per square foot was used for this barrier. Barrier 4 is shown on Figure 2 of *Appendix A*.

#### ***Barrier 5***

Barrier 5 would provide abatement for CNE 10 and extends along the shoulder of the proposed right-of-way of northbound Route 1 approximately from Station 165+00 to 176+00. Barrier 5 has a uniform height of 12 feet and an approximate total length of 1,055 feet, resulting in a surface area of 12,660 square feet. The barrier would benefit all six impacted areas (sites R57 to R62). The barrier would also benefit five additional non-impacted areas, represented by sites R63 to R67. This results in a ratio of 1,151 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable. A unit cost of \$45 per square foot was used for this barrier. Barrier 5 is shown on Figures 6 and 7 of *Appendix A*.

#### ***Barrier 6***

Barrier 6 would provide abatement for CNE 12 and extends along the right-of-way of the existing alignment joining the shoulder of proposed southbound Route 1, approximately from existing alignment Station 188+00 to proposed alignment Station 201+40. Barrier 6 has a uniform height of 10 feet and a total length of approximately 1,235 feet, resulting in a surface area of 12,350 square feet. The barrier would benefit all 10 impacted areas (sites R71 to R76 and R81-R84). The barrier would also benefit seven additional non-impacted areas, represented by sites R70, R77 to R80, and R85 to R86. This results in a ratio of 726 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. A unit cost of \$45 per square foot was used for this barrier. Figure 7 shows the location of Barrier 6 of *Appendix A*.

#### ***Barrier 7***

This barrier would provide noise abatement for five houses in CNE 16 and extends along the shoulder of northbound Telegraph Road between Belvoir Woods Parkway and Whernside Street. Barrier 7 has a uniform height of 8 feet and an approximate total length of 425 feet, resulting in a surface area of 3,400 square feet. The barrier would benefit all five impacted

areas (sites R111 to R112). This results in a ratio of 680 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. A unit cost of \$45 per square foot was used for this barrier. Barrier 7 is shown on Figure 1 of *Appendix A*.

### ***Barrier 8***

Barrier 8 would provide abatement for CNE 11, and it will be on top of the retaining wall along the depressed segment of the proposed northbound Route 1, approximately from Station 176+00 to 180+00. Barrier 8 has a height of 14 feet and a total length of approximately 400 feet, resulting in a surface area of 5,600 square feet. The barrier would benefit the exterior of the Woodlawn Baptist Church (site R68). This results in a ratio of 5,600 square feet per benefited receiver. This barrier is considered feasible but not reasonable in accordance with VDOT's State Noise Abatement Policy. Barrier 8 is shown on Figure 7 of *Appendix A*.

### ***Barrier 9***

Barrier 9 would provide abatement for CNE 13 and it will be partially located on top of the retaining wall along the proposed elevated portion of southbound Route 1, approximately from Station 186+00 to 192+00. Barrier 9 has a uniform height of 12 feet and a total length of approximately 570 feet, resulting in a surface area of 6,840 square feet. The barrier would benefit the exterior of the Woodlawn Stables (site R94). This results in a ratio of 6,840 square feet per benefited receiver. This barrier is considered feasible but not reasonable in accordance with VDOT's State Noise Abatement Policy. Figure 7 of *Appendix A* shows the location of Barrier 9.

### ***Barrier 10***

Barrier 10 would provide abatement for CNE 14 and extends along the shoulder or proposed right-of-way of northbound Route 1 approximately from Station 188+00 to 196+00. Barrier 12 has a uniform height of 10 feet and an approximate total length of 790 feet, resulting in a surface area of 7,900 square feet. The barrier would benefit all five impacted areas (sites R95 to R98 and R102). The barrier would also benefit three additional non-impacted areas, represented by sites R99 to R101. This results in a ratio of 988 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. A unit cost of \$45 per square foot was used for this barrier. Barrier 10 is shown on Figure 7 of *Appendix A*.

### **Areas without Abatement**

#### ***CNE 3***

The areas of the cemetery represented by sites R19A, R20, and R20A of CNE 3 are predicted to be impacted by traffic noise under the future design year build condition. However, feasible noise abatement is only possible at the area represented by site R19A and a noise barrier would reduce the design year noise levels by 5 dB (or more) at less than fifty percent (50%) of the impacted sites. Therefore, a barrier would not be considered feasible at the area.

#### ***CNE 7***

One site representing an apartment building located in CNE 7 is predicted to be impacted by traffic noise under the future design year build condition at site R54A. However, a noise barrier

would not be able to reduce the design year noise levels by 5 dB (or more) at this location because the barrier cannot be extended to the west due to Backlick Road. Therefore, a barrier would not be considered feasible at the area. Furthermore, there is no outdoor use areas associated with the apartment building.

**Table 5: Evaluated Noise Barrier Parameters - Alternative B**

Barrier	Insertion Loss (IL)	Height (Range) (ft)	Total Length (ft)	Total Area (SF)	Benefitted	Area / Benefitted	Cost Effective	Total Cost* (\$SF)
Barrier 1	1-8	12	830	9,960	9	1,107	Yes	\$448,200
Barrier 2	1-9	12	800	9,600	17	565	Yes	\$432,000
Barrier 3	5-12	12-14	1,250	15,000	27	556	Yes	\$675,000
Barrier 4	3-7	14	590	8,260	6	1,377	Yes	\$371,700
Barrier 5	5-9	12	1,055	12,660	11	1,151	Yes	\$569,700
Barrier 6	4-8	10	1,235	12,350	17	726	Yes	\$555,750
Barrier 7	1-9	8	425	3,400	5	680	Yes	\$153,000
Barrier 8	7	14	400	5,600	1	5,600	No	\$252,000
Barrier 9	3-7	12	570	6,840	1	6,840	No	\$307,800
Barrier 10	5-9	10	790	7,900	8	988	Yes	\$355,500

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

**Table 6: Noise Barrier Analysis and Barrier Insertion Loss - Alternative B**

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	59	59	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 2	5	58	58	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 3	5	57	57	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 4	4	58	58	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 5	2	58	59	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 6	3	55	56	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 7	4	53	54	55	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 8 <sup>3</sup>	2	61	62	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CNE 2	R 9	2	57	57	60	60	1 <sup>+</sup>	59	1	59	1	59	2 <sup>+</sup>	58	2	58	2	58	2
	R 10	2	54	54	57	56	1	55	2	54	3	53	4	53	4	53	5 <sup>+</sup>	52	5
	R 11 <sup>3</sup>	2	61	62	63	63	1 <sup>+</sup>	63	1 <sup>+</sup>	61	3 <sup>+</sup>	60	3	59	4	59	4	59	5 <sup>+</sup>
	R 12 <sup>1</sup>	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 13 <sup>3</sup>	4	63	63	<b>70</b>	65	5	64	6	62	8	60	10	60	11 <sup>+</sup>	59	11	59	11
	R 14	1	57	58	64	60	4	59	5	59	5	58	6	58	6	57	6 <sup>+</sup>	57	7
	R 15 <sup>3</sup>	4	60	61	<b>67</b>	63	4	62	4 <sup>+</sup>	61	6	61	6	61	6	60	6 <sup>+</sup>	60	7
	R 16	1	57	58	62	60	1 <sup>+</sup>	58	3 <sup>+</sup>	58	4	58	4	57	4 <sup>+</sup>	57	5	57	5
R 17 <sup>3</sup>	2	60	61	<b>66</b>	63	3	62	3 <sup>+</sup>	62	4	61	4 <sup>+</sup>	61	4 <sup>+</sup>	61	4 <sup>+</sup>	61	4 <sup>+</sup>	
R 18 <sup>3</sup>	2	63	63	65	64	1	64	1	64	2 <sup>+</sup>	64	2 <sup>+</sup>	64	2 <sup>+</sup>	64	2 <sup>+</sup>	63	2	
CNE 3	R 19	1	65	65	65	62	3	61	4	61	5 <sup>+</sup>	60	5	60	5	60	6 <sup>+</sup>	60	6 <sup>+</sup>
	R 19A	1	<b>66</b>	<b>66</b>	<b>66</b>	63	4 <sup>+</sup>	62	5 <sup>+</sup>	61	5	60	6	60	6	60	7 <sup>+</sup>	60	7 <sup>+</sup>
	R 20	1	64	64	<b>66</b>	65	1	64	1 <sup>+</sup>	64	2	64	2	64	2	64	2	64	2
	R 20A	1	64	64	<b>66</b>	65	1	64	1 <sup>+</sup>	64	2	64	2	64	2	64	2	64	2
	R 21	1	61	61	63	62	0 <sup>+</sup>	62	1	62	1	62	1	62	1	62	1	62	1
	R 21A	1	61	62	63	63	1 <sup>+</sup>	63	1 <sup>+</sup>	62	1	62	1	62	1	62	1	62	1
	R 21B <sup>Ext</sup> Int	1	67 42	68 43	69 44	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CNE 4	R 22 <sup>3</sup>	4	59	60	61	61	0	61	0	61	1 <sup>+</sup>	61	1 <sup>+</sup>	61	1 <sup>+</sup>	61	1 <sup>+</sup>	61	1 <sup>+</sup>
	R 23 <sup>3</sup>	4	61	61	64	63	1	63	1	63	1	63	1	63	1	63	1	62	1 <sup>+</sup>
	R 24 <sup>3</sup>	2	65	65	<b>68</b>	66	2	65	3	65	4 <sup>+</sup>	64	4	64	4	64	4	64	4
	R 25 <sup>3</sup>	2	58	58	61	55	6	54	7	53	8	52	9	51	9 <sup>+</sup>	51	10	51	10
	R 26 <sup>3</sup>	1	60	60	63	57	6	56	7	55	8	54	9	54	9	53	9 <sup>+</sup>	53	10
	R 27	3	59	59	61	58	3	56	6 <sup>+</sup>	54	7	54	8 <sup>+</sup>	53	8	53	9 <sup>+</sup>	52	9
	R 28	1	56	56	58	54	3 <sup>+</sup>	53	5	50	7 <sup>+</sup>	50	8	49	9	48	9 <sup>+</sup>	48	10
	R 29 <sup>3</sup>	3	63	63	64	59	5	59	6 <sup>+</sup>	56	9 <sup>+</sup>	55	9	54	10	54	11 <sup>+</sup>	54	11 <sup>+</sup>
	R 30	2	62	62	65	60	5	59	6	58	7	58	7	57	8	57	8	57	8
	R 31 <sup>3</sup>	4	<b>67</b>	<b>67</b>	<b>70</b>	64	6	63	7	62	8	62	8	61	8 <sup>+</sup>	61	9	61	9
R 32 <sup>3</sup>	1	<b>66</b>	<b>66</b>	<b>70</b>	66	3 <sup>+</sup>	66	4	65	5	65	5	65	5	64	5 <sup>+</sup>	64	5 <sup>+</sup>	

Notes:

- 1 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- 2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.
- 3 - Receptor is located on a second story deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.
- Meets feasibility criteria and noise reduction design goal.

**Table 6: Noise Barrier Analysis and Barrier Insertion Loss - Alternative B (Cont'd)**

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 5	R 33 <sup>3</sup>	2	65	65	<b>69</b>	65	4	64	5	61	8	60	9	59	10	59	10	58	11
	R 34	4	56	55	58	54	4	51	8 <sup>+</sup>	49	9	49	10 <sup>+</sup>	48	11 <sup>+</sup>	47	12 <sup>+</sup>	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	49	9	47	10 <sup>+</sup>	46	12	45	13
	R 37 <sup>1</sup>	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 38 <sup>3</sup>	2	65	65	<b>67</b>	61	6	57	10	55	12	54	14 <sup>+</sup>	52	15	51	16	50	17
	R 39 <sup>3</sup>	4	56	56	58	53	5	53	6 <sup>+</sup>	49	9	48	10	46	12	45	13	45	13
	R 40	4	<b>67</b>	<b>67</b>	<b>67</b>	64	3	59	7 <sup>+</sup>	58	9	56	10 <sup>+</sup>	56	11	55	12	54	12 <sup>+</sup>
	R 41 <sup>3</sup>	2	<b>69</b>	<b>69</b>	<b>71</b>	67	3 <sup>+</sup>	66	5	65	5 <sup>+</sup>	62	8 <sup>+</sup>	60	10 <sup>+</sup>	59	11 <sup>+</sup>	59	12
	R 42 <sup>3</sup>	2	<b>67</b>	<b>67</b>	<b>69</b>	66	3	65	4	64	5	62	8 <sup>+</sup>	60	9	59	10	59	10
R 43 <sup>3</sup>	2	65	65	<b>67</b>	64	3	63	4	63	4	60	7	59	8	59	8	59	9 <sup>+</sup>	
R 44	1	64	64	<b>66</b>	63	3	63	3	62	4	61	5	60	6	60	6	60	6	
R 45 <sup>1</sup>	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 6	R 46	2	<b>67</b>	<b>67</b>	<b>69</b>	67	2	67	2	66	3	66	3	66	3	66	3	66	3
	R 47 <sup>1</sup>	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	R 48	2	<b>68</b>	<b>68</b>	<b>71</b>	67	3 <sup>+</sup>	66	4 <sup>+</sup>	65	6	64	7	63	7 <sup>+</sup>	63	8	63	8
	R 49	2	65	65	<b>67</b>	63	4	63	5 <sup>+</sup>	62	5	60	7	60	8 <sup>+</sup>	59	8	59	8
	R 50	2	61	61	64	61	3	61	3	60	4	59	5	59	5	59	5	59	5
CNE 7	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	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 8	R 55 <sup>Ext</sup> / <sub>Int</sub>	1	63	63	64	--	--	--	--	--	--	--	--	--	--	--	--	--	
			38	38	39	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 9	R 56 <sup>Ext</sup> / <sub>Int</sub>	1	61	61	59	--	--	--	--	--	--	--	--	--	--	--	--	--	
			51	51	49	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 10	R 57	1	60	60	<b>69</b>	63	6	63	6	60	9	59	10	59	11 <sup>+</sup>	58	11	58	12 <sup>+</sup>
	R 58	1	59	60	<b>65</b>	62	4 <sup>+</sup>	62	4 <sup>+</sup>	61	5 <sup>+</sup>	60	5	60	5	60	6 <sup>+</sup>	60	6 <sup>+</sup>
	R 59	1	59	59	<b>65</b>	61	4	61	5 <sup>+</sup>	59	6	59	6	59	7 <sup>+</sup>	58	7	58	7
	R 60	1	59	59	<b>66</b>	61	5	61	5	59	7	58	8	58	8	57	9	57	9
	R 61	1	58	58	<b>66</b>	62	5 <sup>+</sup>	61	6 <sup>+</sup>	60	7 <sup>+</sup>	58	8	57	9	57	10 <sup>+</sup>	57	10 <sup>+</sup>
	R 62	1	58	58	<b>67</b>	62	5	62	6 <sup>+</sup>	60	7	58	9	58	9	57	10	57	11 <sup>+</sup>
	R 63	1	57	57	63	59	4	59	4	57	5 <sup>+</sup>	57	6	57	6	57	6	56	6 <sup>+</sup>
	R 64	1	57	57	63	59	4	59	4	57	6	57	6	56	7	56	7	56	7
	R 65	1	56	57	63	59	4	59	4	58	6 <sup>+</sup>	57	7 <sup>+</sup>	56	7	56	8 <sup>+</sup>	55	8
	R 66	1	56	56	64	60	4	60	4	58	6	57	7	56	7 <sup>+</sup>	56	8	55	8 <sup>+</sup>
R 67	1	56	56	65	61	4	61	4	60	5	57	7 <sup>+</sup>	57	8	56	8 <sup>+</sup>	56	9	

Notes:

- 1 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- 2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.
- 3 - Receptor is located on a second story deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.
- Meets feasibility criteria and noise reduction design goal.

**Table 6: Noise Barrier Analysis and Barrier Insertion Loss - Alternative B (Cont'd)**

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 11	R 68A <small>Ext Int</small>	1	54	54	67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			35 <sup>2</sup>	35 <sup>2</sup>	35 <sup>2</sup>															
	R 68			57	57	<b>68</b>	63	5	63	6 <sup>+</sup>	62	6	62	7 <sup>+</sup>	61	7	61	7	61	7
	R 69 <small>Ext Int</small>		64	64	54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
35 <sup>2</sup>		35 <sup>2</sup>	35 <sup>2</sup>																	
CNE 12	R 70	1	<b>72</b>	<b>72</b>	64	58	6	57	7	56	8	55	9	54	10	53	11	52	11 <sup>+</sup>	
	R 71	1	<b>71</b>	<b>71</b>	<b>66</b>	59	6 <sup>+</sup>	58	8	57	9	56	10	55	10 <sup>+</sup>	55	11	54	12	
	R 72	1	<b>70</b>	<b>70</b>	<b>67</b>	60	6 <sup>+</sup>	59	8	58	9	57	10	56	11	55	11 <sup>+</sup>	55	12	
	R 73	1	<b>69</b>	<b>69</b>	<b>68</b>	62	6	60	8	59	9	58	10	57	11	56	12	56	12	
	R 74	1	<b>69</b>	<b>69</b>	<b>70</b>	64	6	63	7	60	9 <sup>+</sup>	59	11	58	11 <sup>+</sup>	57	12 <sup>+</sup>	57	13	
	R 75	1	<b>69</b>	<b>69</b>	<b>71</b>	67	4	65	5 <sup>+</sup>	63	8	61	10	60	11	59	11 <sup>+</sup>	59	12	
	R 76	1	<b>69</b>	<b>69</b>	<b>71</b>	68	3	66	5	64	7	62	9	61	11 <sup>+</sup>	60	12 <sup>+</sup>	59	12	
	R 77	1	<b>66</b>	<b>66</b>	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	56	6 <sup>+</sup>	56	7	55	8	54	9	54	9	
	R 79	1	65	65	63	58	5	58	5	57	6	56	7	55	8	55	8	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	<b>66</b>	61	5	60	5 <sup>+</sup>	59	6 <sup>+</sup>	57	8 <sup>+</sup>	57	9	56	10	55	10 <sup>+</sup>	
	R 82	1	64	64	<b>67</b>	62	5	61	5 <sup>+</sup>	61	6	58	9	57	9 <sup>+</sup>	57	10	56	10 <sup>+</sup>	
	R 83	1	64	64	<b>67</b>	63	4	62	5	62	5	59	8	58	9	58	9	57	10	
	R 84	1	64	64	<b>67</b>	64	4 <sup>+</sup>	63	4	62	5	60	7	59	8	59	8	59	9 <sup>+</sup>	
	R 85	1	62	62	60	56	4	56	5 <sup>+</sup>	55	5	54	6	54	7 <sup>+</sup>	53	7	53	8 <sup>+</sup>	
	R 86	1	62	62	61	56	4 <sup>+</sup>	56	5	55	5 <sup>+</sup>	55	6	54	7	54	7	53	8	
	R 87	1	61	61	61	57	4	56	4 <sup>+</sup>	56	5	55	6	54	7	54	7	53	7 <sup>+</sup>	
	R 88	1	61	61	61	57	4	57	4	56	5	55	6	54	7	54	7	53	8	
	R 89	1	61	61	62	59	4 <sup>+</sup>	58	4	58	5 <sup>+</sup>	56	7 <sup>+</sup>	55	7	55	8 <sup>+</sup>	54	8	
R 90	1	61	61	63	59	4	59	4	58	5	56	7	56	7	55	8	55	8		
R 91	1	62	62	64	60	4	60	4	59	4 <sup>+</sup>	57	6 <sup>+</sup>	57	7	56	7 <sup>+</sup>	56	8		
R 92	1	62	62	64	60	3 <sup>+</sup>	60	4	59	5	58	6	58	6	57	6 <sup>+</sup>	57	7		
CNE 13	R 93	1	59	59	63	62	2 <sup>+</sup>	60	3	60	3	60	3	60	3	60	3	60	4 <sup>+</sup>	
	R 94	1	62	61	<b>69</b>	65	4	64	6 <sup>+</sup>	62	7	61	8	61	8	61	8	60	9	
CNE 14	R 95	1	57	57	<b>66</b>	60	6	59	7	58	8	58	8	57	9	57	9	57	10 <sup>+</sup>	
	R 96	1	58	58	<b>69</b>	61	7 <sup>+</sup>	60	9	59	10	58	10 <sup>+</sup>	58	11	58	11	57	11 <sup>+</sup>	
	R 97	1	59	59	<b>70</b>	62	8	60	9 <sup>+</sup>	60	10	59	11	59	11	58	11 <sup>+</sup>	58	12	
	R 98	1	60	60	<b>70</b>	62	7 <sup>+</sup>	61	9	60	9 <sup>+</sup>	60	10	60	10	59	10 <sup>+</sup>	59	11	
	R 99	1	56	56	64	59	5	58	6	58	6	57	6 <sup>+</sup>	57	7	57	7	57	7	
	R 100	1	57	56	65	60	5	59	6	58	7	57	7 <sup>+</sup>	57	7 <sup>+</sup>	57	8	57	8	
	R 101	1	57	57	65	61	5 <sup>+</sup>	60	6 <sup>+</sup>	59	7 <sup>+</sup>	58	7	58	7	58	8 <sup>+</sup>	58	8 <sup>+</sup>	
R 102	1	58	58	<b>66</b>	62	4	60	5 <sup>+</sup>	60	6	59	6 <sup>+</sup>	59	6 <sup>+</sup>	59	7	59	7		

Notes:

- 1 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- 2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.
- 3 - Receptor is located on a second story deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.

**Bold** - Indicates noise impacts.

  - Meets feasibility criteria and noise reduction design goal.



**Table 6: Noise Barrier Analysis and Barrier Insertion Loss - Alternative B (Cont'd)**

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 15	R 103	1	65	65	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 104 <sup>3</sup>	1	65	65	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 105 <sup>3</sup>	1	63	63	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 106 <sup>3</sup>	1	62	62	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 107 <sup>3</sup>	1	61	61	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 108 <sup>3</sup>	2	62	62	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 109 <sup>3</sup>	1	63	63	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 110 <sup>3</sup>	2	65	65	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 16	R 111	2	<b>68</b>	<b>68</b>	<b>68</b>	59	9	57	11	56	12	56	13 <sup>+</sup>	55	13	54	14	54	14	
	R 112	3	<b>68</b>	<b>68</b>	<b>68</b>	62	6	60	8	59	9	58	10	57	11	57	11	57	11	
	R 113	2	63	63	64	63	1	62	1 <sup>+</sup>	62	2	62	2	62	2	62	2	62	2	

Notes:

- 1 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- 2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.
- 3 - Receptor is located on a second story deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.
- Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.
- Bold** - Indicates noise impacts.
- Meets feasibility criteria and noise reduction design goal.

## **Alternative C**

Noise barriers were evaluated in areas predicted to experience traffic noise impacts in the build condition east of Belvoir Road. Four noise barriers were evaluated and two of them were determined to be feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. Figures in *Appendix A* show barrier locations. *Table 7* shows an overview of the evaluated barrier parameters and *Table 8* lists details of the barrier analysis including barrier insertion losses for the different CNEs. Barriers will be re-evaluated and further refined during final design. The following discussion presents potential mitigation measures for each of the impacted noise sensitive land uses:

### ***Barriers 11 and 12***

Barriers 11 and 12 would work as a system and would provide abatement for CNE 17 and CNE 11. These two barriers extend along the right-of-way of proposed northbound Route 1 approximately from Station 169+00 to 181+00. Barrier 11 has a height of 14 feet and an approximate total length of 565 feet, resulting in a surface area of 7,910 square feet. Barrier 12 has a height of 16 feet and an approximate total length of 565 feet, resulting in a surface area of 9,040 square feet. The barrier system would benefit all seven impacted areas (sites R69 and R114 to R119) and three non impacted areas (sites R120 to R122). This results in a ratio of 1,695 square feet per benefited receiver. This barrier is considered feasible but not reasonable in accordance with VDOT's State Noise Abatement Policy. Figures 8 and 9 of *Appendix A* show the location of Barriers 11 and 12.

### ***Barrier 13***

Barrier 13 would provide abatement for CNE 18 and CNE 13. This barrier will be along the shoulder of northbound Route 1 approximately from Station 187+00 to 196+00. Barrier 13 has a uniform height of 10 feet and an approximate total length of 920 feet, resulting in a surface area of 9,200 square feet. The barrier would benefit all five impacted areas (sites R123 to R127). The barrier would also benefit four additional non-impacted areas, represented by sites R128 to R130 as well as site R94 in CNE 13. This results in a ratio of 1,022 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable in accordance with VDOT's State Noise Abatement Policy. A unit cost of \$45 per square foot was used for this barrier. Barrier 13 is shown on Figure 9 of *Appendix A*.

### ***Barrier 14***

Barrier 14 would provide abatement for CNE 12 and extends along the right-of-way of the widened southbound Route 1, approximately from Station 188+00 to 200+50. Barrier 14 has a uniform height of 12 feet and a total length of approximately 1,225 feet, resulting in a surface area of 14,700 square feet. The barrier would benefit 16 impacted areas (sites R70 to R85) and seven additional non-impacted areas (sites R86 to R92). This results in a ratio of 639 square feet per benefited receiver; therefore, this barrier is considered feasible and reasonable. A unit cost of \$45 per square foot was used for this barrier. Barrier 14 is shown on Figure 9 of *Appendix A*.

**Areas without Abatement**

**CNE 9**

The interior of the Woodlawn Quaker Meetinghouse located in CNE 9 is predicted to be impacted by traffic noise under the future design year build condition at site R56. However, a noise barrier would not be able to reduce the design year noise levels by 5 dB (or more) at this location. Therefore, a barrier would not be considered feasible at the area.

**Table 7: Evaluated Noise Barrier Parameters - Alternative C**

Barrier	Insertion Loss (IL)	Height (Range) (ft)	Total Length (ft)	Total Area (SF)	Benefitted	Area / Benefitted	Cost Effective	Total Cost* (\$SF)
Barriers 11 & 12	5-9	14-16	1,130	16,950	10	1,695	No	\$762,750
Barrier 13	2-8	10	920	9,200	9	1,022	Yes	\$414,000
Barrier 14	5-11	12	1,225	14,700	23	639	Yes	\$661,500

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

**Table 8: Noise Barrier Analysis and Barrier Insertion Loss - Alternative C**

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 9	R 56 <small>Ext Int</small>	1	61	61	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
			<b>51</b>	<b>51</b>	<b>55</b>	52	3	52	3	51	4	50	5	50	5	50	5	50	5	50	5
CNE 11	R 68A <small>Ext Int</small>	1	54	54	55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
			35 <sup>2</sup>	35 <sup>2</sup>	35 <sup>2</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 68		57	57	58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 69 <small>Ext Int</small>		64	64	<b>66</b>	61	5	61	5	61	5	60	6	<b>59</b>	<b>7</b>	58	8	57	9	57	9
CNE 12	R 70	1	<b>71</b>	<b>71</b>	<b>73</b>	64	10 <sup>+</sup>	62	11	<b>62</b>	<b>11</b>	62	11	58	15	58	16 <sup>+</sup>	58	16 <sup>+</sup>		
	R 71	1	<b>71</b>	<b>71</b>	<b>73</b>	64	9	62	11	<b>62</b>	<b>11</b>	62	11	59	14	58	15	58	15		
	R 72	1	<b>70</b>	<b>70</b>	<b>72</b>	66	6	63	9	<b>63</b>	<b>9</b>	63	9	60	13 <sup>+</sup>	59	13	59	13		
	R 73	1	<b>69</b>	<b>69</b>	<b>72</b>	66	6	63	9	<b>63</b>	<b>9</b>	63	9	60	12	59	13	59	13		
	R 74	1	<b>69</b>	<b>69</b>	<b>72</b>	67	6 <sup>+</sup>	63	9	<b>63</b>	<b>9</b>	63	9	60	12	59	13	59	13		
	R 75	1	<b>69</b>	<b>69</b>	<b>72</b>	68	5 <sup>+</sup>	65	8 <sup>+</sup>	<b>65</b>	<b>8<sup>+</sup></b>	65	8 <sup>+</sup>	61	11	60	12	60	12		
	R 76	1	<b>69</b>	<b>69</b>	<b>72</b>	68	5 <sup>+</sup>	67	6 <sup>+</sup>	<b>67</b>	<b>6<sup>+</sup></b>	67	6 <sup>+</sup>	61	12 <sup>+</sup>	60	12	60	12		
	R 77	1	<b>66</b>	<b>66</b>	<b>69</b>	64	5	62	7	<b>62</b>	<b>7</b>	62	7	59	10	58	11	58	11		
	R 78	1	65	65	<b>69</b>	64	5	63	5 <sup>+</sup>	<b>63</b>	<b>5<sup>+</sup></b>	63	5 <sup>+</sup>	58	10 <sup>+</sup>	58	11	58	11		
	R 79	1	65	65	<b>68</b>	63	5	63	5	<b>63</b>	<b>5</b>	63	5	58	11 <sup>+</sup>	57	11	57	11		
	R 80	1	64	64	<b>68</b>	63	5	62	6	<b>62</b>	<b>6</b>	62	6	58	10	57	11	57	11		
	R 81	1	64	64	<b>68</b>	63	5	63	5	<b>60</b>	<b>8</b>	59	10 <sup>+</sup>	58	10	57	11	57	12 <sup>+</sup>		
	R 82	1	64	64	<b>68</b>	63	5	63	5	<b>60</b>	<b>8</b>	59	9	58	10	57	11	57	11		
	R 83	1	64	64	<b>68</b>	64	5 <sup>+</sup>	63	5	<b>61</b>	<b>8<sup>+</sup></b>	60	9 <sup>+</sup>	59	10 <sup>+</sup>	58	10	58	11 <sup>+</sup>		
	R 84	1	64	64	<b>69</b>	64	4 <sup>+</sup>	64	5	<b>62</b>	<b>7</b>	60	8 <sup>+</sup>	60	9	59	9 <sup>+</sup>	59	10		
	R 85	1	62	62	<b>66</b>	62	4	62	4	<b>60</b>	<b>6</b>	59	7	59	7	58	8	58	8		
	R 86	1	62	62	65	61	4	61	4	<b>59</b>	<b>6</b>	58	7	57	8	57	8	57	8		
	R 87	1	61	61	65	61	4	61	4	<b>58</b>	<b>7</b>	57	7 <sup>+</sup>	57	8	56	8 <sup>+</sup>	56	9		
	R 88	1	61	61	65	61	4	60	4 <sup>+</sup>	<b>58</b>	<b>7</b>	57	8	56	8 <sup>+</sup>	56	9	55	9 <sup>+</sup>		
	R 89	1	61	61	65	61	4	61	4	<b>58</b>	<b>6<sup>+</sup></b>	57	8	56	8 <sup>+</sup>	56	9	55	9 <sup>+</sup>		
R 90	1	61	61	65	61	4	61	4	<b>59</b>	<b>6</b>	57	7 <sup>+</sup>	57	8	56	8 <sup>+</sup>	56	9			
R 91	1	62	62	65	61	4	61	4	<b>59</b>	<b>6</b>	58	7	57	8	57	8	57	8			
R 92	1	62	62	65	62	3	61	3 <sup>+</sup>	<b>59</b>	<b>5<sup>+</sup></b>	58	6 <sup>+</sup>	58	7	58	7	57	7 <sup>+</sup>			
CNE 13	R 93	1	59	59	60	58	1 <sup>+</sup>	58	2	58	2	58	2	58	2	58	2	58	2		
	R 94	1	62	61	62	59	4 <sup>+</sup>	<b>58</b>	<b>5<sup>+</sup></b>	57	5	57	5	57	6 <sup>+</sup>	56	6	56	6		

Notes:

1 - Receptor is a measurement site does not represent an outdoor use area; however, is representative of nearby outdoor use areas.

2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.

+ - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.

Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.

**Bold** - Indicates noise impacts.

- Meets feasibility criteria and noise reduction design goal.

**Table 8: Noise Barrier Analysis and Barrier Insertion Loss - Alternative C (Cont'd)**

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 17	R 114	1	69	69	69	61	8	61	8	61	8	61	9 <sup>+</sup>	61	9 <sup>+</sup>	61	9 <sup>+</sup>	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 <sup>+</sup>	58	7 <sup>+</sup>	58	7 <sup>+</sup>	57	8 <sup>+</sup>	57	8 <sup>+</sup>	57	8 <sup>+</sup>	57	8 <sup>+</sup>
	R 117	1	64	64	66	60	6	60	6	60	6	59	6 <sup>+</sup>	59	6 <sup>+</sup>	59	6 <sup>+</sup>	59	6 <sup>+</sup>
	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	60	3 <sup>+</sup>	58	4	58	4	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	
CNE 18	R 123	1	66	66	66	61	6 <sup>+</sup>	59	7	58	8	58	9 <sup>+</sup>	57	9	57	10 <sup>+</sup>	56	10
	R 124	1	65	65	68	61	7	60	8	59	9	58	10	58	10	57	11	57	11
	R 125	1	65	64	67	61	6	60	8 <sup>+</sup>	59	8	58	9	58	10 <sup>+</sup>	57	10	57	10
	R 126	1	65	65	68	61	7	60	8	59	9	59	9	58	10	58	10	57	11
	R 127	1	65	65	68	62	6	60	7 <sup>+</sup>	60	8	59	9	59	9	58	9 <sup>+</sup>	58	10
	R 128	1	61	60	63	59	4	58	5	57	6	57	6	57	7 <sup>+</sup>	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	1	61	61	64	60	4	59	5	58	6	58	6	58	6	57	6 <sup>+</sup>	57	7
R 131	1	58	58	60	57	3	56	4	56	5 <sup>+</sup>	55	5	55	5	55	5	54	6	
R 132	1	58	58	61	58	3	57	4	56	5	56	5	56	5	55	5 <sup>+</sup>	55	6	
R 133	1	59	58	61	59	2	58	3	57	4	57	4	56	5	56	5	56	5	

Notes:

1 - Receptor is a measurement site does not represent an outdoor use area; however, is representative of nearby outdoor use areas.

2 - Calculated interior noise has been capped at 35 dB(A) for purpose of analysis.

+ - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.

Int/Ext - Int - calculated interior noise levels, Ext - exterior noise levels.

**Bold** - Indicates noise impacts.

  - Meets feasibility criteria and noise reduction design goal.

## **8.0 Construction Noise Considerations**

Land uses that are sensitive to traffic noise would also be sensitive to construction noise. A method of controlling construction noise is to establish the maximum level of noise that construction operations can generate. In view of this, VDOT has developed and FHWA has approved a specification that establishes construction noise limits. This specification can be found in VDOT's 2007 *Road and Bridge Specifications*, Section 107.16(b.3), "Noise". The contractor will be required to conform to this specification to reduce the impact of construction noise on the surrounding community.

## **9.0 Public Involvement Process**

### **9.1 Public Involvement Efforts**

For noise barriers determined to be feasible and reasonable, the affected public will be given an opportunity to decide whether they are in favor of construction of the noise barrier. A final determination as to the construction of barriers will be made after the public hearing process. Before final decisions and approvals can be made to construct a noise barrier, a final design noise analysis will be performed. For barriers that are determined to be feasible and reasonable, input from the impacted property owners and renters must be obtained through citizen surveys. Of the votes tallied, 50% or more must be in favor of a proposed noise barrier in order for that barrier to be considered further. Upon completion of the citizen survey, the VDOT Noise Abatement staff will make recommendations to the Chief Engineer for approval. Approved barriers will be incorporated into the road project plans.

### **9.2 Information for Local Government Officials**

FHWA and VDOT policies require that VDOT provides certain information to local officials within whose jurisdiction the highway project is located, to minimize future traffic noise impacts of Type I projects on currently undeveloped lands (Type I projects involve highway improvements with noise analysis). This information must include information on noise-compatible land-use planning, noise impact zones in undeveloped land in the highway project corridor. This section of the report provides that information, as well as information about VDOT's noise abatement program.

#### ***Noise-Compatible Land-Use Planning***

Sections 12.1 and 12.2 of VDOT's 2011 Highway Traffic Noise Impact Analysis Guidance Manual outline VDOT's approach to communication with local officials, and provide information and resources on highway noise and noise-compatible land-use planning. VDOT's intention is to assist local officials in planning the uses of undeveloped land adjacent to highways to minimize the potential impacts of highway traffic noise.

Figures in **Appendix A** show the predicted future traffic noise contours for 66 dBA. These noise contours provide the approximate noise levels at the surrounding areas of the project and they should be used for land use planning purposes and not designing noise barriers.

*Entering the Quiet Zone* is a brochure that provides general information and examples to elected officials, planners, developers, and the general public about the problem of traffic noise and effective responses to it. A link to this brochure on FHWA's website is provided:

[http://www.fhwa.dot.gov/environment/noise/noise\\_compatible\\_planning/federal\\_approach/land\\_use/qz00.cfm](http://www.fhwa.dot.gov/environment/noise/noise_compatible_planning/federal_approach/land_use/qz00.cfm)

A wide variety of administrative strategies may be used to minimize or eliminate potential highway noise impacts, thereby preventing the need or desire for costly noise abatement structures such as noise barriers in future years. There are five broad categories of such strategies:

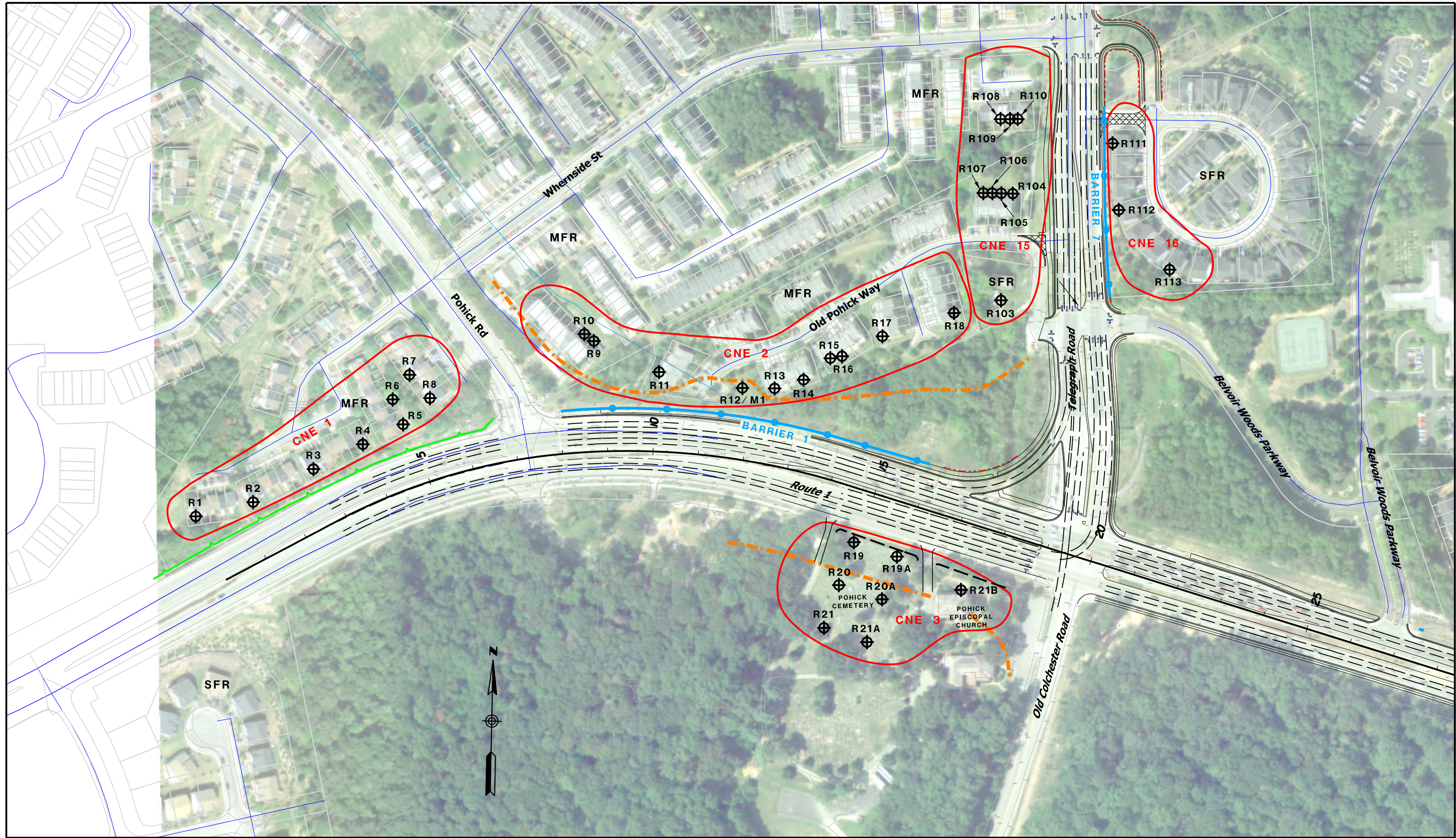
- Zoning, Other legal restrictions (subdivision control, building codes, health codes),
- Municipal ownership or control of the land,
- Financial incentives for compatible development, and
- Educational and advisory services.

*The Audible Landscape: A Manual for Highway and Land Use* is a very well-written and comprehensive guide addressing these noise-compatible land use planning strategies, with significant detailed information. This document is available through FHWA's website, at [http://www.fhwa.dot.gov/environment/noise/noise\\_compatible\\_planning/federal\\_approach/audible\\_landscape/al00.cfm](http://www.fhwa.dot.gov/environment/noise/noise_compatible_planning/federal_approach/audible_landscape/al00.cfm)

# APPENDIX A

## **Noise Receiver and Barrier Locations**

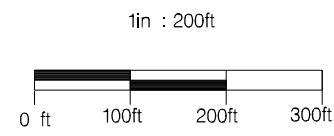




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

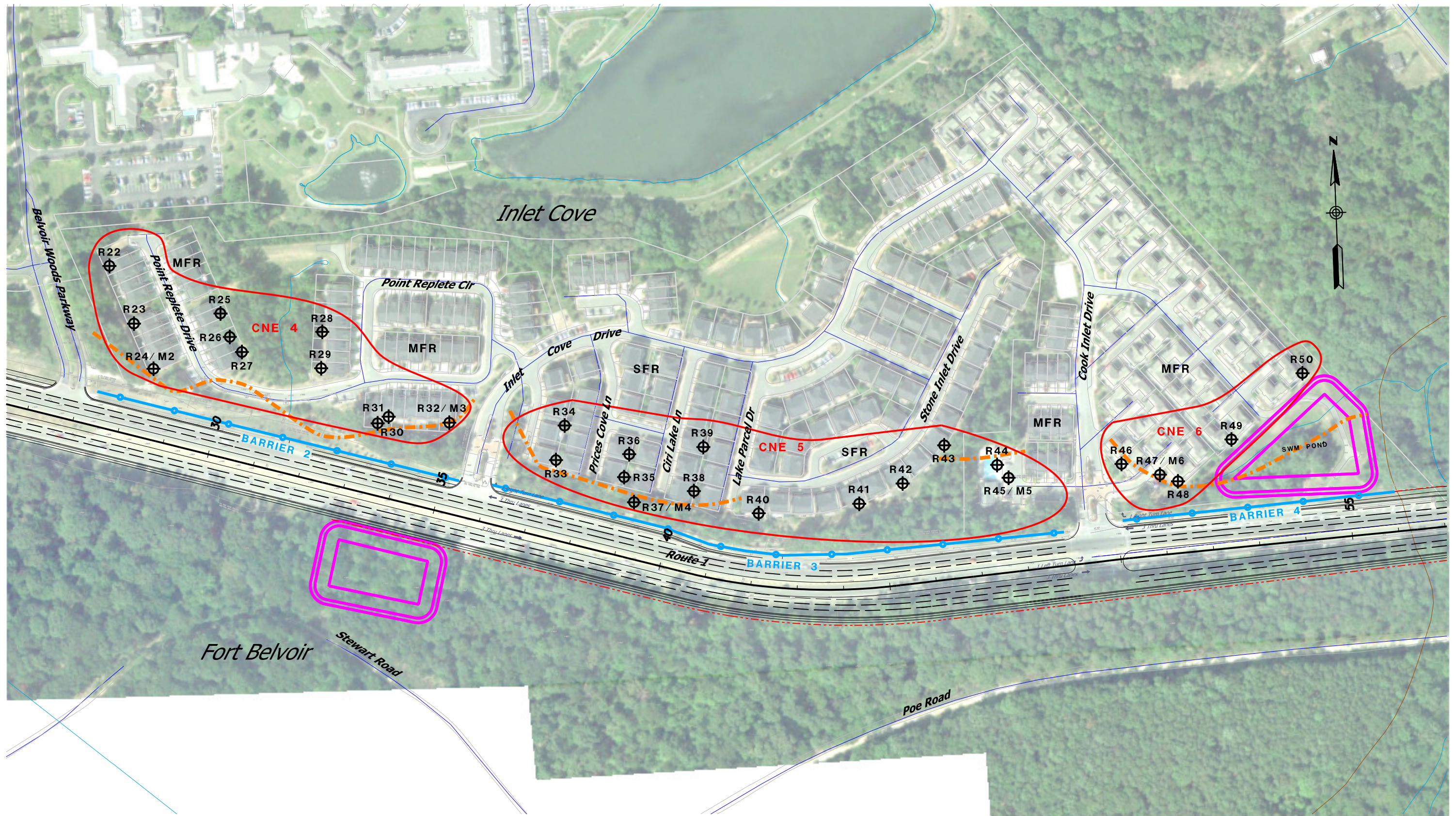


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 1

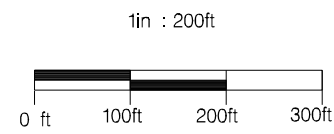




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

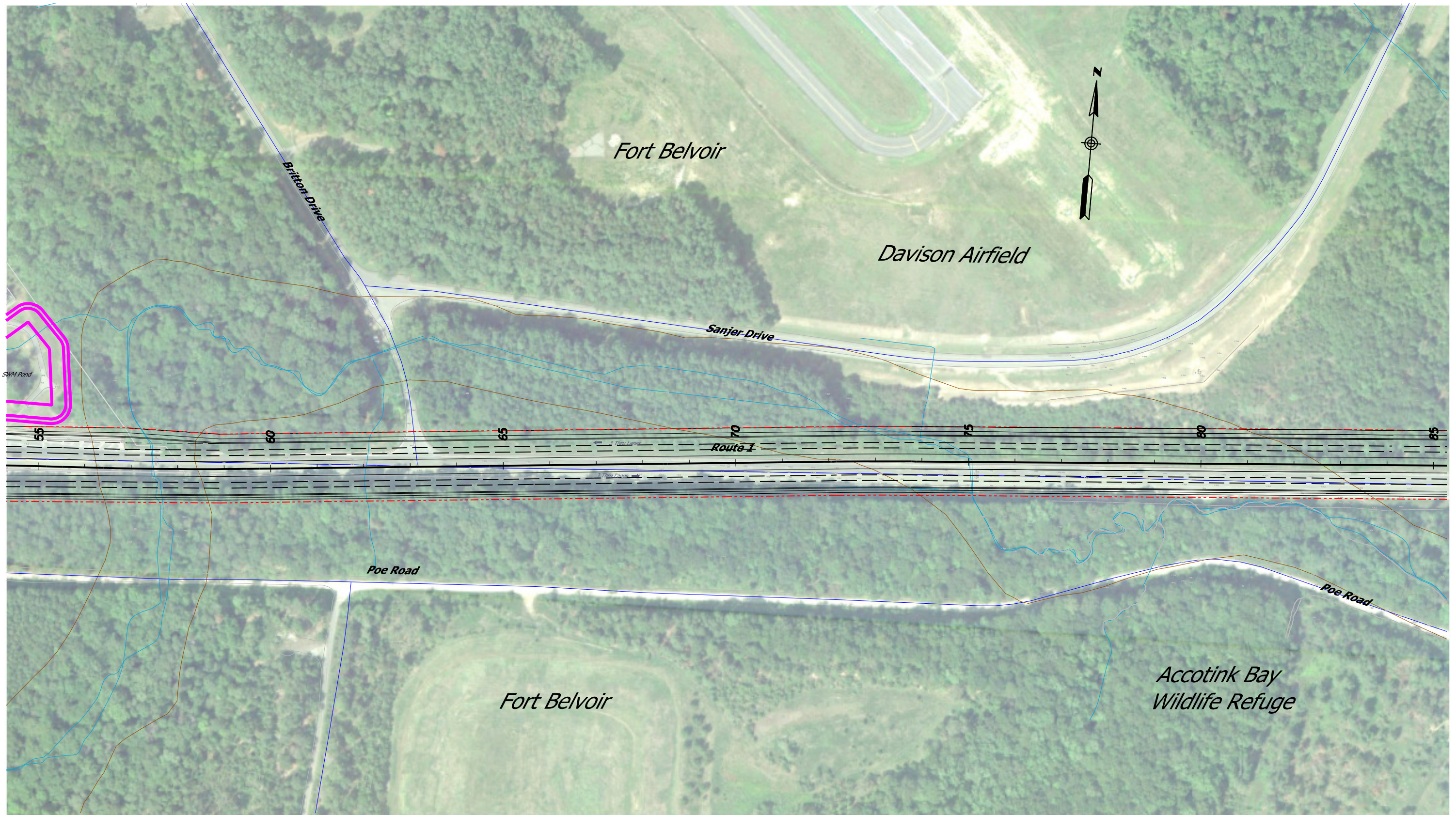


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 2



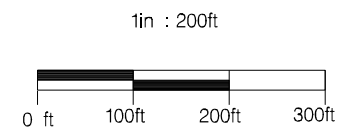


**LEGEND**

- ⊕ R<sub>xx</sub> - RECEIVER SITE
- ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

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

- - SOUNDWALL
- - - - - EXISTING WALL
- - - - - 66 dBA CONTOUR LINE
- - EXISTING SOUNDWALL

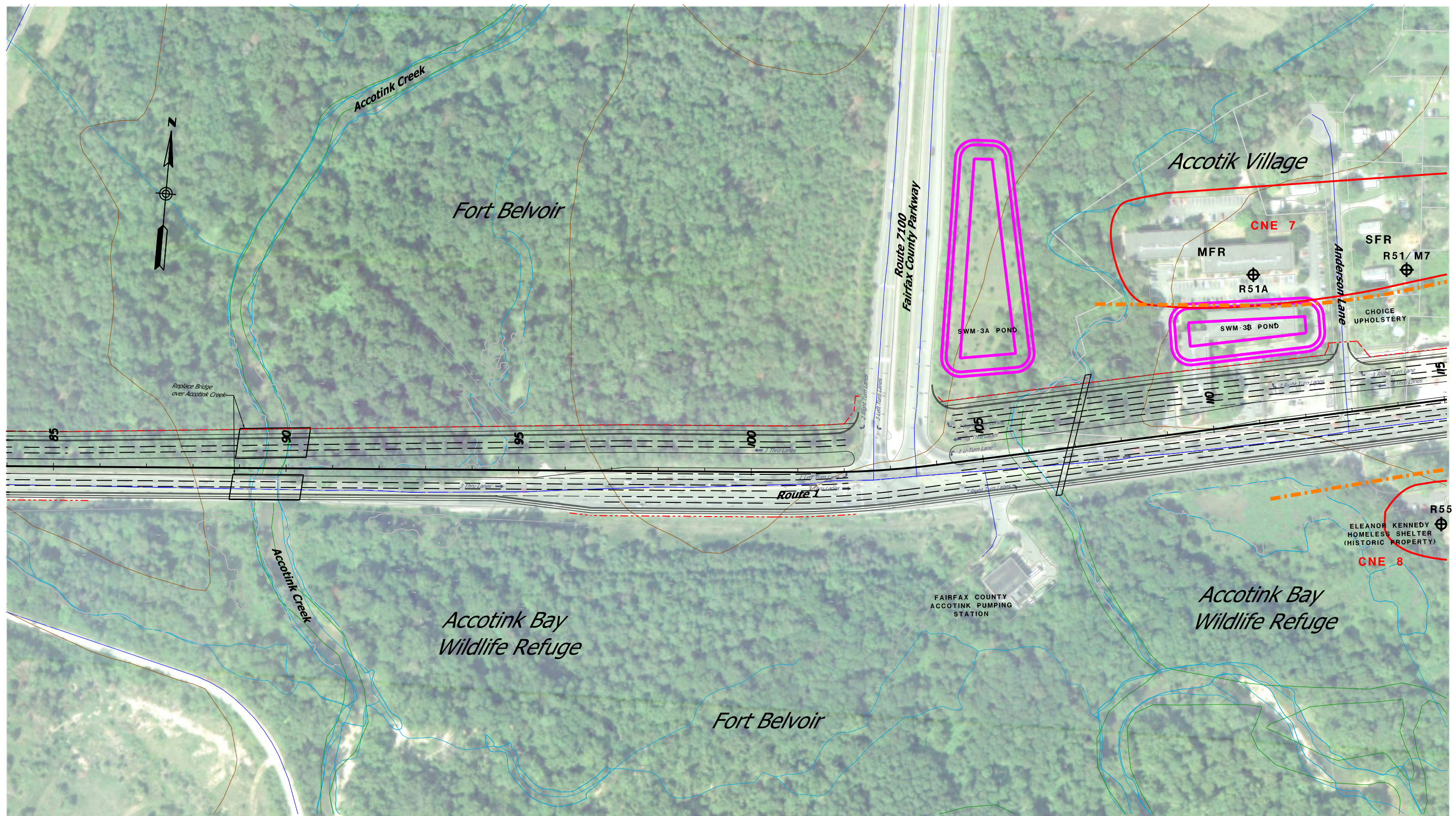


**ROUTE 1/ ALTERNATIVE B  
AT FORT BELVOIR PROJECT  
NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 3

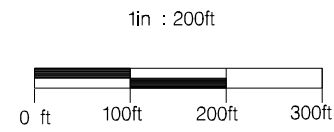




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

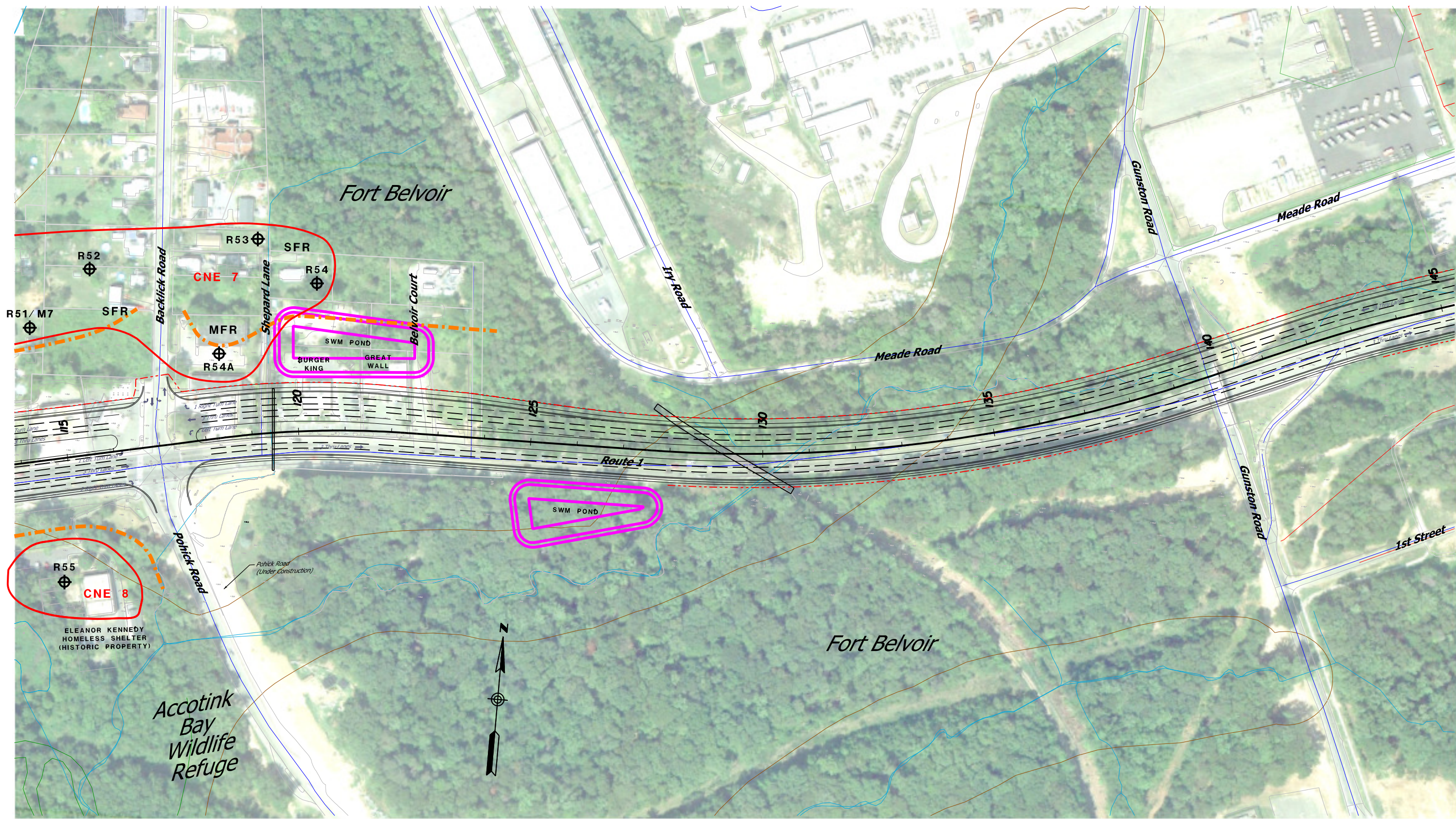


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 4

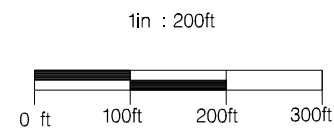




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

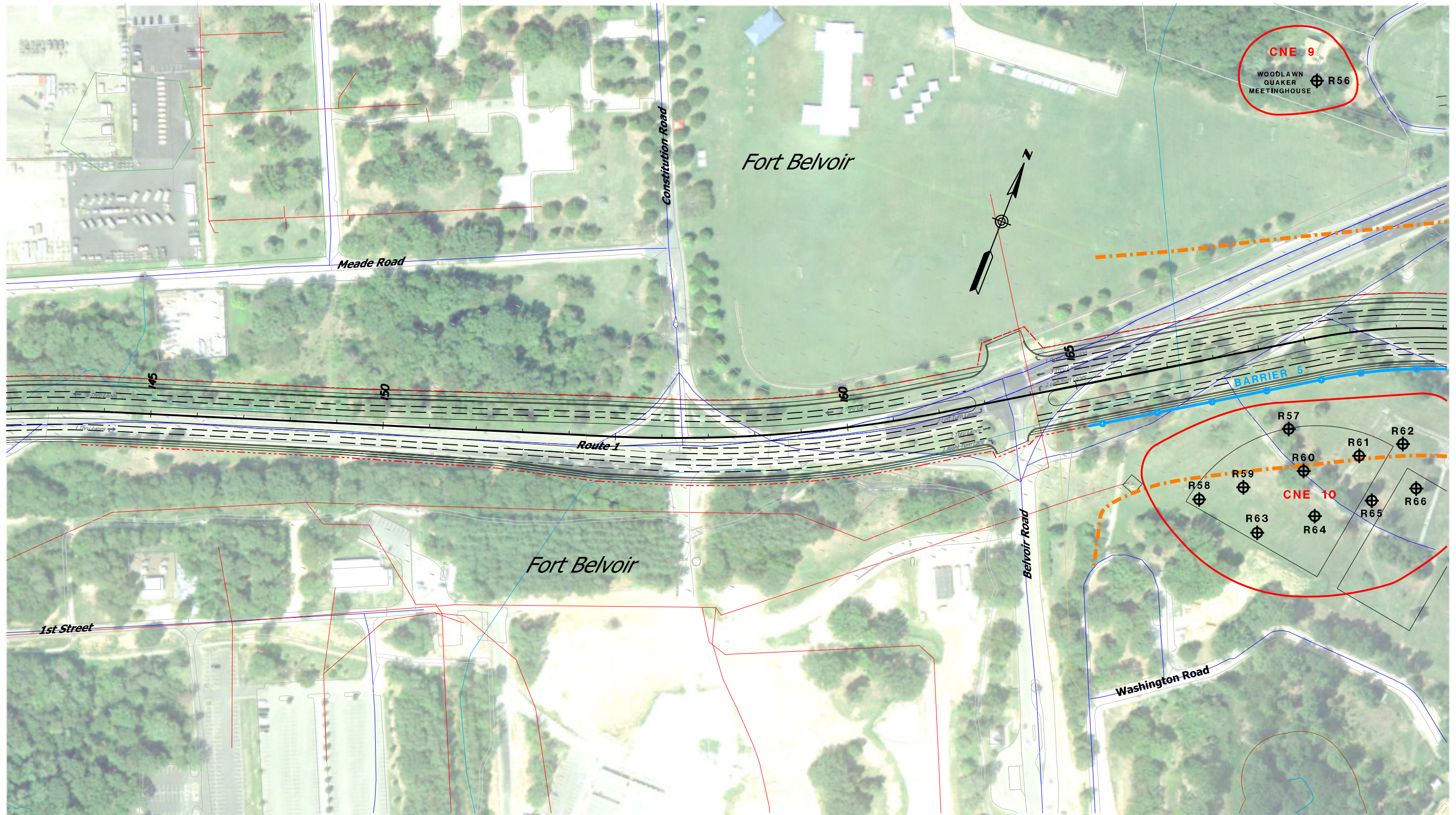


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 5

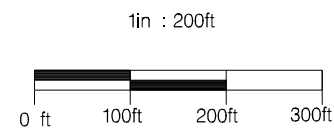




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

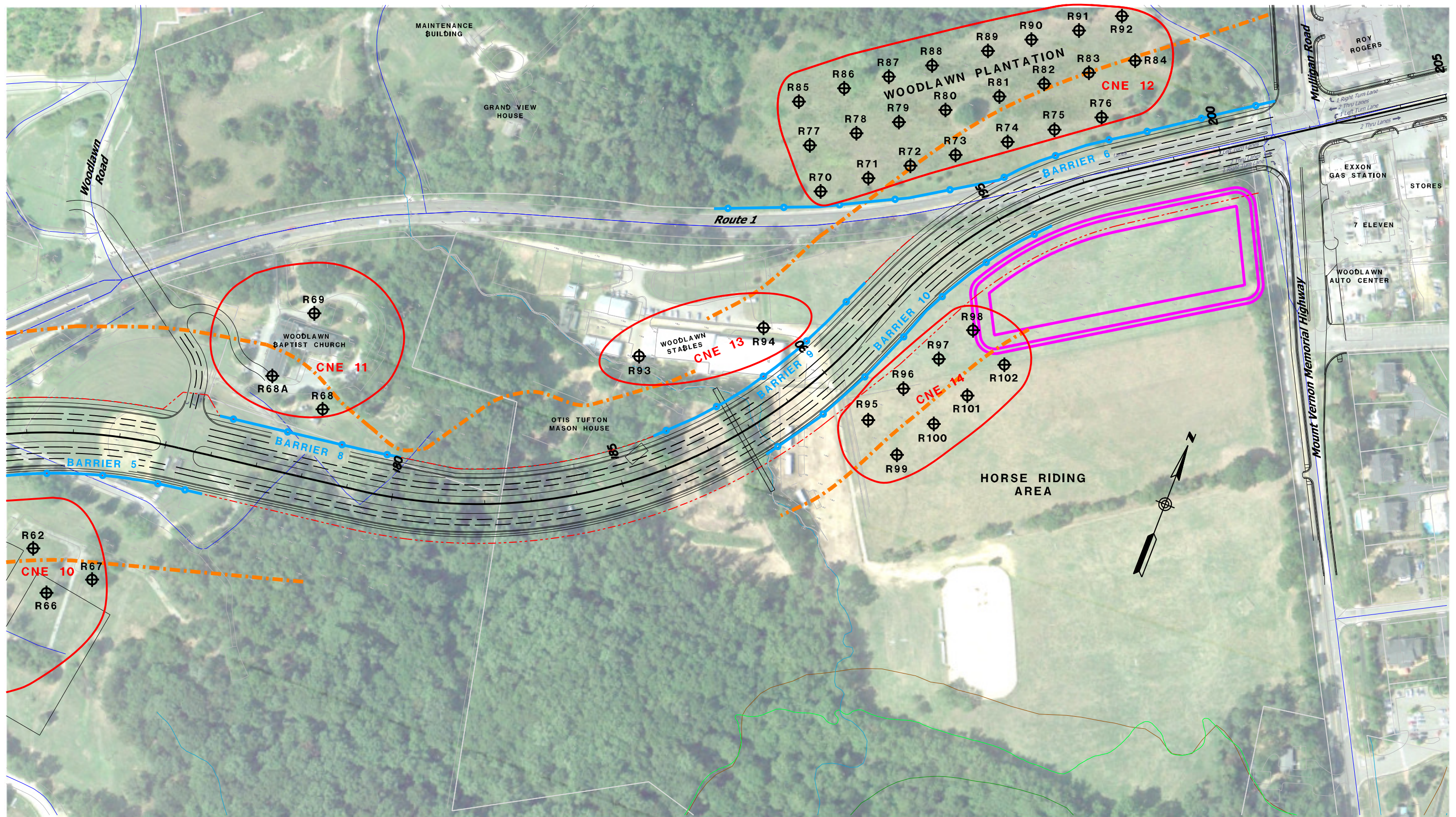


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 6

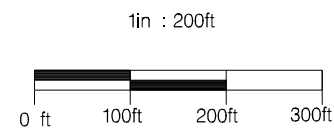




**LEGEND**  
 ⊕ R<sub>xx</sub> - RECEIVER SITE  
 ⊕ M<sub>xx</sub> - NOISE MONITORING LOCATION

SFR - SINGLE FAMILY RESIDENCE  
 MFR - MULTI-FAMILY RESIDENCE  
 COMM - COMMERCIAL  
 ○ - CNE BOUNDARY

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

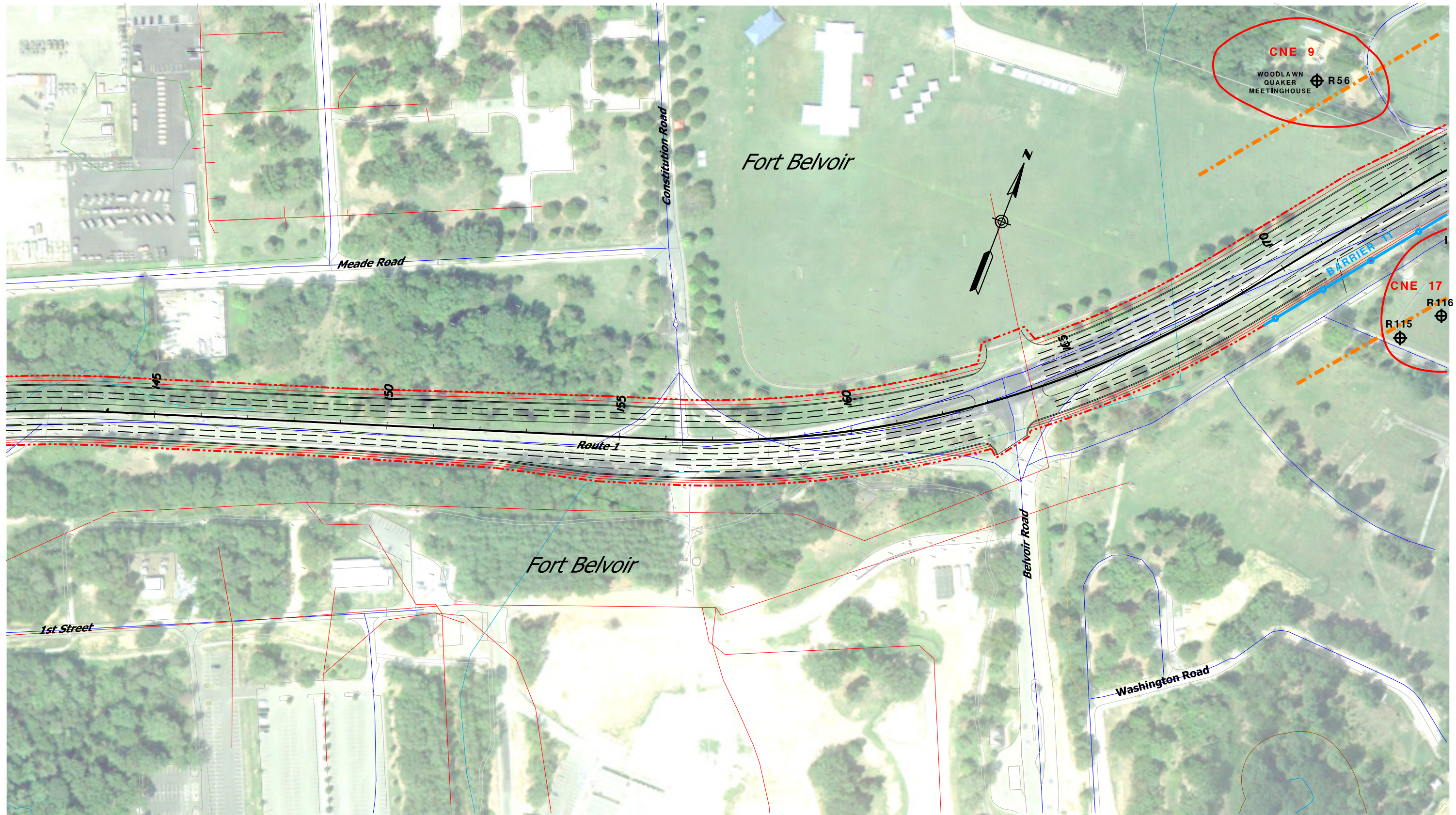


**ROUTE 1/ ALTERNATIVE B  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 7





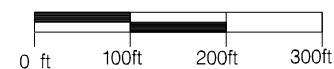
**LEGEND**

⊕ R<sub>xx</sub> - RECEIVER SITE

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

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

1in : 200ft

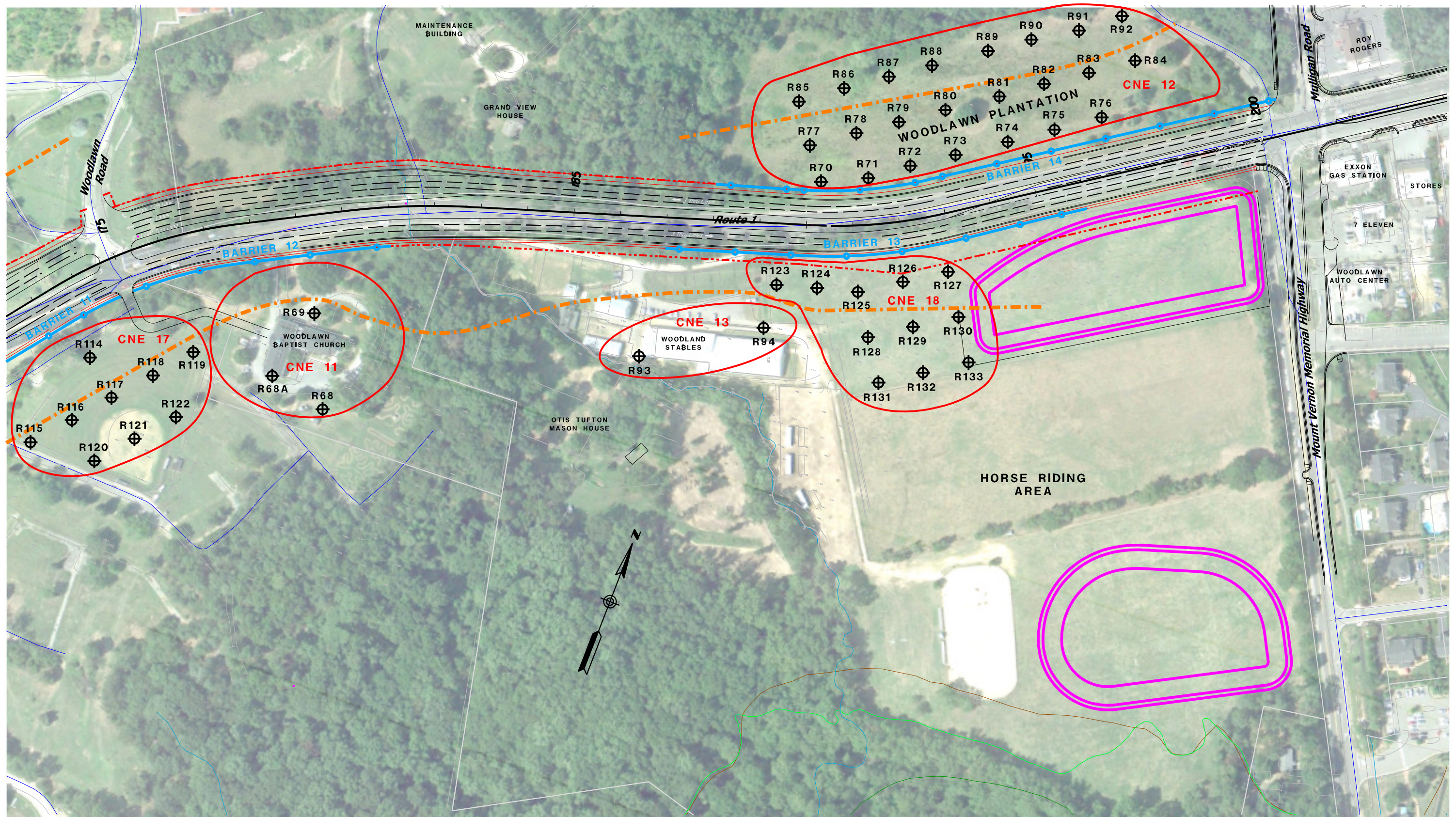


**ROUTE 1/ ALTERNATIVE C  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 8





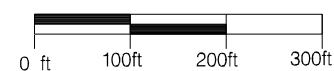
**LEGEND**

⊕ R<sub>xx</sub> - 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 C  
 AT FORT BELVOIR PROJECT  
 NOISE RECEIVER & BARRIER LOCATIONS**

NOVEMBER 21, 2012

FIGURE 9



# APPENDIX B

## **Traffic Data Used in Noise Modeling**

### Traffic Data Used in Noise Modeling

Description of Traffic Lane	Number of Lanes	Total Traffic Volumes	Travel Speeds, mph*	Hourly Volumes by Vehicle Type		
				Cars	Medium Trucks	Heavy Trucks
<i>Hourly Traffic Volumes for Existing Conditions</i>						
Route 1 Northbound Traffic	3	1,417	47	1,353	43	21
Route 1 Southbound Traffic	3	2,666	28	2,461	61	144
<i>Hourly Traffic Volumes for No-Build Conditions</i>						
Route 1 Northbound Traffic	3	1,573	45	1,498	47	28
Route 1 Southbound Traffic	3	2,528	30	2,333	58	137
<i>Hourly Traffic Volumes for Build Conditions</i>						
Route 1 Northbound Traffic	3	1,898	49	1,813	57	28
Route 1 Southbound Traffic	3	3,068	37	2,831	71	166

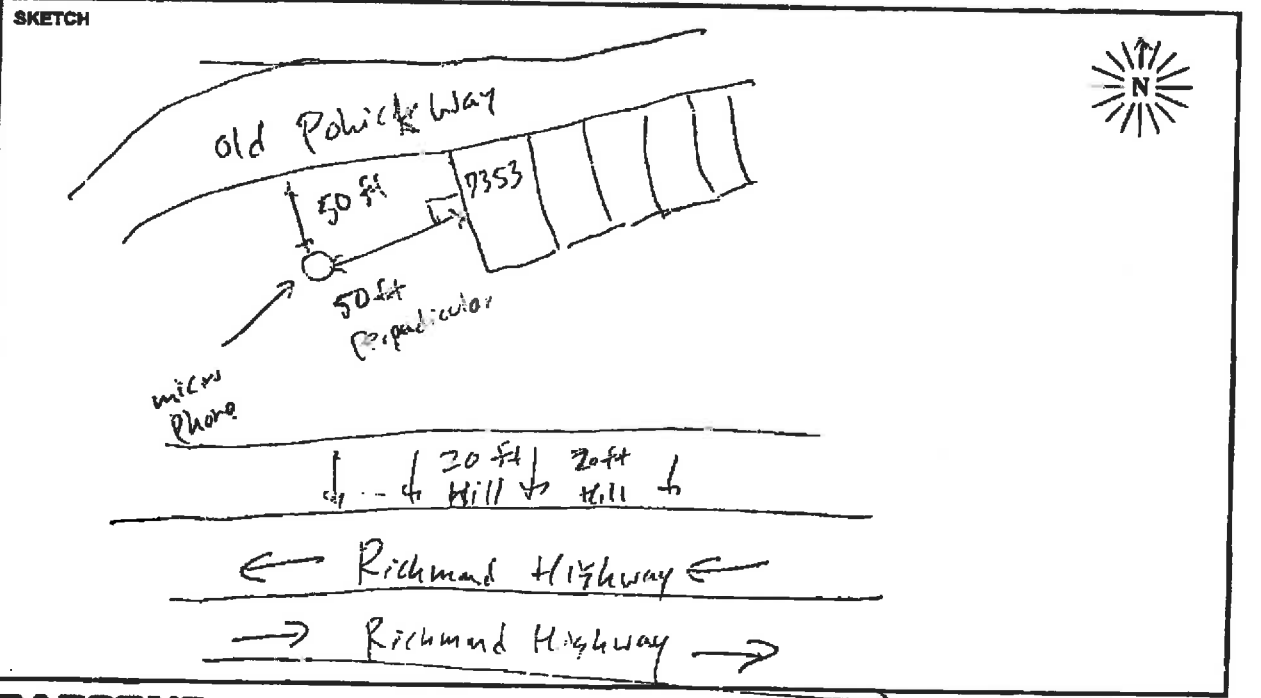
# APPENDIX C

## **Noise Monitoring Data Forms**

## FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/20/2012
MEASUREMENT ADDRESS: 7353 Old Pohick Way		CITY: Fort Belvoir, VA	SITE NO.: 1
SOUND LEVEL METER: <input type="checkbox"/> LD-870 <input checked="" type="checkbox"/> LD-820 <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2800 <input type="checkbox"/> _____		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-900 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-828 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/> _____
SERIAL #: 0638	SERIAL #: 3155	SERIAL #: 511/1938	NOTES:
CALIBRATOR: <input type="checkbox"/> LD CA250 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> _____ S/N 3091		CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 114, 113.9, 6.9, 0950 After 114, 114.9, 6.9, 1030	
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20 - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>n</sub> PERCENTILE VALUES		SYSTEM PWR: <input checked="" type="checkbox"/> BAT <input type="checkbox"/> AC (observations at start of measurement) TEMP: 60 °F R.H.: _____ % WIND SPEED: 3 MPH TOWARD (DIR): NW SKIES: Sunny CAMERA _____ PHOTO NOS. _____	

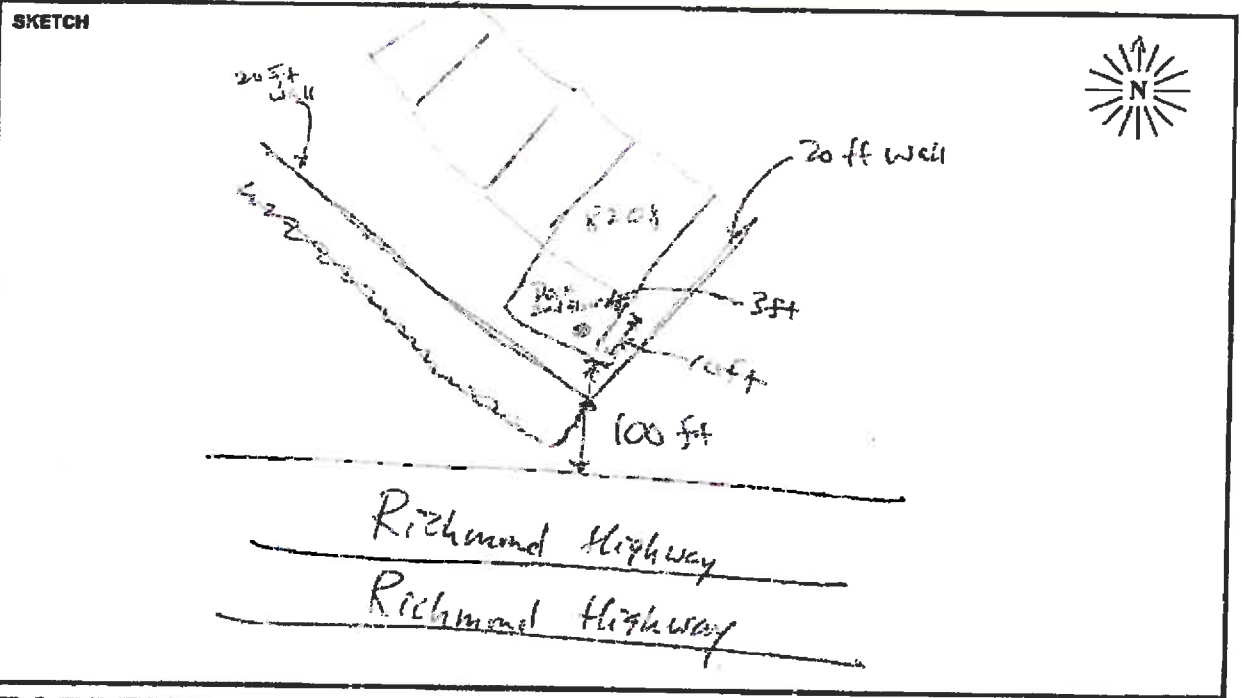
NOTES: microphone 5ft from ground Test site # 1 s1000 - 1020 4/20/2012										Dist. to Center of Nearest Lane _____ <input type="checkbox"/> Video <input type="checkbox"/> Radar			Counts AT MT HT			MEAS. TYPE: <input type="checkbox"/> Long Term <input checked="" type="checkbox"/> Short Term		
DATE	START TIME	STOP TIME	L <sub>MIN</sub>	L <sub>50</sub>	L <sub>50</sub>	L <sub>50</sub>	L <sub>25</sub>	L <sub>50</sub>	L <sub>75</sub>	L <sub>MAX</sub>	L <sub>50</sub>	NOTES:						
4/20	1000	1020	46.5	-	51.8	56.0	57.9	60.1	-	65.4	57.0							



## FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/20/12
MEASUREMENT ADDRESS: 8208 Point Replete Dr.		CITY: Fort Belvoir, VA	<input type="checkbox"/> Single-Family <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Multi-Family <input type="checkbox"/> Commercial <input type="checkbox"/> School
SOUND LEVEL METER: <input type="checkbox"/> LD-870 <input checked="" type="checkbox"/> LD-820 <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2900 <input type="checkbox"/> _____		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-900 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-828 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/> _____
SERIAL #: 0658		SERIAL #: 3155	SERIAL #: SIN 1935
CALIBRATOR: <input type="checkbox"/> LD CA250 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> 250 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> _____ <input checked="" type="checkbox"/> 1000 S/N 3091 <input type="checkbox"/> 84		CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 114, 113.9, 6.9, <sup>09:30</sup> 10:30 After 114, 114, 6.9, 10:30	
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20-MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>n</sub> PERCENTILE VALUES		NOTES: SYSTEM PWR: <input checked="" type="checkbox"/> BAT <input type="checkbox"/> AC (observations at start of measurement) TEMP: 65 °F R.H.: _____ % WIND SPEED: 2 MPH TOWARD (DIR): NE SKIES: Sunny CAMERA: _____ PHOTO NOS.: _____	

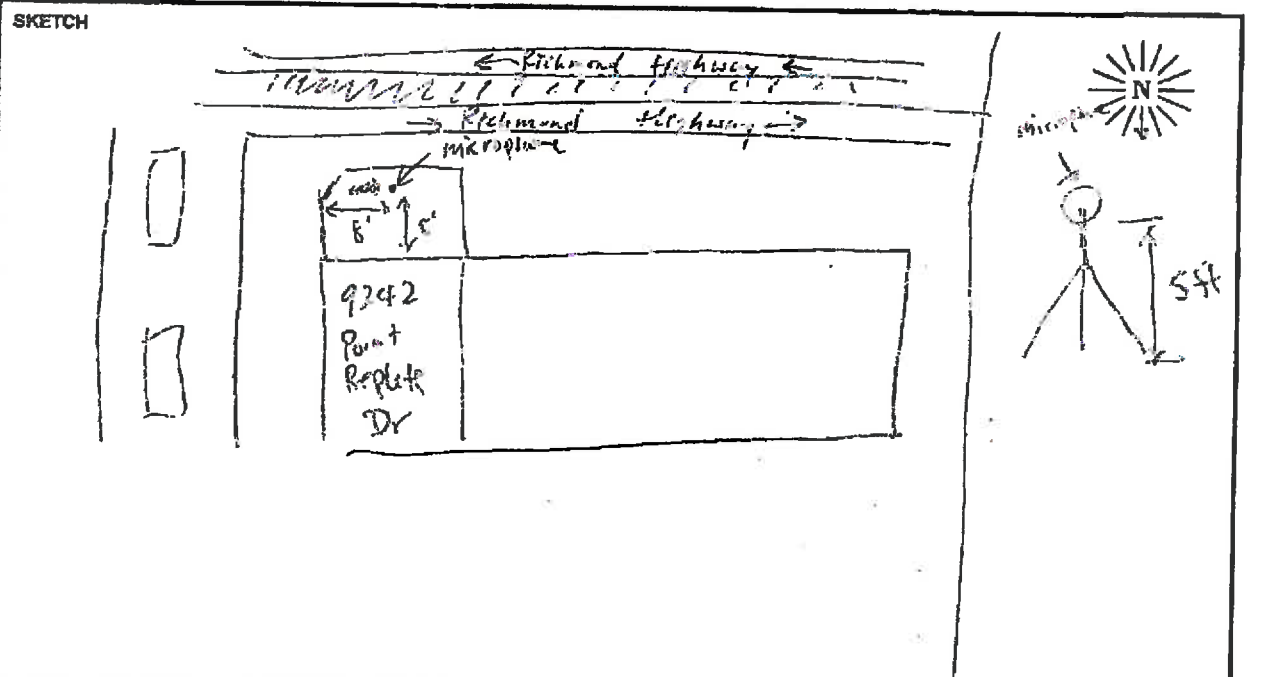
NOTES: Microphone 5 ft from ground Test site # 2.												Dist. to Center of Nearest Lane _____ <input type="checkbox"/> Video    Counts <input type="checkbox"/> Radar    AT    MT    HT	MEAS. TYPE: <input type="checkbox"/> Long Term <input checked="" type="checkbox"/> Short Term
DATE	START TIME	STOP TIME	L <sub>MIN</sub>	L <sub>5</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>95</sub>	L <sub>98</sub>	L <sub>MAX</sub>	L <sub>EO</sub>	NOTES:	
4/20	11:30	11:40	49.6	-	52.6	58.5	61.7	64.2	-	77.4	61.9		



## FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/19/2012
MEASUREMENT ADDRESS: 9242 Point Replete Dr		CITY: Fort Belvoir, VA	<input type="checkbox"/> Single-Family <input checked="" type="checkbox"/> Multi-Family <input type="checkbox"/> School <input type="checkbox"/> Recreational <input type="checkbox"/> Commercial
SOUND LEVEL METER: <input type="checkbox"/> LD-570 <input checked="" type="checkbox"/> <del>LD-585</del> <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2800 <input type="checkbox"/>		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-800 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-828 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/>
SERIAL #: 2638		SERIAL #: 3155	SERIAL #: S/N 1935
CALIBRATOR: <input type="checkbox"/> LD CA250 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> <input checked="" type="checkbox"/> 1000 S/N 3091		CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 114, 114, 8.4, 1139 After 114, 114.1, 8.4, 4120, 1229	NOTES: SYSTEM PWR: <input checked="" type="checkbox"/> BAT <input type="checkbox"/> AC (observations at start of measurement) TEMP: 63 °F R.H.: _____ % WIND SPEED: 5 MPH TOWARD (DIR): NW SKIES: Sunny CAMERA _____ PHOTO NOs. _____
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20 MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>n</sub> PERCENTILE VALUES			

NOTES: MD 1351 Test site #3		Dist. to Center of Nearest Lane _____ Long Term	<input type="checkbox"/> Video <input type="checkbox"/> Radar	Counts AI HI HI	MEAS. TYPE: <input checked="" type="checkbox"/> Long Term <input type="checkbox"/> Short Term								
DATE	START TIME	STOP TIME	L <sub>MIN</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>95</sub>	L <sub>10</sub>	L <sub>95</sub>	L <sub>MAX</sub>	L <sub>EQ</sub>	NOTES:
4/19	13:27												
4/20		12:27											
4/19	14:40	15:00	39.9		56.0	64.9	67.8	69.4		73.1		65.9	



# FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir ENGINEER: George Jin DATE: 4/19/2012

MEASUREMENT ADDRESS: 9158 Ciri Lake Ln CITY: Fort Belvoir, VA SITE NO.: 4

Single-Family  Recreational  
 Multi-Family  Commercial  
 School

SOUND LEVEL METER:  LD-870  LD-820  B&K-2238  LD-824  LD-812  B&K-2260  LD-2900

MICROPHONE:  NON-POLAR  POLARIZED  1/2-INCH  FREEFIELD  1-INCH  RANDOM  WIND SCREEN

PRE AMP:  LD-900  ZC-0030  LD-328  ZC-0032  LD-824

NOTES: SYSTEM PWR:  BAT  AC  
(observations at start of measurement)

SERIAL #: 0633 SERIAL #: 3155 SERIAL #: 1958

CALIBRATOR:  LD CA250  LD CA200 Freq. Hz.  250  1000  84

S/N 3091

CALIBRATION RECORD: Input dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114 / 6.9 / 10:37

After 114.0 / 114.11 - 117.32

TEMP: 68 °F R.H.: %  
WIND SPEED: 3 MPH  
TOWARD (DIR): NW  
SKIES: Sunny  
CAMERA \_\_\_\_\_  
PHOTO NOS. \_\_\_\_\_

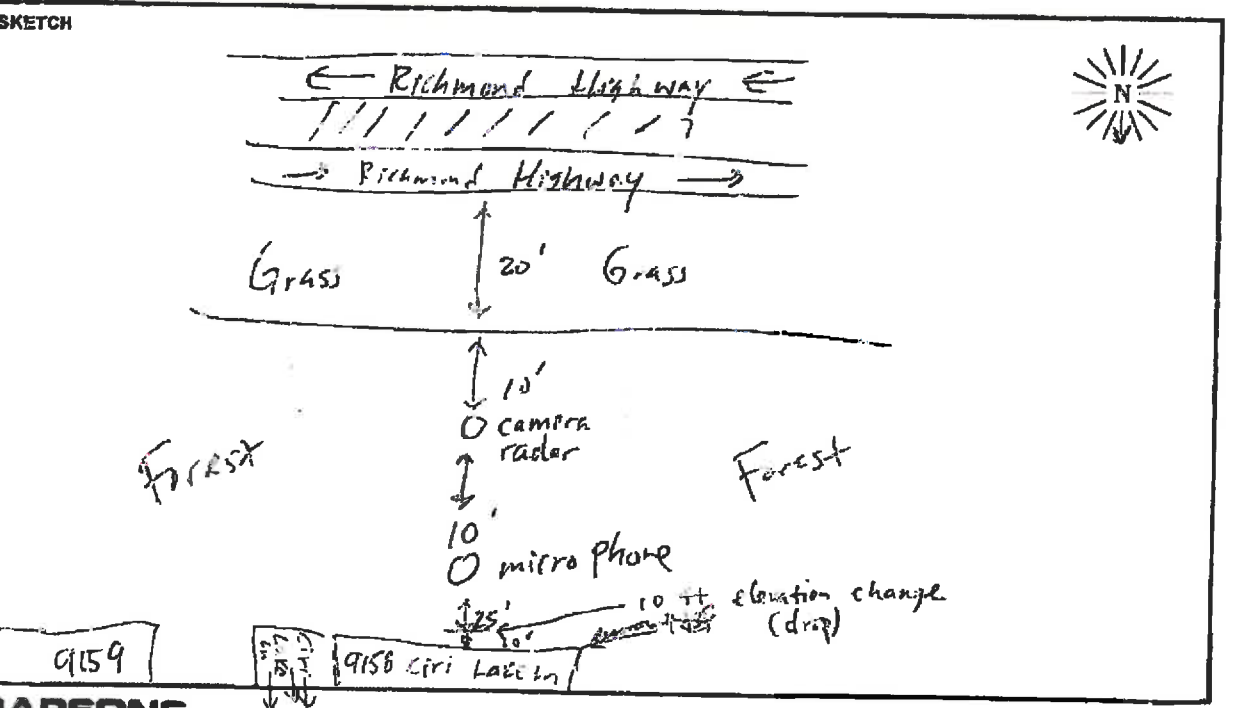
METER SETTINGS:  A-WTD  LINEAR  SLOW  1/1 OCT  INTERVALS 20 - MINUTE  C-WTD  IMPULSE  FAST  1/3 OCT  L<sub>n</sub> PERCENTILE VALUES

NOTES: microphone 5 ft from ground. meter time Test site #4 16:00 ET = 1300 PT. 16:20 intv = 1300 intv

Dist. to Center of Nearest Lane \_\_\_\_\_  Video  Radar Counts ΔI MI HI

MEAS. TYPE:  Long Term  Short Term

DATE	START TIME	STOP TIME	L <sub>max</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	L <sub>5</sub>	L <sub>1</sub>	L <sub>min</sub>	L <sub>20</sub>	NOTES:	
9/10/11	16:00	16:20	48.0	-	63.3	76.6	73.5	74.8	-	79.5	76.9	

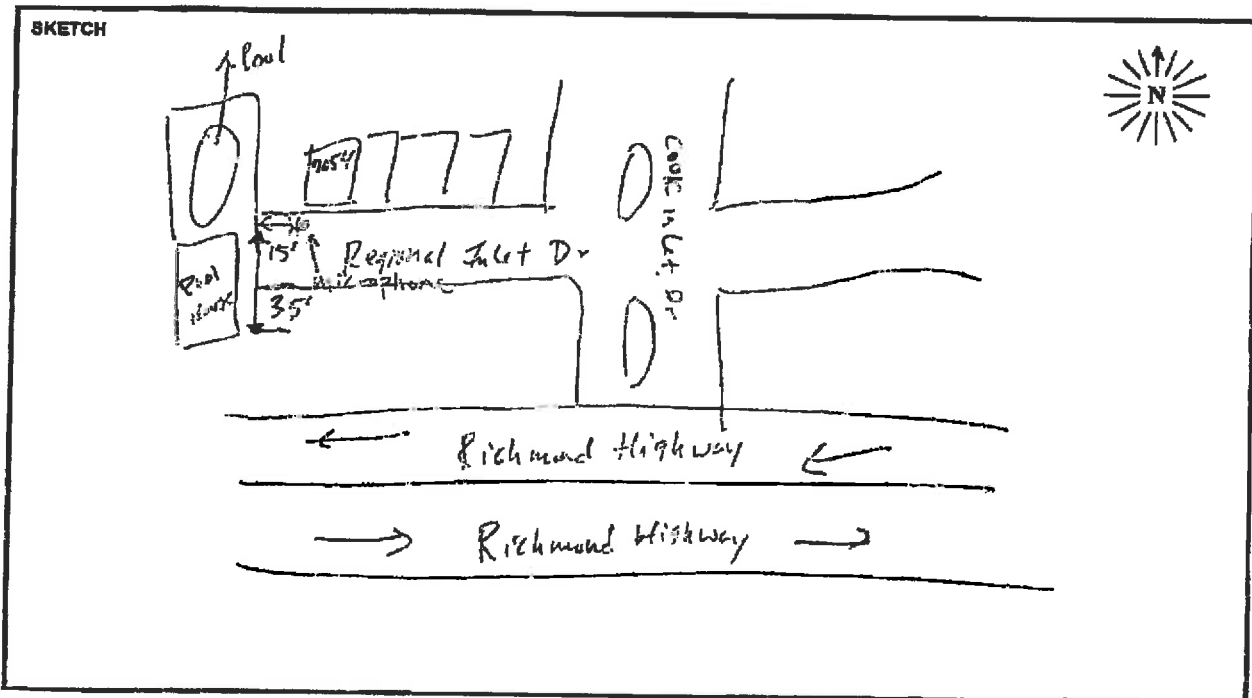




# FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/26/2012
MEASUREMENT ADDRESS: 7054 Regional Inlet Dr		CITY: Fort Belvoir, VA	<input type="checkbox"/> Single-Family <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Multi-Family <input type="checkbox"/> Commercial <input type="checkbox"/> School
SOUND LEVEL METER: <input type="checkbox"/> LD-870 <input checked="" type="checkbox"/> LD-820 <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2900 <input type="checkbox"/> _____		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-900 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-828 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/> _____
SERIAL #: 0638		SERIAL #: 3155	SERIAL #: S/N 1934
CALIBRATOR: <input type="checkbox"/> LD CA260 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> _____ S/N 3091		Freq. Hz. <input type="checkbox"/> 250 <input checked="" type="checkbox"/> 1000 <input type="checkbox"/> 84	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 114, 114.9, 6.9, 8:00 After 114, 114.6, 6.9, 0848
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20 - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>n</sub> PERCENTILE VALUES		NOTES: SYSTEM PWR: <input checked="" type="checkbox"/> BAT <input type="checkbox"/> AC (observations at start of measurement) TEMP: 54 °F R.H.: _____ % WIND SPEED: 5 MPH TOWARD (DIR): NE SKIES: Foggy CAMERA _____ PHOTO NOS. _____	

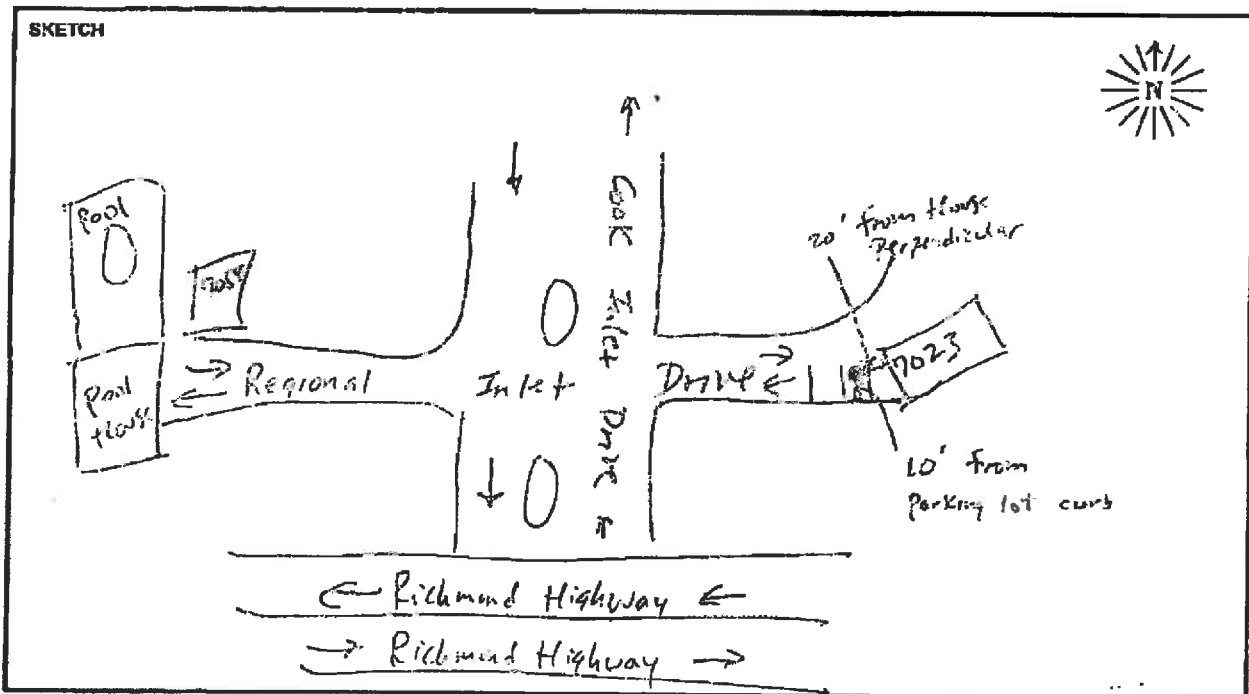
NOTES: microphone height 5' Test site # 5 Interval 5		Dist. to Center of Nearest Lane _____ <input type="checkbox"/> Video    Counts <input type="checkbox"/> Radar    AT MI HI	MEAS. TYPE: <input type="checkbox"/> Long Term <input checked="" type="checkbox"/> Short Term									
DATE	START TIME	STOP TIME	L <sub>MIN</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	L <sub>5</sub>	L <sub>1</sub>	L <sub>MAX</sub>	L <sub>EQ</sub>	NOTES:	
4/20	8:20	08:40	43.5	-	54.8	62.5	64.6	65.8	-	70.6	62.9	



## FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/24/2012
MEASUREMENT ADDRESS: 7023 Regional Inlet Dr.		CITY: Fort Belvoir, VA	SITE NO.: 6
SOUND LEVEL METER: <input type="checkbox"/> LD-870 <input checked="" type="checkbox"/> LD-820 <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2900 <input type="checkbox"/> _____		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-900 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-828 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/> _____
SERIAL #: 0638	SERIAL #: 3155	SERIAL #: SN 1938	NOTES: SYSTEM PWR: <input checked="" type="checkbox"/> BAT <input type="checkbox"/> AC (observations at start of measurement) TEMP: 54 °F R.H.: _____ % WIND SPEED: 5 MPH TOWARD (DIR): NE SKIES: Sunny CAMERA: _____ PHOTO NOS.: _____
CALIBRATOR: <input type="checkbox"/> LD CA250 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> 250 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> _____ <input checked="" type="checkbox"/> 1000 SN 3091 <input type="checkbox"/> 84		CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 114, 114.6, 6.9, 0850 After 114, 114.8, 6.9, 0926	
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20 - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>w</sub> PERCENTILE VALUES			

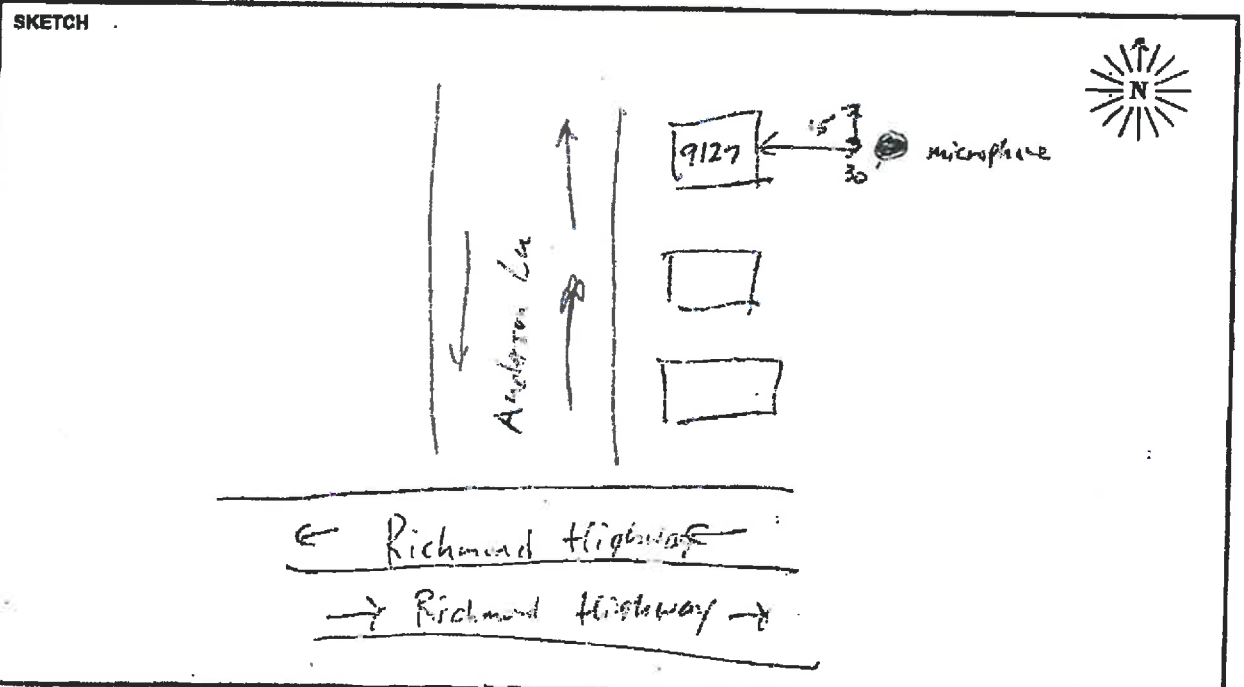
NOTES: Microphone height 5'		Dist. to Center of Nearest Lane _____	<input type="checkbox"/> Video	Counts	MEAS. TYPE:							
Test site #6 0900-0920 4/20/2012		<input type="checkbox"/> Radar	AT	MI	HI	<input type="checkbox"/> Long Term <input checked="" type="checkbox"/> Short Term						
DATE	START TIME	STOP TIME	L <sub>min</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>max</sub>	L <sub>eq</sub>	NOTES:			
4/20	0900	0920	50.9	-	59.6	66.9	69.4	70.9	-	74.4	67.7	



## FIELD SURVEY FORM

PROJECT: Route 1 / Fort Belvoir		ENGINEER: George Jin	DATE: 4/24/2512
MEASUREMENT ADDRESS: 9127 Anderson Lane		CITY: Fort Belvoir, VA	SITE NO.: 7
SOUND LEVEL METER: <input type="checkbox"/> LD-870 <input checked="" type="checkbox"/> LD-870 <input type="checkbox"/> B&K-2238 <input type="checkbox"/> LD-824 <input checked="" type="checkbox"/> LD-812 <input type="checkbox"/> B&K-2250 <input type="checkbox"/> LD-2900 <input type="checkbox"/> _____		MICROPHONE: <input type="checkbox"/> NON-POLAR <input type="checkbox"/> POLARIZED <input type="checkbox"/> 1/2-INCH <input type="checkbox"/> FREEFIELD <input type="checkbox"/> 1-INCH <input type="checkbox"/> RANDOM <input checked="" type="checkbox"/> WIND SCREEN	PRE AMP: <input type="checkbox"/> LD-800 <input type="checkbox"/> ZC-0030 <input checked="" type="checkbox"/> LD-823 <input type="checkbox"/> ZC-0032 <input type="checkbox"/> LD-824 <input type="checkbox"/> _____
SERIAL #: 0638	SERIAL #: 3155	SERIAL #: S/N 1938	NOTES: SYSTEM PWR: <input checked="" type="checkbox"/> BATT <input type="checkbox"/> AC (observations at start of measurement)
CALIBRATOR: <input type="checkbox"/> LD CA250 <input checked="" type="checkbox"/> LD CA200 <input type="checkbox"/> B&K 4231 <input type="checkbox"/> _____ S/N 3091		CALIBRATION RECORD: input, dB / Reading, dB / Offset, dB / Time Before 114, 114.6, 6.9, 0850 After 114, 114.9, 6.9, 1030	TEMP: 76 °F R.H.: _____ % WIND SPEED: 8 MPH TOWARD (DIR): NW SKIES: Sunny
METER SETTINGS: <input type="checkbox"/> A-WTD <input type="checkbox"/> LINEAR <input type="checkbox"/> SLOW <input type="checkbox"/> 1/1 OCT <input checked="" type="checkbox"/> INTERVALS 20 - MINUTE <input type="checkbox"/> C-WTD <input type="checkbox"/> IMPULSE <input type="checkbox"/> FAST <input type="checkbox"/> 1/3 OCT <input type="checkbox"/> L <sub>n</sub> PERCENTILE VALUES		CAMERA _____ PHOTO NOS. _____	

NOTES: 5' off grade microphone Test #7.		Dist. to Center of Nearest Lane _____ <input type="checkbox"/> Video <input type="checkbox"/> Radar Counts AI MI HI	MEAS. TYPE: <input type="checkbox"/> Long Term <input checked="" type="checkbox"/> Short Term											
DATE	START TIME	STOP TIME	L <sub>MIN</sub>	L <sub>25</sub>	L <sub>50</sub>	L <sub>75</sub>	L <sub>10</sub>	L <sub>15</sub>	L <sub>20</sub>	L <sub>25</sub>	L <sub>30</sub>	L <sub>MAX</sub>	L <sub>EQ</sub>	NOTES:
4/20	1340	1400												



# APPENDIX D

## **Noise Monitoring Site Photographs**



**SHORT-TERM MONITORING SITE M1**





**SHORT-TERM MONITORING SITE M2**





**LONG-TERM / SHORT-TERM MONITORING SITE M3**





**SHORT-TERM MONITORING SITE M4**





**SHORT-TERM MONITORING SITE M5**



**SHORT-TERM MONITORING SITE M6**





**SHORT-TERM MONITORING SITE M7**

# APPENDIX E

## **Warranted, Feasible, and Reasonable Worksheets**

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 1
Noise Abatement Category(s)	NAC B
Community Name and/or CNE#	CNE 2

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1974 & 1995
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 8
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 8
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100 %
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 9,960
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 8
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 1
- d. Total number of benefited receptors. 9
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 1,107
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 830 ft
- b. Height range of the proposed noise barrier 12 ft
- c. Average height of the proposed noise barrier 12 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 448,200
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 2
Noise Abatement Category(s)	NAC B
Community Name and/or CNE#	CNE 4

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 2003
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 7
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 7
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 71 %
  - d. Is the percentage 50 or greater? 
 Yes                       No



- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 9,600
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 5
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 12
- d. Total number of benefited receptors. 17
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 565
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 800 ft
- b. Height range of the proposed noise barrier 12 ft
- c. Average height of the proposed noise barrier 12 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 432,000
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	



## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 3
Noise Abatement Category(s)	NAC B
Community Name and/or CNE#	CNE 5

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 2004
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 15
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 15
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 15,000
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 15
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 12
- d. Total number of benefited receptors. 27
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 556
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 1,250 ft
- b. Height range of the proposed noise barrier 12-14 ft
- c. Average height of the proposed noise barrier 13 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 675,000
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 4
Noise Abatement Category(s)	NAC B
Community Name and/or CNE#	CNE 6

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 2002
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 6
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 4
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 67%
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 8,260
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 4
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 2
- d. Total number of benefited receptors. 6
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 1,377
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 590 ft
- b. Height range of the proposed noise barrier 14 ft
- c. Average height of the proposed noise barrier 14 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 371,700
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 5
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 10

Design phase:  Preliminary Design  Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). \_\_\_\_\_
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): \_\_\_\_\_  
N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."  
 Yes  No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria?  Yes  No
  - b. Project causes a substantial noise increase of 10 dBA or more?  Yes  No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: \_\_\_\_\_  
6
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): \_\_\_\_\_  
6
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL \_\_\_\_\_  
100%
  - d. Is the percentage 50 or greater?  Yes  No

---

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 12,660
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 6
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 5
- d. Total number of benefited receptors. 11
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 1,151
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 1,055 ft
- b. Height range of the proposed noise barrier 12 ft
- c. Average height of the proposed noise barrier 12 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 469,700
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

**Decision**

Is the Noise Barrier(s) WARRANTED?  Yes  No

Is the Noise Barrier(s) FEASIBLE?  Yes  No

Is the Noise Barrier(s) REASONABLE?  Yes  No

Additional Reasons for Decision: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 6
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 12

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1799
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 10
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 10
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No



- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 12,350
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 10
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 7
- d. Total number of benefited receptors. 17
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 726
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 1,235 ft
- b. Height range of the proposed noise barrier 10 ft
- c. Average height of the proposed noise barrier 10 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 555,750
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

**Decision**

Is the Noise Barrier(s) WARRANTED?  Yes  No

Is the Noise Barrier(s) FEASIBLE?  Yes  No

Is the Noise Barrier(s) REASONABLE?  Yes  No

Additional Reasons for Decision: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Warranted, Feasible, and Reasonable Worksheet

Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.

Date: 11/16/2012  
Project No. and UPC: 0001-029-938, 99181  
County: Fairfax  
Facility: Route 1  
Barrier System ID: Barrier 7  
Noise Abatement Category(s): NAC B  
Community Name and/or CNE#: CNE 16

Design phase:  Preliminary Design  Final Design

## Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 2004
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."  Yes  No
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria?  Yes  No
  - b. Project causes a substantial noise increase of 10 dBA or more?  Yes  No

## Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 5
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 5
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater?  Yes  No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 3,400
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 5
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 0
- d. Total number of benefited receptors. 5
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 680
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 425 ft
- b. Height range of the proposed noise barrier 8 ft
- c. Average height of the proposed noise barrier 8 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 153,000
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 8
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 11

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1997
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 1
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 1
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No



- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 5,600
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 1
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 0
- d. Total number of benefited receptors. 1
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 5,600
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? No
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 400 ft
- b. Height range of the proposed noise barrier 14 ft
- c. Average height of the proposed noise barrier 14 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 252,000
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 9
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 13

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1979
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 1
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 1
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 6,840
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 1
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 0
- d. Total number of benefited receptors. 1
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 6,840
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? No
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 570 ft
- b. Height range of the proposed noise barrier 12 ft
- c. Average height of the proposed noise barrier 12 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 307,800
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	



## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 10
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 14

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1979
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 5
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 5
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 7,900
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 5
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 3
- d. Total number of benefited receptors. 8
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 988
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 790 ft
- b. Height range of the proposed noise barrier 10 ft
- c. Average height of the proposed noise barrier 10 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 355,500
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barriers 11 & 12
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 11 & 17

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1997
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 7
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 7
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No



- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 16,950
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 7
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 3
- d. Total number of benefited receptors. 10
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 1,695
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? No
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 1,130 ft
- b. Height range of the proposed noise barrier 14-16 ft
- c. Average height of the proposed noise barrier 15 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 762,750
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 13
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 13 & 18

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1979
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 5
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 5
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No



- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 9,200
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 5
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 4
- d. Total number of benefited receptors. 9
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 1,022
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 920 ft
- b. Height range of the proposed noise barrier 10 ft
- c. Average height of the proposed noise barrier 10 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 458
- e. Total Barrier Cost (\$) 414,000
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	



## Warranted, Feasible, and Reasonable Worksheet

*Note: the answers provided in the worksheet may differ between preliminary and final design. This worksheet is available in a protected digital format upon request.*

Date:	11/16/2012
Project No. and UPC:	0001-029-938, 99181
County:	Fairfax
Facility:	Route 1
Barrier System ID:	Barrier 14
Noise Abatement Category(s)	NAC C
Community Name and/or CNE#	CNE 12

Design phase:                       Preliminary Design                       Final Design

### Warranted

1. Community Documentation (if applicable)
  - a. Date community was permitted. (Per 23CFR 772 this is the date the building permit was issued). 1799
  - b. Date of approval for the Categorical Exclusion (CE), Record of Decision (ROD), or Finding of No Significant Impact (FONSI): N/A
  - c. Does the date in 1.a precede the date in 1.b? If yes, proceed to Warranted Item 2. If no, consideration of noise abatement is not warranted. Proceed to "Decision" block and answer "no" to warranted question. As the reason for this decision, state that "Community was permitted after the date of approval of CE, ROD, or FONSI, as appropriate."
 

Yes                       No
  
2. Criteria requiring consideration of noise abatement
  - a. Project causes design year noise levels to approach or exceed the Noise Abatement Criteria? 
 Yes                       No
  - b. Project causes a substantial noise increase of 10 dBA or more? 
 Yes                       No

### Feasibility

1. Impacted receptor units
  - a. Number of impacted receptor units: 16
  - b. Number of impacted receptor units receiving 5 dBA or more insertion loss (IL): 16
  - c. Percentage of impacted receptor units receiving 5 dB(A) or more IL 100%
  - d. Is the percentage 50 or greater? 
 Yes                       No

- 2 Will placement of the noise barrier cause engineering or safety conflicts, e.g. drainage or site distance issues?  Yes  No
- 3 Will placement of the noise barrier restrict access to vehicular or pedestrian travel?  Yes  No
- 4 Will placement of the noise barrier conflict with existing utility locations?  Yes  No

**Reasonableness**

1. Cost-Benefit Factors

- a. Surface Area (Total square foot) of the proposed noise barrier. (ft<sup>2</sup>) 14,700
- b. Impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 16
- c. Non-impacted noise sensitive receptor(s) receiving 5 dB(A) IL or more. 7
- d. Total number of benefited receptors. 23
- e. Surface Area per benefited receptor unit. (ft<sup>2</sup>/BR) 639
- f. Is (1e) less than or equal to the maximum square feet per benefited receptor (MaxSF/BR) value of 1600? Yes
- g. Does the barrier provide an IL of at least 7 dB(A) for at least one impacted receptor in the design year? Yes

2. Community Desires Related to the Barrier

- a. Do at least 50 percent of the benefited receptor unit owner(s) and renters desire the noise barrier? If yes, continue to "decision" block. If no, the barrier can be considered not to be reasonable. Proceed to "decision" block and answer "no" to reasonableness question. As the reason for this decision, state that "The majority of the impacted receptor unit owners do not desire the barrier."  Yes  No

3. Additional Noise Barrier Details

- a. Length of the proposed noise barrier 1,225 ft
- b. Height range of the proposed noise barrier 12 ft
- c. Average height of the proposed noise barrier 12 ft
- d. Cost per square foot. (\$/ft<sup>2</sup>) 45
- e. Total Barrier Cost (\$) 661,500
- f. Additional comments (if applicable) \_\_\_\_\_
- g. Barrier material  Absorptive  Reflective

Decision	
Is the Noise Barrier(s) WARRANTED?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) FEASIBLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the Noise Barrier(s) REASONABLE?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Additional Reasons for Decision: _____	
_____	
_____	

# APPENDIX F

"

.....**J D 2577 F qewo gpvcvkqp**

**ROUTE 1 IMPROVEMENTS AT FORT BELVOIR**  
**State Project Number: 0001-029-938, P101; UPC 99181**

**HB 2577 Documentation**

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The 2009 General Assembly passed Chapter 120 (HB 2577, as amended by HB 2025), which amends the Code of Virginia by adding in Article 15 of Chapter 1 of Title 33.1 a section numbered 33.1-223.2:21, relating to highway noise abatement.

House Bill 2025: Requires that whenever the Commonwealth Transportation Board or the Department plan for or undertake any highway construction or improvement project and such project includes or may include the requirement for the mitigation of traffic noise impacts, first consideration should be given to the use of noise reducing design and low noise pavement materials and techniques in lieu of construction of noise walls or sound barriers. Vegetative screening, such as the planting of appropriate conifers, in such a design would be utilized to act as a visual screen if visual screening is required.

The following responses are provided in an effort to honor the intent of HB 2025 and as part of the Noise Impact Analysis Technical Report and technical files:

**Comment:** Is noise reducing design feasible in lieu of construction of noise walls or sound barriers? For example, the roadway alignment can be shifted away from noise sensitive receptors or the roadway can be placed in deep cut.

**Response:** *Opportunities to alter the horizontal and vertical geometry of U. S. Route 1 from the existing location between Telegraph Road and Belvoir Road are limited due to the constraints on either side of the roadway (residential and commercial developments; U.S. Army Garrison Fort Belvoir; and Section 4(f) properties that include Accotink Bay Wildlife Refuge and Fort Belvoir Forest and Wildlife Corridor). From Belvoir Road to Mount Vernon Memorial Highway in the vicinity of the Woodlawn Historic District, the alignment is being shifted both horizontally and vertically along the Southern Bypass Alignment (Alternative B) to minimize public road right-of-way use of lands currently designated as a National Historic Landmark and properties listed, or eligible for listing, on the National Register of Historic Places in accordance with Section 4(f) of the Department of Transportation Act and Section 110(f) of the National Historic Preservation Act. The relocation of the roadway shifts Route 1 farther away from noise sensitive receptors, including the Woodlawn Plantation National Historic Landmark, the Woodlawn Quaker Meetinghouse and Cemetery, and the Woodlawn Baptist Church Cemetery.*

**Comment:** Can the project support the use of low noise pavement in lieu of construction of noise walls or sound barriers?

**Response:** *The Federal Highway Administration (FHWA) has not authorized the use of “quiet pavement” at this time as a form of noise mitigation. Upon completion of the Quiet Pavement Pilot Program and approval from FHWA, the use of “quiet pavement” may be given additional consideration.*

**Comment:** Can vegetative screening be utilized to act as a visual screen if visual screening is required?

***Response:*** *Vegetative screening could be used as visual screening. However, the vegetation must be placed outside of the clear zone and must not decrease driver sight distance. Coordination with Fort Belvoir, the National Trust for Historic Preservation, consulting parties, and other affected property owners will be needed regarding the acceptable type(s) and placement of the screening. As outlined in the Section 106 Programmatic Agreement, mitigation for possible impacts to historic properties includes landscaping to rehabilitate the setting, screen and reduce the visibility of the highway, and maintain viewsheds, to the greatest extent possible, for all Woodlawn Historic District properties, including plantings within and outside VDOT right-of-way.*

# APPENDIX G

## **Traffic Noise Model Data**



**CD Containing TNM Printouts and  
TNM Files to be Attached**

# APPENDIX G

## **Traffic Noise Model Data**



## **Noise Model for Existing Scenario**





**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway6	30.0	Fairfax Co	26	11,864,058.0	6,943,615.5	20.80	Signal	0.00	25	Average
		104+00	27	11,864,250.0	6,943,648.5	18.80				Average
		106+00	28	11,864,446.0	6,943,688.0	17.60				Average
		108+00	29	11,864,642.0	6,943,724.0	22.70				Average
		110+00	30	11,864,840.0	6,943,759.0	29.70				Average
		112+00	31	11,865,036.0	6,943,798.5	34.30				Average
		114+00	32	11,865,232.0	6,943,837.0	37.90				Average
		116+00/Belvoir	33	11,865,428.0	6,943,875.5	39.00				
Roadway7	30.0	116+00/Belvoir	34	11,865,428.0	6,943,875.5	39.00	Signal	0.00	25	Average
		118+00	35	11,865,624.0	6,943,915.0	38.40				Average
		120+00	36	11,865,817.0	6,943,940.0	42.90				Average
		122+00	37	11,866,009.0	6,943,949.0	51.00				Average
		124+00	38	11,866,208.0	6,943,953.0	61.50				Average
		126+00	39	11,866,408.0	6,943,957.0	70.80				Average
		128+00	40	11,866,609.0	6,943,961.5	73.40				Average
		130+00	41	11,866,812.0	6,943,982.5	69.30				Average
		132+00	42	11,867,011.0	6,944,021.5	75.90				Average
		134+00	43	11,867,209.0	6,944,062.5	88.00				Average
		136+00	44	11,867,406.0	6,944,105.0	98.70				Average
		138+00	45	11,867,603.0	6,944,153.0	103.30				Average
		140+00	46	11,867,794.0	6,944,219.0	106.50				Average
		142+00	47	11,867,979.0	6,944,294.0	111.30				Average
		144+00	48	11,868,161.0	6,944,367.5	117.20				Average
		146+00	49	11,868,351.0	6,944,429.0	120.20				Average
		148+00	50	11,868,543.0	6,944,487.0	125.10				Average
		150+00	51	11,868,734.0	6,944,545.5	132.50				Average
		152+00	52	11,868,926.0	6,944,603.5	136.70				Average
		154+00	53	11,869,117.0	6,944,662.0	139.90				Average
		156+00	54	11,869,309.0	6,944,723.0	143.80				Average
		158+00	55	11,869,496.0	6,944,800.0	143.50				Average
		160+00	56	11,869,674.0	6,944,896.0	142.50				Average
		162+00	57	11,869,845.0	6,945,003.0	141.40				Average
		Belvoir	58	11,869,901.0	6,945,047.5	141.00				
Roadway8	30.0	Belvoir	59	11,869,901.0	6,945,047.5	141.00	Signal	0.00	25	Average
		164+00	60	11,870,003.0	6,945,137.0	140.10				Average
		166+00	61	11,870,148.0	6,945,274.0	138.80				Average
		168+00	62	11,870,293.0	6,945,410.0	136.90				Average
		170+00	63	11,870,439.0	6,945,548.5	136.00				Average
		172+00	64	11,870,585.0	6,945,687.5	133.30				Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		174+00/W	65	11,870,714.0	6,945,816.0	128.10				
Roadway9	30.0	174+00/W	66	11,870,714.0	6,945,816.0	128.10	Signal	0.00	25	Average
		176+00	67	11,870,856.0	6,945,963.5	119.10				Average
		178+00	68	11,871,012.0	6,946,077.5	109.00				Average
		180+00	69	11,871,187.0	6,946,175.0	99.60				Average
		182+00	70	11,871,368.0	6,946,252.5	96.40				Average
		184+00	71	11,871,558.0	6,946,311.5	94.10				Average
		186+00	72	11,871,750.0	6,946,366.0	85.80				Average
		188+00	73	11,871,941.0	6,946,426.0	72.40				Average
		190+00	74	11,872,128.0	6,946,498.0	58.50				Average
		192+00	75	11,872,308.0	6,946,587.5	48.70				Average
		194+00	76	11,872,480.0	6,946,688.5	43.30				Average
		196+00	77	11,872,650.0	6,946,794.5	39.10				Average
		198+00	78	11,872,739.0	6,946,852.0	37.00				Average
		200+00/M	79	11,872,905.0	6,946,960.5	31.30				
Roadway10	30.0	200+00/M	80	11,872,905.0	6,946,960.5	31.30	Signal	0.00	25	Average
		202+00	81	11,873,074.0	6,947,069.5	27.00				Average
		204+00	82	11,873,243.0	6,947,177.0	25.20				Average
		206+00	83	11,873,412.0	6,947,284.5	21.90				Average
		208+00	84	11,873,579.0	6,947,393.5	17.90				Average
		210+00	85	11,873,747.0	6,947,502.0	13.70				Average
		212+00	86	11,873,915.0	6,947,610.5	13.00				Average
		214+00	87	11,874,082.0	6,947,720.5	13.00				Average
		End	88	11,874,514.0	6,948,000.5	16.00				
Roadway12	36.0	Telegraph	89	11,855,983.0	6,944,012.0	151.60	Signal	0.00	25	Average
		20+00	90	11,855,953.0	6,944,019.5	151.60				Average
		18+00	91	11,855,762.0	6,944,077.5	150.30				Average
		16+00	92	11,855,570.0	6,944,135.0	148.80				Average
		14+00	93	11,855,379.0	6,944,194.0	149.10				Average
		12+00	94	11,855,185.0	6,944,249.5	152.40				Average
		10+00	95	11,854,984.0	6,944,274.0	155.20				Average
		8+00	96	11,854,781.0	6,944,277.0	156.00				Average
		Pohick	97	11,854,751.0	6,944,274.5	156.20				
Roadway13	30.0	Cook Inlet	98	11,858,839.0	6,943,396.0	102.50	Signal	0.00	25	Average
		48+00	99	11,858,648.0	6,943,389.0	106.80				Average
		46+00	100	11,858,448.0	6,943,380.5	114.10				Average
		44+00	101	11,858,251.0	6,943,366.5	125.80				Average
		42+00	102	11,858,055.0	6,943,379.0	134.20				Average
		40+00	103	11,857,862.0	6,943,424.5	141.10				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		38+00	104	11,857,671.0	6,943,484.0	144.50				Average
		36+00	105	11,857,480.0	6,943,543.0	145.50				Average
		34+00	106	11,857,290.0	6,943,602.5	146.50				Average
		32+00	107	11,857,098.0	6,943,661.5	147.50				Average
		30+00	108	11,856,907.0	6,943,721.0	149.20				Average
		28+00	109	11,856,716.0	6,943,778.5	152.40				Average
		26+00	110	11,856,525.0	6,943,837.0	154.00				Average
		24+00	111	11,856,335.0	6,943,902.0	154.20				Average
		22+00	112	11,856,144.0	6,943,961.5	152.90				Average
		Telegraph	113	11,855,983.0	6,944,012.0	151.60				
Roadway14	30.0	Fairfax Co	114	11,864,179.0	6,943,684.5	18.40	Signal	0.00	25	Average
		102+00	115	11,864,041.0	6,943,663.5	19.60				Average
		100+00	116	11,863,842.0	6,943,642.5	20.50				Average
		98+00	117	11,863,642.0	6,943,626.0	19.60				Average
		96+00	118	11,863,443.0	6,943,605.0	18.80				Average
		94+00	119	11,863,244.0	6,943,586.0	17.80				Average
		92+00	120	11,863,044.0	6,943,575.5	19.30				Average
		90+00	121	11,862,844.0	6,943,567.0	20.30				Average
		88+00	122	11,862,644.0	6,943,557.5	20.80				Average
		86+00	123	11,862,445.0	6,943,548.5	23.80				Average
		84+00	124	11,862,245.0	6,943,539.0	27.70				Average
		82+00	125	11,862,045.0	6,943,529.5	31.60				Average
		80+00	126	11,861,845.0	6,943,522.5	35.40				Average
		78+00	127	11,861,645.0	6,943,512.5	39.80				Average
		76+00	128	11,861,446.0	6,943,502.5	45.00				Average
		74+00	129	11,861,246.0	6,943,493.5	49.50				Average
		72+00	130	11,861,046.0	6,943,484.5	55.20				Average
		70+00	131	11,860,847.0	6,943,475.5	62.10				Average
		68+00	132	11,860,647.0	6,943,464.5	69.30				Average
		66+00	133	11,860,447.0	6,943,456.5	76.50				Average
		64+00	134	11,860,247.0	6,943,447.0	82.30				Average
		62+00	135	11,860,047.0	6,943,437.5	87.00				Average
		60+00	136	11,859,847.0	6,943,427.5	84.90				Average
		58+00	137	11,859,648.0	6,943,417.5	82.50				Average
		56+00	138	11,859,448.0	6,943,409.0	85.70				Average
		54+00	139	11,859,248.0	6,943,405.5	93.40				Average
		52+00	140	11,859,048.0	6,943,401.0	97.80				Average
		50+00	141	11,858,848.0	6,943,396.5	102.30				Average
		Cook Inlet	142	11,858,839.0	6,943,396.0	102.50				

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway15	30.0	Backkick	143	11,865,535.0	6,943,930.5	38.70	Signal	0.00	25	Average	
		116+00	144	11,865,422.0	6,943,909.0	39.00				Average	
		114+00	145	11,865,225.0	6,943,871.0	37.60				Average	
		112+00	146	11,865,029.0	6,943,831.0	33.90				Average	
		110+00	147	11,864,833.0	6,943,792.0	29.60				Average	
		108+00	148	11,864,636.0	6,943,756.0	22.30				Average	
		106+00	149	11,864,438.0	6,943,726.0	17.00				Average	
		104+00	150	11,864,241.0	6,943,695.0	17.80				Average	
		Fairfax Co	151	11,864,179.0	6,943,684.5	18.40					
Roadway16	30.0	Belvoir	152	11,869,953.0	6,945,147.0	140.40	Signal	0.00	25	Average	
		162+00	153	11,869,825.0	6,945,036.0	141.30				Average	
		160+00	154	11,869,663.0	6,944,917.0	142.40				Average	
		158+00	155	11,869,488.0	6,944,819.5	143.60				Average	
		156+00	156	11,869,302.0	6,944,743.5	143.80				Average	
		154+00	157	11,869,110.0	6,944,682.5	140.00				Average	
		152+00	158	11,868,919.0	6,944,624.5	136.80				Average	
		150+00	159	11,868,728.0	6,944,566.5	132.50				Average	
		148+00	160	11,868,537.0	6,944,507.0	125.10				Average	
		146+00	161	11,868,345.0	6,944,451.0	120.20				Average	
		144+00	162	11,868,155.0	6,944,389.0	117.00				Average	
		142+00	163	11,867,971.0	6,944,313.5	111.00				Average	
		140+00	164	11,867,786.0	6,944,238.5	105.90				Average	
		138+00	165	11,867,596.0	6,944,173.5	102.90				Average	
		136+00	166	11,867,400.0	6,944,125.0	98.60				Average	
		134+00	167	11,867,204.0	6,944,084.0	88.10				Average	
		132+00	168	11,867,008.0	6,944,043.0	75.90				Average	
		130+00	169	11,866,810.0	6,944,005.0	68.80				Average	
		128+00	170	11,866,609.0	6,943,983.5	73.10				Average	
		126+00	171	11,866,408.0	6,943,979.0	70.70				Average	
		124+00	172	11,866,208.0	6,943,974.0	61.60				Average	
		122+00	173	11,866,009.0	6,943,972.0	51.20				Average	
		120+00	174	11,865,814.0	6,943,969.0	43.00				Average	
		118+00	175	11,865,618.0	6,943,945.5	39.00				Average	
		Backkick	176	11,865,535.0	6,943,930.5	38.70					
Roadway17	30.0	Woodlawn	177	11,870,755.0	6,945,914.5	124.50	Signal	0.00	25	Average	
		174+00	178	11,870,699.0	6,945,851.5	127.60				Average	
		172+00	179	11,870,553.0	6,945,713.5	133.50				Average	
		170+00	180	11,870,406.0	6,945,575.0	136.10				Average	
		168+00	181	11,870,262.0	6,945,437.5	137.40				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		166+00	182	11,870,119.0	6,945,304.5	138.70				Average
		164+00	183	11,869,977.0	6,945,171.0	140.20				Average
		Belvoir	184	11,869,953.0	6,945,147.0	140.40				
Roadway18	30.0	Mt Vernon	185	11,873,087.0	6,947,116.5	26.00	Signal	0.00	25	Average
		202+00	186	11,873,056.0	6,947,098.0	26.60				Average
		200+00	187	11,872,889.0	6,946,988.5	31.40				Average
		198+00	188	11,872,720.0	6,946,881.5	36.50				Average
		196+00	189	11,872,631.0	6,946,823.5	39.00				Average
		194+00	190	11,872,463.0	6,946,715.0	42.80				Average
		192+00	191	11,872,296.0	6,946,610.5	48.00				Average
		190+00	192	11,872,122.0	6,946,520.5	57.60				Average
		188+00	193	11,871,935.0	6,946,446.5	71.80				Average
		186+00	194	11,871,744.0	6,946,388.0	85.40				Average
		184+00	195	11,871,551.0	6,946,334.0	94.00				Average
		182+00	196	11,871,360.0	6,946,275.0	97.00				Average
		180+00	197	11,871,177.0	6,946,195.5	100.10				Average
		178+00	198	11,871,002.0	6,946,098.5	109.60				Average
		176+00	199	11,870,840.0	6,945,986.0	119.70				Average
		Woodlawn	200	11,870,755.0	6,945,914.5	124.50				
Roadway19	30.0	Begin	201	11,874,506.0	6,948,021.0	16.00				Average
		214+00	202	11,874,070.0	6,947,740.5	13.00				Average
		212+00	203	11,873,900.0	6,947,634.0	13.00				Average
		210+00	204	11,873,728.0	6,947,532.0	13.00				Average
		208+00	205	11,873,559.0	6,947,425.5	16.90				Average
		206+00	206	11,873,390.0	6,947,317.5	21.40				Average
		204+00	207	11,873,224.0	6,947,207.0	24.50				Average
		Mt Vernon	208	11,873,087.0	6,947,116.5	26.00				
Roadway5-2	30.0	Cook Inlet	209	11,858,742.0	6,943,349.0	105.00	Signal	0.00	25	Average
		50+00	210	11,858,850.0	6,943,354.0	102.50				Average
		52+00	211	11,859,050.0	6,943,364.0	98.00				Average
		54+00	212	11,859,250.0	6,943,374.5	93.50				Average
		56+00	213	11,859,449.0	6,943,384.0	85.60				Average
		58+00	214	11,859,649.0	6,943,395.0	82.30				Average
		60+00	215	11,859,849.0	6,943,404.0	84.90				Average
		62+00	216	11,860,049.0	6,943,414.0	87.00				Average
		64+00	217	11,860,249.0	6,943,423.5	83.40				Average
		66+00	218	11,860,449.0	6,943,433.5	76.50				Average
		68+00	219	11,860,649.0	6,943,442.5	69.20				Average
		70+00	220	11,860,848.0	6,943,451.5	62.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		72+00	221	11,861,048.0	6,943,461.0	55.40				Average	
		74+00	222	11,861,247.0	6,943,470.5	49.70				Average	
		76+00	223	11,861,447.0	6,943,479.0	44.60				Average	
		78+00	224	11,861,647.0	6,943,488.5	40.00				Average	
		80+00	225	11,861,846.0	6,943,498.5	35.70				Average	
		82+00	226	11,862,046.0	6,943,507.0	31.50				Average	
		84+00	227	11,862,246.0	6,943,516.5	27.70				Average	
		86+00	228	11,862,446.0	6,943,526.0	23.70				Average	
		88+00	229	11,862,646.0	6,943,534.5	20.70				Average	
		90+00	230	11,862,846.0	6,943,544.5	20.30				Average	
		92+00	231	11,863,045.0	6,943,554.0	19.40				Average	
		94+00	232	11,863,245.0	6,943,562.5	17.90				Average	
		96+00	233	11,863,445.0	6,943,572.5	18.90				Average	
		98+00	234	11,863,645.0	6,943,582.0	20.00				Average	
		100+00	235	11,863,844.0	6,943,591.5	21.50				Average	
		102+00	236	11,864,046.0	6,943,614.0	20.80				Average	
		Fairfax Co	237	11,864,058.0	6,943,615.5	20.80					
Belvoir Woods In	20.0	1	238	11,856,612.0	6,943,840.0	152.70				Average	
		2	239	11,856,616.0	6,943,854.0	152.00				Average	
		3	240	11,856,621.0	6,943,881.5	149.90				Average	
		4	241	11,856,621.0	6,943,910.5	148.00				Average	
		5	242	11,856,613.0	6,943,944.0	146.00					
Belvoir Woods Out	20.0	1	243	11,856,577.0	6,943,935.5	146.00				Average	
		2	244	11,856,585.0	6,943,907.0	148.00				Average	
		3	245	11,856,583.0	6,943,886.5	150.00				Average	
		4	246	11,856,576.0	6,943,866.5	152.00				Average	
		5	247	11,856,569.0	6,943,853.0	152.80					
Inlet Cove In	20.0	1	248	11,857,463.0	6,943,573.0	145.40				Average	
		2	249	11,857,499.0	6,943,690.0	144.90					
Inlet Cove Out	20.0	1	250	11,857,461.0	6,943,702.0	144.40				Average	
		2	251	11,857,425.0	6,943,585.5	145.60					
Roadway3	36.0	1	252	11,853,008.0	6,943,358.0	62.00				Average	
		2	253	11,853,181.0	6,943,478.5	74.00				Average	
		3	254	11,853,362.0	6,943,573.0	86.00				Average	
		4	255	11,853,520.0	6,943,649.5	96.00				Average	
		5	256	11,853,704.0	6,943,741.0	108.00				Average	
		begin	257	11,853,882.0	6,943,845.0	120.00				Average	
		0+00	258	11,854,057.0	6,943,938.0	131.00				Average	
		2+00	259	11,854,233.0	6,944,033.5	140.00				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		4+00	260	11,854,411.0	6,944,116.0	146.00				Average
		6+00	261	11,854,596.0	6,944,174.5	151.40				Average
		Pohick	262	11,854,632.0	6,944,183.0	151.90				
Roadway11	48.0	Pohick	263	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	264	11,854,578.0	6,944,246.5	154.40				Average
		4+00	265	11,854,382.0	6,944,185.5	149.00				Average
		2+00	266	11,854,199.0	6,944,096.5	142.00				Average
		0+00	267	11,854,025.0	6,943,998.5	132.50				Average
		6	268	11,853,867.0	6,943,909.5	122.00				Average
		5	269	11,853,686.0	6,943,809.0	110.00				Average
		4	270	11,853,502.0	6,943,708.5	98.00				Average
		3	271	11,853,317.0	6,943,613.5	86.00				Average
		2	272	11,853,152.0	6,943,530.0	76.00				Average
		1	273	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	274	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	275	11,854,674.0	6,944,353.0	158.00				Average
		3	276	11,854,658.0	6,944,385.0	158.50				Average
		4	277	11,854,648.0	6,944,404.5	158.00				Average
		5	278	11,854,622.0	6,944,446.0	156.00				Average
		6	279	11,854,582.0	6,944,502.5	154.00				Average
		7	280	11,854,544.0	6,944,553.5	152.00				Average
		8	281	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	18.0	1	282	11,854,471.0	6,944,598.0	150.00				Average
		2	283	11,854,509.0	6,944,540.0	152.00				Average
		3	284	11,854,555.0	6,944,476.0	154.00				Average
		4	285	11,854,610.0	6,944,407.0	156.00				Average
		5	286	11,854,627.0	6,944,364.5	156.00				Average
		6	287	11,854,641.0	6,944,332.5	157.60				Average
		7	288	11,854,647.0	6,944,303.0	157.00				
WB Telegraph	40.0	1	289	11,855,956.0	6,944,101.0	150.00	Signal	10.00	25	Average
		2	290	11,855,967.0	6,944,295.0	148.00				Average
		3	291	11,855,962.0	6,944,391.0	148.00				Average
		4	292	11,855,960.0	6,944,489.0	148.00				
EB Telegraph	40.0	1	293	11,855,904.0	6,944,570.5	146.00	Signal	0.00	25	Average
		2	294	11,855,899.0	6,944,329.5	146.00				Average
		3	295	11,855,898.0	6,944,200.5	148.00				Average
		4	296	11,855,888.0	6,944,107.5	149.00				
WB Telegraph 2	24.0	1	297	11,855,780.0	6,943,550.5	134.00				Average
		2	298	11,855,797.0	6,943,606.5	138.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		3	299	11,855,818.0	6,943,662.5	142.00				Average
		4	300	11,855,841.0	6,943,740.0	145.80				Average
		5	301	11,855,856.0	6,943,799.5	148.10				Average
		6	302	11,855,882.0	6,943,897.0	150.00				Average
		7	303	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	304	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	305	11,855,834.0	6,943,815.0	148.00				Average
		3	306	11,855,809.0	6,943,708.5	144.00				Average
		4	307	11,855,789.0	6,943,642.5	140.00				Average
		5	308	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	309	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	310	11,865,506.0	6,943,785.0	36.00				Average
		3	311	11,865,545.0	6,943,721.5	35.20				Average
		4	312	11,865,595.0	6,943,619.5	36.00				Average
		5	313	11,865,633.0	6,943,549.5	38.70				Average
		6	314	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	315	11,865,720.0	6,943,440.0	38.00				Average
		2	316	11,865,671.0	6,943,519.5	36.00				Average
		3	317	11,865,621.0	6,943,617.5	36.00				Average
		4	318	11,865,577.0	6,943,710.0	35.20				Average
		5	319	11,865,547.0	6,943,772.0	36.00				Average
		6	320	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	1	321	11,869,955.0	6,945,047.5	140.90	Signal	10.00	100	Average
		2	322	11,869,979.0	6,945,009.5	142.00				Average
		3	323	11,870,040.0	6,944,867.0	142.00				Average
		4	324	11,870,068.0	6,944,799.0	140.00				Average
		5	325	11,870,122.0	6,944,680.0	138.00				Average
		6	326	11,870,155.0	6,944,598.5	136.00				Average
		7	327	11,870,199.0	6,944,498.0	132.00				Average
		8	328	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	329	11,870,275.0	6,944,429.5	128.00				Average
		2	330	11,870,233.0	6,944,520.0	132.00				Average
		3	331	11,870,181.0	6,944,618.0	136.00				Average
		4	332	11,870,145.0	6,944,695.0	138.00				Average
		5	333	11,870,102.0	6,944,798.0	140.00				Average
		6	334	11,870,062.0	6,944,884.0	142.00				Average
		7	335	11,869,993.0	6,945,016.0	142.00				Average
		8	336	11,869,974.0	6,945,057.0	140.80				
EB Mnt Vernon	30.0	1	337	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		2	338	11,873,010.0	6,946,872.5	30.00				Average
		3	339	11,873,082.0	6,946,744.0	32.00				Average
		4	340	11,873,105.0	6,946,704.5	32.00				Average
		5	341	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	342	11,873,175.0	6,946,615.0	34.00				Average
		2	343	11,873,131.0	6,946,723.5	32.00				Average
		3	344	11,873,116.0	6,946,754.5	32.00				Average
		4	345	11,873,076.0	6,946,831.5	30.50				Average
		5	346	11,873,055.0	6,946,875.0	30.00				Average
		6	347	11,873,000.0	6,946,983.5	28.00				
Roadway42	18.0	1	348	11,865,502.0	6,943,951.0	38.40	Signal	10.00	100	Average
		2	349	11,865,476.0	6,944,307.5	38.00				Average
		3	350	11,865,464.0	6,944,680.0	40.00				
EB Backlick	18.0	1	351	11,865,447.0	6,944,680.0	40.00				Average
		2	352	11,865,466.0	6,944,283.0	38.00				Average
		3	353	11,865,483.0	6,943,952.0	38.40				
Cook Inlet In	20.0	1	354	11,858,794.0	6,943,442.5	102.60				Average
		2	355	11,858,788.0	6,943,510.0	103.30				Average
		3	356	11,858,773.0	6,943,688.5	102.00				
Cook Inlet Out	20.0	1	357	11,858,755.0	6,943,677.5	102.00				Average
		2	358	11,858,749.0	6,943,507.5	103.70				Average
		3	359	11,858,751.0	6,943,440.5	104.20				
Roadway49	40.0	1	360	11,855,445.0	6,946,274.0	78.00	Signal	10.00	100	Average
		2	361	11,855,472.0	6,946,164.0	80.00				Average
		3	362	11,855,510.0	6,945,998.5	84.00				Average
		4	363	11,855,581.0	6,945,897.0	90.00				
Roadway48-2-2	40.0	point415	364	11,855,612.0	6,945,910.5	90.00	Signal	10.00	100	Average
		17	365	11,855,544.0	6,946,026.0	84.00				Average
		18	366	11,855,512.0	6,946,129.0	80.00				Average
		19	367	11,855,475.0	6,946,293.5	76.00				
Roadway48-2-2-Roadway55	40.0	4	368	11,855,960.0	6,944,489.0	148.00	Signal	10.00	100	Average
		5	369	11,855,956.0	6,944,589.0	146.00				Average
		6	370	11,855,942.0	6,944,759.5	148.00				Average
		7	371	11,855,940.0	6,945,006.0	146.00				Average
		8	372	11,855,940.0	6,945,116.5	144.00				Average
		9	373	11,855,939.0	6,945,189.5	142.00				Average
		10	374	11,855,939.0	6,945,244.5	140.00				Average
		point424	375	11,855,929.0	6,945,282.5	138.00				Average
		10	376	11,855,910.0	6,945,351.0	134.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		11	377	11,855,876.0	6,945,441.0	128.00				Average
		12	378	11,855,841.0	6,945,521.0	122.00				Average
		13	379	11,855,801.0	6,945,593.0	116.00				Average
		14	380	11,855,733.0	6,945,713.0	106.00				Average
		15	381	11,855,689.0	6,945,790.0	100.00				Average
		16	382	11,855,612.0	6,945,910.5	90.00				
Roadway49-2-Roadway58	40.0	point416	383	11,855,581.0	6,945,897.0	90.00	Signal	10.00	100	Average
		5	384	11,855,664.0	6,945,774.0	100.00				Average
		6	385	11,855,718.0	6,945,674.5	108.00				Average
		7	386	11,855,775.0	6,945,572.0	116.00				Average
		8	387	11,855,804.0	6,945,514.5	120.00				Average
		9	388	11,855,840.0	6,945,442.5	126.00				Average
		10	389	11,855,868.0	6,945,353.0	132.00				Average
		11	390	11,855,878.0	6,945,289.0	136.00				Average
		1	391	11,855,885.0	6,945,259.5	138.00				Average
		2	392	11,855,894.0	6,945,162.0	138.00				Average
		3	393	11,855,895.0	6,945,098.0	144.00				Average
		4	394	11,855,895.0	6,945,020.5	146.00				Average
		5	395	11,855,904.0	6,944,570.5	146.00				

INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway4	Pohick	1	1353	47	43	47	21	47	0	0	0	0	
	8+00	2	1353	47	43	47	21	47	0	0	0	0	
	10+00	3	1353	47	43	47	21	47	0	0	0	0	
	12+00	4	1353	47	43	47	21	47	0	0	0	0	
	14+00	5	1353	47	43	47	21	47	0	0	0	0	
	16+00	6	1353	47	43	47	21	47	0	0	0	0	
	18+00	7	1353	47	43	47	21	47	0	0	0	0	
	Telegraph	8											
Roadway5	Telegraph	9	1353	47	43	47	21	47	0	0	0	0	
	20+00	10	1353	47	43	47	21	47	0	0	0	0	
	22+00	11	1353	47	43	47	21	47	0	0	0	0	
	24+00	12	1353	47	43	47	21	47	0	0	0	0	
	26+00	13	1353	47	43	47	21	47	0	0	0	0	
	28+00	14	1353	47	43	47	21	47	0	0	0	0	
	30+00	15	1353	47	43	47	21	47	0	0	0	0	
	32+00	16	1353	47	43	47	21	47	0	0	0	0	
	34+00	17	1353	47	43	47	21	47	0	0	0	0	
	36+00	18	1353	47	43	47	21	47	0	0	0	0	
	38+00	19	1353	47	43	47	21	47	0	0	0	0	
	40+00	20	1353	47	43	47	21	47	0	0	0	0	
	42+00	21	1353	47	43	47	21	47	0	0	0	0	
	44+00	22	1353	47	43	47	21	47	0	0	0	0	
	46+00	23	1353	47	43	47	21	47	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	48+00	24	1353	47	43	47	21	47	0	0	0	0
	Cook Inlet	25										
Roadway6	Fairfax County	26	1353	47	43	47	21	47	0	0	0	0
	104+00	27	1353	47	43	47	21	47	0	0	0	0
	106+00	28	1353	47	43	47	21	47	0	0	0	0
	108+00	29	1353	47	43	47	21	47	0	0	0	0
	110+00	30	1353	47	43	47	21	47	0	0	0	0
	112+00	31	1353	47	43	47	21	47	0	0	0	0
	114+00	32	1353	47	43	47	21	47	0	0	0	0
	116+00/Backk	33										
Roadway7	116+00/Backk	34	1353	47	43	47	21	47	0	0	0	0
	118+00	35	1353	47	43	47	21	47	0	0	0	0
	120+00	36	1353	47	43	47	21	47	0	0	0	0
	122+00	37	1353	47	43	47	21	47	0	0	0	0
	124+00	38	1353	47	43	47	21	47	0	0	0	0
	126+00	39	1353	47	43	47	21	47	0	0	0	0
	128+00	40	1353	47	43	47	21	47	0	0	0	0
	130+00	41	1353	47	43	47	21	47	0	0	0	0
	132+00	42	1353	47	43	47	21	47	0	0	0	0
	134+00	43	1353	47	43	47	21	47	0	0	0	0
	136+00	44	1353	47	43	47	21	47	0	0	0	0
	138+00	45	1353	47	43	47	21	47	0	0	0	0
	140+00	46	1353	47	43	47	21	47	0	0	0	0
	142+00	47	1353	47	43	47	21	47	0	0	0	0
	144+00	48	1353	47	43	47	21	47	0	0	0	0
	146+00	49	1353	47	43	47	21	47	0	0	0	0
	148+00	50	1353	47	43	47	21	47	0	0	0	0
	150+00	51	1353	47	43	47	21	47	0	0	0	0
	152+00	52	1353	47	43	47	21	47	0	0	0	0
	154+00	53	1353	47	43	47	21	47	0	0	0	0
	156+00	54	1353	47	43	47	21	47	0	0	0	0
	158+00	55	1353	47	43	47	21	47	0	0	0	0
	160+00	56	1353	47	43	47	21	47	0	0	0	0
	162+00	57	1353	47	43	47	21	47	0	0	0	0
	Belvoir	58										
Roadway8	Belvoir	59	1353	47	43	47	21	47	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	164+00	60	1353	47	43	47	21	47	0	0	0	0
	166+00	61	1353	47	43	47	21	47	0	0	0	0
	168+00	62	1353	47	43	47	21	47	0	0	0	0
	170+00	63	1353	47	43	47	21	47	0	0	0	0
	172+00	64	1353	47	43	47	21	47	0	0	0	0
	174+00/Wood	65										
Roadway9	174+00/Wood	66	1353	47	43	47	21	47	0	0	0	0
	176+00	67	1353	47	43	47	21	47	0	0	0	0
	178+00	68	1353	47	43	47	21	47	0	0	0	0
	180+00	69	1353	47	43	47	21	47	0	0	0	0
	182+00	70	1353	47	43	47	21	47	0	0	0	0
	184+00	71	1353	47	43	47	21	47	0	0	0	0
	186+00	72	1353	47	43	47	21	47	0	0	0	0
	188+00	73	1353	47	43	47	21	47	0	0	0	0
	190+00	74	1353	47	43	47	21	47	0	0	0	0
	192+00	75	1353	47	43	47	21	47	0	0	0	0
	194+00	76	1353	47	43	47	21	47	0	0	0	0
	196+00	77	1353	47	43	47	21	47	0	0	0	0
	198+00	78	1353	47	43	47	21	47	0	0	0	0
	200+00/Mt Ve	79										
Roadway10	200+00/Mt Ve	80	1353	47	43	47	21	47	0	0	0	0
	202+00	81	1353	47	43	47	21	47	0	0	0	0
	204+00	82	1353	47	43	47	21	47	0	0	0	0
	206+00	83	1353	47	43	47	21	47	0	0	0	0
	208+00	84	1353	47	43	47	21	47	0	0	0	0
	210+00	85	1353	47	43	47	21	47	0	0	0	0
	212+00	86	1353	47	43	47	21	47	0	0	0	0
	214+00	87	1353	47	43	47	21	47	0	0	0	0
	End	88										
Roadway12	Telegraph	89	2461	28	61	28	144	28	0	0	0	0
	20+00	90	2461	28	61	28	144	28	0	0	0	0
	18+00	91	2461	28	61	28	144	28	0	0	0	0
	16+00	92	2461	28	61	28	144	28	0	0	0	0
	14+00	93	2461	28	61	28	144	28	0	0	0	0
	12+00	94	2461	28	61	28	144	28	0	0	0	0
	10+00	95	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	8+00	96	2461	28	61	28	144	28	0	0	0	0
	Pohick	97										
Roadway13	Cook Inlet	98	2461	28	61	28	144	28	0	0	0	0
	48+00	99	2461	28	61	28	144	28	0	0	0	0
	46+00	100	2461	28	61	28	144	28	0	0	0	0
	44+00	101	2461	28	61	28	144	28	0	0	0	0
	42+00	102	2461	28	61	28	144	28	0	0	0	0
	40+00	103	2461	28	61	28	144	28	0	0	0	0
	38+00	104	2461	28	61	28	144	28	0	0	0	0
	36+00	105	2461	28	61	28	144	28	0	0	0	0
	34+00	106	2461	28	61	28	144	28	0	0	0	0
	32+00	107	2461	28	61	28	144	28	0	0	0	0
	30+00	108	2461	28	61	28	144	28	0	0	0	0
	28+00	109	2461	28	61	28	144	28	0	0	0	0
	26+00	110	2461	28	61	28	144	28	0	0	0	0
	24+00	111	2461	28	61	28	144	28	0	0	0	0
	22+00	112	2461	28	61	28	144	28	0	0	0	0
	Telegraph	113										
Roadway14	Fairfax County	114	2461	28	61	28	144	28	0	0	0	0
	102+00	115	2461	28	61	28	144	28	0	0	0	0
	100+00	116	2461	28	61	28	144	28	0	0	0	0
	98+00	117	2461	28	61	28	144	28	0	0	0	0
	96+00	118	2461	28	61	28	144	28	0	0	0	0
	94+00	119	2461	28	61	28	144	28	0	0	0	0
	92+00	120	2461	28	61	28	144	28	0	0	0	0
	90+00	121	2461	28	61	28	144	28	0	0	0	0
	88+00	122	2461	28	61	28	144	28	0	0	0	0
	86+00	123	2461	28	61	28	144	28	0	0	0	0
	84+00	124	2461	28	61	28	144	28	0	0	0	0
	82+00	125	2461	28	61	28	144	28	0	0	0	0
	80+00	126	2461	28	61	28	144	28	0	0	0	0
	78+00	127	2461	28	61	28	144	28	0	0	0	0
	76+00	128	2461	28	61	28	144	28	0	0	0	0
	74+00	129	2461	28	61	28	144	28	0	0	0	0
	72+00	130	2461	28	61	28	144	28	0	0	0	0
	70+00	131	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	68+00	132	2461	28	61	28	144	28	0	0	0	0
	66+00	133	2461	28	61	28	144	28	0	0	0	0
	64+00	134	2461	28	61	28	144	28	0	0	0	0
	62+00	135	2461	28	61	28	144	28	0	0	0	0
	60+00	136	2461	28	61	28	144	28	0	0	0	0
	58+00	137	2461	28	61	28	144	28	0	0	0	0
	56+00	138	2461	28	61	28	144	28	0	0	0	0
	54+00	139	2461	28	61	28	144	28	0	0	0	0
	52+00	140	2461	28	61	28	144	28	0	0	0	0
	50+00	141	2461	28	61	28	144	28	0	0	0	0
	Cook Inlet	142										
Roadway15	Backkick	143	2461	28	61	28	144	28	0	0	0	0
	116+00	144	2461	28	61	28	144	28	0	0	0	0
	114+00	145	2461	28	61	28	144	28	0	0	0	0
	112+00	146	2461	28	61	28	144	28	0	0	0	0
	110+00	147	2461	28	61	28	144	28	0	0	0	0
	108+00	148	2461	28	61	28	144	28	0	0	0	0
	106+00	149	2461	28	61	28	144	28	0	0	0	0
	104+00	150	2461	28	61	28	144	28	0	0	0	0
	Fairfax County	151										
Roadway16	Belvoir	152	2461	28	61	28	144	28	0	0	0	0
	162+00	153	2461	28	61	28	144	28	0	0	0	0
	160+00	154	2461	28	61	28	144	28	0	0	0	0
	158+00	155	2461	28	61	28	144	28	0	0	0	0
	156+00	156	2461	28	61	28	144	28	0	0	0	0
	154+00	157	2461	28	61	28	144	28	0	0	0	0
	152+00	158	2461	28	61	28	144	28	0	0	0	0
	150+00	159	2461	28	61	28	144	28	0	0	0	0
	148+00	160	2461	28	61	28	144	28	0	0	0	0
	146+00	161	2461	28	61	28	144	28	0	0	0	0
	144+00	162	2461	28	61	28	144	28	0	0	0	0
	142+00	163	2461	28	61	28	144	28	0	0	0	0
	140+00	164	2461	28	61	28	144	28	0	0	0	0
	138+00	165	2461	28	61	28	144	28	0	0	0	0
	136+00	166	2461	28	61	28	144	28	0	0	0	0
	134+00	167	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	132+00	168	2461	28	61	28	144	28	0	0	0	0
	130+00	169	2461	28	61	28	144	28	0	0	0	0
	128+00	170	2461	28	61	28	144	28	0	0	0	0
	126+00	171	2461	28	61	28	144	28	0	0	0	0
	124+00	172	2461	28	61	28	144	28	0	0	0	0
	122+00	173	2461	28	61	28	144	28	0	0	0	0
	120+00	174	2461	28	61	28	144	28	0	0	0	0
	118+00	175	2461	28	61	28	144	28	0	0	0	0
	Backkick	176										
Roadway17	Woodlawn	177	2461	28	61	28	144	28	0	0	0	0
	174+00	178	2461	28	61	28	144	28	0	0	0	0
	172+00	179	2461	28	61	28	144	28	0	0	0	0
	170+00	180	2461	28	61	28	144	28	0	0	0	0
	168+00	181	2461	28	61	28	144	28	0	0	0	0
	166+00	182	2461	28	61	28	144	28	0	0	0	0
	164+00	183	2461	28	61	28	144	28	0	0	0	0
	Belvoir	184										
Roadway18	Mt Vernon	185	2461	28	61	28	144	28	0	0	0	0
	202+00	186	2461	28	61	28	144	28	0	0	0	0
	200+00	187	2461	28	61	28	144	28	0	0	0	0
	198+00	188	2461	28	61	28	144	28	0	0	0	0
	196+00	189	2461	28	61	28	144	28	0	0	0	0
	194+00	190	2461	28	61	28	144	28	0	0	0	0
	192+00	191	2461	28	61	28	144	28	0	0	0	0
	190+00	192	2461	28	61	28	144	28	0	0	0	0
	188+00	193	2461	28	61	28	144	28	0	0	0	0
	186+00	194	2461	28	61	28	144	28	0	0	0	0
	184+00	195	2461	28	61	28	144	28	0	0	0	0
	182+00	196	2461	28	61	28	144	28	0	0	0	0
	180+00	197	2461	28	61	28	144	28	0	0	0	0
	178+00	198	2461	28	61	28	144	28	0	0	0	0
	176+00	199	2461	28	61	28	144	28	0	0	0	0
	Woodlawn	200										
Roadway19	Begin	201	2461	28	61	28	144	28	0	0	0	0
	214+00	202	2461	28	61	28	144	28	0	0	0	0
	212+00	203	2461	28	61	28	144	28	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	210+00	204	2461	28	61	28	144	28	0	0	0	0
	208+00	205	2461	28	61	28	144	28	0	0	0	0
	206+00	206	2461	28	61	28	144	28	0	0	0	0
	204+00	207	2461	28	61	28	144	28	0	0	0	0
	Mt Vernon	208										
Roadway5-2	Cook Inlet	209	1353	47	43	47	21	47	0	0	0	0
	50+00	210	1353	47	43	47	21	47	0	0	0	0
	52+00	211	1353	47	43	47	21	47	0	0	0	0
	54+00	212	1353	47	43	47	21	47	0	0	0	0
	56+00	213	1353	47	43	47	21	47	0	0	0	0
	58+00	214	1353	47	43	47	21	47	0	0	0	0
	60+00	215	1353	47	43	47	21	47	0	0	0	0
	62+00	216	1353	47	43	47	21	47	0	0	0	0
	64+00	217	1353	47	43	47	21	47	0	0	0	0
	66+00	218	1353	47	43	47	21	47	0	0	0	0
	68+00	219	1353	47	43	47	21	47	0	0	0	0
	70+00	220	1353	47	43	47	21	47	0	0	0	0
	72+00	221	1353	47	43	47	21	47	0	0	0	0
	74+00	222	1353	47	43	47	21	47	0	0	0	0
	76+00	223	1353	47	43	47	21	47	0	0	0	0
	78+00	224	1353	47	43	47	21	47	0	0	0	0
	80+00	225	1353	47	43	47	21	47	0	0	0	0
	82+00	226	1353	47	43	47	21	47	0	0	0	0
	84+00	227	1353	47	43	47	21	47	0	0	0	0
	86+00	228	1353	47	43	47	21	47	0	0	0	0
	88+00	229	1353	47	43	47	21	47	0	0	0	0
	90+00	230	1353	47	43	47	21	47	0	0	0	0
	92+00	231	1353	47	43	47	21	47	0	0	0	0
	94+00	232	1353	47	43	47	21	47	0	0	0	0
	96+00	233	1353	47	43	47	21	47	0	0	0	0
	98+00	234	1353	47	43	47	21	47	0	0	0	0
	100+00	235	1353	47	43	47	21	47	0	0	0	0
	102+00	236	1353	47	43	47	21	47	0	0	0	0
	Fairfax County	237										
Belvoir Woods In	1	238	0	0	0	0	0	0	0	0	0	0
	2	239	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	240	0	0	0	0	0	0	0	0	0	0
	4	241	0	0	0	0	0	0	0	0	0	0
	5	242										
Belvoir Woods Out	1	243	0	0	0	0	0	0	0	0	0	0
	2	244	0	0	0	0	0	0	0	0	0	0
	3	245	0	0	0	0	0	0	0	0	0	0
	4	246	0	0	0	0	0	0	0	0	0	0
	5	247										
Inlet Cove In	1	248	0	0	0	0	0	0	0	0	0	0
	2	249										
Inlet Cove Out	1	250	0	0	0	0	0	0	0	0	0	0
	2	251										
Roadway3	1	252	1353	47	43	47	21	47	0	0	0	0
	2	253	1353	47	43	47	21	47	0	0	0	0
	3	254	1353	47	43	47	21	47	0	0	0	0
	4	255	1353	47	43	47	21	47	0	0	0	0
	5	256	1353	47	43	47	21	47	0	0	0	0
	begin	257	1353	47	43	47	21	47	0	0	0	0
	0+00	258	1353	47	43	47	21	47	0	0	0	0
	2+00	259	1353	47	43	47	21	47	0	0	0	0
	4+00	260	1353	47	43	47	21	47	0	0	0	0
	6+00	261	1353	47	43	47	21	47	0	0	0	0
	Pohick	262										
Roadway11	Pohick	263	2461	28	61	28	144	28	0	0	0	0
	6+00	264	2461	28	61	28	144	28	0	0	0	0
	4+00	265	2461	28	61	28	144	28	0	0	0	0
	2+00	266	2461	28	61	28	144	28	0	0	0	0
	0+00	267	2461	28	61	28	144	28	0	0	0	0
	6	268	2461	28	61	28	144	28	0	0	0	0
	5	269	2461	28	61	28	144	28	0	0	0	0
	4	270	2461	28	61	28	144	28	0	0	0	0
	3	271	2461	28	61	28	144	28	0	0	0	0
	2	272	2461	28	61	28	144	28	0	0	0	0
	1	273										
WB Pohick West	1	274	532	27	15	27	20	27	0	0	0	0
	2	275	532	27	15	27	20	27	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	276	532	27	15	27	20	27	0	0	0	0
	4	277	532	27	15	27	20	27	0	0	0	0
	5	278	532	27	15	27	20	27	0	0	0	0
	6	279	532	27	15	27	20	27	0	0	0	0
	7	280	532	27	15	27	20	27	0	0	0	0
	8	281										
EB Pohick West	1	282	460	30	13	30	18	30	0	0	0	0
	2	283	460	30	13	30	18	30	0	0	0	0
	3	284	460	30	13	30	18	30	0	0	0	0
	4	285	460	30	13	30	18	30	0	0	0	0
	5	286	460	30	13	30	18	30	0	0	0	0
	6	287	460	30	13	30	18	30	0	0	0	0
	7	288										
WB Telegraph	1	289	325	43	9	43	12	43	0	0	0	0
	2	290	325	43	9	43	12	43	0	0	0	0
	3	291	325	43	9	43	12	43	0	0	0	0
	4	292										
EB Telegraph	1	293	1526	23	42	23	59	23	0	0	0	0
	2	294	1526	23	42	23	59	23	0	0	0	0
	3	295	1526	23	42	23	59	23	0	0	0	0
	4	296										
WB Telegraph 2	1	297	325	43	9	43	12	43	0	0	0	0
	2	298	325	43	9	43	12	43	0	0	0	0
	3	299	325	43	9	43	12	43	0	0	0	0
	4	300	325	43	9	43	12	43	0	0	0	0
	5	301	325	43	9	43	12	43	0	0	0	0
	6	302	325	43	9	43	12	43	0	0	0	0
	7	303										
EB Telegraph 2	1	304	1526	23	42	23	59	23	0	0	0	0
	2	305	1526	23	42	23	59	23	0	0	0	0
	3	306	1526	23	42	23	59	23	0	0	0	0
	4	307	1526	23	42	23	59	23	0	0	0	0
	5	308										
EB Pohick	1	309	241	34	7	34	9	34	0	0	0	0
	2	310	241	34	7	34	9	34	0	0	0	0
	3	311	241	34	7	34	9	34	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	312	241	34	7	34	9	34	0	0	0	0
	5	313	241	34	7	34	9	34	0	0	0	0
	6	314										
WB Pohick	1	315	1059	18	29	18	41	18	0	0	0	0
	2	316	1059	18	29	18	41	18	0	0	0	0
	3	317	1059	18	29	18	41	18	0	0	0	0
	4	318	1059	18	29	18	41	18	0	0	0	0
	5	319	1059	18	29	18	41	18	0	0	0	0
	6	320										
EB Belvoir	1	321	122	35	3	35	5	35	0	0	0	0
	2	322	122	35	3	35	5	35	0	0	0	0
	3	323	122	35	3	35	5	35	0	0	0	0
	4	324	122	35	3	35	5	35	0	0	0	0
	5	325	122	35	3	35	5	35	0	0	0	0
	6	326	122	35	3	35	5	35	0	0	0	0
	7	327	122	35	3	35	5	35	0	0	0	0
	8	328										
WB Belvoir	1	329	532	29	15	29	20	29	0	0	0	0
	2	330	532	29	15	29	20	29	0	0	0	0
	3	331	532	29	15	29	20	29	0	0	0	0
	4	332	532	29	15	29	20	29	0	0	0	0
	5	333	532	29	15	29	20	29	0	0	0	0
	6	334	532	29	15	29	20	29	0	0	0	0
	7	335	532	29	15	29	20	29	0	0	0	0
	8	336										
EB Mnt Vernon	1	337	449	38	12	38	17	38	0	0	0	0
	2	338	449	38	12	38	17	38	0	0	0	0
	3	339	449	38	12	38	17	38	0	0	0	0
	4	340	449	38	12	38	17	38	0	0	0	0
	5	341										
WB Mnt Vernon	1	342	586	32	16	32	23	32	0	0	0	0
	2	343	586	32	16	32	23	32	0	0	0	0
	3	344	586	32	16	32	23	32	0	0	0	0
	4	345	586	32	16	32	23	32	0	0	0	0
	5	346	586	32	16	32	23	32	0	0	0	0
	6	347										

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Roadway42	1	348	173	30	5	30	7	30	0	0	0	0
	2	349	173	30	5	30	7	30	0	0	0	0
	3	350										
EB Backlick	1	351	118	30	3	30	5	30	0	0	0	0
	2	352	118	30	3	30	5	30	0	0	0	0
	3	353										
Cook Inlet In	1	354	0	0	0	0	0	0	0	0	0	0
	2	355	0	0	0	0	0	0	0	0	0	0
	3	356										
Cook Inlet Out	1	357	0	0	0	0	0	0	0	0	0	0
	2	358	0	0	0	0	0	0	0	0	0	0
	3	359										
Roadway49	1	360	1526	23	42	23	59	23	0	0	0	0
	2	361	1526	23	42	23	59	23	0	0	0	0
	3	362	1526	23	42	23	59	23	0	0	0	0
	4	363										
Roadway48-2-2	point415	364	325	43	9	43	12	43	0	0	0	0
	17	365	325	43	9	43	12	43	0	0	0	0
	18	366	325	43	9	43	12	43	0	0	0	0
	19	367										
Roadway48-2-2-Roadway55	4	368	325	43	9	43	12	43	0	0	0	0
	5	369	325	43	9	43	12	43	0	0	0	0
	6	370	325	43	9	43	12	43	0	0	0	0
	7	371	325	43	9	43	12	43	0	0	0	0
	8	372	325	43	9	43	12	43	0	0	0	0
	9	373	325	43	9	43	12	43	0	0	0	0
	10	374	325	43	9	43	12	43	0	0	0	0
	point424	375	325	43	9	43	12	43	0	0	0	0
	10	376	325	43	9	43	12	43	0	0	0	0
	11	377	325	43	9	43	12	43	0	0	0	0
	12	378	325	43	9	43	12	43	0	0	0	0
	13	379	325	43	9	43	12	43	0	0	0	0
	14	380	325	43	9	43	12	43	0	0	0	0
	15	381	325	43	9	43	12	43	0	0	0	0
	16	382										
Roadway49-2-Roadway58	point416	383	1526	23	42	23	59	23	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	5	384	1526	23	42	23	59	23	0	0	0	0
	6	385	1526	23	42	23	59	23	0	0	0	0
	7	386	1526	23	42	23	59	23	0	0	0	0
	8	387	1526	23	42	23	59	23	0	0	0	0
	9	388	1526	23	42	23	59	23	0	0	0	0
	10	389	1526	23	42	23	59	23	0	0	0	0
	11	390	1526	23	42	23	59	23	0	0	0	0
	1	391	1526	23	42	23	59	23	0	0	0	0
	2	392	1526	23	42	23	59	23	0	0	0	0
	3	393	1526	23	42	23	59	23	0	0	0	0
	4	394	1526	23	42	23	59	23	0	0	0	0
	5	395										



**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R21	23	1	11,855,337.0	6,943,849.0	144.00	5.00	0.00	66	10.0	5.0
R21A	24	1	11,855,432.0	6,943,817.5	148.20	5.00	0.00	66	10.0	5.0
R21B	25	5	11,855,663.0	6,943,946.5	151.50	5.00	0.00	66	10.0	5.0
R22-Deck	26	1	11,856,693.0	6,944,114.5	132.00	15.00	0.00	66	10.0	5.0
R23-Deck	27	1	11,856,738.0	6,943,987.5	134.20	15.00	62.00	66	10.0	5.0
R24/Site 2-Deck	28	1	11,856,774.0	6,943,888.0	138.00	15.00	0.00	66	10.0	5.0
R25-Deck	29	1	11,856,925.0	6,943,998.0	135.20	15.00	0.00	66	10.0	5.0
R26-Deck	30	1	11,856,942.0	6,943,946.5	137.00	15.00	0.00	66	10.0	5.0
R27	31	1	11,856,966.0	6,943,912.5	137.50	5.00	0.00	66	10.0	5.0
R28	32	1	11,857,141.0	6,943,945.5	128.20	5.00	0.00	66	10.0	5.0
R29-Deck	33	1	11,857,134.0	6,943,867.5	129.20	15.00	0.00	66	10.0	5.0
R30	34	1	11,857,248.0	6,943,742.0	134.00	5.00	0.00	66	10.0	5.0
R31-Deck	35	1	11,857,272.0	6,943,754.5	133.30	15.00	68.00	66	10.0	5.0
R32/Site 3-Deck	36	1	11,857,402.0	6,943,734.0	139.00	15.00	0.00	66	10.0	5.0
R33-Deck	37	1	11,857,626.0	6,943,640.0	141.00	15.00	0.00	66	10.0	5.0
R34	38	1	11,857,649.0	6,943,713.0	140.80	5.00	0.00	66	10.0	5.0
R35	39	1	11,857,770.0	6,943,594.5	134.20	5.00	0.00	66	10.0	5.0
R36	40	1	11,857,784.0	6,943,643.0	133.90	5.00	72.00	66	10.0	5.0
R37/Site 4	41	1	11,857,788.0	6,943,539.5	145.00	5.00	0.00	66	10.0	5.0
R38-Deck	42	1	11,857,918.0	6,943,555.5	128.20	15.00	0.00	66	10.0	5.0
R39-Deck	43	1	11,857,944.0	6,943,649.0	126.50	15.00	0.00	66	10.0	5.0
R40	44	1	11,858,054.0	6,943,499.5	128.70	5.00	0.00	66	10.0	5.0
R41-Deck	45	1	11,858,271.0	6,943,507.0	131.50	15.00	0.00	66	10.0	5.0
R42-Deck	46	1	11,858,367.0	6,943,545.0	127.50	15.00	0.00	66	10.0	5.0
R43-Deck	47	1	11,858,461.0	6,943,621.5	123.50	15.00	0.00	66	10.0	5.0
R44	48	1	11,858,572.0	6,943,572.5	107.00	5.00	63.00	66	10.0	5.0
R45/Site 5	49	1	11,858,595.0	6,943,543.5	106.20	5.00	0.00	66	10.0	5.0
R46	50	1	11,858,839.0	6,943,558.5	106.00	5.00	0.00	66	10.0	5.0
R47/Site 6	51	1	11,858,920.0	6,943,530.5	105.60	5.00	0.00	66	10.0	5.0
R48	52	1	11,858,958.0	6,943,514.0	106.20	5.00	0.00	66	10.0	5.0
R49	53	1	11,859,078.0	6,943,597.0	105.70	5.00	0.00	66	10.0	5.0
R50	54	1	11,859,239.0	6,943,730.0	101.00	5.00	54.00	66	10.0	5.0
R51A	55	1	11,864,858.0	6,944,158.0	30.00	5.00	0.00	66	10.0	5.0
R51/Site 7	56	1	11,865,194.0	6,944,182.0	33.00	5.00	0.00	66	10.0	5.0
R52	57	1	11,865,314.0	6,944,316.5	34.50	5.00	0.00	66	10.0	5.0
R53	58	1	11,865,671.0	6,944,404.5	43.00	5.00	0.00	66	10.0	5.0

**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R54	59	1	11,865,804.0	6,944,317.5	46.20	5.00	0.00	66	10.0	5.0
R54A	60	1	11,865,598.0	6,944,168.5	39.00	5.00	0.00	66	10.0	5.0
R55	61	1	11,865,304.0	6,943,641.0	28.20	5.00	0.00	66	10.0	5.0
R56	62	1	11,870,335.0	6,945,947.5	135.50	5.00	0.00	66	10.0	5.0
R57	63	1	11,870,533.0	6,945,223.0	133.00	5.00	0.00	66	10.0	5.0
R58	64	1	11,870,403.0	6,945,015.0	136.00	5.00	0.00	66	10.0	5.0
R59	66	1	11,870,484.0	6,945,071.5	135.00	5.00	0.00	66	10.0	5.0
R60	67	1	11,870,593.0	6,945,149.0	135.00	5.00	0.00	66	10.0	5.0
R61	68	1	11,870,695.0	6,945,220.0	134.00	5.00	0.00	66	10.0	5.0
R62	69	1	11,870,774.0	6,945,276.0	133.00	5.00	0.00	66	10.0	5.0
R63	70	1	11,870,545.0	6,944,990.0	132.00	5.00	0.00	66	10.0	5.0
R64	71	1	11,870,649.0	6,945,065.5	133.00	5.00	0.00	66	10.0	5.0
R65	72	1	11,870,753.0	6,945,138.5	133.00	5.00	0.00	66	10.0	5.0
R66	73	1	11,870,834.0	6,945,195.5	132.00	5.00	0.00	66	10.0	5.0
R67	74	1	11,870,916.0	6,945,255.5	132.00	5.00	0.00	66	10.0	5.0
R68A	75	1	11,871,155.0	6,945,813.0	122.50	5.00	0.00	66	10.0	5.0
R68	76	1	11,871,258.0	6,945,768.5	121.80	5.00	0.00	66	10.0	5.0
R69	77	1	11,871,171.0	6,945,956.5	123.20	5.00	0.00	66	10.0	5.0
R70	78	1	11,872,106.0	6,946,573.0	54.00	5.00	0.00	66	10.0	5.0
R71	79	1	11,872,192.0	6,946,634.5	51.00	5.00	0.00	66	10.0	5.0
R72	80	1	11,872,268.0	6,946,690.5	48.00	5.00	0.00	66	10.0	5.0
R73	81	1	11,872,352.0	6,946,745.5	45.50	5.00	0.00	66	10.0	5.0
R74	82	1	11,872,447.0	6,946,809.5	43.00	5.00	0.00	66	10.0	5.0
R75	83	1	11,872,533.0	6,946,868.5	42.00	5.00	0.00	66	10.0	5.0
R76	84	1	11,872,620.0	6,946,928.0	41.00	5.00	0.00	66	10.0	5.0
R77	85	1	11,872,050.0	6,946,658.5	58.00	5.00	0.00	66	10.0	5.0
R78	86	1	11,872,135.0	6,946,717.0	54.00	5.00	0.00	66	10.0	5.0
R79	87	1	11,872,213.0	6,946,770.5	49.00	5.00	0.00	66	10.0	5.0
R80	88	1	11,872,299.0	6,946,829.0	46.00	5.00	0.00	66	10.0	5.0
R81	89	1	11,872,398.0	6,946,895.5	44.00	5.00	0.00	66	10.0	5.0
R82	90	1	11,872,479.0	6,946,954.0	43.00	5.00	0.00	66	10.0	5.0
R83	91	1	11,872,561.0	6,947,009.0	42.00	5.00	0.00	66	10.0	5.0
R84	92	1	11,872,646.0	6,947,067.0	40.00	5.00	0.00	66	10.0	5.0
R85	93	1	11,871,996.0	6,946,739.0	62.00	5.00	0.00	66	10.0	5.0
R86	94	1	11,872,078.0	6,946,798.5	56.00	5.00	0.00	66	10.0	5.0
R87	95	1	11,872,160.0	6,946,855.0	51.00	5.00	0.00	66	10.0	5.0

**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R88	96	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0	
R89	103	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0	Y
R90	104	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0	Y
R91	105	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0	Y
R92	106	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0	Y
R93	107	1	11,871,859.0	6,946,107.0	54.00	5.00	0.00	66	10.0	5.0	Y
R94	108	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0	Y
R95	109	1	11,872,369.0	6,946,145.5	39.50	5.00	0.00	66	10.0	5.0	Y
R96	111	1	11,872,417.0	6,946,234.5	39.50	5.00	0.00	66	10.0	5.0	Y
R97	112	1	11,872,467.0	6,946,320.5	38.50	5.00	0.00	66	10.0	5.0	Y
R98	114	1	11,872,515.0	6,946,403.5	36.50	5.00	0.00	66	10.0	5.0	Y
R99	115	1	11,872,452.0	6,946,096.0	37.00	5.00	0.00	66	10.0	5.0	Y
R100	118	1	11,872,504.0	6,946,185.5	37.50	5.00	0.00	66	10.0	5.0	Y
R101	119	1	11,872,552.0	6,946,267.5	37.50	5.00	0.00	66	10.0	5.0	Y
R102	120	1	11,872,604.0	6,946,356.5	36.00	5.00	0.00	66	10.0	5.0	Y
R103	121	1	11,855,752.0	6,944,598.5	144.00	5.00	0.00	66	10.0	5.0	Y
R104-Deck	122	1	11,855,767.0	6,944,817.5	145.00	15.00	0.00	66	10.0	5.0	Y
R105-Deck	123	1	11,855,746.0	6,944,815.5	143.00	15.00	0.00	66	10.0	5.0	Y
R106-Deck	124	1	11,855,726.0	6,944,819.0	142.00	15.00	0.00	66	10.0	5.0	Y
R107-Deck	125	1	11,855,708.0	6,944,818.5	142.00	15.00	0.00	66	10.0	5.0	Y
R108-Deck	126	1	11,855,741.0	6,944,979.0	141.00	15.00	0.00	66	10.0	5.0	Y
R109-Deck	127	1	11,855,762.0	6,944,981.0	143.00	15.00	0.00	66	10.0	5.0	Y
R110-Deck	129	1	11,855,784.0	6,944,985.5	144.00	15.00	0.00	66	10.0	5.0	Y
R111	130	1	11,855,987.0	6,944,931.0	144.00	5.00	0.00	66	10.0	5.0	Y
R112	132	1	11,855,997.0	6,944,779.5	147.00	5.00	0.00	66	10.0	5.0	Y
R113	133	1	11,856,115.0	6,944,647.5	148.00	5.00	0.00	66	10.0	5.0	Y



INPUT: BARRIERS

Route 1 / Fort Belvoir

Parsons	27 November 2012
Greg J Berg	TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: Route 1 / Fort Belvoir  
 RUN: Existing

Barrier Name	Type	Height		If Wall \$ per Unit Area \$/sq ft	If Berm \$ per Unit Vol. \$/cu yd	Top Width ft	Run:Rise ft:ft	Add'tnl \$ per Unit Length \$/ft	Points			Height at Point ft	Segment										
		Min	Max						Name	No.	Coordinates (bottom)			Seg Ht	Perturbs	On	Important						
											X		Y					Z	Incr-	#Up	#Dn	Struct?	Reflec- tions?
		ft	ft								ft		ft					ft					
3 story Building	W	0.00	99.99	0.00				0.00	1	1	11,864,761.0	6,943,854.5	31.00	40.00	0.00	0	0						
									2	2	11,864,768.0	6,944,026.0	31.00	40.00	0.00	0	0						
									3	3	11,864,961.0	6,944,060.0	31.00	40.00									
Stores	W	0.00	99.99	0.00				0.00	1	4	11,865,208.0	6,943,945.0	38.00	12.00	0.00	0	0						
									2	5	11,865,367.0	6,944,028.0	38.00	12.00									
House21	W	0.00	99.99	0.00				0.00	1	6	11,865,112.0	6,944,077.5	33.00	15.00	0.00	0	0						
									2	7	11,865,167.0	6,944,061.0	33.00	15.00									
Shed	W	0.00	99.99	0.00				0.00	1	8	11,865,169.0	6,944,137.0	33.50	8.00	0.00	0	0						
									2	9	11,865,215.0	6,944,147.0	33.50	8.00									
Baptist Church	W	0.00	99.99	0.00				0.00	1	10	11,871,129.0	6,945,807.0	123.00	25.00	0.00	0	0						
									2	11	11,871,126.0	6,945,924.5	123.00	25.00	0.00	0	0						
									3	12	11,871,231.0	6,945,929.0	123.00	25.00									
Pool House	W	0.00	99.99	0.00				0.00	1	13	11,858,542.0	6,943,540.5	107.00	15.00	0.00	0	0						
									2	14	11,858,556.0	6,943,496.0	107.00	15.00									
House1	W	0.00	99.99	0.00				0.00	1	15	11,854,305.0	6,944,440.0	144.00	30.00	0.00	0	0						
									2	16	11,854,386.0	6,944,279.0	148.00	30.00									
House2	W	0.00	99.99	0.00				0.00	1	17	11,854,499.0	6,944,369.0	144.00	30.00	0.00	0	0						
									2	18	11,854,387.0	6,944,514.5	154.00	30.00									
House3	W	0.00	99.99	0.00				0.00	1	19	11,854,806.0	6,944,451.0	154.00	30.00	0.00	0	0						
									2	20	11,854,690.0	6,944,567.5	156.00	30.00									
House4	W	0.00	99.99	0.00				0.00	1	21	11,854,979.0	6,944,396.5	154.00	30.00	0.00	0	0						
									2	22	11,855,018.0	6,944,470.0	150.00	30.00									
House5	W	0.00	99.99	0.00				0.00	1	23	11,855,484.0	6,944,495.0	141.00	30.00	0.00	0	0						
									2	24	11,855,462.0	6,944,578.5	138.00	30.00									
House6	W	0.00	99.99	0.00				0.00	1	25	11,855,568.0	6,944,649.0	137.00	30.00	0.00	0	0						
									2	26	11,855,607.0	6,944,536.5	142.00	30.00									
House7	W	0.00	99.99	0.00				0.00	1	27	11,856,789.0	6,943,892.5	139.00	40.00	0.00	0	0						
									2	28	11,856,701.0	6,944,135.5	132.00	40.00									
House8	W	0.00	99.99	0.00				0.00	1	29	11,856,847.0	6,944,152.5	130.00	40.00	0.00	0	0						
									2	30	11,856,942.0	6,943,887.5	137.00	40.00									
House9	W	0.00	99.99	0.00				0.00	1	31	11,857,179.0	6,944,044.0	128.00	40.00	0.00	0	0						
									2	32	11,857,156.0	6,943,857.0	131.00	40.00									
House10	W	0.00	99.99	0.00				0.00	1	33	11,857,237.0	6,943,771.5	132.00	40.00	0.00	0	0						
									2	34	11,857,407.0	6,943,753.5	138.00	40.00									
House11	W	0.00	99.99	0.00				0.00	1	35	11,857,605.0	6,943,632.0	144.00	40.00	0.00	0	0						

INPUT: BARRIERS

Route 1 / Fort Belvoir

									2	36	11,857,649.0	6,943,771.5	142.00	40.00					
House12	W	0.00	99.99	0.00			0.00	1	37	11,857,695.0	6,943,795.5	137.00	40.00	0.00	0	0			
									2	38	11,857,638.0	6,943,619.0	138.00	40.00					
House13	W	0.00	99.99	0.00			0.00	1	39	11,857,754.0	6,943,589.0	138.00	40.00	0.00	0	0			
									2	40	11,857,780.0	6,943,681.5	136.00	40.00					
House14	W	0.00	99.99	0.00			0.00	1	41	11,857,817.0	6,943,667.5	134.00	40.00	0.00	0	0			
									2	42	11,857,789.0	6,943,576.0	136.00	40.00					
House15	W	0.00	99.99	0.00			0.00	1	43	11,857,895.0	6,943,542.0	132.00	40.00	0.00	0	0			
									2	44	11,857,978.0	6,943,826.5	126.00	40.00					
House16	W	0.00	99.99	0.00			0.00	1	45	11,858,018.0	6,943,812.5	124.00	40.00	0.00	0	0			
									2	46	11,857,932.0	6,943,529.5	128.00	40.00					
House17	W	0.00	99.99	0.00			0.00	1	47	11,858,816.0	6,943,611.5	104.00	40.00	0.00	0	0			
									2	48	11,858,874.0	6,943,545.0	106.00	40.00					
House18	W	0.00	99.99	0.00			0.00	1	49	11,858,935.0	6,943,550.0	106.00	40.00	0.00	0	0			
									2	50	11,858,959.0	6,943,519.5	106.00	40.00	0.00	0	0		
									3	51	11,859,025.0	6,943,581.0	106.00	40.00					
House19	W	0.00	99.99	0.00			0.00	1	52	11,858,912.0	6,943,765.5	107.00	40.00	0.00	0	0			
									2	53	11,859,048.0	6,943,591.5	106.00	40.00	0.00	0	0		
									3	54	11,859,112.0	6,943,641.0	104.00	40.00					
House20	W	0.00	99.99	0.00			0.00	1	55	11,859,157.0	6,943,687.5	102.00	40.00	0.00	0	0			
									2	56	11,859,229.0	6,943,738.5	102.00	40.00					
Barrier28	W	0.00	99.99	0.00			0.00	1	57	11,865,545.0	6,944,090.5	40.00	25.00	0.00	0	0			
									2	58	11,865,673.0	6,944,094.0	40.00	25.00	0.00	0	0		
									3	59	11,865,671.0	6,944,008.5	40.00	25.00					
Barrier29	W	0.00	99.99	0.00			0.00	1	60	11,865,659.0	6,944,175.5	40.00	25.00	0.00	0	0			
									2	61	11,865,550.0	6,944,224.0	40.00	25.00					
Cemetary Wall	W	0.00	99.99	0.00			0.00	1	62	11,855,362.0	6,944,060.0	144.00	5.00	0.00	0	0			
									2	63	11,855,376.0	6,944,064.5	145.00	5.00	0.00	0	0		
									3	64	11,855,420.0	6,944,049.5	146.00	5.00	0.00	0	0		
									4	65	11,855,442.0	6,944,041.5	146.00	5.00	0.00	0	0		
									5	66	11,855,470.0	6,944,032.0	148.00	5.00	0.00	0	0		
									6	67	11,855,537.0	6,944,008.5	148.50	5.00	0.00	0	0		
									7	68	11,855,543.0	6,943,996.0	149.00	5.00					
Barrier31	W	0.00	99.99	0.00			0.00	point69	69	11,855,802.0	6,944,999.5	144.00	30.00	0.00	0	0			
								point70	70	11,855,692.0	6,944,999.0	140.00	30.00						
Barrier32	W	0.00	99.99	0.00			0.00	point71	71	11,855,684.0	6,944,790.0	142.00	30.00	0.00	0	0			
								point72	72	11,855,766.0	6,944,788.5	144.00	30.00						
Barn	W	0.00	99.99	0.00			0.00	1	73	11,871,883.0	6,946,150.0	54.00	12.00	0.00	0	0			
								2	74	11,872,030.0	6,946,181.5	51.00	12.00	0.00	0	0			
								3	75	11,872,177.0	6,946,209.0	47.00	12.00						
Existing SW	W	0.00	99.99	0.00			0.00	start	76	11,853,880.0	6,943,970.5	124.80	12.00	0.00	0	0			
								0+00	77	11,854,003.0	6,944,041.0	132.50	12.00	0.00	0	0			
								2+00	78	11,854,179.0	6,944,134.5	142.00	12.00	0.00	0	0			
								4+00	79	11,854,366.0	6,944,224.0	149.00	12.00	0.00	0	0			
								4+90	80	11,854,464.0	6,944,260.5	153.80	12.00	0.00	0	0			
								6+00	81	11,854,567.0	6,944,291.0	156.59	12.00	0.00	0	0			
								6+40	82	11,854,607.0	6,944,300.0	156.67	12.00	0.00	0	0			
								6+70	83	11,854,632.0	6,944,326.5	156.95	12.00						
Church Wall	W	0.00	99.99	0.00			0.00	1	84	11,855,584.0	6,943,990.5	149.83	5.00	0.00	0	0			

**INPUT: BARRIERS**

**Route 1 / Fort Belvoir**

									2	85	11,855,738.0	6,943,936.5	151.89	5.00				
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**INPUT: TERRAIN LINES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012
Greg J Berg				TNM 2.5
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 / Fort Belvoir</b>			
<b>RUN:</b>	<b>Existing</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
	9	11,855,042.0	6,944,337.0	162.90
	10	11,855,097.0	6,944,331.0	164.00
	11	11,855,125.0	6,944,327.0	163.30
	12	11,855,155.0	6,944,326.5	162.90
	13	11,855,188.0	6,944,317.5	160.70
	14	11,855,226.0	6,944,312.0	161.40
	15	11,855,314.0	6,944,286.0	160.00
	16	11,855,410.0	6,944,256.5	158.00
	17	11,855,497.0	6,944,232.5	156.50
	18	11,855,525.0	6,944,236.5	157.10
	19	11,855,568.0	6,944,248.5	156.00
	20	11,855,607.0	6,944,279.5	148.00
Terrain Line3	21	11,854,720.0	6,944,333.5	158.00
	22	11,854,749.0	6,944,327.5	158.00
	23	11,854,840.0	6,944,333.5	158.40
	24	11,855,027.0	6,944,327.5	157.80

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	25	11,855,062.0	6,944,320.0	156.20
	26	11,855,188.0	6,944,301.0	154.10
	27	11,855,298.0	6,944,273.0	152.00
	28	11,855,415.0	6,944,234.5	150.40
	29	11,855,554.0	6,944,188.5	150.80
	30	11,855,604.0	6,944,189.0	152.00
	31	11,855,623.0	6,944,227.5	150.00
	32	11,855,622.0	6,944,248.0	148.00
	33	11,855,599.0	6,944,298.5	147.80
	34	11,855,569.0	6,944,315.5	148.00
	35	11,855,516.0	6,944,294.0	144.00
	36	11,855,478.0	6,944,288.0	142.00
	37	11,855,466.0	6,944,284.0	142.00
	38	11,855,378.0	6,944,309.0	142.00
	39	11,855,300.0	6,944,324.5	146.00
	40	11,855,261.0	6,944,337.0	146.00
	41	11,855,178.0	6,944,350.5	152.10
	42	11,855,122.0	6,944,348.0	157.50
	43	11,855,001.0	6,944,363.0	156.10
	44	11,854,941.0	6,944,381.5	156.00
	45	11,854,841.0	6,944,372.0	158.00
	46	11,854,831.0	6,944,394.5	158.00
	47	11,854,756.0	6,944,356.5	159.40
Terrain Line17	48	11,856,688.0	6,943,853.0	154.00
	49	11,856,738.0	6,943,836.5	154.60
	50	11,856,769.0	6,943,834.5	155.10
	51	11,856,812.0	6,943,819.0	154.00
	52	11,856,866.0	6,943,800.0	152.00
	53	11,856,921.0	6,943,788.0	148.00
	54	11,856,993.0	6,943,783.5	140.00
	55	11,857,046.0	6,943,779.0	128.00
	56	11,857,114.0	6,943,780.0	128.00
	57	11,857,155.0	6,943,780.5	128.00
	58	11,857,188.0	6,943,747.5	130.00
	59	11,857,230.0	6,943,693.5	136.00
	60	11,857,268.0	6,943,676.0	138.00



**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	61	11,857,304.0	6,943,662.0	140.00
Terrain Line20	62	11,858,137.0	6,943,439.0	138.00
	63	11,858,246.0	6,943,466.5	138.00
	64	11,858,300.0	6,943,487.0	134.00
Terrain Line22	65	11,857,498.0	6,943,629.5	146.00
	66	11,857,525.0	6,943,621.5	146.00
	67	11,857,550.0	6,943,608.5	144.00
	68	11,857,595.0	6,943,598.5	142.00
	69	11,857,629.0	6,943,589.5	138.00
	70	11,857,651.0	6,943,595.5	135.30
	71	11,857,665.0	6,943,584.0	138.00
	72	11,857,708.0	6,943,567.0	142.00
	73	11,857,744.0	6,943,570.5	144.00
	74	11,857,818.0	6,943,549.0	146.00
	75	11,857,856.0	6,943,537.0	146.00
	76	11,857,894.0	6,943,525.0	144.00
	77	11,857,920.0	6,943,516.5	140.00
	78	11,857,947.0	6,943,503.0	138.00
	79	11,857,963.0	6,943,495.5	136.00
	80	11,857,959.0	6,943,498.0	134.00
	81	11,857,937.0	6,943,513.0	132.00
	82	11,857,916.0	6,943,519.0	134.00
	83	11,857,879.0	6,943,531.5	136.00
	84	11,857,855.0	6,943,539.0	138.00
	85	11,857,790.0	6,943,560.5	140.00
	86	11,857,749.0	6,943,574.0	142.00
Terrain Line23	87	11,857,963.0	6,943,495.5	136.00
	88	11,857,999.0	6,943,492.0	134.00
	89	11,858,010.0	6,943,490.0	136.00
	90	11,858,036.0	6,943,483.0	136.00
	91	11,858,051.0	6,943,479.0	134.00
	92	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	93	11,858,058.0	6,943,477.0	132.00
	94	11,858,067.0	6,943,481.0	128.00
	95	11,858,095.0	6,943,482.0	128.00
	96	11,858,124.0	6,943,489.0	128.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	97	11,858,154.0	6,943,484.5	130.00
	98	11,858,172.0	6,943,479.0	132.00
	99	11,858,213.0	6,943,480.5	134.00
	100	11,858,299.0	6,943,488.5	134.00
Terrain Line28	101	11,858,816.0	6,943,467.0	102.00
	102	11,858,837.0	6,943,468.0	98.00
	103	11,858,917.0	6,943,485.5	96.00
	104	11,858,974.0	6,943,492.5	94.00
	105	11,858,995.0	6,943,501.0	92.00
	106	11,859,026.0	6,943,508.0	86.00
	107	11,859,094.0	6,943,534.0	84.00
	108	11,859,164.0	6,943,586.5	83.10
Terrain Line33	109	11,870,814.0	6,945,837.0	122.00
	110	11,870,960.0	6,945,964.5	122.00
	111	11,871,050.0	6,946,044.5	108.00
	112	11,871,090.0	6,945,944.0	118.00
	113	11,871,117.0	6,945,958.5	118.10
	114	11,871,094.0	6,946,036.5	113.00
	115	11,871,132.0	6,946,048.0	118.00
	116	11,871,189.0	6,946,066.0	122.00
	117	11,871,230.0	6,946,071.0	124.00
	118	11,871,293.0	6,946,054.5	124.00
	119	11,871,328.0	6,946,027.5	124.00
	120	11,871,350.0	6,945,975.0	124.00
Terrain Line35	121	11,859,164.0	6,943,586.0	83.10
	122	11,859,201.0	6,943,620.0	84.00
	123	11,859,236.0	6,943,656.5	84.00
	124	11,859,256.0	6,943,666.5	90.00
	125	11,859,291.0	6,943,695.5	90.00
	126	11,859,312.0	6,943,703.0	82.00

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

Parsons			27 November 2012		
Greg J Berg			TNM 2.5		
INPUT: GROUND ZONES					
PROJECT/CONTRACT:		Route 1 / Fort Belvoir			
RUN:		Existing			
Ground Zone			Points		
Name	Type	Flow Resistivity cgs rayls	No.	Coordinates	
				X ft	Y ft
Ground Zone2	Pavement	20000	1	11,853,692.0	6,943,795.5
			2	11,853,166.0	6,943,516.5
			3	11,853,178.0	6,943,502.5
			4	11,853,667.0	6,943,741.5
			5	11,853,861.0	6,943,849.5
			6	11,854,050.0	6,943,950.5
			7	11,854,226.0	6,944,046.0
			8	11,854,406.0	6,944,129.0
			9	11,854,592.0	6,944,188.0
			10	11,854,629.0	6,944,196.5
			11	11,854,788.0	6,944,216.5
			12	11,854,983.0	6,944,217.5
			13	11,855,176.0	6,944,188.5
			14	11,855,361.0	6,944,133.0
			15	11,855,551.0	6,944,075.5
			16	11,855,743.0	6,944,019.0
			17	11,855,802.0	6,944,001.0
			18	11,855,935.0	6,943,961.5
			19	11,856,126.0	6,943,902.0
			20	11,856,317.0	6,943,844.5
			21	11,856,509.0	6,943,787.5
			22	11,856,700.0	6,943,729.0
			23	11,856,893.0	6,943,676.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			24	11,857,276.0	6,943,561.0
			25	11,857,468.0	6,943,505.0
			26	11,857,661.0	6,943,452.0
			27	11,857,853.0	6,943,397.0
			28	11,858,050.0	6,943,353.5
			29	11,858,250.0	6,943,344.5
			30	11,858,450.0	6,943,349.5
			31	11,859,199.0	6,943,385.0
			32	11,859,459.0	6,943,397.5
			33	11,859,122.0	6,943,392.0
			34	11,858,449.0	6,943,366.5
			35	11,858,251.0	6,943,352.5
			36	11,858,053.0	6,943,365.0
			37	11,857,859.0	6,943,411.0
			38	11,857,667.0	6,943,470.5
			39	11,857,476.0	6,943,529.5
			40	11,857,285.0	6,943,589.5
			41	11,857,094.0	6,943,648.0
			42	11,856,903.0	6,943,707.5
			43	11,856,712.0	6,943,765.0
			44	11,856,520.0	6,943,824.0
			45	11,856,331.0	6,943,889.0
			46	11,856,140.0	6,943,948.5
			47	11,855,979.0	6,943,998.5
			48	11,855,949.0	6,944,006.5
			49	11,855,758.0	6,944,064.0
			50	11,855,566.0	6,944,121.5
			51	11,855,375.0	6,944,180.5
			52	11,855,182.0	6,944,235.5
			53	11,854,983.0	6,944,260.0
			54	11,854,781.0	6,944,263.0
			55	11,854,752.0	6,944,260.5
			56	11,854,582.0	6,944,233.0
			57	11,854,388.0	6,944,172.0
			58	11,854,206.0	6,944,084.0
			59	11,854,032.0	6,943,986.5

S:\N&amp;\Active Projects\Highway\Route 1 at Fort Belvoir\TNM\_Files to VDOT\Exist

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

			60	11,853,873.0	6,943,897.0
Median 2	Pavement	20000	61	11,863,244.0	6,943,576.5
			62	11,863,444.0	6,943,586.5
			63	11,863,644.0	6,943,596.0
			64	11,863,844.0	6,943,608.0
			65	11,864,048.0	6,943,628.5
			66	11,864,247.0	6,943,662.0
			67	11,864,443.0	6,943,702.0
			68	11,864,640.0	6,943,738.0
			69	11,864,837.0	6,943,772.5
			70	11,865,033.0	6,943,812.0
			71	11,865,229.0	6,943,851.0
			72	11,865,425.0	6,943,889.5
			73	11,865,424.0	6,943,895.0
			74	11,865,228.0	6,943,857.5
			75	11,865,032.0	6,943,817.0
			76	11,864,836.0	6,943,778.0
			77	11,864,639.0	6,943,742.0
			78	11,864,441.0	6,943,709.5
			79	11,864,243.0	6,943,678.5
			80	11,864,181.0	6,943,666.5
			81	11,864,041.0	6,943,647.5
			82	11,863,842.0	6,943,626.5
			83	11,863,643.0	6,943,610.5
			84	11,863,444.0	6,943,594.0
			85	11,863,244.0	6,943,579.0





**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R21B	25	5	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	5	-5.0
R22-Deck	26	1	0.0	59.4	66	59.4	10	----	59.4	0.0	5	-5.0
R23-Deck	27	1	62.0	61.1	66	-0.9	10	----	61.1	0.0	5	-5.0
R24/Site 2-Deck	28	1	0.0	64.8	66	64.8	10	----	64.8	0.0	5	-5.0
R25-Deck	29	1	0.0	58.0	66	58.0	10	----	58.0	0.0	5	-5.0
R26-Deck	30	1	0.0	60.0	66	60.0	10	----	60.0	0.0	5	-5.0
R27	31	1	0.0	59.3	66	59.3	10	----	59.3	0.0	5	-5.0
R28	32	1	0.0	55.6	66	55.6	10	----	55.6	0.0	5	-5.0
R29-Deck	33	1	0.0	62.7	66	62.7	10	----	62.7	0.0	5	-5.0
R30	34	1	0.0	62.2	66	62.2	10	----	62.2	0.0	5	-5.0
R31-Deck	35	1	68.0	66.7	66	-1.3	10	Snd Lvl	66.7	0.0	5	-5.0
R32/Site 3-Deck	36	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	5	-5.0
R33-Deck	37	1	0.0	65.3	66	65.3	10	----	65.3	0.0	5	-5.0
R34	38	1	0.0	56.1	66	56.1	10	----	56.1	0.0	5	-5.0
R35	39	1	0.0	58.7	66	58.7	10	----	58.7	0.0	5	-5.0
R36	40	1	72.0	54.3	66	-17.7	10	----	54.3	0.0	5	-5.0
R37/Site 4	41	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	5	-5.0
R38-Deck	42	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R39-Deck	43	1	0.0	56.1	66	56.1	10	----	56.1	0.0	5	-5.0
R40	44	1	0.0	66.6	66	66.6	10	Snd Lvl	66.6	0.0	5	-5.0
R41-Deck	45	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	5	-5.0
R42-Deck	46	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	5	-5.0
R43-Deck	47	1	0.0	65.2	66	65.2	10	----	65.2	0.0	5	-5.0
R44	48	1	63.0	63.9	66	0.9	10	----	63.9	0.0	5	-5.0
R45/Site 5	49	1	0.0	65.6	66	65.6	10	----	65.6	0.0	5	-5.0
R46	50	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	5	-5.0
R47/Site 6	51	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	5	-5.0
R48	52	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	5	-5.0
R49	53	1	0.0	65.0	66	65.0	10	----	65.0	0.0	5	-5.0
R50	54	1	54.0	60.8	66	6.8	10	----	60.8	0.0	5	-5.0
R51A	55	1	0.0	56.1	66	56.1	10	----	56.1	0.0	5	-5.0
R51/Site 7	56	1	0.0	57.0	66	57.0	10	----	57.0	0.0	5	-5.0
R52	57	1	0.0	58.5	66	58.5	10	----	58.5	0.0	5	-5.0
R53	58	1	0.0	56.0	66	56.0	10	----	56.0	0.0	5	-5.0
R54	59	1	0.0	56.6	66	56.6	10	----	56.6	0.0	5	-5.0
R54A	60	1	0.0	60.3	66	60.3	10	----	60.3	0.0	5	-5.0
R55	61	1	0.0	62.7	66	62.7	10	----	62.7	0.0	5	-5.0
R56	62	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0
R57	63	1	0.0	60.2	66	60.2	10	----	60.2	0.0	5	-5.0
R58	64	1	0.0	59.4	66	59.4	10	----	59.4	0.0	5	-5.0
R59	66	1	0.0	59.0	66	59.0	10	----	59.0	0.0	5	-5.0

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R60	67	1	0.0	58.6	66	58.6	10	----	58.6	0.0	5	-5.0
R61	68	1	0.0	58.2	66	58.2	10	----	58.2	0.0	5	-5.0
R62	69	1	0.0	58.1	66	58.1	10	----	58.1	0.0	5	-5.0
R63	70	1	0.0	56.9	66	56.9	10	----	56.9	0.0	5	-5.0
R64	71	1	0.0	56.7	66	56.7	10	----	56.7	0.0	5	-5.0
R65	72	1	0.0	56.3	66	56.3	10	----	56.3	0.0	5	-5.0
R66	73	1	0.0	56.2	66	56.2	10	----	56.2	0.0	5	-5.0
R67	74	1	0.0	56.2	66	56.2	10	----	56.2	0.0	5	-5.0
R68A	75	1	0.0	54.1	66	54.1	10	----	54.1	0.0	5	-5.0
R68	76	1	0.0	56.7	66	56.7	10	----	56.7	0.0	5	-5.0
R69	77	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
R70	78	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	5	-5.0
R71	79	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	5	-5.0
R72	80	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	5	-5.0
R73	81	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	5	-5.0
R74	82	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R75	83	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R76	84	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R77	85	1	0.0	65.9	66	65.9	10	----	65.9	0.0	5	-5.0
R78	86	1	0.0	65.1	66	65.1	10	----	65.1	0.0	5	-5.0
R79	87	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0
R80	88	1	0.0	64.2	66	64.2	10	----	64.2	0.0	5	-5.0
R81	89	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0
R82	90	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0
R83	91	1	0.0	64.3	66	64.3	10	----	64.3	0.0	5	-5.0
R84	92	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0
R85	93	1	0.0	62.2	66	62.2	10	----	62.2	0.0	5	-5.0
R86	94	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R87	95	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R88	96	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0
R89	103	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0
R90	104	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R91	105	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R92	106	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R93	107	1	0.0	59.0	66	59.0	10	----	59.0	0.0	5	-5.0
R94	108	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R95	109	1	0.0	56.7	66	56.7	10	----	56.7	0.0	5	-5.0
R96	111	1	0.0	57.7	66	57.7	10	----	57.7	0.0	5	-5.0
R97	112	1	0.0	58.8	66	58.8	10	----	58.8	0.0	5	-5.0
R98	114	1	0.0	60.0	66	60.0	10	----	60.0	0.0	5	-5.0
R99	115	1	0.0	55.6	66	55.6	10	----	55.6	0.0	5	-5.0

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R100	118	1	0.0	56.5	66	56.5	10	----	56.5	0.0	5	-5.0
R101	119	1	0.0	57.2	66	57.2	10	----	57.2	0.0	5	-5.0
R102	120	1	0.0	58.2	66	58.2	10	----	58.2	0.0	5	-5.0
R103	121	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0
R104-Deck	122	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R105-Deck	123	1	0.0	63.1	66	63.1	10	----	63.1	0.0	5	-5.0
R106-Deck	124	1	0.0	61.8	66	61.8	10	----	61.8	0.0	5	-5.0
R107-Deck	125	1	0.0	60.9	66	60.9	10	----	60.9	0.0	5	-5.0
R108-Deck	126	1	0.0	62.2	66	62.2	10	----	62.2	0.0	5	-5.0
R109-Deck	127	1	0.0	63.2	66	63.2	10	----	63.2	0.0	5	-5.0
R110-Deck	129	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0
R111	130	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	5	-5.0
R112	132	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	5	-5.0
R113	133	1	0.0	62.7	66	62.7	10	----	62.7	0.0	5	-5.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		124	0.0	0.0	0.0							
All Impacted		23	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							





## **Noise Model Validation**



INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M1 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment	Autos		MTrucks		HTrucks		Buses		Motorcycles	
				V	S	V	S	V	S	V	S	V	S
				veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Roadway3	begin	1	1038	45	45	45	45	27	45	0	0	0	0
	0+00	2	1038	45	45	45	45	27	45	0	0	0	0
	2+00	3	1038	45	45	45	45	27	45	0	0	0	0
	4+00	4	1038	45	45	45	45	27	45	0	0	0	0
	6+00	5	1038	45	45	45	45	27	45	0	0	0	0
	Pohick	6											
Roadway4	Pohick	7	1038	45	45	45	45	27	45	0	0	0	0
	8+00	8	1038	45	45	45	45	27	45	0	0	0	0
	10+00	9	1038	45	45	45	45	27	45	0	0	0	0
	12+00	10	1038	45	45	45	45	27	45	0	0	0	0
	14+00	11	1038	45	45	45	45	27	45	0	0	0	0
	16+00	12	1038	45	45	45	45	27	45	0	0	0	0
	18+00	13	1038	45	45	45	45	27	45	0	0	0	0
	Telegraph	14											
Roadway5	Telegraph	15	1038	45	45	45	45	27	45	0	0	0	0
	20+00	16	1038	45	45	45	45	27	45	0	0	0	0
	22+00	17	1038	45	45	45	45	27	45	0	0	0	0
	24+00	18	1038	45	45	45	45	27	45	0	0	0	0
	26+00	19	1038	45	45	45	45	27	45	0	0	0	0
	28+00	20	1038	45	45	45	45	27	45	0	0	0	0
	30+00	21	1038	45	45	45	45	27	45	0	0	0	0
	32+00	22	1038	45	45	45	45	27	45	0	0	0	0
	34+00	23	1038	45	45	45	45	27	45	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	1038	45	45	45	27	45	0	0	0	0
	38+00	25	1038	45	45	45	27	45	0	0	0	0
	40+00	26	1038	45	45	45	27	45	0	0	0	0
	42+00	27	1038	45	45	45	27	45	0	0	0	0
	44+00	28	1038	45	45	45	27	45	0	0	0	0
	46+00	29	1038	45	45	45	27	45	0	0	0	0
	48+00	30	1038	45	45	45	27	45	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	936	45	51	45	30	45	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	936	45	51	45	30	45	0	0	0	0
	4+00	97	936	45	51	45	30	45	0	0	0	0
	2+00	98	936	45	51	45	30	45	0	0	0	0
	0+00	99	936	45	51	45	30	45	0	0	0	0
	End	100										
Roadway12	Telegraph	101	936	45	51	45	30	45	0	0	0	0
	20+00	102	936	45	51	45	30	45	0	0	0	0
	18+00	103	936	45	51	45	30	45	0	0	0	0
	16+00	104	936	45	51	45	30	45	0	0	0	0
	14+00	105	936	45	51	45	30	45	0	0	0	0
	12+00	106	936	45	51	45	30	45	0	0	0	0
	10+00	107	936	45	51	45	30	45	0	0	0	0
	8+00	108	936	45	51	45	30	45	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	936	45	51	45	30	45	0	0	0	0
	48+00	111	936	45	51	45	30	45	0	0	0	0
	46+00	112	936	45	51	45	30	45	0	0	0	0
	44+00	113	936	45	51	45	30	45	0	0	0	0
	42+00	114	936	45	51	45	30	45	0	0	0	0
	40+00	115	936	45	51	45	30	45	0	0	0	0
	38+00	116	936	45	51	45	30	45	0	0	0	0
	36+00	117	936	45	51	45	30	45	0	0	0	0
	34+00	118	936	45	51	45	30	45	0	0	0	0
	32+00	119	936	45	51	45	30	45	0	0	0	0
	30+00	120	936	45	51	45	30	45	0	0	0	0
	28+00	121	936	45	51	45	30	45	0	0	0	0
	26+00	122	936	45	51	45	30	45	0	0	0	0
	24+00	123	936	45	51	45	30	45	0	0	0	0
	22+00	124	936	45	51	45	30	45	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	0	0	0	0	0	0	0	0	0	0
	102+00	127	0	0	0	0	0	0	0	0	0	0
	100+00	128	0	0	0	0	0	0	0	0	0	0
	98+00	129	0	0	0	0	0	0	0	0	0	0
	96+00	130	0	0	0	0	0	0	0	0	0	0
	94+00	131	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	0	0	0	0	0	0	0	0	0	0
	90+00	133	0	0	0	0	0	0	0	0	0	0
	88+00	134	0	0	0	0	0	0	0	0	0	0
	86+00	135	0	0	0	0	0	0	0	0	0	0
	84+00	136	0	0	0	0	0	0	0	0	0	0
	82+00	137	0	0	0	0	0	0	0	0	0	0
	80+00	138	0	0	0	0	0	0	0	0	0	0
	78+00	139	0	0	0	0	0	0	0	0	0	0
	76+00	140	0	0	0	0	0	0	0	0	0	0
	74+00	141	0	0	0	0	0	0	0	0	0	0
	72+00	142	0	0	0	0	0	0	0	0	0	0
	70+00	143	0	0	0	0	0	0	0	0	0	0
	68+00	144	0	0	0	0	0	0	0	0	0	0
	66+00	145	0	0	0	0	0	0	0	0	0	0
	64+00	146	0	0	0	0	0	0	0	0	0	0
	62+00	147	0	0	0	0	0	0	0	0	0	0
	60+00	148	0	0	0	0	0	0	0	0	0	0
	58+00	149	0	0	0	0	0	0	0	0	0	0
	56+00	150	0	0	0	0	0	0	0	0	0	0
	54+00	151	0	0	0	0	0	0	0	0	0	0
	52+00	152	0	0	0	0	0	0	0	0	0	0
	50+00	153	0	0	0	0	0	0	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	0	0	0	0	0	0	0	0	0	0
	50+00	222	0	0	0	0	0	0	0	0	0	0
	52+00	223	0	0	0	0	0	0	0	0	0	0
	54+00	224	0	0	0	0	0	0	0	0	0	0
	56+00	225	0	0	0	0	0	0	0	0	0	0
	58+00	226	0	0	0	0	0	0	0	0	0	0
	60+00	227	0	0	0	0	0	0	0	0	0	0
	62+00	228	0	0	0	0	0	0	0	0	0	0
	64+00	229	0	0	0	0	0	0	0	0	0	0
	66+00	230	0	0	0	0	0	0	0	0	0	0
	68+00	231	0	0	0	0	0	0	0	0	0	0
	70+00	232	0	0	0	0	0	0	0	0	0	0
	72+00	233	0	0	0	0	0	0	0	0	0	0
	74+00	234	0	0	0	0	0	0	0	0	0	0
	76+00	235	0	0	0	0	0	0	0	0	0	0
	78+00	236	0	0	0	0	0	0	0	0	0	0
	80+00	237	0	0	0	0	0	0	0	0	0	0
	82+00	238	0	0	0	0	0	0	0	0	0	0
	84+00	239	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	0	0	0	0	0	0	0	0	0	0
	88+00	241	0	0	0	0	0	0	0	0	0	0
	90+00	242	0	0	0	0	0	0	0	0	0	0
	92+00	243	0	0	0	0	0	0	0	0	0	0
	94+00	244	0	0	0	0	0	0	0	0	0	0
	96+00	245	0	0	0	0	0	0	0	0	0	0
	98+00	246	0	0	0	0	0	0	0	0	0	0
	100+00	247	0	0	0	0	0	0	0	0	0	0
	102+00	248	0	0	0	0	0	0	0	0	0	0
	Fairfax County	249										

**RESULTS: SOUND LEVELS**

Route 1 / Fort Belvoir

Parsons													27 November 2012	
Greg J Berg													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir											
<b>RUN:</b>			Existing - Site M1 Validation											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS											
													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>Type Impact</b>	<b>With Barrier</b>				
							<b>Calculated</b>	<b>Crit'n</b>		<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>	
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
Site 1		1	1	0.0	55.8	66	55.8	10	----	55.8	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			1	0.0	0.0	0.0								
All Impacted			0	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								



INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M2 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S			
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph			
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	843	50	18	50	18	50	0	0	0	0	
	8+00	8	843	50	18	50	18	50	0	0	0	0	
	10+00	9	843	50	18	50	18	50	0	0	0	0	
	12+00	10	843	50	18	50	18	50	0	0	0	0	
	14+00	11	843	50	18	50	18	50	0	0	0	0	
	16+00	12	843	50	18	50	18	50	0	0	0	0	
	18+00	13	843	50	18	50	18	50	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	843	50	18	50	18	50	0	0	0	0	
	20+00	16	843	50	18	50	18	50	0	0	0	0	
	22+00	17	843	50	18	50	18	50	0	0	0	0	
	24+00	18	843	50	18	50	18	50	0	0	0	0	
	26+00	19	843	50	18	50	18	50	0	0	0	0	
	28+00	20	843	50	18	50	18	50	0	0	0	0	
	30+00	21	843	50	18	50	18	50	0	0	0	0	
	32+00	22	843	50	18	50	18	50	0	0	0	0	
	34+00	23	843	50	18	50	18	50	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	843	50	18	50	18	50	0	0	0	0
	38+00	25	843	50	18	50	18	50	0	0	0	0
	40+00	26	843	50	18	50	18	50	0	0	0	0
	42+00	27	843	50	18	50	18	50	0	0	0	0
	44+00	28	843	50	18	50	18	50	0	0	0	0
	46+00	29	843	50	18	50	18	50	0	0	0	0
	48+00	30	843	50	18	50	18	50	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	1098	50	27	50	27	50	0	0	0	0
	20+00	102	1098	50	27	50	27	50	0	0	0	0
	18+00	103	1098	50	27	50	27	50	0	0	0	0
	16+00	104	1098	50	27	50	27	50	0	0	0	0
	14+00	105	1098	50	27	50	27	50	0	0	0	0
	12+00	106	1098	50	27	50	27	50	0	0	0	0
	10+00	107	1098	50	27	50	27	50	0	0	0	0
	8+00	108	1098	50	27	50	27	50	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	1098	50	27	50	27	50	0	0	0	0
	48+00	111	1098	50	27	50	27	50	0	0	0	0
	46+00	112	1098	50	27	50	27	50	0	0	0	0
	44+00	113	1098	50	27	50	27	50	0	0	0	0
	42+00	114	1098	50	27	50	27	50	0	0	0	0
	40+00	115	1098	50	27	50	27	50	0	0	0	0
	38+00	116	1098	50	27	50	27	50	0	0	0	0
	36+00	117	1098	50	27	50	27	50	0	0	0	0
	34+00	118	1098	50	27	50	27	50	0	0	0	0
	32+00	119	1098	50	27	50	27	50	0	0	0	0
	30+00	120	1098	50	27	50	27	50	0	0	0	0
	28+00	121	1098	50	27	50	27	50	0	0	0	0
	26+00	122	1098	50	27	50	27	50	0	0	0	0
	24+00	123	1098	50	27	50	27	50	0	0	0	0
	22+00	124	1098	50	27	50	27	50	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	0	0	0	0	0	0	0	0	0	0
	102+00	127	0	0	0	0	0	0	0	0	0	0
	100+00	128	0	0	0	0	0	0	0	0	0	0
	98+00	129	0	0	0	0	0	0	0	0	0	0
	96+00	130	0	0	0	0	0	0	0	0	0	0
	94+00	131	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	0	0	0	0	0	0	0	0	0	0
	90+00	133	0	0	0	0	0	0	0	0	0	0
	88+00	134	0	0	0	0	0	0	0	0	0	0
	86+00	135	0	0	0	0	0	0	0	0	0	0
	84+00	136	0	0	0	0	0	0	0	0	0	0
	82+00	137	0	0	0	0	0	0	0	0	0	0
	80+00	138	0	0	0	0	0	0	0	0	0	0
	78+00	139	0	0	0	0	0	0	0	0	0	0
	76+00	140	0	0	0	0	0	0	0	0	0	0
	74+00	141	0	0	0	0	0	0	0	0	0	0
	72+00	142	0	0	0	0	0	0	0	0	0	0
	70+00	143	0	0	0	0	0	0	0	0	0	0
	68+00	144	0	0	0	0	0	0	0	0	0	0
	66+00	145	0	0	0	0	0	0	0	0	0	0
	64+00	146	0	0	0	0	0	0	0	0	0	0
	62+00	147	0	0	0	0	0	0	0	0	0	0
	60+00	148	0	0	0	0	0	0	0	0	0	0
	58+00	149	0	0	0	0	0	0	0	0	0	0
	56+00	150	0	0	0	0	0	0	0	0	0	0
	54+00	151	0	0	0	0	0	0	0	0	0	0
	52+00	152	0	0	0	0	0	0	0	0	0	0
	50+00	153	0	0	0	0	0	0	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	0	0	0	0	0	0	0	0	0	0
	50+00	222	0	0	0	0	0	0	0	0	0	0
	52+00	223	0	0	0	0	0	0	0	0	0	0
	54+00	224	0	0	0	0	0	0	0	0	0	0
	56+00	225	0	0	0	0	0	0	0	0	0	0
	58+00	226	0	0	0	0	0	0	0	0	0	0
	60+00	227	0	0	0	0	0	0	0	0	0	0
	62+00	228	0	0	0	0	0	0	0	0	0	0
	64+00	229	0	0	0	0	0	0	0	0	0	0
	66+00	230	0	0	0	0	0	0	0	0	0	0
	68+00	231	0	0	0	0	0	0	0	0	0	0
	70+00	232	0	0	0	0	0	0	0	0	0	0
	72+00	233	0	0	0	0	0	0	0	0	0	0
	74+00	234	0	0	0	0	0	0	0	0	0	0
	76+00	235	0	0	0	0	0	0	0	0	0	0
	78+00	236	0	0	0	0	0	0	0	0	0	0
	80+00	237	0	0	0	0	0	0	0	0	0	0
	82+00	238	0	0	0	0	0	0	0	0	0	0
	84+00	239	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	86+00	240	0	0	0	0	0	0	0	0	0	0
	88+00	241	0	0	0	0	0	0	0	0	0	0
	90+00	242	0	0	0	0	0	0	0	0	0	0
	92+00	243	0	0	0	0	0	0	0	0	0	0
	94+00	244	0	0	0	0	0	0	0	0	0	0
	96+00	245	0	0	0	0	0	0	0	0	0	0
	98+00	246	0	0	0	0	0	0	0	0	0	0
	100+00	247	0	0	0	0	0	0	0	0	0	0
	102+00	248	0	0	0	0	0	0	0	0	0	0
	Fairfax County	249										
Belvoir Woods Out	1	250	0	0	0	0	0	0	0	0	0	0
	2	251	0	0	0	0	0	0	0	0	0	0
	3	252	0	0	0	0	0	0	0	0	0	0
	4	253	0	0	0	0	0	0	0	0	0	0
	5	254										
Belvoir Woods In	1	255	0	0	0	0	0	0	0	0	0	0
	2	256	0	0	0	0	0	0	0	0	0	0
	3	257	0	0	0	0	0	0	0	0	0	0
	4	258	0	0	0	0	0	0	0	0	0	0
	5	259										

**RESULTS: SOUND LEVELS**

Route 1 / Fort Belvoir

Parsons													27 November 2012	
Greg J Berg													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir											
<b>RUN:</b>			Existing - Site M2 Validation											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS											
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.														
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>Type Impact</b>	<b>With Barrier</b>				
							<b>Calculated</b>	<b>Crit'n</b>		<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>	
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				dB	dB	dB	dB	dB		dB	dB	dB	dB	
Site 2		2	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			1	0.0	0.0	0.0								
All Impacted			0	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:		Route 1 / Fort Belvoir											
RUN:		Existing - Site M3 Validation											
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	0	0	0	0	0	0	0	0	0	0	
	8+00	8	0	0	0	0	0	0	0	0	0	0	
	10+00	9	0	0	0	0	0	0	0	0	0	0	
	12+00	10	0	0	0	0	0	0	0	0	0	0	
	14+00	11	0	0	0	0	0	0	0	0	0	0	
	16+00	12	0	0	0	0	0	0	0	0	0	0	
	18+00	13	0	0	0	0	0	0	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	750	45	36	45	3	45	0	0	0	0	
	20+00	16	750	45	36	45	3	45	0	0	0	0	
	22+00	17	750	45	36	45	3	45	0	0	0	0	
	24+00	18	750	45	36	45	3	45	0	0	0	0	
	26+00	19	750	45	36	45	3	45	0	0	0	0	
	28+00	20	750	45	36	45	3	45	0	0	0	0	
	30+00	21	750	45	36	45	3	45	0	0	0	0	
	32+00	22	750	45	36	45	3	45	0	0	0	0	
	34+00	23	750	45	36	45	3	45	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	750	45	36	45	3	45	0	0	0	0
	38+00	25	750	45	36	45	3	45	0	0	0	0
	40+00	26	750	45	36	45	3	45	0	0	0	0
	42+00	27	750	45	36	45	3	45	0	0	0	0
	44+00	28	750	45	36	45	3	45	0	0	0	0
	46+00	29	750	45	36	45	3	45	0	0	0	0
	48+00	30	750	45	36	45	3	45	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	0	0	0	0	0	0	0	0	0	0
	20+00	102	0	0	0	0	0	0	0	0	0	0
	18+00	103	0	0	0	0	0	0	0	0	0	0
	16+00	104	0	0	0	0	0	0	0	0	0	0
	14+00	105	0	0	0	0	0	0	0	0	0	0
	12+00	106	0	0	0	0	0	0	0	0	0	0
	10+00	107	0	0	0	0	0	0	0	0	0	0
	8+00	108	0	0	0	0	0	0	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	1521	45	36	45	9	45	0	0	0	0
	48+00	111	1521	45	36	45	9	45	0	0	0	0
	46+00	112	1521	45	36	45	9	45	0	0	0	0
	44+00	113	1521	45	36	45	9	45	0	0	0	0
	42+00	114	1521	45	36	45	9	45	0	0	0	0
	40+00	115	1521	45	36	45	9	45	0	0	0	0
	38+00	116	1521	45	36	45	9	45	0	0	0	0
	36+00	117	1521	45	36	45	9	45	0	0	0	0
	34+00	118	1521	45	36	45	9	45	0	0	0	0
	32+00	119	1521	45	36	45	9	45	0	0	0	0
	30+00	120	1521	45	36	45	9	45	0	0	0	0
	28+00	121	1521	45	36	45	9	45	0	0	0	0
	26+00	122	1521	45	36	45	9	45	0	0	0	0
	24+00	123	1521	45	36	45	9	45	0	0	0	0
	22+00	124	1521	45	36	45	9	45	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	0	0	0	0	0	0	0	0	0	0
	102+00	127	0	0	0	0	0	0	0	0	0	0
	100+00	128	0	0	0	0	0	0	0	0	0	0
	98+00	129	0	0	0	0	0	0	0	0	0	0
	96+00	130	0	0	0	0	0	0	0	0	0	0
	94+00	131	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	0	0	0	0	0	0	0	0	0	0
	90+00	133	0	0	0	0	0	0	0	0	0	0
	88+00	134	0	0	0	0	0	0	0	0	0	0
	86+00	135	0	0	0	0	0	0	0	0	0	0
	84+00	136	0	0	0	0	0	0	0	0	0	0
	82+00	137	0	0	0	0	0	0	0	0	0	0
	80+00	138	0	0	0	0	0	0	0	0	0	0
	78+00	139	0	0	0	0	0	0	0	0	0	0
	76+00	140	0	0	0	0	0	0	0	0	0	0
	74+00	141	0	0	0	0	0	0	0	0	0	0
	72+00	142	0	0	0	0	0	0	0	0	0	0
	70+00	143	0	0	0	0	0	0	0	0	0	0
	68+00	144	0	0	0	0	0	0	0	0	0	0
	66+00	145	0	0	0	0	0	0	0	0	0	0
	64+00	146	0	0	0	0	0	0	0	0	0	0
	62+00	147	0	0	0	0	0	0	0	0	0	0
	60+00	148	0	0	0	0	0	0	0	0	0	0
	58+00	149	0	0	0	0	0	0	0	0	0	0
	56+00	150	0	0	0	0	0	0	0	0	0	0
	54+00	151	0	0	0	0	0	0	0	0	0	0
	52+00	152	0	0	0	0	0	0	0	0	0	0
	50+00	153	0	0	0	0	0	0	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	0	0	0	0	0	0	0	0	0	0
	50+00	222	0	0	0	0	0	0	0	0	0	0
	52+00	223	0	0	0	0	0	0	0	0	0	0
	54+00	224	0	0	0	0	0	0	0	0	0	0
	56+00	225	0	0	0	0	0	0	0	0	0	0
	58+00	226	0	0	0	0	0	0	0	0	0	0
	60+00	227	0	0	0	0	0	0	0	0	0	0
	62+00	228	0	0	0	0	0	0	0	0	0	0
	64+00	229	0	0	0	0	0	0	0	0	0	0
	66+00	230	0	0	0	0	0	0	0	0	0	0
	68+00	231	0	0	0	0	0	0	0	0	0	0
	70+00	232	0	0	0	0	0	0	0	0	0	0
	72+00	233	0	0	0	0	0	0	0	0	0	0
	74+00	234	0	0	0	0	0	0	0	0	0	0
	76+00	235	0	0	0	0	0	0	0	0	0	0
	78+00	236	0	0	0	0	0	0	0	0	0	0
	80+00	237	0	0	0	0	0	0	0	0	0	0
	82+00	238	0	0	0	0	0	0	0	0	0	0
	84+00	239	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	0	0	0	0	0	0	0	0	0	0
	88+00	241	0	0	0	0	0	0	0	0	0	0
	90+00	242	0	0	0	0	0	0	0	0	0	0
	92+00	243	0	0	0	0	0	0	0	0	0	0
	94+00	244	0	0	0	0	0	0	0	0	0	0
	96+00	245	0	0	0	0	0	0	0	0	0	0
	98+00	246	0	0	0	0	0	0	0	0	0	0
	100+00	247	0	0	0	0	0	0	0	0	0	0
	102+00	248	0	0	0	0	0	0	0	0	0	0
	Fairfax County	249										
Inlet Cove Out	1	250	0	0	0	0	0	0	0	0	0	0
	2	251										
Inlet Cove In	1	252	0	0	0	0	0	0	0	0	0	0
	2	253										

**RESULTS: SOUND LEVELS**

Route 1 / Fort Belvoir

Parsons						27 November 2012							
Greg J Berg						TNM 2.5							
						Calculated with TNM 2.5							
<b>RESULTS: SOUND LEVELS</b>													
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir										
<b>RUN:</b>			Existing - Site M3 Validation										
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH										
<b>Receiver</b>													
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>Type Impact</b>	<b>With Barrier Calculated LAeq1h</b>	<b>Noise Reduction Calculated Goal</b>		<b>Calculated minus Goal</b>
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Site 3		3	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>									
				<b>Min</b>	<b>Avg</b>	<b>Max</b>							
				<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected			1	0.0	0.0	0.0							
All Impacted			0	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							



INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M4 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S			
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph			
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	0	0	0	0	0	0	0	0	0	0	
	8+00	8	0	0	0	0	0	0	0	0	0	0	
	10+00	9	0	0	0	0	0	0	0	0	0	0	
	12+00	10	0	0	0	0	0	0	0	0	0	0	
	14+00	11	0	0	0	0	0	0	0	0	0	0	
	16+00	12	0	0	0	0	0	0	0	0	0	0	
	18+00	13	0	0	0	0	0	0	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	813	50	6	50	0	0	0	0	0	0	
	20+00	16	813	50	6	50	0	0	0	0	0	0	
	22+00	17	813	50	6	50	0	0	0	0	0	0	
	24+00	18	813	50	6	50	0	0	0	0	0	0	
	26+00	19	813	50	6	50	0	0	0	0	0	0	
	28+00	20	813	50	6	50	0	0	0	0	0	0	
	30+00	21	813	50	6	50	0	0	0	0	0	0	
	32+00	22	813	50	6	50	0	0	0	0	0	0	
	34+00	23	813	50	6	50	0	0	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	813	50	6	50	0	0	0	0	0	0
	38+00	25	813	50	6	50	0	0	0	0	0	0
	40+00	26	813	50	6	50	0	0	0	0	0	0
	42+00	27	813	50	6	50	0	0	0	0	0	0
	44+00	28	813	50	6	50	0	0	0	0	0	0
	46+00	29	813	50	6	50	0	0	0	0	0	0
	48+00	30	813	50	6	50	0	0	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	0	0	0	0	0	0	0	0	0	0
	20+00	102	0	0	0	0	0	0	0	0	0	0
	18+00	103	0	0	0	0	0	0	0	0	0	0
	16+00	104	0	0	0	0	0	0	0	0	0	0
	14+00	105	0	0	0	0	0	0	0	0	0	0
	12+00	106	0	0	0	0	0	0	0	0	0	0
	10+00	107	0	0	0	0	0	0	0	0	0	0
	8+00	108	0	0	0	0	0	0	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	2253	50	24	50	6	50	0	0	0	0
	48+00	111	2253	50	24	50	6	50	0	0	0	0
	46+00	112	2253	50	24	50	6	50	0	0	0	0
	44+00	113	2253	50	24	50	6	50	0	0	0	0
	42+00	114	2253	50	24	50	6	50	0	0	0	0
	40+00	115	2253	50	24	50	6	50	0	0	0	0
	38+00	116	2253	50	24	50	6	50	0	0	0	0
	36+00	117	2253	50	24	50	6	50	0	0	0	0
	34+00	118	2253	50	24	50	6	50	0	0	0	0
	32+00	119	2253	50	24	50	6	50	0	0	0	0
	30+00	120	2253	50	24	50	6	50	0	0	0	0
	28+00	121	2253	50	24	50	6	50	0	0	0	0
	26+00	122	2253	50	24	50	6	50	0	0	0	0
	24+00	123	2253	50	24	50	6	50	0	0	0	0
	22+00	124	2253	50	24	50	6	50	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	2253	50	24	50	6	50	0	0	0	0
	102+00	127	2253	50	24	50	6	50	0	0	0	0
	100+00	128	2253	50	24	50	6	50	0	0	0	0
	98+00	129	2253	50	24	50	6	50	0	0	0	0
	96+00	130	2253	50	24	50	6	50	0	0	0	0
	94+00	131	2253	50	24	50	6	50	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	2253	50	24	50	6	50	0	0	0	0
	90+00	133	2253	50	24	50	6	50	0	0	0	0
	88+00	134	2253	50	24	50	6	50	0	0	0	0
	86+00	135	2253	50	24	50	6	50	0	0	0	0
	84+00	136	2253	50	24	50	6	50	0	0	0	0
	82+00	137	2253	50	24	50	6	50	0	0	0	0
	80+00	138	2253	50	24	50	6	50	0	0	0	0
	78+00	139	2253	50	24	50	6	50	0	0	0	0
	76+00	140	2253	50	24	50	6	50	0	0	0	0
	74+00	141	2253	50	24	50	6	50	0	0	0	0
	72+00	142	2253	50	24	50	6	50	0	0	0	0
	70+00	143	2253	50	24	50	6	50	0	0	0	0
	68+00	144	2253	50	24	50	6	50	0	0	0	0
	66+00	145	2253	50	24	50	6	50	0	0	0	0
	64+00	146	2253	50	24	50	6	50	0	0	0	0
	62+00	147	2253	50	24	50	6	50	0	0	0	0
	60+00	148	2253	50	24	50	6	50	0	0	0	0
	58+00	149	2253	50	24	50	6	50	0	0	0	0
	56+00	150	2253	50	24	50	6	50	0	0	0	0
	54+00	151	2253	50	24	50	6	50	0	0	0	0
	52+00	152	2253	50	24	50	6	50	0	0	0	0
	50+00	153	2253	50	24	50	6	50	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	813	50	6	50	0	0	0	0	0	0
	50+00	222	813	50	6	50	0	0	0	0	0	0
	52+00	223	813	50	6	50	0	0	0	0	0	0
	54+00	224	813	50	6	50	0	0	0	0	0	0
	56+00	225	813	50	6	50	0	0	0	0	0	0
	58+00	226	813	50	6	50	0	0	0	0	0	0
	60+00	227	813	50	6	50	0	0	0	0	0	0
	62+00	228	813	50	6	50	0	0	0	0	0	0
	64+00	229	813	50	6	50	0	0	0	0	0	0
	66+00	230	813	50	6	50	0	0	0	0	0	0
	68+00	231	813	50	6	50	0	0	0	0	0	0
	70+00	232	813	50	6	50	0	0	0	0	0	0
	72+00	233	813	50	6	50	0	0	0	0	0	0
	74+00	234	813	50	6	50	0	0	0	0	0	0
	76+00	235	813	50	6	50	0	0	0	0	0	0
	78+00	236	813	50	6	50	0	0	0	0	0	0
	80+00	237	813	50	6	50	0	0	0	0	0	0
	82+00	238	813	50	6	50	0	0	0	0	0	0
	84+00	239	813	50	6	50	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	813	50	6	50	0	0	0	0	0	0
	88+00	241	813	50	6	50	0	0	0	0	0	0
	90+00	242	813	50	6	50	0	0	0	0	0	0
	92+00	243	813	50	6	50	0	0	0	0	0	0
	94+00	244	813	50	6	50	0	0	0	0	0	0
	96+00	245	813	50	6	50	0	0	0	0	0	0
	98+00	246	813	50	6	50	0	0	0	0	0	0
	100+00	247	813	50	6	50	0	0	0	0	0	0
	102+00	248	813	50	6	50	0	0	0	0	0	0
	Fairfax County	249										

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

Parsons						27 November 2012						
Greg J Berg						TNM 2.5						
						Calculated with TNM 2.5						
<b>RESULTS: SOUND LEVELS</b>												
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir									
<b>RUN:</b>			Existing - Site M4 Validation									
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.			
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH									
<b>Receiver</b>												
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing Calculated</b>	<b>Crit'n Sub'l Inc</b>	<b>Type Impact</b>	<b>With Barrier Calculated LAeq1h</b>	<b>Noise Reduction Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
			dB	dB	dB	dB	dB		dB	dB	dB	dB
Site 4	4	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		1	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M5 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	0	0	0	0	0	0	0	0	0	0	
	8+00	8	0	0	0	0	0	0	0	0	0	0	
	10+00	9	0	0	0	0	0	0	0	0	0	0	
	12+00	10	0	0	0	0	0	0	0	0	0	0	
	14+00	11	0	0	0	0	0	0	0	0	0	0	
	16+00	12	0	0	0	0	0	0	0	0	0	0	
	18+00	13	0	0	0	0	0	0	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	1638	50	33	50	9	50	0	0	0	0	
	20+00	16	1638	50	33	50	9	50	0	0	0	0	
	22+00	17	1638	50	33	50	9	50	0	0	0	0	
	24+00	18	1638	50	33	50	9	50	0	0	0	0	
	26+00	19	1638	50	33	50	9	50	0	0	0	0	
	28+00	20	1638	50	33	50	9	50	0	0	0	0	
	30+00	21	1638	50	33	50	9	50	0	0	0	0	
	32+00	22	1638	50	33	50	9	50	0	0	0	0	
	34+00	23	1638	50	33	50	9	50	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	1638	50	33	50	9	50	0	0	0	0
	38+00	25	1638	50	33	50	9	50	0	0	0	0
	40+00	26	1638	50	33	50	9	50	0	0	0	0
	42+00	27	1638	50	33	50	9	50	0	0	0	0
	44+00	28	1638	50	33	50	9	50	0	0	0	0
	46+00	29	1638	50	33	50	9	50	0	0	0	0
	48+00	30	1638	50	33	50	9	50	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	0	0	0	0	0	0	0	0	0	0
	20+00	102	0	0	0	0	0	0	0	0	0	0
	18+00	103	0	0	0	0	0	0	0	0	0	0
	16+00	104	0	0	0	0	0	0	0	0	0	0
	14+00	105	0	0	0	0	0	0	0	0	0	0
	12+00	106	0	0	0	0	0	0	0	0	0	0
	10+00	107	0	0	0	0	0	0	0	0	0	0
	8+00	108	0	0	0	0	0	0	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	684	50	21	50	12	50	0	0	0	0
	48+00	111	684	50	21	50	12	50	0	0	0	0
	46+00	112	684	50	21	50	12	50	0	0	0	0
	44+00	113	684	50	21	50	12	50	0	0	0	0
	42+00	114	684	50	21	50	12	50	0	0	0	0
	40+00	115	684	50	21	50	12	50	0	0	0	0
	38+00	116	684	50	21	50	12	50	0	0	0	0
	36+00	117	684	50	21	50	12	50	0	0	0	0
	34+00	118	684	50	21	50	12	50	0	0	0	0
	32+00	119	684	50	21	50	12	50	0	0	0	0
	30+00	120	684	50	21	50	12	50	0	0	0	0
	28+00	121	684	50	21	50	12	50	0	0	0	0
	26+00	122	684	50	21	50	12	50	0	0	0	0
	24+00	123	684	50	21	50	12	50	0	0	0	0
	22+00	124	684	50	21	50	12	50	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	684	50	21	50	12	50	0	0	0	0
	102+00	127	684	50	21	50	12	50	0	0	0	0
	100+00	128	684	50	21	50	12	50	0	0	0	0
	98+00	129	684	50	21	50	12	50	0	0	0	0
	96+00	130	684	50	21	50	12	50	0	0	0	0
	94+00	131	684	50	21	50	12	50	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	684	50	21	50	12	50	0	0	0	0
	90+00	133	684	50	21	50	12	50	0	0	0	0
	88+00	134	684	50	21	50	12	50	0	0	0	0
	86+00	135	684	50	21	50	12	50	0	0	0	0
	84+00	136	684	50	21	50	12	50	0	0	0	0
	82+00	137	684	50	21	50	12	50	0	0	0	0
	80+00	138	684	50	21	50	12	50	0	0	0	0
	78+00	139	684	50	21	50	12	50	0	0	0	0
	76+00	140	684	50	21	50	12	50	0	0	0	0
	74+00	141	684	50	21	50	12	50	0	0	0	0
	72+00	142	684	50	21	50	12	50	0	0	0	0
	70+00	143	684	50	21	50	12	50	0	0	0	0
	68+00	144	684	50	21	50	12	50	0	0	0	0
	66+00	145	684	50	21	50	12	50	0	0	0	0
	64+00	146	684	50	21	50	12	50	0	0	0	0
	62+00	147	684	50	21	50	12	50	0	0	0	0
	60+00	148	684	50	21	50	12	50	0	0	0	0
	58+00	149	684	50	21	50	12	50	0	0	0	0
	56+00	150	684	50	21	50	12	50	0	0	0	0
	54+00	151	684	50	21	50	12	50	0	0	0	0
	52+00	152	684	50	21	50	12	50	0	0	0	0
	50+00	153	684	50	21	50	12	50	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1638	50	33	50	9	50	0	0	0	0
	50+00	222	1638	50	33	50	9	50	0	0	0	0
	52+00	223	1638	50	33	50	9	50	0	0	0	0
	54+00	224	1638	50	33	50	9	50	0	0	0	0
	56+00	225	1638	50	33	50	9	50	0	0	0	0
	58+00	226	1638	50	33	50	9	50	0	0	0	0
	60+00	227	1638	50	33	50	9	50	0	0	0	0
	62+00	228	1638	50	33	50	9	50	0	0	0	0
	64+00	229	1638	50	33	50	9	50	0	0	0	0
	66+00	230	1638	50	33	50	9	50	0	0	0	0
	68+00	231	1638	50	33	50	9	50	0	0	0	0
	70+00	232	1638	50	33	50	9	50	0	0	0	0
	72+00	233	1638	50	33	50	9	50	0	0	0	0
	74+00	234	1638	50	33	50	9	50	0	0	0	0
	76+00	235	1638	50	33	50	9	50	0	0	0	0
	78+00	236	1638	50	33	50	9	50	0	0	0	0
	80+00	237	1638	50	33	50	9	50	0	0	0	0
	82+00	238	1638	50	33	50	9	50	0	0	0	0
	84+00	239	1638	50	33	50	9	50	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	1638	50	33	50	9	50	0	0	0	0
	88+00	241	1638	50	33	50	9	50	0	0	0	0
	90+00	242	1638	50	33	50	9	50	0	0	0	0
	92+00	243	1638	50	33	50	9	50	0	0	0	0
	94+00	244	1638	50	33	50	9	50	0	0	0	0
	96+00	245	1638	50	33	50	9	50	0	0	0	0
	98+00	246	1638	50	33	50	9	50	0	0	0	0
	100+00	247	1638	50	33	50	9	50	0	0	0	0
	102+00	248	1638	50	33	50	9	50	0	0	0	0
	Fairfax County	249										

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

Parsons						27 November 2012							
Greg J Berg						TNM 2.5							
						Calculated with TNM 2.5							
<b>RESULTS: SOUND LEVELS</b>													
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir										
<b>RUN:</b>			Existing - Site M5 Validation										
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH										
<b>Receiver</b>													
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>With Barrier</b>				
							<b>Calculated</b>	<b>Crit'n</b>	<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Site 5		5	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>									
				<b>Min</b>	<b>Avg</b>	<b>Max</b>							
				<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected			1	0.0	0.0	0.0							
All Impacted			0	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							

INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M6 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	0	0	0	0	0	0	0	0	0	0	
	8+00	8	0	0	0	0	0	0	0	0	0	0	
	10+00	9	0	0	0	0	0	0	0	0	0	0	
	12+00	10	0	0	0	0	0	0	0	0	0	0	
	14+00	11	0	0	0	0	0	0	0	0	0	0	
	16+00	12	0	0	0	0	0	0	0	0	0	0	
	18+00	13	0	0	0	0	0	0	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	1179	50	24	50	24	50	0	0	0	0	
	20+00	16	1179	50	24	50	24	50	0	0	0	0	
	22+00	17	1179	50	24	50	24	50	0	0	0	0	
	24+00	18	1179	50	24	50	24	50	0	0	0	0	
	26+00	19	1179	50	24	50	24	50	0	0	0	0	
	28+00	20	1179	50	24	50	24	50	0	0	0	0	
	30+00	21	1179	50	24	50	24	50	0	0	0	0	
	32+00	22	1179	50	24	50	24	50	0	0	0	0	
	34+00	23	1179	50	24	50	24	50	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	1179	50	24	50	24	50	0	0	0	0
	38+00	25	1179	50	24	50	24	50	0	0	0	0
	40+00	26	1179	50	24	50	24	50	0	0	0	0
	42+00	27	1179	50	24	50	24	50	0	0	0	0
	44+00	28	1179	50	24	50	24	50	0	0	0	0
	46+00	29	1179	50	24	50	24	50	0	0	0	0
	48+00	30	1179	50	24	50	24	50	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	0	0	0	0	0	0	0	0	0	0
	104+00	33	0	0	0	0	0	0	0	0	0	0
	106+00	34	0	0	0	0	0	0	0	0	0	0
	108+00	35	0	0	0	0	0	0	0	0	0	0
	110+00	36	0	0	0	0	0	0	0	0	0	0
	112+00	37	0	0	0	0	0	0	0	0	0	0
	114+00	38	0	0	0	0	0	0	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	0	0	0	0	0	0	0	0	0	0
	118+00	41	0	0	0	0	0	0	0	0	0	0
	120+00	42	0	0	0	0	0	0	0	0	0	0
	122+00	43	0	0	0	0	0	0	0	0	0	0
	124+00	44	0	0	0	0	0	0	0	0	0	0
	126+00	45	0	0	0	0	0	0	0	0	0	0
	128+00	46	0	0	0	0	0	0	0	0	0	0
	130+00	47	0	0	0	0	0	0	0	0	0	0
	132+00	48	0	0	0	0	0	0	0	0	0	0
	134+00	49	0	0	0	0	0	0	0	0	0	0
	136+00	50	0	0	0	0	0	0	0	0	0	0
	138+00	51	0	0	0	0	0	0	0	0	0	0
	140+00	52	0	0	0	0	0	0	0	0	0	0
	142+00	53	0	0	0	0	0	0	0	0	0	0
	144+00	54	0	0	0	0	0	0	0	0	0	0
	146+00	55	0	0	0	0	0	0	0	0	0	0
	148+00	56	0	0	0	0	0	0	0	0	0	0
	150+00	57	0	0	0	0	0	0	0	0	0	0
	152+00	58	0	0	0	0	0	0	0	0	0	0
	154+00	59	0	0	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	0	0	0	0	0	0	0	0	0	0
	158+00	61	0	0	0	0	0	0	0	0	0	0
	160+00	62	0	0	0	0	0	0	0	0	0	0
	162+00	63	0	0	0	0	0	0	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	0	0	0	0	0	0	0	0	0	0
	20+00	102	0	0	0	0	0	0	0	0	0	0
	18+00	103	0	0	0	0	0	0	0	0	0	0
	16+00	104	0	0	0	0	0	0	0	0	0	0
	14+00	105	0	0	0	0	0	0	0	0	0	0
	12+00	106	0	0	0	0	0	0	0	0	0	0
	10+00	107	0	0	0	0	0	0	0	0	0	0
	8+00	108	0	0	0	0	0	0	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	615	50	24	50	18	50	0	0	0	0
	48+00	111	615	50	24	50	18	50	0	0	0	0
	46+00	112	615	50	24	50	18	50	0	0	0	0
	44+00	113	615	50	24	50	18	50	0	0	0	0
	42+00	114	615	50	24	50	18	50	0	0	0	0
	40+00	115	615	50	24	50	18	50	0	0	0	0
	38+00	116	615	50	24	50	18	50	0	0	0	0
	36+00	117	615	50	24	50	18	50	0	0	0	0
	34+00	118	615	50	24	50	18	50	0	0	0	0
	32+00	119	615	50	24	50	18	50	0	0	0	0
	30+00	120	615	50	24	50	18	50	0	0	0	0
	28+00	121	615	50	24	50	18	50	0	0	0	0
	26+00	122	615	50	24	50	18	50	0	0	0	0
	24+00	123	615	50	24	50	18	50	0	0	0	0
	22+00	124	615	50	24	50	18	50	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	615	50	24	50	18	50	0	0	0	0
	102+00	127	615	50	24	50	18	50	0	0	0	0
	100+00	128	615	50	24	50	18	50	0	0	0	0
	98+00	129	615	50	24	50	18	50	0	0	0	0
	96+00	130	615	50	24	50	18	50	0	0	0	0
	94+00	131	615	50	24	50	18	50	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	615	50	24	50	18	50	0	0	0	0
	90+00	133	615	50	24	50	18	50	0	0	0	0
	88+00	134	615	50	24	50	18	50	0	0	0	0
	86+00	135	615	50	24	50	18	50	0	0	0	0
	84+00	136	615	50	24	50	18	50	0	0	0	0
	82+00	137	615	50	24	50	18	50	0	0	0	0
	80+00	138	615	50	24	50	18	50	0	0	0	0
	78+00	139	615	50	24	50	18	50	0	0	0	0
	76+00	140	615	50	24	50	18	50	0	0	0	0
	74+00	141	615	50	24	50	18	50	0	0	0	0
	72+00	142	615	50	24	50	18	50	0	0	0	0
	70+00	143	615	50	24	50	18	50	0	0	0	0
	68+00	144	615	50	24	50	18	50	0	0	0	0
	66+00	145	615	50	24	50	18	50	0	0	0	0
	64+00	146	615	50	24	50	18	50	0	0	0	0
	62+00	147	615	50	24	50	18	50	0	0	0	0
	60+00	148	615	50	24	50	18	50	0	0	0	0
	58+00	149	615	50	24	50	18	50	0	0	0	0
	56+00	150	615	50	24	50	18	50	0	0	0	0
	54+00	151	615	50	24	50	18	50	0	0	0	0
	52+00	152	615	50	24	50	18	50	0	0	0	0
	50+00	153	615	50	24	50	18	50	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	0	0	0	0	0	0	0	0	0	0
	116+00	156	0	0	0	0	0	0	0	0	0	0
	114+00	157	0	0	0	0	0	0	0	0	0	0
	112+00	158	0	0	0	0	0	0	0	0	0	0
	110+00	159	0	0	0	0	0	0	0	0	0	0
	108+00	160	0	0	0	0	0	0	0	0	0	0
	106+00	161	0	0	0	0	0	0	0	0	0	0
	104+00	162	0	0	0	0	0	0	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	0	0	0	0	0	0	0	0	0	0
	162+00	165	0	0	0	0	0	0	0	0	0	0
	160+00	166	0	0	0	0	0	0	0	0	0	0
	158+00	167	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	0	0	0	0	0	0	0	0	0	0
	154+00	169	0	0	0	0	0	0	0	0	0	0
	152+00	170	0	0	0	0	0	0	0	0	0	0
	150+00	171	0	0	0	0	0	0	0	0	0	0
	148+00	172	0	0	0	0	0	0	0	0	0	0
	146+00	173	0	0	0	0	0	0	0	0	0	0
	144+00	174	0	0	0	0	0	0	0	0	0	0
	142+00	175	0	0	0	0	0	0	0	0	0	0
	140+00	176	0	0	0	0	0	0	0	0	0	0
	138+00	177	0	0	0	0	0	0	0	0	0	0
	136+00	178	0	0	0	0	0	0	0	0	0	0
	134+00	179	0	0	0	0	0	0	0	0	0	0
	132+00	180	0	0	0	0	0	0	0	0	0	0
	130+00	181	0	0	0	0	0	0	0	0	0	0
	128+00	182	0	0	0	0	0	0	0	0	0	0
	126+00	183	0	0	0	0	0	0	0	0	0	0
	124+00	184	0	0	0	0	0	0	0	0	0	0
	122+00	185	0	0	0	0	0	0	0	0	0	0
	120+00	186	0	0	0	0	0	0	0	0	0	0
	118+00	187	0	0	0	0	0	0	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1179	50	24	50	24	50	0	0	0	0
	50+00	222	1179	50	24	50	24	50	0	0	0	0
	52+00	223	1179	50	24	50	24	50	0	0	0	0
	54+00	224	1179	50	24	50	24	50	0	0	0	0
	56+00	225	1179	50	24	50	24	50	0	0	0	0
	58+00	226	1179	50	24	50	24	50	0	0	0	0
	60+00	227	1179	50	24	50	24	50	0	0	0	0
	62+00	228	1179	50	24	50	24	50	0	0	0	0
	64+00	229	1179	50	24	50	24	50	0	0	0	0
	66+00	230	1179	50	24	50	24	50	0	0	0	0
	68+00	231	1179	50	24	50	24	50	0	0	0	0
	70+00	232	1179	50	24	50	24	50	0	0	0	0
	72+00	233	1179	50	24	50	24	50	0	0	0	0
	74+00	234	1179	50	24	50	24	50	0	0	0	0
	76+00	235	1179	50	24	50	24	50	0	0	0	0
	78+00	236	1179	50	24	50	24	50	0	0	0	0
	80+00	237	1179	50	24	50	24	50	0	0	0	0
	82+00	238	1179	50	24	50	24	50	0	0	0	0
	84+00	239	1179	50	24	50	24	50	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	1179	50	24	50	24	50	0	0	0	0
	88+00	241	1179	50	24	50	24	50	0	0	0	0
	90+00	242	1179	50	24	50	24	50	0	0	0	0
	92+00	243	1179	50	24	50	24	50	0	0	0	0
	94+00	244	1179	50	24	50	24	50	0	0	0	0
	96+00	245	1179	50	24	50	24	50	0	0	0	0
	98+00	246	1179	50	24	50	24	50	0	0	0	0
	100+00	247	1179	50	24	50	24	50	0	0	0	0
	102+00	248	1179	50	24	50	24	50	0	0	0	0
	Fairfax County	249										

**RESULTS: SOUND LEVELS**

Route 1 / Fort Belvoir

Parsons						27 November 2012							
Greg J Berg						TNM 2.5							
						Calculated with TNM 2.5							
<b>RESULTS: SOUND LEVELS</b>													
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir										
<b>RUN:</b>			Existing - Site M6 Validation										
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH										
<b>Receiver</b>													
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>With Barrier</b>				
							<b>Calculated</b>	<b>Crit'n</b>	<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		
							<b>Calculated</b>	<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Site 6		6	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>									
				<b>Min</b>	<b>Avg</b>	<b>Max</b>							
				<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected			1	0.0	0.0	0.0							
All Impacted			1	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes		Route 1 / Fort Belvoir											
PROJECT/CONTRACT:		Existing - Site M7 Validation											
RUN:													
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			V	S	V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway3	begin	1	0	0	0	0	0	0	0	0	0	0	
	0+00	2	0	0	0	0	0	0	0	0	0	0	
	2+00	3	0	0	0	0	0	0	0	0	0	0	
	4+00	4	0	0	0	0	0	0	0	0	0	0	
	6+00	5	0	0	0	0	0	0	0	0	0	0	
	Pohick	6											
Roadway4	Pohick	7	0	0	0	0	0	0	0	0	0	0	
	8+00	8	0	0	0	0	0	0	0	0	0	0	
	10+00	9	0	0	0	0	0	0	0	0	0	0	
	12+00	10	0	0	0	0	0	0	0	0	0	0	
	14+00	11	0	0	0	0	0	0	0	0	0	0	
	16+00	12	0	0	0	0	0	0	0	0	0	0	
	18+00	13	0	0	0	0	0	0	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	0	0	0	0	0	0	0	0	0	0	
	20+00	16	0	0	0	0	0	0	0	0	0	0	
	22+00	17	0	0	0	0	0	0	0	0	0	0	
	24+00	18	0	0	0	0	0	0	0	0	0	0	
	26+00	19	0	0	0	0	0	0	0	0	0	0	
	28+00	20	0	0	0	0	0	0	0	0	0	0	
	30+00	21	0	0	0	0	0	0	0	0	0	0	
	32+00	22	0	0	0	0	0	0	0	0	0	0	
	34+00	23	0	0	0	0	0	0	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	36+00	24	0	0	0	0	0	0	0	0	0	0
	38+00	25	0	0	0	0	0	0	0	0	0	0
	40+00	26	0	0	0	0	0	0	0	0	0	0
	42+00	27	0	0	0	0	0	0	0	0	0	0
	44+00	28	0	0	0	0	0	0	0	0	0	0
	46+00	29	0	0	0	0	0	0	0	0	0	0
	48+00	30	0	0	0	0	0	0	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	1383	35	48	35	39	35	0	0	0	0
	104+00	33	1383	35	48	35	39	35	0	0	0	0
	106+00	34	1383	35	48	35	39	35	0	0	0	0
	108+00	35	1383	35	48	35	39	35	0	0	0	0
	110+00	36	1383	35	48	35	39	35	0	0	0	0
	112+00	37	1383	35	48	35	39	35	0	0	0	0
	114+00	38	1383	35	48	35	39	35	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	1383	35	48	35	39	35	0	0	0	0
	118+00	41	1383	35	48	35	39	35	0	0	0	0
	120+00	42	1383	35	48	35	39	35	0	0	0	0
	122+00	43	1383	35	48	35	39	35	0	0	0	0
	124+00	44	1383	35	48	35	39	35	0	0	0	0
	126+00	45	1383	35	48	35	39	35	0	0	0	0
	128+00	46	1383	35	48	35	39	35	0	0	0	0
	130+00	47	1383	35	48	35	39	35	0	0	0	0
	132+00	48	1383	35	48	35	39	35	0	0	0	0
	134+00	49	1383	35	48	35	39	35	0	0	0	0
	136+00	50	1383	35	48	35	39	35	0	0	0	0
	138+00	51	1383	35	48	35	39	35	0	0	0	0
	140+00	52	1383	35	48	35	39	35	0	0	0	0
	142+00	53	1383	35	48	35	39	35	0	0	0	0
	144+00	54	1383	35	48	35	39	35	0	0	0	0
	146+00	55	1383	35	48	35	39	35	0	0	0	0
	148+00	56	1383	35	48	35	39	35	0	0	0	0
	150+00	57	1383	35	48	35	39	35	0	0	0	0
	152+00	58	1383	35	48	35	39	35	0	0	0	0
	154+00	59	1383	35	48	35	39	35	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	60	1383	35	48	35	39	35	0	0	0	0
	158+00	61	1383	35	48	35	39	35	0	0	0	0
	160+00	62	1383	35	48	35	39	35	0	0	0	0
	162+00	63	1383	35	48	35	39	35	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	0	0	0	0	0	0	0	0	0	0
	164+00	66	0	0	0	0	0	0	0	0	0	0
	166+00	67	0	0	0	0	0	0	0	0	0	0
	168+00	68	0	0	0	0	0	0	0	0	0	0
	170+00	69	0	0	0	0	0	0	0	0	0	0
	172+00	70	0	0	0	0	0	0	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	0	0	0	0	0	0	0	0	0	0
	176+00	73	0	0	0	0	0	0	0	0	0	0
	178+00	74	0	0	0	0	0	0	0	0	0	0
	180+00	75	0	0	0	0	0	0	0	0	0	0
	182+00	76	0	0	0	0	0	0	0	0	0	0
	184+00	77	0	0	0	0	0	0	0	0	0	0
	186+00	78	0	0	0	0	0	0	0	0	0	0
	188+00	79	0	0	0	0	0	0	0	0	0	0
	190+00	80	0	0	0	0	0	0	0	0	0	0
	192+00	81	0	0	0	0	0	0	0	0	0	0
	194+00	82	0	0	0	0	0	0	0	0	0	0
	196+00	83	0	0	0	0	0	0	0	0	0	0
	198+00	84	0	0	0	0	0	0	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	0	0	0	0	0	0	0	0	0	0
	202+00	87	0	0	0	0	0	0	0	0	0	0
	204+00	88	0	0	0	0	0	0	0	0	0	0
	206+00	89	0	0	0	0	0	0	0	0	0	0
	208+00	90	0	0	0	0	0	0	0	0	0	0
	210+00	91	0	0	0	0	0	0	0	0	0	0
	212+00	92	0	0	0	0	0	0	0	0	0	0
	214+00	93	0	0	0	0	0	0	0	0	0	0
	End	94										
Roadway11	Pohick	95	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	6+00	96	0	0	0	0	0	0	0	0	0	0
	4+00	97	0	0	0	0	0	0	0	0	0	0
	2+00	98	0	0	0	0	0	0	0	0	0	0
	0+00	99	0	0	0	0	0	0	0	0	0	0
	End	100										
Roadway12	Telegraph	101	0	0	0	0	0	0	0	0	0	0
	20+00	102	0	0	0	0	0	0	0	0	0	0
	18+00	103	0	0	0	0	0	0	0	0	0	0
	16+00	104	0	0	0	0	0	0	0	0	0	0
	14+00	105	0	0	0	0	0	0	0	0	0	0
	12+00	106	0	0	0	0	0	0	0	0	0	0
	10+00	107	0	0	0	0	0	0	0	0	0	0
	8+00	108	0	0	0	0	0	0	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	0	0	0	0	0	0	0	0	0	0
	48+00	111	0	0	0	0	0	0	0	0	0	0
	46+00	112	0	0	0	0	0	0	0	0	0	0
	44+00	113	0	0	0	0	0	0	0	0	0	0
	42+00	114	0	0	0	0	0	0	0	0	0	0
	40+00	115	0	0	0	0	0	0	0	0	0	0
	38+00	116	0	0	0	0	0	0	0	0	0	0
	36+00	117	0	0	0	0	0	0	0	0	0	0
	34+00	118	0	0	0	0	0	0	0	0	0	0
	32+00	119	0	0	0	0	0	0	0	0	0	0
	30+00	120	0	0	0	0	0	0	0	0	0	0
	28+00	121	0	0	0	0	0	0	0	0	0	0
	26+00	122	0	0	0	0	0	0	0	0	0	0
	24+00	123	0	0	0	0	0	0	0	0	0	0
	22+00	124	0	0	0	0	0	0	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	1647	35	48	35	54	35	0	0	0	0
	102+00	127	1647	35	48	35	54	35	0	0	0	0
	100+00	128	1647	35	48	35	54	35	0	0	0	0
	98+00	129	1647	35	48	35	54	35	0	0	0	0
	96+00	130	1647	35	48	35	54	35	0	0	0	0
	94+00	131	1647	35	48	35	54	35	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	92+00	132	1647	35	48	35	54	35	0	0	0	0
	90+00	133	1647	35	48	35	54	35	0	0	0	0
	88+00	134	1647	35	48	35	54	35	0	0	0	0
	86+00	135	1647	35	48	35	54	35	0	0	0	0
	84+00	136	1647	35	48	35	54	35	0	0	0	0
	82+00	137	1647	35	48	35	54	35	0	0	0	0
	80+00	138	1647	35	48	35	54	35	0	0	0	0
	78+00	139	1647	35	48	35	54	35	0	0	0	0
	76+00	140	1647	35	48	35	54	35	0	0	0	0
	74+00	141	1647	35	48	35	54	35	0	0	0	0
	72+00	142	1647	35	48	35	54	35	0	0	0	0
	70+00	143	1647	35	48	35	54	35	0	0	0	0
	68+00	144	1647	35	48	35	54	35	0	0	0	0
	66+00	145	1647	35	48	35	54	35	0	0	0	0
	64+00	146	1647	35	48	35	54	35	0	0	0	0
	62+00	147	1647	35	48	35	54	35	0	0	0	0
	60+00	148	1647	35	48	35	54	35	0	0	0	0
	58+00	149	1647	35	48	35	54	35	0	0	0	0
	56+00	150	1647	35	48	35	54	35	0	0	0	0
	54+00	151	1647	35	48	35	54	35	0	0	0	0
	52+00	152	1647	35	48	35	54	35	0	0	0	0
	50+00	153	1647	35	48	35	54	35	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	1647	35	48	35	54	35	0	0	0	0
	116+00	156	1647	35	48	35	54	35	0	0	0	0
	114+00	157	1647	35	48	35	54	35	0	0	0	0
	112+00	158	1647	35	48	35	54	35	0	0	0	0
	110+00	159	1647	35	48	35	54	35	0	0	0	0
	108+00	160	1647	35	48	35	54	35	0	0	0	0
	106+00	161	1647	35	48	35	54	35	0	0	0	0
	104+00	162	1647	35	48	35	54	35	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	1647	35	48	35	54	35	0	0	0	0
	162+00	165	1647	35	48	35	54	35	0	0	0	0
	160+00	166	1647	35	48	35	54	35	0	0	0	0
	158+00	167	1647	35	48	35	54	35	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	156+00	168	1647	35	48	35	54	35	0	0	0	0
	154+00	169	1647	35	48	35	54	35	0	0	0	0
	152+00	170	1647	35	48	35	54	35	0	0	0	0
	150+00	171	1647	35	48	35	54	35	0	0	0	0
	148+00	172	1647	35	48	35	54	35	0	0	0	0
	146+00	173	1647	35	48	35	54	35	0	0	0	0
	144+00	174	1647	35	48	35	54	35	0	0	0	0
	142+00	175	1647	35	48	35	54	35	0	0	0	0
	140+00	176	1647	35	48	35	54	35	0	0	0	0
	138+00	177	1647	35	48	35	54	35	0	0	0	0
	136+00	178	1647	35	48	35	54	35	0	0	0	0
	134+00	179	1647	35	48	35	54	35	0	0	0	0
	132+00	180	1647	35	48	35	54	35	0	0	0	0
	130+00	181	1647	35	48	35	54	35	0	0	0	0
	128+00	182	1647	35	48	35	54	35	0	0	0	0
	126+00	183	1647	35	48	35	54	35	0	0	0	0
	124+00	184	1647	35	48	35	54	35	0	0	0	0
	122+00	185	1647	35	48	35	54	35	0	0	0	0
	120+00	186	1647	35	48	35	54	35	0	0	0	0
	118+00	187	1647	35	48	35	54	35	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	0	0	0	0	0	0	0	0	0	0
	174+00	190	0	0	0	0	0	0	0	0	0	0
	172+00	191	0	0	0	0	0	0	0	0	0	0
	170+00	192	0	0	0	0	0	0	0	0	0	0
	168+00	193	0	0	0	0	0	0	0	0	0	0
	166+00	194	0	0	0	0	0	0	0	0	0	0
	164+00	195	0	0	0	0	0	0	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	0	0	0	0	0	0	0	0	0	0
	202+00	198	0	0	0	0	0	0	0	0	0	0
	200+00	199	0	0	0	0	0	0	0	0	0	0
	198+00	200	0	0	0	0	0	0	0	0	0	0
	196+00	201	0	0	0	0	0	0	0	0	0	0
	194+00	202	0	0	0	0	0	0	0	0	0	0
	192+00	203	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	190+00	204	0	0	0	0	0	0	0	0	0	0
	188+00	205	0	0	0	0	0	0	0	0	0	0
	186+00	206	0	0	0	0	0	0	0	0	0	0
	184+00	207	0	0	0	0	0	0	0	0	0	0
	182+00	208	0	0	0	0	0	0	0	0	0	0
	180+00	209	0	0	0	0	0	0	0	0	0	0
	178+00	210	0	0	0	0	0	0	0	0	0	0
	176+00	211	0	0	0	0	0	0	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	0	0	0	0	0	0	0	0	0	0
	214+00	214	0	0	0	0	0	0	0	0	0	0
	212+00	215	0	0	0	0	0	0	0	0	0	0
	210+00	216	0	0	0	0	0	0	0	0	0	0
	208+00	217	0	0	0	0	0	0	0	0	0	0
	206+00	218	0	0	0	0	0	0	0	0	0	0
	204+00	219	0	0	0	0	0	0	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1383	35	48	35	39	35	0	0	0	0
	50+00	222	1383	35	48	35	39	35	0	0	0	0
	52+00	223	1383	35	48	35	39	35	0	0	0	0
	54+00	224	1383	35	48	35	39	35	0	0	0	0
	56+00	225	1383	35	48	35	39	35	0	0	0	0
	58+00	226	1383	35	48	35	39	35	0	0	0	0
	60+00	227	1383	35	48	35	39	35	0	0	0	0
	62+00	228	1383	35	48	35	39	35	0	0	0	0
	64+00	229	1383	35	48	35	39	35	0	0	0	0
	66+00	230	1383	35	48	35	39	35	0	0	0	0
	68+00	231	1383	35	48	35	39	35	0	0	0	0
	70+00	232	1383	35	48	35	39	35	0	0	0	0
	72+00	233	1383	35	48	35	39	35	0	0	0	0
	74+00	234	1383	35	48	35	39	35	0	0	0	0
	76+00	235	1383	35	48	35	39	35	0	0	0	0
	78+00	236	1383	35	48	35	39	35	0	0	0	0
	80+00	237	1383	35	48	35	39	35	0	0	0	0
	82+00	238	1383	35	48	35	39	35	0	0	0	0
	84+00	239	1383	35	48	35	39	35	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	86+00	240	1383	35	48	35	39	35	0	0	0	0
	88+00	241	1383	35	48	35	39	35	0	0	0	0
	90+00	242	1383	35	48	35	39	35	0	0	0	0
	92+00	243	1383	35	48	35	39	35	0	0	0	0
	94+00	244	1383	35	48	35	39	35	0	0	0	0
	96+00	245	1383	35	48	35	39	35	0	0	0	0
	98+00	246	1383	35	48	35	39	35	0	0	0	0
	100+00	247	1383	35	48	35	39	35	0	0	0	0
	102+00	248	1383	35	48	35	39	35	0	0	0	0
	Fairfax County	249										

**RESULTS: SOUND LEVELS**

Route 1 / Fort Belvoir

Parsons						27 November 2012							
Greg J Berg						TNM 2.5							
						Calculated with TNM 2.5							
<b>RESULTS: SOUND LEVELS</b>													
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir										
<b>RUN:</b>			Existing - Site M7 Validation										
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.				
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH										
<b>Receiver</b>													
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h Calculated</b>	<b>Crit'n</b>	<b>Increase over existing</b>		<b>With Barrier</b>				
							<b>Calculated</b>	<b>Crit'n</b>	<b>Type Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated minus Goal</b>
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>
				dB	dB	dB	dB	dB		dB	dB	dB	dB
Site 7		7	1	0.0	54.3	66	54.3	10	----	54.3	0.0	8	-8.0
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>									
				<b>Min</b>	<b>Avg</b>	<b>Max</b>							
				<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected			1	0.0	0.0	0.0							
All Impacted			0	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0							



**Noise Model for Existing Scenario  
with Alternative C Receivers**





**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway6	30.0	Fairfax Co	32	11,864,058.0	6,943,615.5	20.80	Signal	0.00	25	Average
		104+00	33	11,864,250.0	6,943,648.5	18.80				Average
		106+00	34	11,864,446.0	6,943,688.0	17.60				Average
		108+00	35	11,864,642.0	6,943,724.0	22.70				Average
		110+00	36	11,864,840.0	6,943,759.0	29.70				Average
		112+00	37	11,865,036.0	6,943,798.5	34.30				Average
		114+00	38	11,865,232.0	6,943,837.0	37.90				Average
		116+00/Bel	39	11,865,428.0	6,943,875.5	39.00				
Roadway7	30.0	116+00/Bel	40	11,865,428.0	6,943,875.5	39.00	Signal	0.00	25	Average
		118+00	41	11,865,624.0	6,943,915.0	38.40				Average
		120+00	42	11,865,817.0	6,943,940.0	42.90				Average
		122+00	43	11,866,009.0	6,943,949.0	51.00				Average
		124+00	44	11,866,208.0	6,943,953.0	61.50				Average
		126+00	45	11,866,408.0	6,943,957.0	70.80				Average
		128+00	46	11,866,609.0	6,943,961.5	73.40				Average
		130+00	47	11,866,812.0	6,943,982.5	69.30				Average
		132+00	48	11,867,011.0	6,944,021.5	75.90				Average
		134+00	49	11,867,209.0	6,944,062.5	88.00				Average
		136+00	50	11,867,406.0	6,944,105.0	98.70				Average
		138+00	51	11,867,603.0	6,944,153.0	103.30				Average
		140+00	52	11,867,794.0	6,944,219.0	106.50				Average
		142+00	53	11,867,979.0	6,944,294.0	111.30				Average
		144+00	54	11,868,161.0	6,944,367.5	117.20				Average
		146+00	55	11,868,351.0	6,944,429.0	120.20				Average
		148+00	56	11,868,543.0	6,944,487.0	125.10				Average
		150+00	57	11,868,734.0	6,944,545.5	132.50				Average
		152+00	58	11,868,926.0	6,944,603.5	136.70				Average
		154+00	59	11,869,117.0	6,944,662.0	139.90				Average
		156+00	60	11,869,309.0	6,944,723.0	143.80				Average
		158+00	61	11,869,496.0	6,944,800.0	143.50				Average
		160+00	62	11,869,674.0	6,944,896.0	142.50				Average
		162+00	63	11,869,845.0	6,945,003.0	141.40				Average
		Belvoir	64	11,869,901.0	6,945,047.5	141.00				
Roadway8	30.0	Belvoir	65	11,869,901.0	6,945,047.5	141.00	Signal	0.00	25	Average
		164+00	66	11,870,003.0	6,945,137.0	140.10				Average
		166+00	67	11,870,148.0	6,945,274.0	138.80				Average
		168+00	68	11,870,293.0	6,945,410.0	136.90				Average
		170+00	69	11,870,439.0	6,945,548.5	136.00				Average
		172+00	70	11,870,585.0	6,945,687.5	133.30				Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		174+00/W	71	11,870,714.0	6,945,816.0	128.10				
Roadway9	30.0	174+00/W	72	11,870,714.0	6,945,816.0	128.10	Signal	0.00	25	Average
		176+00	73	11,870,856.0	6,945,963.5	119.10				Average
		178+00	74	11,871,012.0	6,946,077.5	109.00				Average
		180+00	75	11,871,187.0	6,946,175.0	99.60				Average
		182+00	76	11,871,368.0	6,946,252.5	96.40				Average
		184+00	77	11,871,558.0	6,946,311.5	94.10				Average
		186+00	78	11,871,750.0	6,946,366.0	85.80				Average
		188+00	79	11,871,941.0	6,946,426.0	72.40				Average
		190+00	80	11,872,128.0	6,946,498.0	58.50				Average
		192+00	81	11,872,308.0	6,946,587.5	48.70				Average
		194+00	82	11,872,480.0	6,946,688.5	43.30				Average
		196+00	83	11,872,650.0	6,946,794.5	39.10				Average
		198+00	84	11,872,739.0	6,946,852.0	37.00				Average
		200+00/M	85	11,872,905.0	6,946,960.5	31.30				
Roadway10	30.0	200+00/M	86	11,872,905.0	6,946,960.5	31.30	Signal	0.00	25	Average
		202+00	87	11,873,074.0	6,947,069.5	27.00				Average
		204+00	88	11,873,243.0	6,947,177.0	25.20				Average
		206+00	89	11,873,412.0	6,947,284.5	21.90				Average
		208+00	90	11,873,579.0	6,947,393.5	17.90				Average
		210+00	91	11,873,747.0	6,947,502.0	13.70				Average
		212+00	92	11,873,915.0	6,947,610.5	13.00				Average
		214+00	93	11,874,082.0	6,947,720.5	13.00				Average
		End	94	11,874,514.0	6,948,000.5	16.00				
Roadway12	36.0	Telegraph	101	11,855,983.0	6,944,012.0	151.60	Signal	0.00	25	Average
		20+00	102	11,855,953.0	6,944,019.5	151.60				Average
		18+00	103	11,855,762.0	6,944,077.5	150.30				Average
		16+00	104	11,855,570.0	6,944,135.0	148.80				Average
		14+00	105	11,855,379.0	6,944,194.0	149.10				Average
		12+00	106	11,855,185.0	6,944,249.5	152.40				Average
		10+00	107	11,854,984.0	6,944,274.0	155.20				Average
		8+00	108	11,854,781.0	6,944,277.0	156.00				Average
		Pohick	109	11,854,751.0	6,944,274.5	156.20				
Roadway13	30.0	Cook Inlet	110	11,858,839.0	6,943,396.0	102.50	Signal	0.00	25	Average
		48+00	111	11,858,648.0	6,943,389.0	106.80				Average
		46+00	112	11,858,448.0	6,943,380.5	114.10				Average
		44+00	113	11,858,251.0	6,943,366.5	125.80				Average
		42+00	114	11,858,055.0	6,943,379.0	134.20				Average
		40+00	115	11,857,862.0	6,943,424.5	141.10				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		38+00	116	11,857,671.0	6,943,484.0	144.50				Average
		36+00	117	11,857,480.0	6,943,543.0	145.50				Average
		34+00	118	11,857,290.0	6,943,602.5	146.50				Average
		32+00	119	11,857,098.0	6,943,661.5	147.50				Average
		30+00	120	11,856,907.0	6,943,721.0	149.20				Average
		28+00	121	11,856,716.0	6,943,778.5	152.40				Average
		26+00	122	11,856,525.0	6,943,837.0	154.00				Average
		24+00	123	11,856,335.0	6,943,902.0	154.20				Average
		22+00	124	11,856,144.0	6,943,961.5	152.90				Average
		Telegraph	125	11,855,983.0	6,944,012.0	151.60				
Roadway14	30.0	Fairfax Co	126	11,864,179.0	6,943,684.5	18.40	Signal	0.00	25	Average
		102+00	127	11,864,041.0	6,943,663.5	19.60				Average
		100+00	128	11,863,842.0	6,943,642.5	20.50				Average
		98+00	129	11,863,642.0	6,943,626.0	19.60				Average
		96+00	130	11,863,443.0	6,943,605.0	18.80				Average
		94+00	131	11,863,244.0	6,943,586.0	17.80				Average
		92+00	132	11,863,044.0	6,943,575.5	19.30				Average
		90+00	133	11,862,844.0	6,943,567.0	20.30				Average
		88+00	134	11,862,644.0	6,943,557.5	20.80				Average
		86+00	135	11,862,445.0	6,943,548.5	23.80				Average
		84+00	136	11,862,245.0	6,943,539.0	27.70				Average
		82+00	137	11,862,045.0	6,943,529.5	31.60				Average
		80+00	138	11,861,845.0	6,943,522.5	35.40				Average
		78+00	139	11,861,645.0	6,943,512.5	39.80				Average
		76+00	140	11,861,446.0	6,943,502.5	45.00				Average
		74+00	141	11,861,246.0	6,943,493.5	49.50				Average
		72+00	142	11,861,046.0	6,943,484.5	55.20				Average
		70+00	143	11,860,847.0	6,943,475.5	62.10				Average
		68+00	144	11,860,647.0	6,943,464.5	69.30				Average
		66+00	145	11,860,447.0	6,943,456.5	76.50				Average
		64+00	146	11,860,247.0	6,943,447.0	82.30				Average
		62+00	147	11,860,047.0	6,943,437.5	87.00				Average
		60+00	148	11,859,847.0	6,943,427.5	84.90				Average
		58+00	149	11,859,648.0	6,943,417.5	82.50				Average
		56+00	150	11,859,448.0	6,943,409.0	85.70				Average
		54+00	151	11,859,248.0	6,943,405.5	93.40				Average
		52+00	152	11,859,048.0	6,943,401.0	97.80				Average
		50+00	153	11,858,848.0	6,943,396.5	102.30				Average
		Cook Inlet	154	11,858,839.0	6,943,396.0	102.50				

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway15	30.0	Backkick	155	11,865,535.0	6,943,930.5	38.70	Signal	0.00	25	Average
		116+00	156	11,865,422.0	6,943,909.0	39.00				Average
		114+00	157	11,865,225.0	6,943,871.0	37.60				Average
		112+00	158	11,865,029.0	6,943,831.0	33.90				Average
		110+00	159	11,864,833.0	6,943,792.0	29.60				Average
		108+00	160	11,864,636.0	6,943,756.0	22.30				Average
		106+00	161	11,864,438.0	6,943,726.0	17.00				Average
		104+00	162	11,864,241.0	6,943,695.0	17.80				Average
		Fairfax Co	163	11,864,179.0	6,943,684.5	18.40				
Roadway16	30.0	Belvoir	164	11,869,953.0	6,945,147.0	140.40	Signal	0.00	25	Average
		162+00	165	11,869,825.0	6,945,036.0	141.30				Average
		160+00	166	11,869,663.0	6,944,917.0	142.40				Average
		158+00	167	11,869,488.0	6,944,819.5	143.60				Average
		156+00	168	11,869,302.0	6,944,743.5	143.80				Average
		154+00	169	11,869,110.0	6,944,682.5	140.00				Average
		152+00	170	11,868,919.0	6,944,624.5	136.80				Average
		150+00	171	11,868,728.0	6,944,566.5	132.50				Average
		148+00	172	11,868,537.0	6,944,507.0	125.10				Average
		146+00	173	11,868,345.0	6,944,451.0	120.20				Average
		144+00	174	11,868,155.0	6,944,389.0	117.00				Average
		142+00	175	11,867,971.0	6,944,313.5	111.00				Average
		140+00	176	11,867,786.0	6,944,238.5	105.90				Average
		138+00	177	11,867,596.0	6,944,173.5	102.90				Average
		136+00	178	11,867,400.0	6,944,125.0	98.60				Average
		134+00	179	11,867,204.0	6,944,084.0	88.10				Average
		132+00	180	11,867,008.0	6,944,043.0	75.90				Average
		130+00	181	11,866,810.0	6,944,005.0	68.80				Average
		128+00	182	11,866,609.0	6,943,983.5	73.10				Average
		126+00	183	11,866,408.0	6,943,979.0	70.70				Average
		124+00	184	11,866,208.0	6,943,974.0	61.60				Average
		122+00	185	11,866,009.0	6,943,972.0	51.20				Average
		120+00	186	11,865,814.0	6,943,969.0	43.00				Average
		118+00	187	11,865,618.0	6,943,945.5	39.00				Average
		Backkick	188	11,865,535.0	6,943,930.5	38.70				
Roadway17	30.0	Woodlawn	189	11,870,755.0	6,945,914.5	124.50	Signal	0.00	25	Average
		174+00	190	11,870,699.0	6,945,851.5	127.60				Average
		172+00	191	11,870,553.0	6,945,713.5	133.50				Average
		170+00	192	11,870,406.0	6,945,575.0	136.10				Average
		168+00	193	11,870,262.0	6,945,437.5	137.40				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		166+00	194	11,870,119.0	6,945,304.5	138.70				Average
		164+00	195	11,869,977.0	6,945,171.0	140.20				Average
		Belvoir	196	11,869,953.0	6,945,147.0	140.40				
Roadway18	30.0	Mt Vernon	197	11,873,087.0	6,947,116.5	26.00	Signal	0.00	25	Average
		202+00	198	11,873,056.0	6,947,098.0	26.60				Average
		200+00	199	11,872,889.0	6,946,988.5	31.40				Average
		198+00	200	11,872,720.0	6,946,881.5	36.50				Average
		196+00	201	11,872,631.0	6,946,823.5	39.00				Average
		194+00	202	11,872,463.0	6,946,715.0	42.80				Average
		192+00	203	11,872,296.0	6,946,610.5	48.00				Average
		190+00	204	11,872,122.0	6,946,520.5	57.60				Average
		188+00	205	11,871,935.0	6,946,446.5	71.80				Average
		186+00	206	11,871,744.0	6,946,388.0	85.40				Average
		184+00	207	11,871,551.0	6,946,334.0	94.00				Average
		182+00	208	11,871,360.0	6,946,275.0	97.00				Average
		180+00	209	11,871,177.0	6,946,195.5	100.10				Average
		178+00	210	11,871,002.0	6,946,098.5	109.60				Average
		176+00	211	11,870,840.0	6,945,986.0	119.70				Average
		Woodlawn	212	11,870,755.0	6,945,914.5	124.50				
Roadway19	30.0	Begin	213	11,874,506.0	6,948,021.0	16.00				Average
		214+00	214	11,874,070.0	6,947,740.5	13.00				Average
		212+00	215	11,873,900.0	6,947,634.0	13.00				Average
		210+00	216	11,873,728.0	6,947,532.0	13.00				Average
		208+00	217	11,873,559.0	6,947,425.5	16.90				Average
		206+00	218	11,873,390.0	6,947,317.5	21.40				Average
		204+00	219	11,873,224.0	6,947,207.0	24.50				Average
		Mt Vernon	220	11,873,087.0	6,947,116.5	26.00				
Roadway5-2	30.0	Cook Inlet	221	11,858,742.0	6,943,349.0	105.00	Signal	0.00	25	Average
		50+00	222	11,858,850.0	6,943,354.0	102.50				Average
		52+00	223	11,859,050.0	6,943,364.0	98.00				Average
		54+00	224	11,859,250.0	6,943,374.5	93.50				Average
		56+00	225	11,859,449.0	6,943,384.0	85.60				Average
		58+00	226	11,859,649.0	6,943,395.0	82.30				Average
		60+00	227	11,859,849.0	6,943,404.0	84.90				Average
		62+00	228	11,860,049.0	6,943,414.0	87.00				Average
		64+00	229	11,860,249.0	6,943,423.5	83.40				Average
		66+00	230	11,860,449.0	6,943,433.5	76.50				Average
		68+00	231	11,860,649.0	6,943,442.5	69.20				Average
		70+00	232	11,860,848.0	6,943,451.5	62.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		72+00	233	11,861,048.0	6,943,461.0	55.40				Average	
		74+00	234	11,861,247.0	6,943,470.5	49.70				Average	
		76+00	235	11,861,447.0	6,943,479.0	44.60				Average	
		78+00	236	11,861,647.0	6,943,488.5	40.00				Average	
		80+00	237	11,861,846.0	6,943,498.5	35.70				Average	
		82+00	238	11,862,046.0	6,943,507.0	31.50				Average	
		84+00	239	11,862,246.0	6,943,516.5	27.70				Average	
		86+00	240	11,862,446.0	6,943,526.0	23.70				Average	
		88+00	241	11,862,646.0	6,943,534.5	20.70				Average	
		90+00	242	11,862,846.0	6,943,544.5	20.30				Average	
		92+00	243	11,863,045.0	6,943,554.0	19.40				Average	
		94+00	244	11,863,245.0	6,943,562.5	17.90				Average	
		96+00	245	11,863,445.0	6,943,572.5	18.90				Average	
		98+00	246	11,863,645.0	6,943,582.0	20.00				Average	
		100+00	247	11,863,844.0	6,943,591.5	21.50				Average	
		102+00	248	11,864,046.0	6,943,614.0	20.80				Average	
		Fairfax Co	249	11,864,058.0	6,943,615.5	20.80					
Belvoir Woods In	20.0	1	250	11,856,612.0	6,943,840.0	152.70				Average	
		2	251	11,856,616.0	6,943,854.0	152.00				Average	
		3	252	11,856,621.0	6,943,881.5	149.90				Average	
		4	253	11,856,621.0	6,943,910.5	148.00				Average	
		5	254	11,856,613.0	6,943,944.0	146.00					
Belvoir Woods Out	20.0	1	255	11,856,577.0	6,943,935.5	146.00				Average	
		2	256	11,856,585.0	6,943,907.0	148.00				Average	
		3	257	11,856,583.0	6,943,886.5	150.00				Average	
		4	258	11,856,576.0	6,943,866.5	152.00				Average	
		5	259	11,856,569.0	6,943,853.0	152.80					
Inlet Cove In	20.0	1	260	11,857,463.0	6,943,573.0	145.40				Average	
		2	261	11,857,499.0	6,943,690.0	144.90					
Inlet Cove Out	20.0	1	262	11,857,461.0	6,943,702.0	144.40				Average	
		2	263	11,857,425.0	6,943,585.5	145.60					
Roadway3	36.0	1	264	11,853,008.0	6,943,358.0	62.00				Average	
		2	265	11,853,181.0	6,943,478.5	74.00				Average	
		3	266	11,853,362.0	6,943,573.0	86.00				Average	
		4	267	11,853,520.0	6,943,649.5	96.00				Average	
		5	268	11,853,704.0	6,943,741.0	108.00				Average	
		begin	1	11,853,882.0	6,943,845.0	120.00				Average	
		0+00	2	11,854,057.0	6,943,938.0	131.00				Average	
		2+00	3	11,854,233.0	6,944,033.5	140.00				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		4+00	4	11,854,411.0	6,944,116.0	146.00				Average
		6+00	5	11,854,596.0	6,944,174.5	151.40				Average
		Pohick	6	11,854,632.0	6,944,183.0	151.90				
Roadway11	48.0	Pohick	95	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	96	11,854,578.0	6,944,246.5	154.40				Average
		4+00	97	11,854,382.0	6,944,185.5	149.00				Average
		2+00	98	11,854,199.0	6,944,096.5	142.00				Average
		0+00	99	11,854,025.0	6,943,998.5	132.50				Average
		6	275	11,853,867.0	6,943,909.5	122.00				Average
		5	274	11,853,686.0	6,943,809.0	110.00				Average
		4	273	11,853,502.0	6,943,708.5	98.00				Average
		3	272	11,853,317.0	6,943,613.5	86.00				Average
		2	271	11,853,152.0	6,943,530.0	76.00				Average
		1	270	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	276	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	277	11,854,674.0	6,944,353.0	158.00				Average
		3	278	11,854,658.0	6,944,385.0	158.50				Average
		4	279	11,854,648.0	6,944,404.5	158.00				Average
		5	280	11,854,622.0	6,944,446.0	156.00				Average
		6	281	11,854,582.0	6,944,502.5	154.00				Average
		7	282	11,854,544.0	6,944,553.5	152.00				Average
		8	283	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	28.0	1	284	11,854,471.0	6,944,598.0	150.00				Average
		2	285	11,854,509.0	6,944,540.0	152.00				Average
		3	286	11,854,555.0	6,944,476.0	154.00				Average
		4	287	11,854,610.0	6,944,407.0	156.00				Average
		5	288	11,854,627.0	6,944,364.5	156.00				Average
		6	289	11,854,639.0	6,944,332.5	157.60				Average
		7	290	11,854,647.0	6,944,303.0	157.00				
WB Telegraph	40.0	1	291	11,855,956.0	6,944,101.0	150.00	Signal	10.00	25	Average
		2	292	11,855,967.0	6,944,295.0	148.00				Average
		3	293	11,855,962.0	6,944,391.0	148.00				Average
		4	294	11,855,960.0	6,944,489.0	148.00				
EB Telegraph	40.0	1	297	11,855,904.0	6,944,570.5	146.00	Signal	0.00	25	Average
		2	298	11,855,899.0	6,944,329.5	146.00				Average
		3	299	11,855,898.0	6,944,200.5	148.00				Average
		4	300	11,855,888.0	6,944,107.5	149.00				
WB Telegraph 2	24.0	1	302	11,855,780.0	6,943,550.5	134.00				Average
		2	303	11,855,797.0	6,943,606.5	138.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		3	304	11,855,818.0	6,943,662.5	142.00				Average
		4	305	11,855,841.0	6,943,740.0	145.80				Average
		5	306	11,855,856.0	6,943,799.5	148.10				Average
		6	307	11,855,882.0	6,943,897.0	150.00				Average
		7	308	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	309	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	310	11,855,834.0	6,943,815.0	148.00				Average
		3	311	11,855,809.0	6,943,708.5	144.00				Average
		4	312	11,855,789.0	6,943,642.5	140.00				Average
		5	313	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	314	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	315	11,865,506.0	6,943,785.0	36.00				Average
		3	316	11,865,545.0	6,943,721.5	35.20				Average
		4	317	11,865,595.0	6,943,619.5	36.00				Average
		5	318	11,865,633.0	6,943,549.5	38.70				Average
		6	319	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	320	11,865,720.0	6,943,440.0	38.00				Average
		2	321	11,865,671.0	6,943,519.5	36.00				Average
		3	322	11,865,621.0	6,943,617.5	36.00				Average
		4	323	11,865,577.0	6,943,710.0	35.20				Average
		5	324	11,865,547.0	6,943,772.0	36.00				Average
		6	325	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	1	326	11,869,955.0	6,945,047.5	140.90	Signal	10.00	100	Average
		2	327	11,869,979.0	6,945,009.5	142.00				Average
		3	328	11,870,040.0	6,944,867.0	142.00				Average
		4	329	11,870,068.0	6,944,799.0	140.00				Average
		5	330	11,870,122.0	6,944,680.0	138.00				Average
		6	331	11,870,155.0	6,944,598.5	136.00				Average
		7	332	11,870,199.0	6,944,498.0	132.00				Average
		8	333	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	334	11,870,275.0	6,944,429.5	128.00				Average
		2	335	11,870,233.0	6,944,520.0	132.00				Average
		3	336	11,870,181.0	6,944,618.0	136.00				Average
		4	337	11,870,145.0	6,944,695.0	138.00				Average
		5	338	11,870,102.0	6,944,798.0	140.00				Average
		6	339	11,870,062.0	6,944,884.0	142.00				Average
		7	340	11,869,993.0	6,945,016.0	142.00				Average
		8	341	11,869,974.0	6,945,057.0	140.80				
EB Mnt Vernon	30.0	1	342	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		2	343	11,873,010.0	6,946,872.5	30.00				Average
		3	344	11,873,082.0	6,946,744.0	32.00				Average
		4	345	11,873,105.0	6,946,704.5	32.00				Average
		5	346	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	347	11,873,175.0	6,946,615.0	34.00				Average
		2	348	11,873,131.0	6,946,723.5	32.00				Average
		3	349	11,873,116.0	6,946,754.5	32.00				Average
		4	350	11,873,076.0	6,946,831.5	30.50				Average
		5	351	11,873,055.0	6,946,875.0	30.00				Average
		6	352	11,873,000.0	6,946,983.5	28.00				
Roadway42	18.0	1	353	11,865,502.0	6,943,951.0	38.40	Signal	10.00	100	Average
		2	354	11,865,476.0	6,944,307.5	38.00				Average
		3	355	11,865,464.0	6,944,680.0	40.00				
EB Backlick	18.0	1	356	11,865,447.0	6,944,680.0	40.00				Average
		2	357	11,865,466.0	6,944,283.0	38.00				Average
		3	358	11,865,483.0	6,943,952.0	38.40				
Cook Inlet In	20.0	1	359	11,858,794.0	6,943,442.5	102.60				Average
		2	360	11,858,788.0	6,943,510.0	103.30				Average
		3	361	11,858,773.0	6,943,688.5	102.00				
Cook Inlet Out	20.0	1	362	11,858,755.0	6,943,677.5	102.00				Average
		2	363	11,858,749.0	6,943,507.5	103.70				Average
		3	364	11,858,751.0	6,943,440.5	104.20				
Roadway49	40.0	1	408	11,855,445.0	6,946,274.0	78.00	Signal	10.00	100	Average
		2	407	11,855,472.0	6,946,164.0	80.00				Average
		3	406	11,855,510.0	6,945,998.5	84.00				Average
		4	405	11,855,581.0	6,945,897.0	90.00				
Roadway48-2-2	40.0	point415	415	11,855,612.0	6,945,910.5	90.00	Signal	10.00	100	Average
		17	392	11,855,544.0	6,946,026.0	84.00				Average
		18	393	11,855,512.0	6,946,129.0	80.00				Average
		19	394	11,855,475.0	6,946,293.5	76.00				
Roadway48-2-2-Roadway55	40.0	4	417	11,855,960.0	6,944,489.0	148.00	Signal	10.00	100	Average
		5	418	11,855,956.0	6,944,589.0	146.00				Average
		6	419	11,855,942.0	6,944,759.5	148.00				Average
		7	420	11,855,940.0	6,945,006.0	146.00				Average
		8	421	11,855,940.0	6,945,116.5	144.00				Average
		9	422	11,855,939.0	6,945,189.5	142.00				Average
		10	423	11,855,939.0	6,945,244.5	140.00				Average
		point424	424	11,855,929.0	6,945,282.5	138.00				Average
		10	385	11,855,910.0	6,945,351.0	134.00				Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		11	386	11,855,876.0	6,945,441.0	128.00				Average
		12	387	11,855,841.0	6,945,521.0	122.00				Average
		13	388	11,855,801.0	6,945,593.0	116.00				Average
		14	389	11,855,733.0	6,945,713.0	106.00				Average
		15	390	11,855,689.0	6,945,790.0	100.00				Average
		16	391	11,855,612.0	6,945,910.5	90.00				
Roadway49-2-Roadway58	40.0	point416	416	11,855,581.0	6,945,897.0	90.00	Signal	10.00	100	Average
		5	404	11,855,664.0	6,945,774.0	100.00				Average
		6	403	11,855,718.0	6,945,674.5	108.00				Average
		7	402	11,855,775.0	6,945,572.0	116.00				Average
		8	401	11,855,804.0	6,945,514.5	120.00				Average
		9	400	11,855,840.0	6,945,442.5	126.00				Average
		10	399	11,855,868.0	6,945,353.0	132.00				Average
		11	398	11,855,878.0	6,945,289.0	136.00				Average
		1	425	11,855,885.0	6,945,259.5	138.00				Average
		2	426	11,855,894.0	6,945,162.0	138.00				Average
		3	427	11,855,895.0	6,945,098.0	144.00				Average
		4	428	11,855,895.0	6,945,020.5	146.00				Average
		5	429	11,855,904.0	6,944,570.5	146.00				

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Parsons		27 November 2012										
Greg J Berg		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		Route 1 / Fort Belvoir										
RUN:		Existing w/ Alternative C Recievers										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			Autos		V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Roadway4	Pohick	7	1353	47	43	47	21	47	0	0	0	0
	8+00	8	1353	47	43	47	21	47	0	0	0	0
	10+00	9	1353	47	43	47	21	47	0	0	0	0
	12+00	10	1353	47	43	47	21	47	0	0	0	0
	14+00	11	1353	47	43	47	21	47	0	0	0	0
	16+00	12	1353	47	43	47	21	47	0	0	0	0
	18+00	13	1353	47	43	47	21	47	0	0	0	0
	Telegraph	14										
Roadway5	Telegraph	15	1353	47	43	47	21	47	0	0	0	0
	20+00	16	1353	47	43	47	21	47	0	0	0	0
	22+00	17	1353	47	43	47	21	47	0	0	0	0
	24+00	18	1353	47	43	47	21	47	0	0	0	0
	26+00	19	1353	47	43	47	21	47	0	0	0	0
	28+00	20	1353	47	43	47	21	47	0	0	0	0
	30+00	21	1353	47	43	47	21	47	0	0	0	0
	32+00	22	1353	47	43	47	21	47	0	0	0	0
	34+00	23	1353	47	43	47	21	47	0	0	0	0
	36+00	24	1353	47	43	47	21	47	0	0	0	0
	38+00	25	1353	47	43	47	21	47	0	0	0	0
	40+00	26	1353	47	43	47	21	47	0	0	0	0
	42+00	27	1353	47	43	47	21	47	0	0	0	0
	44+00	28	1353	47	43	47	21	47	0	0	0	0
	46+00	29	1353	47	43	47	21	47	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	48+00	30	1353	47	43	47	21	47	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	1353	47	43	47	21	47	0	0	0	0
	104+00	33	1353	47	43	47	21	47	0	0	0	0
	106+00	34	1353	47	43	47	21	47	0	0	0	0
	108+00	35	1353	47	43	47	21	47	0	0	0	0
	110+00	36	1353	47	43	47	21	47	0	0	0	0
	112+00	37	1353	47	43	47	21	47	0	0	0	0
	114+00	38	1353	47	43	47	21	47	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	1353	47	43	47	21	47	0	0	0	0
	118+00	41	1353	47	43	47	21	47	0	0	0	0
	120+00	42	1353	47	43	47	21	47	0	0	0	0
	122+00	43	1353	47	43	47	21	47	0	0	0	0
	124+00	44	1353	47	43	47	21	47	0	0	0	0
	126+00	45	1353	47	43	47	21	47	0	0	0	0
	128+00	46	1353	47	43	47	21	47	0	0	0	0
	130+00	47	1353	47	43	47	21	47	0	0	0	0
	132+00	48	1353	47	43	47	21	47	0	0	0	0
	134+00	49	1353	47	43	47	21	47	0	0	0	0
	136+00	50	1353	47	43	47	21	47	0	0	0	0
	138+00	51	1353	47	43	47	21	47	0	0	0	0
	140+00	52	1353	47	43	47	21	47	0	0	0	0
	142+00	53	1353	47	43	47	21	47	0	0	0	0
	144+00	54	1353	47	43	47	21	47	0	0	0	0
	146+00	55	1353	47	43	47	21	47	0	0	0	0
	148+00	56	1353	47	43	47	21	47	0	0	0	0
	150+00	57	1353	47	43	47	21	47	0	0	0	0
	152+00	58	1353	47	43	47	21	47	0	0	0	0
	154+00	59	1353	47	43	47	21	47	0	0	0	0
	156+00	60	1353	47	43	47	21	47	0	0	0	0
	158+00	61	1353	47	43	47	21	47	0	0	0	0
	160+00	62	1353	47	43	47	21	47	0	0	0	0
	162+00	63	1353	47	43	47	21	47	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	1353	47	43	47	21	47	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	164+00	66	1353	47	43	47	21	47	0	0	0	0
	166+00	67	1353	47	43	47	21	47	0	0	0	0
	168+00	68	1353	47	43	47	21	47	0	0	0	0
	170+00	69	1353	47	43	47	21	47	0	0	0	0
	172+00	70	1353	47	43	47	21	47	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	1353	47	43	47	21	47	0	0	0	0
	176+00	73	1353	47	43	47	21	47	0	0	0	0
	178+00	74	1353	47	43	47	21	47	0	0	0	0
	180+00	75	1353	47	43	47	21	47	0	0	0	0
	182+00	76	1353	47	43	47	21	47	0	0	0	0
	184+00	77	1353	47	43	47	21	47	0	0	0	0
	186+00	78	1353	47	43	47	21	47	0	0	0	0
	188+00	79	1353	47	43	47	21	47	0	0	0	0
	190+00	80	1353	47	43	47	21	47	0	0	0	0
	192+00	81	1353	47	43	47	21	47	0	0	0	0
	194+00	82	1353	47	43	47	21	47	0	0	0	0
	196+00	83	1353	47	43	47	21	47	0	0	0	0
	198+00	84	1353	47	43	47	21	47	0	0	0	0
	200+00/Mt Ver	85										
Roadway10	200+00/Mt Ver	86	1353	47	43	47	21	47	0	0	0	0
	202+00	87	1353	47	43	47	21	47	0	0	0	0
	204+00	88	1353	47	43	47	21	47	0	0	0	0
	206+00	89	1353	47	43	47	21	47	0	0	0	0
	208+00	90	1353	47	43	47	21	47	0	0	0	0
	210+00	91	1353	47	43	47	21	47	0	0	0	0
	212+00	92	1353	47	43	47	21	47	0	0	0	0
	214+00	93	1353	47	43	47	21	47	0	0	0	0
	End	94										
Roadway12	Telegraph	101	2461	28	61	28	144	28	0	0	0	0
	20+00	102	2461	28	61	28	144	28	0	0	0	0
	18+00	103	2461	28	61	28	144	28	0	0	0	0
	16+00	104	2461	28	61	28	144	28	0	0	0	0
	14+00	105	2461	28	61	28	144	28	0	0	0	0
	12+00	106	2461	28	61	28	144	28	0	0	0	0
	10+00	107	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	8+00	108	2461	28	61	28	144	28	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	2461	28	61	28	144	28	0	0	0	0
	48+00	111	2461	28	61	28	144	28	0	0	0	0
	46+00	112	2461	28	61	28	144	28	0	0	0	0
	44+00	113	2461	28	61	28	144	28	0	0	0	0
	42+00	114	2461	28	61	28	144	28	0	0	0	0
	40+00	115	2461	28	61	28	144	28	0	0	0	0
	38+00	116	2461	28	61	28	144	28	0	0	0	0
	36+00	117	2461	28	61	28	144	28	0	0	0	0
	34+00	118	2461	28	61	28	144	28	0	0	0	0
	32+00	119	2461	28	61	28	144	28	0	0	0	0
	30+00	120	2461	28	61	28	144	28	0	0	0	0
	28+00	121	2461	28	61	28	144	28	0	0	0	0
	26+00	122	2461	28	61	28	144	28	0	0	0	0
	24+00	123	2461	28	61	28	144	28	0	0	0	0
	22+00	124	2461	28	61	28	144	28	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	2461	28	61	28	144	28	0	0	0	0
	102+00	127	2461	28	61	28	144	28	0	0	0	0
	100+00	128	2461	28	61	28	144	28	0	0	0	0
	98+00	129	2461	28	61	28	144	28	0	0	0	0
	96+00	130	2461	28	61	28	144	28	0	0	0	0
	94+00	131	2461	28	61	28	144	28	0	0	0	0
	92+00	132	2461	28	61	28	144	28	0	0	0	0
	90+00	133	2461	28	61	28	144	28	0	0	0	0
	88+00	134	2461	28	61	28	144	28	0	0	0	0
	86+00	135	2461	28	61	28	144	28	0	0	0	0
	84+00	136	2461	28	61	28	144	28	0	0	0	0
	82+00	137	2461	28	61	28	144	28	0	0	0	0
	80+00	138	2461	28	61	28	144	28	0	0	0	0
	78+00	139	2461	28	61	28	144	28	0	0	0	0
	76+00	140	2461	28	61	28	144	28	0	0	0	0
	74+00	141	2461	28	61	28	144	28	0	0	0	0
	72+00	142	2461	28	61	28	144	28	0	0	0	0
	70+00	143	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	68+00	144	2461	28	61	28	144	28	0	0	0	0
	66+00	145	2461	28	61	28	144	28	0	0	0	0
	64+00	146	2461	28	61	28	144	28	0	0	0	0
	62+00	147	2461	28	61	28	144	28	0	0	0	0
	60+00	148	2461	28	61	28	144	28	0	0	0	0
	58+00	149	2461	28	61	28	144	28	0	0	0	0
	56+00	150	2461	28	61	28	144	28	0	0	0	0
	54+00	151	2461	28	61	28	144	28	0	0	0	0
	52+00	152	2461	28	61	28	144	28	0	0	0	0
	50+00	153	2461	28	61	28	144	28	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	2461	28	61	28	144	28	0	0	0	0
	116+00	156	2461	28	61	28	144	28	0	0	0	0
	114+00	157	2461	28	61	28	144	28	0	0	0	0
	112+00	158	2461	28	61	28	144	28	0	0	0	0
	110+00	159	2461	28	61	28	144	28	0	0	0	0
	108+00	160	2461	28	61	28	144	28	0	0	0	0
	106+00	161	2461	28	61	28	144	28	0	0	0	0
	104+00	162	2461	28	61	28	144	28	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	2461	28	61	28	144	28	0	0	0	0
	162+00	165	2461	28	61	28	144	28	0	0	0	0
	160+00	166	2461	28	61	28	144	28	0	0	0	0
	158+00	167	2461	28	61	28	144	28	0	0	0	0
	156+00	168	2461	28	61	28	144	28	0	0	0	0
	154+00	169	2461	28	61	28	144	28	0	0	0	0
	152+00	170	2461	28	61	28	144	28	0	0	0	0
	150+00	171	2461	28	61	28	144	28	0	0	0	0
	148+00	172	2461	28	61	28	144	28	0	0	0	0
	146+00	173	2461	28	61	28	144	28	0	0	0	0
	144+00	174	2461	28	61	28	144	28	0	0	0	0
	142+00	175	2461	28	61	28	144	28	0	0	0	0
	140+00	176	2461	28	61	28	144	28	0	0	0	0
	138+00	177	2461	28	61	28	144	28	0	0	0	0
	136+00	178	2461	28	61	28	144	28	0	0	0	0
	134+00	179	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	132+00	180	2461	28	61	28	144	28	0	0	0	0
	130+00	181	2461	28	61	28	144	28	0	0	0	0
	128+00	182	2461	28	61	28	144	28	0	0	0	0
	126+00	183	2461	28	61	28	144	28	0	0	0	0
	124+00	184	2461	28	61	28	144	28	0	0	0	0
	122+00	185	2461	28	61	28	144	28	0	0	0	0
	120+00	186	2461	28	61	28	144	28	0	0	0	0
	118+00	187	2461	28	61	28	144	28	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	2461	28	61	28	144	28	0	0	0	0
	174+00	190	2461	28	61	28	144	28	0	0	0	0
	172+00	191	2461	28	61	28	144	28	0	0	0	0
	170+00	192	2461	28	61	28	144	28	0	0	0	0
	168+00	193	2461	28	61	28	144	28	0	0	0	0
	166+00	194	2461	28	61	28	144	28	0	0	0	0
	164+00	195	2461	28	61	28	144	28	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	2461	28	61	28	144	28	0	0	0	0
	202+00	198	2461	28	61	28	144	28	0	0	0	0
	200+00	199	2461	28	61	28	144	28	0	0	0	0
	198+00	200	2461	28	61	28	144	28	0	0	0	0
	196+00	201	2461	28	61	28	144	28	0	0	0	0
	194+00	202	2461	28	61	28	144	28	0	0	0	0
	192+00	203	2461	28	61	28	144	28	0	0	0	0
	190+00	204	2461	28	61	28	144	28	0	0	0	0
	188+00	205	2461	28	61	28	144	28	0	0	0	0
	186+00	206	2461	28	61	28	144	28	0	0	0	0
	184+00	207	2461	28	61	28	144	28	0	0	0	0
	182+00	208	2461	28	61	28	144	28	0	0	0	0
	180+00	209	2461	28	61	28	144	28	0	0	0	0
	178+00	210	2461	28	61	28	144	28	0	0	0	0
	176+00	211	2461	28	61	28	144	28	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	2461	28	61	28	144	28	0	0	0	0
	214+00	214	2461	28	61	28	144	28	0	0	0	0
	212+00	215	2461	28	61	28	144	28	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	210+00	216	2461	28	61	28	144	28	0	0	0	0
	208+00	217	2461	28	61	28	144	28	0	0	0	0
	206+00	218	2461	28	61	28	144	28	0	0	0	0
	204+00	219	2461	28	61	28	144	28	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1353	47	43	47	21	47	0	0	0	0
	50+00	222	1353	47	43	47	21	47	0	0	0	0
	52+00	223	1353	47	43	47	21	47	0	0	0	0
	54+00	224	1353	47	43	47	21	47	0	0	0	0
	56+00	225	1353	47	43	47	21	47	0	0	0	0
	58+00	226	1353	47	43	47	21	47	0	0	0	0
	60+00	227	1353	47	43	47	21	47	0	0	0	0
	62+00	228	1353	47	43	47	21	47	0	0	0	0
	64+00	229	1353	47	43	47	21	47	0	0	0	0
	66+00	230	1353	47	43	47	21	47	0	0	0	0
	68+00	231	1353	47	43	47	21	47	0	0	0	0
	70+00	232	1353	47	43	47	21	47	0	0	0	0
	72+00	233	1353	47	43	47	21	47	0	0	0	0
	74+00	234	1353	47	43	47	21	47	0	0	0	0
	76+00	235	1353	47	43	47	21	47	0	0	0	0
	78+00	236	1353	47	43	47	21	47	0	0	0	0
	80+00	237	1353	47	43	47	21	47	0	0	0	0
	82+00	238	1353	47	43	47	21	47	0	0	0	0
	84+00	239	1353	47	43	47	21	47	0	0	0	0
	86+00	240	1353	47	43	47	21	47	0	0	0	0
	88+00	241	1353	47	43	47	21	47	0	0	0	0
	90+00	242	1353	47	43	47	21	47	0	0	0	0
	92+00	243	1353	47	43	47	21	47	0	0	0	0
	94+00	244	1353	47	43	47	21	47	0	0	0	0
	96+00	245	1353	47	43	47	21	47	0	0	0	0
	98+00	246	1353	47	43	47	21	47	0	0	0	0
	100+00	247	1353	47	43	47	21	47	0	0	0	0
	102+00	248	1353	47	43	47	21	47	0	0	0	0
	Fairfax County	249										
Belvoir Woods In	1	250	0	0	0	0	0	0	0	0	0	0
	2	251	0	0	0	0	0	0	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	252	0	0	0	0	0	0	0	0	0	0
	4	253	0	0	0	0	0	0	0	0	0	0
	5	254										
Belvoir Woods Out	1	255	0	0	0	0	0	0	0	0	0	0
	2	256	0	0	0	0	0	0	0	0	0	0
	3	257	0	0	0	0	0	0	0	0	0	0
	4	258	0	0	0	0	0	0	0	0	0	0
	5	259										
Inlet Cove In	1	260	0	0	0	0	0	0	0	0	0	0
	2	261										
Inlet Cove Out	1	262	0	0	0	0	0	0	0	0	0	0
	2	263										
Roadway3	1	264	1353	47	43	47	21	47	0	0	0	0
	2	265	1353	47	43	47	21	47	0	0	0	0
	3	266	1353	47	43	47	21	47	0	0	0	0
	4	267	1353	47	43	47	21	47	0	0	0	0
	5	268	1353	47	43	47	21	47	0	0	0	0
	begin	1	1353	47	43	47	21	47	0	0	0	0
	0+00	2	1353	47	43	47	21	47	0	0	0	0
	2+00	3	1353	47	43	47	21	47	0	0	0	0
	4+00	4	1353	47	43	47	21	47	0	0	0	0
	6+00	5	1353	47	43	47	21	47	0	0	0	0
	Pohick	6										
Roadway11	Pohick	95	2461	28	61	28	144	28	0	0	0	0
	6+00	96	2461	28	61	28	144	28	0	0	0	0
	4+00	97	2461	28	61	28	144	28	0	0	0	0
	2+00	98	2461	28	61	28	144	28	0	0	0	0
	0+00	99	2461	28	61	28	144	28	0	0	0	0
	6	275	2461	28	61	28	144	28	0	0	0	0
	5	274	2461	28	61	28	144	28	0	0	0	0
	4	273	2461	28	61	28	144	28	0	0	0	0
	3	272	2461	28	61	28	144	28	0	0	0	0
	2	271	2461	28	61	28	144	28	0	0	0	0
	1	270										
WB Pohick West	1	276	532	27	15	27	20	27	0	0	0	0
	2	277	532	27	15	27	20	27	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	278	532	27	15	27	20	27	0	0	0	0
	4	279	532	27	15	27	20	27	0	0	0	0
	5	280	532	27	15	27	20	27	0	0	0	0
	6	281	532	27	15	27	20	27	0	0	0	0
	7	282	532	27	15	27	20	27	0	0	0	0
	8	283										
EB Pohick West	1	284	460	30	13	30	18	30	0	0	0	0
	2	285	460	30	13	30	18	30	0	0	0	0
	3	286	460	30	13	30	18	30	0	0	0	0
	4	287	460	30	13	30	18	30	0	0	0	0
	5	288	460	30	13	30	18	30	0	0	0	0
	6	289	460	30	13	30	18	30	0	0	0	0
	7	290										
WB Telegraph	1	291	325	43	9	43	12	43	0	0	0	0
	2	292	325	43	9	43	12	43	0	0	0	0
	3	293	325	43	9	43	12	43	0	0	0	0
	4	294										
EB Telegraph	1	297	1526	23	42	23	59	23	0	0	0	0
	2	298	1526	23	42	23	59	23	0	0	0	0
	3	299	1526	23	42	23	59	23	0	0	0	0
	4	300										
WB Telegraph 2	1	302	325	43	9	43	12	43	0	0	0	0
	2	303	325	43	9	43	12	43	0	0	0	0
	3	304	325	43	9	43	12	43	0	0	0	0
	4	305	325	43	9	43	12	43	0	0	0	0
	5	306	325	43	9	43	12	43	0	0	0	0
	6	307	325	43	9	43	12	43	0	0	0	0
	7	308										
EB Telegraph 2	1	309	1526	23	42	23	59	23	0	0	0	0
	2	310	1526	23	42	23	59	23	0	0	0	0
	3	311	1526	23	42	23	59	23	0	0	0	0
	4	312	1526	23	42	23	59	23	0	0	0	0
	5	313										
EB Pohick	1	314	241	34	7	34	9	34	0	0	0	0
	2	315	241	34	7	34	9	34	0	0	0	0
	3	316	241	34	7	34	9	34	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	317	241	34	7	34	9	34	0	0	0	0
	5	318	241	34	7	34	9	34	0	0	0	0
	6	319										
WB Pohick	1	320	1059	18	29	18	41	18	0	0	0	0
	2	321	1059	18	29	18	41	18	0	0	0	0
	3	322	1059	18	29	18	41	18	0	0	0	0
	4	323	1059	18	29	18	41	18	0	0	0	0
	5	324	1059	18	29	18	41	18	0	0	0	0
	6	325										
EB Belvoir	1	326	122	35	3	35	5	35	0	0	0	0
	2	327	122	35	3	35	5	35	0	0	0	0
	3	328	122	35	3	35	5	35	0	0	0	0
	4	329	122	35	3	35	5	35	0	0	0	0
	5	330	122	35	3	35	5	35	0	0	0	0
	6	331	122	35	3	35	5	35	0	0	0	0
	7	332	122	35	3	35	5	35	0	0	0	0
	8	333										
WB Belvoir	1	334	532	29	15	29	20	29	0	0	0	0
	2	335	532	29	15	29	20	29	0	0	0	0
	3	336	532	29	15	29	20	29	0	0	0	0
	4	337	532	29	15	29	20	29	0	0	0	0
	5	338	532	29	15	29	20	29	0	0	0	0
	6	339	532	29	15	29	20	29	0	0	0	0
	7	340	532	29	15	29	20	29	0	0	0	0
	8	341										
EB Mnt Vernon	1	342	449	38	12	38	17	38	0	0	0	0
	2	343	449	38	12	38	17	38	0	0	0	0
	3	344	449	38	12	38	17	38	0	0	0	0
	4	345	449	38	12	38	17	38	0	0	0	0
	5	346										
WB Mnt Vernon	1	347	586	32	16	32	23	32	0	0	0	0
	2	348	586	32	16	32	23	32	0	0	0	0
	3	349	586	32	16	32	23	32	0	0	0	0
	4	350	586	32	16	32	23	32	0	0	0	0
	5	351	586	32	16	32	23	32	0	0	0	0
	6	352										

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Roadway42	1	353	173	30	5	30	7	30	0	0	0	0
	2	354	173	30	5	30	7	30	0	0	0	0
	3	355										
EB Backlick	1	356	118	30	3	30	5	30	0	0	0	0
	2	357	118	30	3	30	5	30	0	0	0	0
	3	358										
Cook Inlet In	1	359	0	0	0	0	0	0	0	0	0	0
	2	360	0	0	0	0	0	0	0	0	0	0
	3	361										
Cook Inlet Out	1	362	0	0	0	0	0	0	0	0	0	0
	2	363	0	0	0	0	0	0	0	0	0	0
	3	364										
Roadway49	1	408	1526	23	42	23	59	23	0	0	0	0
	2	407	1526	23	42	23	59	23	0	0	0	0
	3	406	1526	23	42	23	59	23	0	0	0	0
	4	405										
Roadway48-2-2	point415	415	325	43	9	43	12	43	0	0	0	0
	17	392	325	43	9	43	12	43	0	0	0	0
	18	393	325	43	9	43	12	43	0	0	0	0
	19	394										
Roadway48-2-2-Roadway55	4	417	325	43	9	43	12	43	0	0	0	0
	5	418	325	43	9	43	12	43	0	0	0	0
	6	419	325	43	9	43	12	43	0	0	0	0
	7	420	325	43	9	43	12	43	0	0	0	0
	8	421	325	43	9	43	12	43	0	0	0	0
	9	422	325	43	9	43	12	43	0	0	0	0
	10	423	325	43	9	43	12	43	0	0	0	0
	point424	424	325	43	9	43	12	43	0	0	0	0
	10	385	325	43	9	43	12	43	0	0	0	0
	11	386	325	43	9	43	12	43	0	0	0	0
	12	387	325	43	9	43	12	43	0	0	0	0
	13	388	325	43	9	43	12	43	0	0	0	0
	14	389	325	43	9	43	12	43	0	0	0	0
	15	390	325	43	9	43	12	43	0	0	0	0
	16	391										
Roadway49-2-Roadway58	point416	416	1526	23	42	23	59	23	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	5	404	1526	23	42	23	59	23	0	0	0	0
	6	403	1526	23	42	23	59	23	0	0	0	0
	7	402	1526	23	42	23	59	23	0	0	0	0
	8	401	1526	23	42	23	59	23	0	0	0	0
	9	400	1526	23	42	23	59	23	0	0	0	0
	10	399	1526	23	42	23	59	23	0	0	0	0
	11	398	1526	23	42	23	59	23	0	0	0	0
	1	425	1526	23	42	23	59	23	0	0	0	0
	2	426	1526	23	42	23	59	23	0	0	0	0
	3	427	1526	23	42	23	59	23	0	0	0	0
	4	428	1526	23	42	23	59	23	0	0	0	0
	5	429										



**INPUT: RECEIVERS****Route 1 / Fort Belvoir**

R89	23	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0	
R90	24	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0	
R91	25	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0	
R92	26	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0	
R93	27	1	11,871,859.0	6,946,107.0	54.00	5.00	62.00	66	10.0	5.0	
R94	28	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0	
R114	29	1	11,870,750.0	6,945,703.0	127.00	5.00	0.00	66	10.0	5.0	
R115	30	1	11,870,683.0	6,945,497.5	130.00	5.00	0.00	66	10.0	5.0	
R116	31	1	11,870,747.0	6,945,580.5	127.50	5.00	0.00	66	10.0	5.0	
R117	32	1	11,870,823.0	6,945,638.0	127.00	5.00	0.00	66	10.0	5.0	
R118	33	1	11,870,890.0	6,945,713.0	126.50	5.00	0.00	66	10.0	5.0	
R119	34	1	11,870,955.0	6,945,789.5	125.00	5.00	0.00	66	10.0	5.0	
R120	35	1	11,870,834.0	6,945,497.5	128.00	5.00	68.00	66	10.0	5.0	
R121	36	1	11,870,899.0	6,945,571.5	128.00	5.00	0.00	66	10.0	5.0	
R122	37	1	11,870,967.0	6,945,645.5	126.50	5.00	0.00	66	10.0	5.0	
R123	38	1	11,872,061.0	6,946,338.0	57.00	5.00	0.00	66	10.0	5.0	
R124	39	1	11,872,158.0	6,946,366.5	53.00	5.00	0.00	66	10.0	5.0	
R125	40	1	11,872,254.0	6,946,397.0	47.50	5.00	72.00	66	10.0	5.0	
R126	41	1	11,872,338.0	6,946,450.0	43.50	5.00	0.00	66	10.0	5.0	
R127	42	1	11,872,422.0	6,946,504.0	40.00	5.00	0.00	66	10.0	5.0	
R128	43	1	11,872,308.0	6,946,312.5	45.00	5.00	0.00	66	10.0	5.0	
R129	44	1	11,872,391.0	6,946,366.5	41.00	5.00	0.00	66	10.0	5.0	
R130	45	1	11,872,476.0	6,946,419.5	37.50	5.00	0.00	66	10.0	5.0	
R131	130	1	11,872,362.0	6,946,228.5	41.00	5.00	0.00	66	10.0	5.0	Y
R132	132	1	11,872,445.0	6,946,281.5	39.00	5.00	0.00	66	10.0	5.0	Y
R133	133	1	11,872,530.0	6,946,335.5	37.00	5.00	0.00	66	10.0	5.0	Y

INPUT: BARRIERS

Route 1 / Fort Belvoir

Parsons									27 November 2012										
Greg J Berg									TNM 2.5										
INPUT: BARRIERS																			
PROJECT/CONTRACT: Route 1 / Fort Belvoir																			
RUN: Existing w/ Alternative C Recievers																			
Barrier Name	Type	Height		If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'tnl \$ per Unit Length	Points Name	No.	Coordinates (bottom)			Height at Point	Segment			On Struct?	Important Reflec-tions?
		Min	Max								X	Y	Z		Seg Ht	Perturbs	#Up		
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				
3 story Building	W	0.00	99.99	0.00				0.00	1	1	11,864,761.0	6,943,854.5	31.00	40.00	0.00	0	0		
									2	2	11,864,768.0	6,944,026.0	31.00	40.00	0.00	0	0		
									3	3	11,864,961.0	6,944,060.0	31.00	40.00					
Stores	W	0.00	99.99	0.00				0.00	1	4	11,865,208.0	6,943,945.0	38.00	12.00	0.00	0	0		
									2	5	11,865,367.0	6,944,028.0	38.00	12.00					
House21	W	0.00	99.99	0.00				0.00	1	6	11,865,112.0	6,944,077.5	33.00	15.00	0.00	0	0		
									2	7	11,865,167.0	6,944,061.0	33.00	15.00					
Shed	W	0.00	99.99	0.00				0.00	1	8	11,865,169.0	6,944,137.0	33.50	8.00	0.00	0	0		
									2	9	11,865,215.0	6,944,147.0	33.50	8.00					
Baptist Church	W	0.00	99.99	0.00				0.00	1	10	11,871,129.0	6,945,807.0	123.00	25.00	0.00	0	0		
									2	11	11,871,126.0	6,945,924.5	123.00	25.00	0.00	0	0		
									3	12	11,871,231.0	6,945,929.0	123.00	25.00					
Pool House	W	0.00	99.99	0.00				0.00	1	13	11,858,542.0	6,943,540.5	107.00	15.00	0.00	0	0		
									2	14	11,858,556.0	6,943,496.0	107.00	15.00					
House1	W	0.00	99.99	0.00				0.00	1	15	11,854,305.0	6,944,440.0	144.00	30.00	0.00	0	0		
									2	16	11,854,386.0	6,944,279.0	148.00	30.00					
House2	W	0.00	99.99	0.00				0.00	1	17	11,854,499.0	6,944,369.0	144.00	30.00	0.00	0	0		
									2	18	11,854,387.0	6,944,514.5	154.00	30.00					
House3	W	0.00	99.99	0.00				0.00	1	19	11,854,806.0	6,944,451.0	154.00	30.00	0.00	0	0		
									2	20	11,854,690.0	6,944,567.5	156.00	30.00					
House4	W	0.00	99.99	0.00				0.00	1	21	11,854,979.0	6,944,396.5	154.00	30.00	0.00	0	0		
									2	22	11,855,018.0	6,944,470.0	150.00	30.00					
House5	W	0.00	99.99	0.00				0.00	1	23	11,855,484.0	6,944,495.0	141.00	30.00	0.00	0	0		
									2	24	11,855,462.0	6,944,578.5	138.00	30.00					
House6	W	0.00	99.99	0.00				0.00	1	25	11,855,568.0	6,944,649.0	137.00	30.00	0.00	0	0		
									2	26	11,855,607.0	6,944,536.5	142.00	30.00					
House7	W	0.00	99.99	0.00				0.00	1	27	11,856,789.0	6,943,892.5	139.00	40.00	0.00	0	0		
									2	28	11,856,701.0	6,944,135.5	132.00	40.00					
House8	W	0.00	99.99	0.00				0.00	1	29	11,856,847.0	6,944,152.5	130.00	40.00	0.00	0	0		
									2	30	11,856,942.0	6,943,887.5	137.00	40.00					
House9	W	0.00	99.99	0.00				0.00	1	31	11,857,179.0	6,944,044.0	128.00	40.00	0.00	0	0		
									2	32	11,857,156.0	6,943,857.0	131.00	40.00					
House10	W	0.00	99.99	0.00				0.00	1	33	11,857,237.0	6,943,771.5	132.00	40.00	0.00	0	0		
									2	34	11,857,407.0	6,943,753.5	138.00	40.00					
House11	W	0.00	99.99	0.00				0.00	1	35	11,857,605.0	6,943,632.0	144.00	40.00	0.00	0	0		



INPUT: BARRIERS

Route 1 / Fort Belvoir

									2	36	11,857,649.0	6,943,771.5	142.00	40.00				
House12	W	0.00	99.99	0.00			0.00	1	37	11,857,695.0	6,943,795.5	137.00	40.00	0.00	0	0		
								2	38	11,857,638.0	6,943,619.0	138.00	40.00					
House13	W	0.00	99.99	0.00			0.00	1	39	11,857,754.0	6,943,589.0	138.00	40.00	0.00	0	0		
								2	40	11,857,780.0	6,943,681.5	136.00	40.00					
House14	W	0.00	99.99	0.00			0.00	1	41	11,857,817.0	6,943,667.5	134.00	40.00	0.00	0	0		
								2	42	11,857,789.0	6,943,576.0	136.00	40.00					
House15	W	0.00	99.99	0.00			0.00	1	43	11,857,895.0	6,943,542.0	132.00	40.00	0.00	0	0		
								2	44	11,857,978.0	6,943,826.5	126.00	40.00					
House16	W	0.00	99.99	0.00			0.00	1	45	11,858,018.0	6,943,812.5	124.00	40.00	0.00	0	0		
								2	46	11,857,932.0	6,943,529.5	128.00	40.00					
House17	W	0.00	99.99	0.00			0.00	1	47	11,858,816.0	6,943,611.5	104.00	40.00	0.00	0	0		
								2	48	11,858,874.0	6,943,545.0	106.00	40.00					
House18	W	0.00	99.99	0.00			0.00	1	49	11,858,935.0	6,943,550.0	106.00	40.00	0.00	0	0		
								2	50	11,858,959.0	6,943,519.5	106.00	40.00	0.00	0	0		
								3	51	11,859,025.0	6,943,581.0	106.00	40.00					
House19	W	0.00	99.99	0.00			0.00	1	52	11,858,912.0	6,943,765.5	107.00	40.00	0.00	0	0		
								2	53	11,859,048.0	6,943,591.5	106.00	40.00	0.00	0	0		
								3	54	11,859,112.0	6,943,641.0	104.00	40.00					
House20	W	0.00	99.99	0.00			0.00	1	55	11,859,157.0	6,943,687.5	102.00	40.00	0.00	0	0		
								2	56	11,859,229.0	6,943,738.5	102.00	40.00					
Barrier28	W	0.00	99.99	0.00			0.00	1	57	11,865,545.0	6,944,090.5	40.00	25.00	0.00	0	0		
								2	58	11,865,673.0	6,944,094.0	40.00	25.00	0.00	0	0		
								3	59	11,865,671.0	6,944,008.5	40.00	25.00					
Barrier29	W	0.00	99.99	0.00			0.00	1	60	11,865,659.0	6,944,175.5	40.00	25.00	0.00	0	0		
								2	61	11,865,550.0	6,944,224.0	40.00	25.00					
Cemetary Wall	W	0.00	99.99	0.00			0.00	1	62	11,855,362.0	6,944,060.0	144.00	5.00	0.00	0	0		
								2	63	11,855,376.0	6,944,064.5	145.00	5.00	0.00	0	0		
								3	64	11,855,420.0	6,944,049.5	146.00	5.00	0.00	0	0		
								4	65	11,855,442.0	6,944,041.5	146.00	5.00	0.00	0	0		
								5	66	11,855,470.0	6,944,032.0	148.00	5.00	0.00	0	0		
								6	67	11,855,537.0	6,944,008.5	148.50	5.00	0.00	0	0		
								7	68	11,855,543.0	6,943,996.0	149.00	5.00					
Barrier31	W	0.00	99.99	0.00			0.00	point69	69	11,855,802.0	6,944,999.5	144.00	30.00	0.00	0	0		
								point70	70	11,855,692.0	6,944,999.0	140.00	30.00					
Barrier32	W	0.00	99.99	0.00			0.00	point71	71	11,855,684.0	6,944,790.0	142.00	30.00	0.00	0	0		
								point72	72	11,855,766.0	6,944,788.5	144.00	30.00					
Barn	W	0.00	99.99	0.00			0.00	1	73	11,871,883.0	6,946,150.0	54.00	12.00	0.00	0	0		
								2	74	11,872,030.0	6,946,181.5	51.00	12.00	0.00	0	0		
								3	75	11,872,177.0	6,946,209.0	47.00	12.00					

**INPUT: TERRAIN LINES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012
Greg J Berg				TNM 2.5
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 / Fort Belvoir</b>			
<b>RUN:</b>	<b>Existing w/ Alternative C Recievers</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
	9	11,855,042.0	6,944,337.0	162.90
	10	11,855,097.0	6,944,331.0	164.00
	11	11,855,125.0	6,944,327.0	163.30
	12	11,855,155.0	6,944,326.5	162.90
	13	11,855,188.0	6,944,317.5	160.70
	14	11,855,226.0	6,944,312.0	161.40
	15	11,855,314.0	6,944,286.0	160.00
	16	11,855,410.0	6,944,256.5	158.00
	17	11,855,497.0	6,944,232.5	156.50
	18	11,855,525.0	6,944,236.5	157.10
	19	11,855,568.0	6,944,248.5	156.00
	20	11,855,607.0	6,944,279.5	148.00
Terrain Line3	21	11,854,720.0	6,944,333.5	158.00
	22	11,854,749.0	6,944,327.5	158.00
	23	11,854,840.0	6,944,333.5	158.40
	24	11,855,027.0	6,944,327.5	157.80

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	25	11,855,062.0	6,944,320.0	156.20
	26	11,855,188.0	6,944,301.0	154.10
	27	11,855,298.0	6,944,273.0	152.00
	28	11,855,415.0	6,944,234.5	150.40
	29	11,855,554.0	6,944,188.5	150.80
	30	11,855,604.0	6,944,189.0	152.00
	31	11,855,623.0	6,944,227.5	150.00
	32	11,855,622.0	6,944,248.0	148.00
	33	11,855,599.0	6,944,298.5	147.80
	34	11,855,569.0	6,944,315.5	148.00
	35	11,855,516.0	6,944,294.0	144.00
	36	11,855,478.0	6,944,288.0	142.00
	37	11,855,466.0	6,944,284.0	142.00
	38	11,855,378.0	6,944,309.0	142.00
	39	11,855,300.0	6,944,324.5	146.00
	40	11,855,261.0	6,944,337.0	146.00
	41	11,855,178.0	6,944,350.5	152.10
	42	11,855,122.0	6,944,348.0	157.50
	43	11,855,001.0	6,944,363.0	156.10
	44	11,854,941.0	6,944,381.5	156.00
	45	11,854,841.0	6,944,372.0	158.00
	46	11,854,831.0	6,944,394.5	158.00
	47	11,854,756.0	6,944,356.5	159.40
Terrain Line17	48	11,856,688.0	6,943,853.0	154.00
	49	11,856,738.0	6,943,836.5	154.60
	50	11,856,769.0	6,943,834.5	155.10
	51	11,856,812.0	6,943,819.0	154.00
	52	11,856,866.0	6,943,800.0	152.00
	53	11,856,921.0	6,943,788.0	148.00
	54	11,856,993.0	6,943,783.5	140.00
	55	11,857,046.0	6,943,779.0	128.00
	56	11,857,114.0	6,943,780.0	128.00
	57	11,857,155.0	6,943,780.5	128.00
	58	11,857,188.0	6,943,747.5	130.00
	59	11,857,230.0	6,943,693.5	136.00
	60	11,857,268.0	6,943,676.0	138.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	61	11,857,304.0	6,943,662.0	140.00
Terrain Line20	85	11,858,137.0	6,943,439.0	138.00
	86	11,858,246.0	6,943,466.5	138.00
	87	11,858,300.0	6,943,487.0	134.00
Terrain Line22	102	11,857,498.0	6,943,629.5	146.00
	103	11,857,525.0	6,943,621.5	146.00
	104	11,857,550.0	6,943,608.5	144.00
	105	11,857,595.0	6,943,598.5	142.00
	106	11,857,629.0	6,943,589.5	138.00
	107	11,857,651.0	6,943,595.5	135.30
	108	11,857,665.0	6,943,584.0	138.00
	109	11,857,708.0	6,943,567.0	142.00
	110	11,857,744.0	6,943,570.5	144.00
	111	11,857,818.0	6,943,549.0	146.00
	112	11,857,856.0	6,943,537.0	146.00
	113	11,857,894.0	6,943,525.0	144.00
	114	11,857,920.0	6,943,516.5	140.00
	115	11,857,947.0	6,943,503.0	138.00
	116	11,857,963.0	6,943,495.5	136.00
	117	11,857,959.0	6,943,498.0	134.00
	118	11,857,937.0	6,943,513.0	132.00
	119	11,857,916.0	6,943,519.0	134.00
	120	11,857,879.0	6,943,531.5	136.00
	121	11,857,855.0	6,943,539.0	138.00
	122	11,857,790.0	6,943,560.5	140.00
	123	11,857,749.0	6,943,574.0	142.00
Terrain Line23	124	11,857,963.0	6,943,495.5	136.00
	125	11,857,999.0	6,943,492.0	134.00
	126	11,858,010.0	6,943,490.0	136.00
	127	11,858,036.0	6,943,483.0	136.00
	128	11,858,051.0	6,943,479.0	134.00
	129	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	150	11,858,058.0	6,943,477.0	132.00
	151	11,858,067.0	6,943,481.0	128.00
	152	11,858,095.0	6,943,482.0	128.00
	153	11,858,124.0	6,943,489.0	128.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	154	11,858,154.0	6,943,484.5	130.00
	155	11,858,172.0	6,943,479.0	132.00
	156	11,858,213.0	6,943,480.5	134.00
	157	11,858,299.0	6,943,488.5	134.00
Terrain Line28	158	11,858,816.0	6,943,467.0	102.00
	159	11,858,837.0	6,943,468.0	98.00
	160	11,858,917.0	6,943,485.5	96.00
	161	11,858,974.0	6,943,492.5	94.00
	162	11,858,995.0	6,943,501.0	92.00
	163	11,859,026.0	6,943,508.0	86.00
	164	11,859,094.0	6,943,534.0	84.00
	165	11,859,164.0	6,943,586.5	83.10
Terrain Line33	202	11,870,814.0	6,945,837.0	122.00
	203	11,870,960.0	6,945,964.5	122.00
	204	11,871,050.0	6,946,044.5	108.00
	205	11,871,090.0	6,945,944.0	118.00
	206	11,871,117.0	6,945,958.5	118.10
	207	11,871,094.0	6,946,036.5	113.00
	208	11,871,132.0	6,946,048.0	118.00
	209	11,871,189.0	6,946,066.0	122.00
	210	11,871,230.0	6,946,071.0	124.00
	211	11,871,293.0	6,946,054.5	124.00
	212	11,871,328.0	6,946,027.5	124.00
	213	11,871,350.0	6,945,975.0	124.00
Terrain Line35	222	11,859,164.0	6,943,586.0	83.10
	223	11,859,201.0	6,943,620.0	84.00
	224	11,859,236.0	6,943,656.5	84.00
	225	11,859,256.0	6,943,666.5	90.00
	226	11,859,291.0	6,943,695.5	90.00
	227	11,859,312.0	6,943,703.0	82.00

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012	
Greg J Berg				TNM 2.5	
<b>INPUT: GROUND ZONES</b>					
<b>PROJECT/CONTRACT:</b>		Route 1 / Fort Belvoir			
<b>RUN:</b>		Existing w/ Alternative C Recievers			
<b>Ground Zone</b>			<b>Points</b>		
<b>Name</b>	<b>Type</b>	<b>Flow</b>	<b>No.</b>	<b>Coordinates</b>	
		<b>Resistivity</b>		<b>X</b>	<b>Y</b>
		cgs rayls		ft	ft
Ground Zone2	Pavement	20000	86	11,853,692.0	6,943,795.5
			83	11,853,166.0	6,943,516.5
			84	11,853,178.0	6,943,502.5
			85	11,853,667.0	6,943,741.5
			1	11,853,861.0	6,943,849.5
			2	11,854,050.0	6,943,950.5
			3	11,854,226.0	6,944,046.0
			4	11,854,406.0	6,944,129.0
			5	11,854,592.0	6,944,188.0
			6	11,854,629.0	6,944,196.5
			7	11,854,788.0	6,944,216.5
			8	11,854,983.0	6,944,217.5
			9	11,855,176.0	6,944,188.5
			10	11,855,361.0	6,944,133.0
			11	11,855,551.0	6,944,075.5
			12	11,855,743.0	6,944,019.0
			13	11,855,802.0	6,944,001.0
			14	11,855,935.0	6,943,961.5
			15	11,856,126.0	6,943,902.0
			16	11,856,317.0	6,943,844.5
			17	11,856,509.0	6,943,787.5
			18	11,856,700.0	6,943,729.0
			19	11,856,893.0	6,943,676.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			20	11,857,276.0	6,943,561.0
			21	11,857,468.0	6,943,505.0
			22	11,857,661.0	6,943,452.0
			23	11,857,853.0	6,943,397.0
			24	11,858,050.0	6,943,353.5
			25	11,858,250.0	6,943,344.5
			26	11,858,450.0	6,943,349.5
			27	11,859,199.0	6,943,385.0
			56	11,859,459.0	6,943,397.5
			28	11,859,122.0	6,943,392.0
			29	11,858,449.0	6,943,366.5
			30	11,858,251.0	6,943,352.5
			31	11,858,053.0	6,943,365.0
			32	11,857,859.0	6,943,411.0
			33	11,857,667.0	6,943,470.5
			34	11,857,476.0	6,943,529.5
			35	11,857,285.0	6,943,589.5
			36	11,857,094.0	6,943,648.0
			37	11,856,903.0	6,943,707.5
			38	11,856,712.0	6,943,765.0
			39	11,856,520.0	6,943,824.0
			40	11,856,331.0	6,943,889.0
			41	11,856,140.0	6,943,948.5
			42	11,855,979.0	6,943,998.5
			43	11,855,949.0	6,944,006.5
			44	11,855,758.0	6,944,064.0
			45	11,855,566.0	6,944,121.5
			46	11,855,375.0	6,944,180.5
			47	11,855,182.0	6,944,235.5
			48	11,854,983.0	6,944,260.0
			49	11,854,781.0	6,944,263.0
			50	11,854,752.0	6,944,260.5
			51	11,854,582.0	6,944,233.0
			52	11,854,388.0	6,944,172.0
			53	11,854,206.0	6,944,084.0
			54	11,854,032.0	6,943,986.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			55	11,853,873.0	6,943,897.0
Median 2	Pavement	20000	57	11,863,244.0	6,943,576.5
			58	11,863,444.0	6,943,586.5
			59	11,863,644.0	6,943,596.0
			81	11,863,844.0	6,943,608.0
			82	11,864,048.0	6,943,628.5
			60	11,864,247.0	6,943,662.0
			61	11,864,443.0	6,943,702.0
			62	11,864,640.0	6,943,738.0
			63	11,864,837.0	6,943,772.5
			64	11,865,033.0	6,943,812.0
			65	11,865,229.0	6,943,851.0
			66	11,865,425.0	6,943,889.5
			67	11,865,424.0	6,943,895.0
			68	11,865,228.0	6,943,857.5
			69	11,865,032.0	6,943,817.0
			70	11,864,836.0	6,943,778.0
			71	11,864,639.0	6,943,742.0
			72	11,864,441.0	6,943,709.5
			73	11,864,243.0	6,943,678.5
			74	11,864,181.0	6,943,666.5
			75	11,864,041.0	6,943,647.5
			76	11,863,842.0	6,943,626.5
			77	11,863,643.0	6,943,610.5
			78	11,863,444.0	6,943,594.0
			79	11,863,244.0	6,943,579.0



**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

Parsons													27 November 2012	
Greg J Berg													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			Route 1 / Fort Belvoir											
<b>RUN:</b>			Existing w/ Alternative C Recievers											
<b>BARRIER DESIGN:</b>			INPUT HEIGHTS						Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.					
<b>ATMOSPHERICS:</b>			68 deg F, 50% RH											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h</b>		<b>Increase over existing</b>		<b>Type</b>	<b>With Barrier</b>		<b>Noise Reduction</b>		
					<b>Calculated</b>	<b>Crit'n</b>	<b>Calculated</b>	<b>Crit'n</b>	<b>Impact</b>	<b>Calculated LAeq1h</b>	<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
R56		1	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0	
R68		2	1	0.0	56.7	66	56.7	10	----	56.7	0.0	5	-5.0	
R69		3	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0	
R70-Alt C		4	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	5	-5.0	
R71		5	1	0.0	71.0	66	71.0	10	Snd Lvl	71.0	0.0	5	-5.0	
R72		6	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	5	-5.0	
R73		7	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	5	-5.0	
R74		8	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0	
R75		9	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0	
R76		10	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0	
R77		11	1	0.0	65.9	66	65.9	10	----	65.9	0.0	5	-5.0	
R78		12	1	57.0	65.1	66	8.1	10	----	65.1	0.0	5	-5.0	
R79		13	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0	
R80		14	1	0.0	64.2	66	64.2	10	----	64.2	0.0	5	-5.0	
R81		15	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0	
R82		16	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0	
R83		17	1	0.0	64.3	66	64.3	10	----	64.3	0.0	5	-5.0	
R84		18	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0	
R85		19	1	0.0	62.2	66	62.2	10	----	62.2	0.0	5	-5.0	
R86		20	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0	
R87		21	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0	
R88		22	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0	
R89		23	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0	
R90		24	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0	

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R91	25	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R92	26	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R93	27	1	62.0	59.0	66	-3.0	10	----	59.0	0.0	5	-5.0
R94	28	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R114	29	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	5	-5.0
R115	30	1	0.0	62.9	66	62.9	10	----	62.9	0.0	5	-5.0
R116	31	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
R117	32	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
R118	33	1	0.0	64.0	66	64.0	10	----	64.0	0.0	5	-5.0
R119	34	1	0.0	64.2	66	64.2	10	----	64.2	0.0	5	-5.0
R120	35	1	68.0	60.6	66	-7.4	10	----	60.6	0.0	5	-5.0
R121	36	1	0.0	60.9	66	60.9	10	----	60.9	0.0	5	-5.0
R122	37	1	0.0	61.0	66	61.0	10	----	61.0	0.0	5	-5.0
R123	38	1	0.0	65.7	66	65.7	10	----	65.7	0.0	5	-5.0
R124	39	1	0.0	65.4	66	65.4	10	----	65.4	0.0	5	-5.0
R125	40	1	72.0	64.6	66	-7.4	10	----	64.6	0.0	5	-5.0
R126	41	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R127	42	1	0.0	65.3	66	65.3	10	----	65.3	0.0	5	-5.0
R128	43	1	0.0	60.5	66	60.5	10	----	60.5	0.0	5	-5.0
R129	44	1	0.0	60.7	66	60.7	10	----	60.7	0.0	5	-5.0
R130	45	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0
R131	130	1	0.0	58.0	66	58.0	10	----	58.0	0.0	5	-5.0
R132	132	1	0.0	58.3	66	58.3	10	----	58.3	0.0	5	-5.0
R133	133	1	0.0	58.5	66	58.5	10	----	58.5	0.0	5	-5.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		48	0.0	0.0	0.0							
All Impacted		8	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

## **Traffic Noise Model for Future No Build Scenario**





**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway6	30.0	Fairfax Co	32	11,864,058.0	6,943,615.5	20.80	Signal	0.00	25	Average	
		104+00	33	11,864,250.0	6,943,648.5	18.80				Average	
		106+00	34	11,864,446.0	6,943,688.0	17.60				Average	
		108+00	35	11,864,642.0	6,943,724.0	22.70				Average	
		110+00	36	11,864,840.0	6,943,759.0	29.70				Average	
		112+00	37	11,865,036.0	6,943,798.5	34.30				Average	
		114+00	38	11,865,232.0	6,943,837.0	37.90				Average	
		116+00/Belvoir	39	11,865,428.0	6,943,875.5	39.00					
Roadway7	30.0	116+00/Belvoir	40	11,865,428.0	6,943,875.5	39.00	Signal	0.00	25	Average	
		118+00	41	11,865,624.0	6,943,915.0	38.40				Average	
		120+00	42	11,865,817.0	6,943,940.0	42.90				Average	
		122+00	43	11,866,009.0	6,943,949.0	51.00				Average	
		124+00	44	11,866,208.0	6,943,953.0	61.50				Average	
		126+00	45	11,866,408.0	6,943,957.0	70.80				Average	
		128+00	46	11,866,609.0	6,943,961.5	73.40				Average	
		130+00	47	11,866,812.0	6,943,982.5	69.30				Average	
		132+00	48	11,867,011.0	6,944,021.5	75.90				Average	
		134+00	49	11,867,209.0	6,944,062.5	88.00				Average	
		136+00	50	11,867,406.0	6,944,105.0	98.70				Average	
		138+00	51	11,867,603.0	6,944,153.0	103.30				Average	
		140+00	52	11,867,794.0	6,944,219.0	106.50				Average	
		142+00	53	11,867,979.0	6,944,294.0	111.30				Average	
		144+00	54	11,868,161.0	6,944,367.5	117.20				Average	
		146+00	55	11,868,351.0	6,944,429.0	120.20				Average	
		148+00	56	11,868,543.0	6,944,487.0	125.10				Average	
		150+00	57	11,868,734.0	6,944,545.5	132.50				Average	
		152+00	58	11,868,926.0	6,944,603.5	136.70				Average	
		154+00	59	11,869,117.0	6,944,662.0	139.90				Average	
		156+00	60	11,869,309.0	6,944,723.0	143.80				Average	
		158+00	61	11,869,496.0	6,944,800.0	143.50				Average	
		160+00	62	11,869,674.0	6,944,896.0	142.50				Average	
		162+00	63	11,869,845.0	6,945,003.0	141.40				Average	
		Belvoir	64	11,869,901.0	6,945,047.5	141.00					
Roadway8	30.0	Belvoir	65	11,869,901.0	6,945,047.5	141.00	Signal	0.00	25	Average	
		164+00	66	11,870,003.0	6,945,137.0	140.10				Average	
		166+00	67	11,870,148.0	6,945,274.0	138.80				Average	
		168+00	68	11,870,293.0	6,945,410.0	136.90				Average	
		170+00	69	11,870,439.0	6,945,548.5	136.00				Average	
		172+00	70	11,870,585.0	6,945,687.5	133.30				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		174+00/W	71	11,870,714.0	6,945,816.0	128.10				
Roadway9	30.0	174+00/W	72	11,870,714.0	6,945,816.0	128.10	Signal	0.00	25	Average
		176+00	73	11,870,856.0	6,945,963.5	119.10				Average
		178+00	74	11,871,012.0	6,946,077.5	109.00				Average
		180+00	75	11,871,187.0	6,946,175.0	99.60				Average
		182+00	76	11,871,368.0	6,946,252.5	96.40				Average
		184+00	77	11,871,558.0	6,946,311.5	94.10				Average
		186+00	78	11,871,750.0	6,946,366.0	85.80				Average
		188+00	79	11,871,941.0	6,946,426.0	72.40				Average
		190+00	80	11,872,128.0	6,946,498.0	58.50				Average
		192+00	81	11,872,308.0	6,946,587.5	48.70				Average
		194+00	82	11,872,480.0	6,946,688.5	43.30				Average
		196+00	83	11,872,650.0	6,946,794.5	39.10				Average
		198+00	84	11,872,739.0	6,946,852.0	37.00				Average
		200+00/M	85	11,872,905.0	6,946,960.5	31.30				
Roadway10	30.0	200+00/M	86	11,872,905.0	6,946,960.5	31.30	Signal	0.00	25	Average
		202+00	87	11,873,074.0	6,947,069.5	27.00				Average
		204+00	88	11,873,243.0	6,947,177.0	25.20				Average
		206+00	89	11,873,412.0	6,947,284.5	21.90				Average
		208+00	90	11,873,579.0	6,947,393.5	17.90				Average
		210+00	91	11,873,747.0	6,947,502.0	13.70				Average
		212+00	92	11,873,915.0	6,947,610.5	13.00				Average
		214+00	93	11,874,082.0	6,947,720.5	13.00				Average
		End	94	11,874,514.0	6,948,000.5	16.00				
Roadway12	36.0	Telegraph	101	11,855,983.0	6,944,012.0	151.60	Signal	0.00	25	Average
		20+00	102	11,855,953.0	6,944,019.5	151.60				Average
		18+00	103	11,855,762.0	6,944,077.5	150.30				Average
		16+00	104	11,855,570.0	6,944,135.0	148.80				Average
		14+00	105	11,855,379.0	6,944,194.0	149.10				Average
		12+00	106	11,855,185.0	6,944,249.5	152.40				Average
		10+00	107	11,854,984.0	6,944,274.0	155.20				Average
		8+00	108	11,854,781.0	6,944,277.0	156.00				Average
		Pohick	109	11,854,751.0	6,944,274.5	156.20				
Roadway13	30.0	Cook Inlet	110	11,858,839.0	6,943,396.0	102.50	Signal	0.00	25	Average
		48+00	111	11,858,648.0	6,943,389.0	106.80				Average
		46+00	112	11,858,448.0	6,943,380.5	114.10				Average
		44+00	113	11,858,251.0	6,943,366.5	125.80				Average
		42+00	114	11,858,055.0	6,943,379.0	134.20				Average
		40+00	115	11,857,862.0	6,943,424.5	141.10				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		38+00	116	11,857,671.0	6,943,484.0	144.50				Average
		36+00	117	11,857,480.0	6,943,543.0	145.50				Average
		34+00	118	11,857,290.0	6,943,602.5	146.50				Average
		32+00	119	11,857,098.0	6,943,661.5	147.50				Average
		30+00	120	11,856,907.0	6,943,721.0	149.20				Average
		28+00	121	11,856,716.0	6,943,778.5	152.40				Average
		26+00	122	11,856,525.0	6,943,837.0	154.00				Average
		24+00	123	11,856,335.0	6,943,902.0	154.20				Average
		22+00	124	11,856,144.0	6,943,961.5	152.90				Average
		Telegraph	125	11,855,983.0	6,944,012.0	151.60				
Roadway14	30.0	Fairfax Co	126	11,864,179.0	6,943,684.5	18.40	Signal	0.00	25	Average
		102+00	127	11,864,041.0	6,943,663.5	19.60				Average
		100+00	128	11,863,842.0	6,943,642.5	20.50				Average
		98+00	129	11,863,642.0	6,943,626.0	19.60				Average
		96+00	130	11,863,443.0	6,943,605.0	18.80				Average
		94+00	131	11,863,244.0	6,943,586.0	17.80				Average
		92+00	132	11,863,044.0	6,943,575.5	19.30				Average
		90+00	133	11,862,844.0	6,943,567.0	20.30				Average
		88+00	134	11,862,644.0	6,943,557.5	20.80				Average
		86+00	135	11,862,445.0	6,943,548.5	23.80				Average
		84+00	136	11,862,245.0	6,943,539.0	27.70				Average
		82+00	137	11,862,045.0	6,943,529.5	31.60				Average
		80+00	138	11,861,845.0	6,943,522.5	35.40				Average
		78+00	139	11,861,645.0	6,943,512.5	39.80				Average
		76+00	140	11,861,446.0	6,943,502.5	45.00				Average
		74+00	141	11,861,246.0	6,943,493.5	49.50				Average
		72+00	142	11,861,046.0	6,943,484.5	55.20				Average
		70+00	143	11,860,847.0	6,943,475.5	62.10				Average
		68+00	144	11,860,647.0	6,943,464.5	69.30				Average
		66+00	145	11,860,447.0	6,943,456.5	76.50				Average
		64+00	146	11,860,247.0	6,943,447.0	82.30				Average
		62+00	147	11,860,047.0	6,943,437.5	87.00				Average
		60+00	148	11,859,847.0	6,943,427.5	84.90				Average
		58+00	149	11,859,648.0	6,943,417.5	82.50				Average
		56+00	150	11,859,448.0	6,943,409.0	85.70				Average
		54+00	151	11,859,248.0	6,943,405.5	93.40				Average
		52+00	152	11,859,048.0	6,943,401.0	97.80				Average
		50+00	153	11,858,848.0	6,943,396.5	102.30				Average
		Cook Inlet	154	11,858,839.0	6,943,396.0	102.50				



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway15	30.0	Backkick	155	11,865,535.0	6,943,930.5	38.70	Signal	0.00	25	Average	
		116+00	156	11,865,422.0	6,943,909.0	39.00				Average	
		114+00	157	11,865,225.0	6,943,871.0	37.60				Average	
		112+00	158	11,865,029.0	6,943,831.0	33.90				Average	
		110+00	159	11,864,833.0	6,943,792.0	29.60				Average	
		108+00	160	11,864,636.0	6,943,756.0	22.30				Average	
		106+00	161	11,864,438.0	6,943,726.0	17.00				Average	
		104+00	162	11,864,241.0	6,943,695.0	17.80				Average	
		Fairfax Co	163	11,864,179.0	6,943,684.5	18.40					
Roadway16	30.0	Belvoir	164	11,869,953.0	6,945,147.0	140.40	Signal	0.00	25	Average	
		162+00	165	11,869,825.0	6,945,036.0	141.30				Average	
		160+00	166	11,869,663.0	6,944,917.0	142.40				Average	
		158+00	167	11,869,488.0	6,944,819.5	143.60				Average	
		156+00	168	11,869,302.0	6,944,743.5	143.80				Average	
		154+00	169	11,869,110.0	6,944,682.5	140.00				Average	
		152+00	170	11,868,919.0	6,944,624.5	136.80				Average	
		150+00	171	11,868,728.0	6,944,566.5	132.50				Average	
		148+00	172	11,868,537.0	6,944,507.0	125.10				Average	
		146+00	173	11,868,345.0	6,944,451.0	120.20				Average	
		144+00	174	11,868,155.0	6,944,389.0	117.00				Average	
		142+00	175	11,867,971.0	6,944,313.5	111.00				Average	
		140+00	176	11,867,786.0	6,944,238.5	105.90				Average	
		138+00	177	11,867,596.0	6,944,173.5	102.90				Average	
		136+00	178	11,867,400.0	6,944,125.0	98.60				Average	
		134+00	179	11,867,204.0	6,944,084.0	88.10				Average	
		132+00	180	11,867,008.0	6,944,043.0	75.90				Average	
		130+00	181	11,866,810.0	6,944,005.0	68.80				Average	
		128+00	182	11,866,609.0	6,943,983.5	73.10				Average	
		126+00	183	11,866,408.0	6,943,979.0	70.70				Average	
		124+00	184	11,866,208.0	6,943,974.0	61.60				Average	
		122+00	185	11,866,009.0	6,943,972.0	51.20				Average	
		120+00	186	11,865,814.0	6,943,969.0	43.00				Average	
		118+00	187	11,865,618.0	6,943,945.5	39.00				Average	
		Backkick	188	11,865,535.0	6,943,930.5	38.70					
Roadway17	30.0	Woodlawn	189	11,870,755.0	6,945,914.5	124.50	Signal	0.00	25	Average	
		174+00	190	11,870,699.0	6,945,851.5	127.60				Average	
		172+00	191	11,870,553.0	6,945,713.5	133.50				Average	
		170+00	192	11,870,406.0	6,945,575.0	136.10				Average	
		168+00	193	11,870,262.0	6,945,437.5	137.40				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		166+00	194	11,870,119.0	6,945,304.5	138.70				Average
		164+00	195	11,869,977.0	6,945,171.0	140.20				Average
		Belvoir	196	11,869,953.0	6,945,147.0	140.40				
Roadway18	30.0	Mt Vernon	197	11,873,087.0	6,947,116.5	26.00	Signal	0.00	25	Average
		202+00	198	11,873,056.0	6,947,098.0	26.60				Average
		200+00	199	11,872,889.0	6,946,988.5	31.40				Average
		198+00	200	11,872,720.0	6,946,881.5	36.50				Average
		196+00	201	11,872,631.0	6,946,823.5	39.00				Average
		194+00	202	11,872,463.0	6,946,715.0	42.80				Average
		192+00	203	11,872,296.0	6,946,610.5	48.00				Average
		190+00	204	11,872,122.0	6,946,520.5	57.60				Average
		188+00	205	11,871,935.0	6,946,446.5	71.80				Average
		186+00	206	11,871,744.0	6,946,388.0	85.40				Average
		184+00	207	11,871,551.0	6,946,334.0	94.00				Average
		182+00	208	11,871,360.0	6,946,275.0	97.00				Average
		180+00	209	11,871,177.0	6,946,195.5	100.10				Average
		178+00	210	11,871,002.0	6,946,098.5	109.60				Average
		176+00	211	11,870,840.0	6,945,986.0	119.70				Average
		Woodlawn	212	11,870,755.0	6,945,914.5	124.50				
Roadway19	30.0	Begin	213	11,874,506.0	6,948,021.0	16.00				Average
		214+00	214	11,874,070.0	6,947,740.5	13.00				Average
		212+00	215	11,873,900.0	6,947,634.0	13.00				Average
		210+00	216	11,873,728.0	6,947,532.0	13.00				Average
		208+00	217	11,873,559.0	6,947,425.5	16.90				Average
		206+00	218	11,873,390.0	6,947,317.5	21.40				Average
		204+00	219	11,873,224.0	6,947,207.0	24.50				Average
		Mt Vernon	220	11,873,087.0	6,947,116.5	26.00				
Roadway5-2	30.0	Cook Inlet	221	11,858,742.0	6,943,349.0	105.00	Signal	0.00	25	Average
		50+00	222	11,858,850.0	6,943,354.0	102.50				Average
		52+00	223	11,859,050.0	6,943,364.0	98.00				Average
		54+00	224	11,859,250.0	6,943,374.5	93.50				Average
		56+00	225	11,859,449.0	6,943,384.0	85.60				Average
		58+00	226	11,859,649.0	6,943,395.0	82.30				Average
		60+00	227	11,859,849.0	6,943,404.0	84.90				Average
		62+00	228	11,860,049.0	6,943,414.0	87.00				Average
		64+00	229	11,860,249.0	6,943,423.5	83.40				Average
		66+00	230	11,860,449.0	6,943,433.5	76.50				Average
		68+00	231	11,860,649.0	6,943,442.5	69.20				Average
		70+00	232	11,860,848.0	6,943,451.5	62.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		72+00	233	11,861,048.0	6,943,461.0	55.40				Average
		74+00	234	11,861,247.0	6,943,470.5	49.70				Average
		76+00	235	11,861,447.0	6,943,479.0	44.60				Average
		78+00	236	11,861,647.0	6,943,488.5	40.00				Average
		80+00	237	11,861,846.0	6,943,498.5	35.70				Average
		82+00	238	11,862,046.0	6,943,507.0	31.50				Average
		84+00	239	11,862,246.0	6,943,516.5	27.70				Average
		86+00	240	11,862,446.0	6,943,526.0	23.70				Average
		88+00	241	11,862,646.0	6,943,534.5	20.70				Average
		90+00	242	11,862,846.0	6,943,544.5	20.30				Average
		92+00	243	11,863,045.0	6,943,554.0	19.40				Average
		94+00	244	11,863,245.0	6,943,562.5	17.90				Average
		96+00	245	11,863,445.0	6,943,572.5	18.90				Average
		98+00	246	11,863,645.0	6,943,582.0	20.00				Average
		100+00	247	11,863,844.0	6,943,591.5	21.50				Average
		102+00	248	11,864,046.0	6,943,614.0	20.80				Average
		Fairfax Co	249	11,864,058.0	6,943,615.5	20.80				
Belvoir Woods In	20.0	1	250	11,856,612.0	6,943,840.0	152.70				Average
		2	251	11,856,616.0	6,943,854.0	152.00				Average
		3	252	11,856,621.0	6,943,881.5	149.90				Average
		4	253	11,856,621.0	6,943,910.5	148.00				Average
		5	254	11,856,613.0	6,943,944.0	146.00				
Belvoir Woods Out	20.0	1	255	11,856,577.0	6,943,935.5	146.00				Average
		2	256	11,856,585.0	6,943,907.0	148.00				Average
		3	257	11,856,583.0	6,943,886.5	150.00				Average
		4	258	11,856,576.0	6,943,866.5	152.00				Average
		5	259	11,856,569.0	6,943,853.0	152.80				
Inlet Cove In	20.0	1	260	11,857,463.0	6,943,573.0	145.40				Average
		2	261	11,857,499.0	6,943,690.0	144.90				
Inlet Cove Out	20.0	1	262	11,857,461.0	6,943,702.0	144.40				Average
		2	263	11,857,425.0	6,943,585.5	145.60				
Roadway3	36.0	1	264	11,853,008.0	6,943,358.0	62.00				Average
		2	265	11,853,181.0	6,943,478.5	74.00				Average
		3	266	11,853,362.0	6,943,573.0	86.00				Average
		4	267	11,853,520.0	6,943,649.5	96.00				Average
		5	268	11,853,704.0	6,943,741.0	108.00				Average
		begin	1	11,853,882.0	6,943,845.0	120.00				Average
		0+00	2	11,854,057.0	6,943,938.0	131.00				Average
		2+00	3	11,854,233.0	6,944,033.5	140.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		4+00	4	11,854,411.0	6,944,116.0	146.00				Average
		6+00	5	11,854,596.0	6,944,174.5	151.40				Average
		Pohick	6	11,854,632.0	6,944,183.0	151.90				
Roadway11	48.0	Pohick	95	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	96	11,854,578.0	6,944,246.5	154.40				Average
		4+00	97	11,854,382.0	6,944,185.5	149.00				Average
		2+00	98	11,854,199.0	6,944,096.5	142.00				Average
		0+00	99	11,854,025.0	6,943,998.5	132.50				Average
		6	275	11,853,867.0	6,943,909.5	122.00				Average
		5	274	11,853,686.0	6,943,809.0	110.00				Average
		4	273	11,853,502.0	6,943,708.5	98.00				Average
		3	272	11,853,317.0	6,943,613.5	86.00				Average
		2	271	11,853,152.0	6,943,530.0	76.00				Average
		1	270	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	276	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	277	11,854,674.0	6,944,353.0	158.00				Average
		3	278	11,854,658.0	6,944,385.0	158.50				Average
		4	279	11,854,648.0	6,944,404.5	158.00				Average
		5	280	11,854,622.0	6,944,446.0	156.00				Average
		6	281	11,854,582.0	6,944,502.5	154.00				Average
		7	282	11,854,544.0	6,944,553.5	152.00				Average
		8	283	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	18.0	1	284	11,854,471.0	6,944,598.0	150.00				Average
		2	285	11,854,509.0	6,944,540.0	152.00				Average
		3	286	11,854,555.0	6,944,476.0	154.00				Average
		4	287	11,854,610.0	6,944,407.0	156.00				Average
		5	288	11,854,627.0	6,944,364.5	156.00				Average
		6	289	11,854,641.0	6,944,332.5	157.60				Average
		7	290	11,854,647.0	6,944,303.0	157.00				
WB Telegraph	40.0	1	291	11,855,956.0	6,944,101.0	150.00	Signal	10.00	100	Average
		2	292	11,855,967.0	6,944,295.0	148.00				Average
		3	293	11,855,962.0	6,944,391.0	148.00				Average
		4	294	11,855,960.0	6,944,489.0	148.00				
EB Telegraph	40.0	1	297	11,855,904.0	6,944,570.5	146.00	Signal	0.00	25	Average
		2	298	11,855,899.0	6,944,329.5	146.00				Average
		3	299	11,855,898.0	6,944,200.5	148.00				Average
		4	300	11,855,888.0	6,944,107.5	149.00				
WB Telegraph 2	24.0	1	302	11,855,780.0	6,943,550.5	134.00				Average
		2	303	11,855,797.0	6,943,606.5	138.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		3	304	11,855,818.0	6,943,662.5	142.00				Average
		4	305	11,855,841.0	6,943,740.0	145.80				Average
		5	306	11,855,856.0	6,943,799.5	148.10				Average
		6	307	11,855,882.0	6,943,897.0	150.00				Average
		7	308	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	309	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	310	11,855,834.0	6,943,815.0	148.00				Average
		3	311	11,855,809.0	6,943,708.5	144.00				Average
		4	312	11,855,789.0	6,943,642.5	140.00				Average
		5	313	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	314	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	315	11,865,506.0	6,943,785.0	36.00				Average
		3	316	11,865,545.0	6,943,721.5	35.20				Average
		4	317	11,865,595.0	6,943,619.5	36.00				Average
		5	318	11,865,633.0	6,943,549.5	38.70				Average
		6	319	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	320	11,865,720.0	6,943,440.0	38.00				Average
		2	321	11,865,671.0	6,943,519.5	36.00				Average
		3	322	11,865,621.0	6,943,617.5	36.00				Average
		4	323	11,865,577.0	6,943,710.0	35.20				Average
		5	324	11,865,547.0	6,943,772.0	36.00				Average
		6	325	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	1	326	11,869,955.0	6,945,047.5	140.90	Signal	10.00	100	Average
		2	327	11,869,979.0	6,945,009.5	142.00				Average
		3	328	11,870,040.0	6,944,867.0	142.00				Average
		4	329	11,870,068.0	6,944,799.0	140.00				Average
		5	330	11,870,122.0	6,944,680.0	138.00				Average
		6	331	11,870,155.0	6,944,598.5	136.00				Average
		7	332	11,870,199.0	6,944,498.0	132.00				Average
		8	333	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	334	11,870,275.0	6,944,429.5	128.00				Average
		2	335	11,870,233.0	6,944,520.0	132.00				Average
		3	336	11,870,181.0	6,944,618.0	136.00				Average
		4	337	11,870,145.0	6,944,695.0	138.00				Average
		5	338	11,870,102.0	6,944,798.0	140.00				Average
		6	339	11,870,062.0	6,944,884.0	142.00				Average
		7	340	11,869,993.0	6,945,016.0	142.00				Average
		8	341	11,869,974.0	6,945,057.0	140.80				
EB Mnt Vernon	30.0	1	342	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		2	343	11,873,010.0	6,946,872.5	30.00				Average
		3	344	11,873,082.0	6,946,744.0	32.00				Average
		4	345	11,873,105.0	6,946,704.5	32.00				Average
		5	346	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	347	11,873,175.0	6,946,615.0	34.00				Average
		2	348	11,873,131.0	6,946,723.5	32.00				Average
		3	349	11,873,116.0	6,946,754.5	32.00				Average
		4	350	11,873,076.0	6,946,831.5	30.50				Average
		5	351	11,873,055.0	6,946,875.0	30.00				Average
		6	352	11,873,000.0	6,946,983.5	28.00				
Roadway42	18.0	1	353	11,865,502.0	6,943,951.0	38.40	Signal	10.00	100	Average
		2	354	11,865,476.0	6,944,307.5	38.00				Average
		3	355	11,865,464.0	6,944,680.0	40.00				
EB Backlick	18.0	1	356	11,865,447.0	6,944,680.0	40.00				Average
		2	357	11,865,466.0	6,944,283.0	38.00				Average
		3	358	11,865,483.0	6,943,952.0	38.40				
Cook Inlet In	20.0	1	359	11,858,794.0	6,943,442.5	102.60				Average
		2	360	11,858,788.0	6,943,510.0	103.30				Average
		3	361	11,858,773.0	6,943,688.5	102.00				
Cook Inlet Out	20.0	1	362	11,858,755.0	6,943,677.5	102.00				Average
		2	363	11,858,749.0	6,943,507.5	103.70				Average
		3	364	11,858,751.0	6,943,440.5	104.20				
Roadway47	40.0	4	379	11,855,960.0	6,944,489.0	148.00	Signal	10.00	25	Average
		5	380	11,855,956.0	6,944,589.0	146.00				Average
		6	393	11,855,942.0	6,944,759.5	148.00				Average
		7	382	11,855,940.0	6,945,006.0	146.00				Average
		8	383	11,855,940.0	6,945,116.5	144.00				Average
		9	384	11,855,939.0	6,945,189.5	142.00				Average
		10	385	11,855,939.0	6,945,244.5	140.00				Average
		point424	386	11,855,929.0	6,945,282.5	138.00				Average
		10	387	11,855,910.0	6,945,351.0	134.00				Average
		11	388	11,855,876.0	6,945,441.0	128.00				Average
		12	396	11,855,841.0	6,945,521.0	122.00				Average
		13	390	11,855,801.0	6,945,593.0	116.00				Average
		14	391	11,855,733.0	6,945,713.0	106.00				Average
		15	392	11,855,689.0	6,945,790.0	100.00				Average
		16	398	11,855,612.0	6,945,910.5	90.00				
Roadway46-2-Roadway46	40.0	point416	365	11,855,581.0	6,945,897.0	90.00	Signal	10.00	100	Average
		5	366	11,855,664.0	6,945,774.0	100.00				Average

**INPUT: ROADWAYS****Route 1 / Fort Belvoir**

		6	367	11,855,718.0	6,945,674.5	108.00				Average	
		7	395	11,855,775.0	6,945,572.0	116.00				Average	
		8	369	11,855,804.0	6,945,514.5	120.00				Average	
		9	370	11,855,840.0	6,945,442.5	126.00				Average	
		10	371	11,855,868.0	6,945,353.0	132.00				Average	
		11	372	11,855,878.0	6,945,289.0	136.00				Average	
		1	373	11,855,885.0	6,945,259.5	138.00				Average	
		2	374	11,855,894.0	6,945,162.0	138.00				Average	
		3	375	11,855,895.0	6,945,098.0	144.00				Average	
		4	376	11,855,895.0	6,945,020.5	146.00				Average	
		5	399	11,855,904.0	6,944,570.5	146.00					

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

<b>Parsons</b>		<b>27 November 2012</b>											
<b>Greg J Berg</b>		<b>TNM 2.5</b>											
<b>INPUT: TRAFFIC FOR LAeq1h Volumes</b>													
<b>PROJECT/CONTRACT:</b>		<b>Route 1 / Fort Belvoir</b>											
<b>RUN:</b>		<b>Future No Build</b>											
<b>Roadway</b>	<b>Points</b>												
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>		
			<b>Autos</b>		<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	
					veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Roadway4	Pohick	7	1498	45	47	45	24	45	0	0	0	0	
	8+00	8	1498	45	47	45	24	45	0	0	0	0	
	10+00	9	1498	45	47	45	24	45	0	0	0	0	
	12+00	10	1498	45	47	45	24	45	0	0	0	0	
	14+00	11	1498	45	47	45	24	45	0	0	0	0	
	16+00	12	1498	45	47	45	24	45	0	0	0	0	
	18+00	13	1498	45	47	45	24	45	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	1498	45	47	45	24	45	0	0	0	0	
	20+00	16	1498	45	47	45	24	45	0	0	0	0	
	22+00	17	1498	45	47	45	24	45	0	0	0	0	
	24+00	18	1498	45	47	45	24	45	0	0	0	0	
	26+00	19	1498	45	47	45	24	45	0	0	0	0	
	28+00	20	1498	45	47	45	24	45	0	0	0	0	
	30+00	21	1498	45	47	45	24	45	0	0	0	0	
	32+00	22	1498	45	47	45	24	45	0	0	0	0	
	34+00	23	1498	45	47	45	24	45	0	0	0	0	
	36+00	24	1498	45	47	45	24	45	0	0	0	0	
	38+00	25	1498	45	47	45	24	45	0	0	0	0	
	40+00	26	1498	45	47	45	24	45	0	0	0	0	
	42+00	27	1498	45	47	45	24	45	0	0	0	0	
	44+00	28	1498	45	47	45	24	45	0	0	0	0	
	46+00	29	1498	45	47	45	24	45	0	0	0	0	



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	48+00	30	1498	45	47	45	24	45	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	1498	45	47	45	24	45	0	0	0	0
	104+00	33	1498	45	47	45	24	45	0	0	0	0
	106+00	34	1498	45	47	45	24	45	0	0	0	0
	108+00	35	1498	45	47	45	24	45	0	0	0	0
	110+00	36	1498	45	47	45	24	45	0	0	0	0
	112+00	37	1498	45	47	45	24	45	0	0	0	0
	114+00	38	1498	45	47	45	24	45	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	1498	45	47	45	24	45	0	0	0	0
	118+00	41	1498	45	47	45	24	45	0	0	0	0
	120+00	42	1498	45	47	45	24	45	0	0	0	0
	122+00	43	1498	45	47	45	24	45	0	0	0	0
	124+00	44	1498	45	47	45	24	45	0	0	0	0
	126+00	45	1498	45	47	45	24	45	0	0	0	0
	128+00	46	1498	45	47	45	24	45	0	0	0	0
	130+00	47	1498	45	47	45	24	45	0	0	0	0
	132+00	48	1498	45	47	45	24	45	0	0	0	0
	134+00	49	1498	45	47	45	24	45	0	0	0	0
	136+00	50	1498	45	47	45	24	45	0	0	0	0
	138+00	51	1498	45	47	45	24	45	0	0	0	0
	140+00	52	1498	45	47	45	24	45	0	0	0	0
	142+00	53	1498	45	47	45	24	45	0	0	0	0
	144+00	54	1498	45	47	45	24	45	0	0	0	0
	146+00	55	1498	45	47	45	24	45	0	0	0	0
	148+00	56	1498	45	47	45	24	45	0	0	0	0
	150+00	57	1498	45	47	45	24	45	0	0	0	0
	152+00	58	1498	45	47	45	24	45	0	0	0	0
	154+00	59	1498	45	47	45	24	45	0	0	0	0
	156+00	60	1498	45	47	45	24	45	0	0	0	0
	158+00	61	1498	45	47	45	24	45	0	0	0	0
	160+00	62	1498	45	47	45	24	45	0	0	0	0
	162+00	63	1498	45	47	45	24	45	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	1498	45	47	45	24	45	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	164+00	66	1498	45	47	45	24	45	0	0	0	0
	166+00	67	1498	45	47	45	24	45	0	0	0	0
	168+00	68	1498	45	47	45	24	45	0	0	0	0
	170+00	69	1498	45	47	45	24	45	0	0	0	0
	172+00	70	1498	45	47	45	24	45	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	1498	45	47	45	24	45	0	0	0	0
	176+00	73	1498	45	47	45	24	45	0	0	0	0
	178+00	74	1498	45	47	45	24	45	0	0	0	0
	180+00	75	1498	45	47	45	24	45	0	0	0	0
	182+00	76	1498	45	47	45	24	45	0	0	0	0
	184+00	77	1498	45	47	45	24	45	0	0	0	0
	186+00	78	1498	45	47	45	24	45	0	0	0	0
	188+00	79	1498	45	47	45	24	45	0	0	0	0
	190+00	80	1498	45	47	45	24	45	0	0	0	0
	192+00	81	1498	45	47	45	24	45	0	0	0	0
	194+00	82	1498	45	47	45	24	45	0	0	0	0
	196+00	83	1498	45	47	45	24	45	0	0	0	0
	198+00	84	1498	45	47	45	24	45	0	0	0	0
	200+00/Mt Ve	85										
Roadway10	200+00/Mt Ve	86	1498	45	47	45	24	45	0	0	0	0
	202+00	87	1498	45	47	45	24	45	0	0	0	0
	204+00	88	1498	45	47	45	24	45	0	0	0	0
	206+00	89	1498	45	47	45	24	45	0	0	0	0
	208+00	90	1498	45	47	45	24	45	0	0	0	0
	210+00	91	1498	45	47	45	24	45	0	0	0	0
	212+00	92	1498	45	47	45	24	45	0	0	0	0
	214+00	93	1498	45	47	45	24	45	0	0	0	0
	End	94										
Roadway12	Telegraph	101	2333	30	58	30	137	30	0	0	0	0
	20+00	102	2333	30	58	30	137	30	0	0	0	0
	18+00	103	2333	30	58	30	137	30	0	0	0	0
	16+00	104	2333	30	58	30	137	30	0	0	0	0
	14+00	105	2333	30	58	30	137	30	0	0	0	0
	12+00	106	2333	30	58	30	137	30	0	0	0	0
	10+00	107	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	8+00	108	2333	30	58	30	137	30	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	2333	30	58	30	137	30	0	0	0	0
	48+00	111	2333	30	58	30	137	30	0	0	0	0
	46+00	112	2333	30	58	30	137	30	0	0	0	0
	44+00	113	2333	30	58	30	137	30	0	0	0	0
	42+00	114	2333	30	58	30	137	30	0	0	0	0
	40+00	115	2333	30	58	30	137	30	0	0	0	0
	38+00	116	2333	30	58	30	137	30	0	0	0	0
	36+00	117	2333	30	58	30	137	30	0	0	0	0
	34+00	118	2333	30	58	30	137	30	0	0	0	0
	32+00	119	2333	30	58	30	137	30	0	0	0	0
	30+00	120	2333	30	58	30	137	30	0	0	0	0
	28+00	121	2333	30	58	30	137	30	0	0	0	0
	26+00	122	2333	30	58	30	137	30	0	0	0	0
	24+00	123	2333	30	58	30	137	30	0	0	0	0
	22+00	124	2333	30	58	30	137	30	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	2333	30	58	30	137	30	0	0	0	0
	102+00	127	2333	30	58	30	137	30	0	0	0	0
	100+00	128	2333	30	58	30	137	30	0	0	0	0
	98+00	129	2333	30	58	30	137	30	0	0	0	0
	96+00	130	2333	30	58	30	137	30	0	0	0	0
	94+00	131	2333	30	58	30	137	30	0	0	0	0
	92+00	132	2333	30	58	30	137	30	0	0	0	0
	90+00	133	2333	30	58	30	137	30	0	0	0	0
	88+00	134	2333	30	58	30	137	30	0	0	0	0
	86+00	135	2333	30	58	30	137	30	0	0	0	0
	84+00	136	2333	30	58	30	137	30	0	0	0	0
	82+00	137	2333	30	58	30	137	30	0	0	0	0
	80+00	138	2333	30	58	30	137	30	0	0	0	0
	78+00	139	2333	30	58	30	137	30	0	0	0	0
	76+00	140	2333	30	58	30	137	30	0	0	0	0
	74+00	141	2333	30	58	30	137	30	0	0	0	0
	72+00	142	2333	30	58	30	137	30	0	0	0	0
	70+00	143	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	68+00	144	2333	30	58	30	137	30	0	0	0	0
	66+00	145	2333	30	58	30	137	30	0	0	0	0
	64+00	146	2333	30	58	30	137	30	0	0	0	0
	62+00	147	2333	30	58	30	137	30	0	0	0	0
	60+00	148	2333	30	58	30	137	30	0	0	0	0
	58+00	149	2333	30	58	30	137	30	0	0	0	0
	56+00	150	2333	30	58	30	137	30	0	0	1	0
	54+00	151	2333	30	58	30	137	30	0	0	0	0
	52+00	152	2333	30	58	30	137	30	0	0	0	0
	50+00	153	2333	30	58	30	137	30	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	2333	30	58	30	137	30	0	0	0	0
	116+00	156	2333	30	58	30	137	30	0	0	0	0
	114+00	157	2333	30	58	30	137	30	0	0	0	0
	112+00	158	2333	30	58	30	137	30	0	0	0	0
	110+00	159	2333	30	58	30	137	30	0	0	0	0
	108+00	160	2333	30	58	30	137	30	0	0	0	0
	106+00	161	2333	30	58	30	137	30	0	0	0	0
	104+00	162	2333	30	58	30	137	30	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	2333	30	58	30	137	30	0	0	0	0
	162+00	165	2333	30	58	30	137	30	0	0	0	0
	160+00	166	2333	30	58	30	137	30	0	0	0	0
	158+00	167	2333	30	58	30	137	30	0	0	0	0
	156+00	168	2333	30	58	30	137	30	0	0	0	0
	154+00	169	2333	30	58	30	137	30	0	0	0	0
	152+00	170	2333	30	58	30	137	30	0	0	0	0
	150+00	171	2333	30	58	30	137	30	0	0	0	0
	148+00	172	2333	30	58	30	137	30	0	0	0	0
	146+00	173	2333	30	58	30	137	30	0	0	0	0
	144+00	174	2333	30	58	30	137	30	0	0	0	0
	142+00	175	2333	30	58	30	137	30	0	0	0	0
	140+00	176	2333	30	58	30	137	30	0	0	0	0
	138+00	177	2333	30	58	30	137	30	0	0	0	0
	136+00	178	2333	30	58	30	137	30	0	0	0	0
	134+00	179	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	132+00	180	2333	30	58	30	137	30	0	0	0	0
	130+00	181	2333	30	58	30	137	30	0	0	0	0
	128+00	182	2333	30	58	30	137	30	0	0	0	0
	126+00	183	2333	30	58	30	137	30	0	0	0	0
	124+00	184	2333	30	58	30	137	30	0	0	0	0
	122+00	185	2333	30	58	30	137	30	0	0	0	0
	120+00	186	2333	30	58	30	137	30	0	0	0	0
	118+00	187	2333	30	58	30	137	30	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	2333	30	58	30	137	30	0	0	0	0
	174+00	190	2333	30	58	30	137	30	0	0	0	0
	172+00	191	2333	30	58	30	137	30	0	0	0	0
	170+00	192	2333	30	58	30	137	30	0	0	0	0
	168+00	193	2333	30	58	30	137	30	0	0	0	0
	166+00	194	2333	30	58	30	137	30	0	0	0	0
	164+00	195	2333	30	58	30	137	30	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	2333	30	58	30	137	30	0	0	0	0
	202+00	198	2333	30	58	30	137	30	0	0	0	0
	200+00	199	2333	30	58	30	137	30	0	0	0	0
	198+00	200	2333	30	58	30	137	30	0	0	0	0
	196+00	201	2333	30	58	30	137	30	0	0	0	0
	194+00	202	2333	30	58	30	137	30	0	0	0	0
	192+00	203	2333	30	58	30	137	30	0	0	0	0
	190+00	204	2333	30	58	30	137	30	0	0	0	0
	188+00	205	2333	30	58	30	137	30	0	0	0	0
	186+00	206	2333	30	58	30	137	30	0	0	0	0
	184+00	207	2333	30	58	30	137	30	0	0	0	0
	182+00	208	2333	30	58	30	137	30	0	0	0	0
	180+00	209	2333	30	58	30	137	30	0	0	0	0
	178+00	210	2333	30	58	30	137	30	0	0	0	0
	176+00	211	2333	30	58	30	137	30	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	2333	30	58	30	137	30	0	0	0	0
	214+00	214	2333	30	58	30	137	30	0	0	0	0
	212+00	215	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	210+00	216	2333	30	58	30	137	30	0	0	0	0
	208+00	217	2333	30	58	30	137	30	0	0	0	0
	206+00	218	2333	30	58	30	137	30	0	0	0	0
	204+00	219	2333	30	58	30	137	30	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1498	45	47	45	24	45	0	0	0	0
	50+00	222	1498	45	47	45	24	45	0	0	0	0
	52+00	223	1498	45	47	45	24	45	0	0	0	0
	54+00	224	1498	45	47	45	24	45	0	0	0	0
	56+00	225	1498	45	47	45	24	45	0	0	0	0
	58+00	226	1498	45	47	45	24	45	0	0	0	0
	60+00	227	1498	45	47	45	24	45	0	0	0	0
	62+00	228	1498	45	47	45	24	45	0	0	0	0
	64+00	229	1498	45	47	45	24	45	0	0	0	0
	66+00	230	1498	45	47	45	24	45	0	0	0	0
	68+00	231	1498	45	47	45	24	45	0	0	0	0
	70+00	232	1498	45	47	45	24	45	0	0	0	0
	72+00	233	1498	45	47	45	24	45	0	0	0	0
	74+00	234	1498	45	47	45	24	45	0	0	0	0
	76+00	235	1498	45	47	45	24	45	0	0	0	0
	78+00	236	1498	45	47	45	24	45	0	0	0	0
	80+00	237	1498	45	47	45	24	45	0	0	0	0
	82+00	238	1498	45	47	45	24	45	0	0	0	0
	84+00	239	1498	45	47	45	24	45	0	0	0	0
	86+00	240	1498	45	47	45	24	45	0	0	0	0
	88+00	241	1498	45	47	45	24	45	0	0	0	0
	90+00	242	1498	45	47	45	24	45	0	0	0	0
	92+00	243	1498	45	47	45	24	45	0	0	0	0
	94+00	244	1498	45	47	45	24	45	0	0	0	0
	96+00	245	1498	45	47	45	24	45	0	0	0	0
	98+00	246	1498	45	47	45	24	45	0	0	0	0
	100+00	247	1498	45	47	45	24	45	0	0	0	0
	102+00	248	1498	45	47	45	24	45	0	0	0	0
	Fairfax County	249										
Belvoir Woods In	1	250	0	0	0	0	0	0	0	0	0	0
	2	251	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	252	0	0	0	0	0	0	0	0	0	0
	4	253	0	0	0	0	0	0	0	0	0	0
	5	254										
Belvoir Woods Out	1	255	0	0	0	0	0	0	0	0	0	0
	2	256	0	0	0	0	0	0	0	0	0	0
	3	257	0	0	0	0	0	0	0	0	0	0
	4	258	0	0	0	0	0	0	0	0	0	0
	5	259										
Inlet Cove In	1	260	0	0	0	0	0	0	0	0	0	0
	2	261										
Inlet Cove Out	1	262	0	0	0	0	0	0	0	0	0	0
	2	263										
Roadway3	1	264	1498	45	47	45	24	45	0	0	0	0
	2	265	1498	45	47	45	24	45	0	0	0	0
	3	266	1498	45	47	45	24	45	0	0	0	0
	4	267	1498	45	47	45	24	45	0	0	0	0
	5	268	1498	45	47	45	24	45	0	0	0	0
	begin	1	1498	45	47	45	24	45	0	0	0	0
	0+00	2	1498	45	47	45	24	45	0	0	0	0
	2+00	3	1498	45	47	45	24	45	0	0	0	0
	4+00	4	1498	45	47	45	24	45	0	0	0	0
	6+00	5	1498	45	47	45	24	45	0	0	0	0
	Pohick	6										
Roadway11	Pohick	95	2333	30	58	30	137	30	0	0	0	0
	6+00	96	2333	30	58	30	137	30	0	0	0	0
	4+00	97	2333	30	58	30	137	30	0	0	0	0
	2+00	98	2333	30	58	30	137	30	0	0	0	0
	0+00	99	2333	30	58	30	137	30	0	0	0	0
	6	275	2333	30	58	30	137	30	0	0	0	0
	5	274	2333	30	58	30	137	30	0	0	0	0
	4	273	2333	30	58	30	137	30	0	0	0	0
	3	272	2333	30	58	30	137	30	0	0	0	0
	2	271	2333	30	58	30	137	30	0	0	0	0
	1	270										
WB Pohick West	1	276	978	29	27	29	38	29	0	0	0	0
	2	277	978	29	27	29	38	29	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	278	978	29	27	29	38	29	0	0	0	0
	4	279	978	29	27	29	38	29	0	0	0	0
	5	280	978	29	27	29	38	29	0	0	0	0
	6	281	978	29	27	29	38	29	0	0	0	0
	7	282	978	29	27	29	38	29	0	0	0	0
	8	283										
EB Pohick West	1	284	807	32	22	32	31	32	0	0	0	0
	2	285	807	32	22	32	31	32	0	0	0	0
	3	286	807	32	22	32	31	32	0	0	0	0
	4	287	807	32	22	32	31	32	0	0	0	0
	5	288	807	32	22	32	31	32	0	0	0	0
	6	289	807	32	22	32	31	32	0	0	0	0
	7	290										
WB Telegraph	1	291	539	41	15	41	21	41	0	0	0	0
	2	292	539	41	15	41	21	41	0	0	0	0
	3	293	539	41	15	41	21	41	0	0	0	0
	4	294										
EB Telegraph	1	297	2161	15	60	15	83	15	0	0	0	0
	2	298	2161	15	60	15	83	15	0	0	0	0
	3	299	2161	15	60	15	83	15	0	0	0	0
	4	300										
WB Telegraph 2	1	302	539	41	15	41	21	41	0	0	0	0
	2	303	539	41	15	41	21	41	0	0	0	0
	3	304	539	41	15	41	21	41	0	0	0	0
	4	305	539	41	15	41	21	41	0	0	0	0
	5	306	539	41	15	41	21	41	0	0	0	0
	6	307	539	41	15	41	21	41	0	0	0	0
	7	308										
EB Telegraph 2	1	309	2161	15	60	15	83	15	0	0	0	0
	2	310	2161	15	60	15	83	15	0	0	0	0
	3	311	2161	15	60	15	83	15	0	0	0	0
	4	312	2161	15	60	15	83	15	0	0	0	0
	5	313										
EB Pohick	1	314	316	33	9	33	12	33	0	0	0	0
	2	315	316	33	9	33	12	33	0	0	0	0
	3	316	316	33	9	33	12	33	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	317	316	33	9	33	12	33	0	0	0	0
	5	318	316	33	9	33	12	33	0	0	0	0
	6	319										
WB Pohick	1	320	821	23	23	23	32	23	0	0	0	0
	2	321	821	23	23	23	32	23	0	0	0	0
	3	322	821	23	23	23	32	23	0	0	0	0
	4	323	821	23	23	23	32	23	0	0	0	0
	5	324	821	23	23	23	32	23	0	0	0	0
	6	325										
EB Belvoir	1	326	292	33	8	33	11	33	0	0	0	0
	2	327	292	33	8	33	11	33	0	0	0	0
	3	328	292	33	8	33	11	33	0	0	0	0
	4	329	292	33	8	33	11	33	0	0	0	0
	5	330	292	33	8	33	11	33	0	0	0	0
	6	331	292	33	8	33	11	33	0	0	0	0
	7	332	292	33	8	33	11	33	0	0	0	0
	8	333										
WB Belvoir	1	334	887	21	25	21	34	21	0	0	0	0
	2	335	887	21	25	21	34	21	0	0	0	0
	3	336	887	21	25	21	34	21	0	0	0	0
	4	337	887	21	25	21	34	21	0	0	0	0
	5	338	887	21	25	21	34	21	0	0	0	0
	6	339	887	21	25	21	34	21	0	0	0	0
	7	340	887	21	25	21	34	21	0	0	0	0
	8	341										
EB Mnt Vernon	1	342	495	36	14	36	19	36	0	0	0	0
	2	343	495	36	14	36	19	36	0	0	0	0
	3	344	495	36	14	36	19	36	0	0	0	0
	4	345	495	36	14	36	19	36	0	0	0	0
	5	346										
WB Mnt Vernon	1	347	654	29	18	29	25	29	0	0	0	0
	2	348	654	29	18	29	25	29	0	0	0	0
	3	349	654	29	18	29	25	29	0	0	0	0
	4	350	654	29	18	29	25	29	0	0	0	0
	5	351	654	29	18	29	25	29	0	0	0	0
	6	352										

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Roadway42	1	353	310	30	9	30	12	30	0	0	0	0
	2	354	310	30	9	30	12	30	0	0	0	0
	3	355										
EB Backlick	1	356	100	30	3	30	4	30	0	0	0	0
	2	357	100	30	3	30	4	30	0	0	0	0
	3	358										
Cook Inlet In	1	359	0	0	0	0	0	0	0	0	0	0
	2	360	0	0	0	0	0	0	0	0	0	0
	3	361										
Cook Inlet Out	1	362	0	0	0	0	0	0	0	0	0	0
	2	363	0	0	0	0	0	0	0	0	0	0
	3	364										
Roadway47	4	379	539	41	15	41	21	41	0	0	0	0
	5	380	539	41	15	41	21	41	0	0	0	0
	6	393	539	41	15	41	21	41	0	0	0	0
	7	382	539	41	15	41	21	41	0	0	0	0
	8	383	539	41	15	41	21	41	0	0	0	0
	9	384	539	41	15	41	21	41	0	0	0	0
	10	385	539	41	15	41	21	41	0	0	0	0
	point424	386	539	41	15	41	21	41	0	0	0	0
	10	387	539	41	15	41	21	41	0	0	0	0
	11	388	539	41	15	41	21	41	0	0	0	0
	12	396	539	41	15	41	21	41	0	0	0	0
	13	390	539	41	15	41	21	41	0	0	0	0
	14	391	539	41	15	41	21	41	0	0	0	0
	15	392	539	41	15	41	21	41	0	0	0	0
	16	398										
Roadway46-2-Roadway46	point416	365	2161	15	60	15	83	15	0	0	0	0
	5	366	2161	15	60	15	83	15	0	0	0	0
	6	367	2161	15	60	15	83	15	0	0	0	0
	7	395	2161	15	60	15	83	15	0	0	0	0
	8	369	2161	15	60	15	83	15	0	0	0	0
	9	370	2161	15	60	15	83	15	0	0	0	0
	10	371	2161	15	60	15	83	15	0	0	0	0
	11	372	2161	15	60	15	83	15	0	0	0	0
	1	373	2161	15	60	15	83	15	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	2	374	2161	15	60	15	83	15	0	0	0	0
	3	375	2161	15	60	15	83	15	0	0	0	0
	4	376	2161	15	60	15	83	15	0	0	0	0
	5	399										



**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R21	23	1	11,855,337.0	6,943,849.0	144.00	5.00	0.00	66	10.0	5.0	Y
R21A	24	1	11,855,432.0	6,943,817.5	148.20	5.00	0.00	66	10.0	5.0	Y
R21B	25	5	11,855,663.0	6,943,946.5	151.50	5.00	0.00	66	10.0	5.0	Y
R22-Deck	26	1	11,856,693.0	6,944,114.5	132.00	15.00	0.00	66	10.0	5.0	Y
R23-Deck	27	1	11,856,738.0	6,943,987.5	134.20	15.00	62.00	66	10.0	5.0	Y
R24/Site 2-Deck	28	1	11,856,774.0	6,943,888.0	138.00	15.00	0.00	66	10.0	5.0	Y
R25-Deck	29	1	11,856,925.0	6,943,998.0	135.20	15.00	0.00	66	10.0	5.0	Y
R26-Deck	30	1	11,856,942.0	6,943,946.5	137.00	15.00	0.00	66	10.0	5.0	Y
R27	31	1	11,856,966.0	6,943,912.5	137.50	5.00	0.00	66	10.0	5.0	Y
R28	32	1	11,857,141.0	6,943,945.5	128.20	5.00	0.00	66	10.0	5.0	Y
R29-Deck	33	1	11,857,134.0	6,943,867.5	129.20	15.00	0.00	66	10.0	5.0	Y
R30	34	1	11,857,248.0	6,943,742.0	134.00	5.00	0.00	66	10.0	5.0	Y
R31-Deck	35	1	11,857,272.0	6,943,754.5	133.30	15.00	68.00	66	10.0	5.0	Y
R32/Site 3-Deck	36	1	11,857,402.0	6,943,734.0	139.00	15.00	0.00	66	10.0	5.0	Y
R33-Deck	37	1	11,857,626.0	6,943,640.0	141.00	15.00	0.00	66	10.0	5.0	Y
R34	38	1	11,857,649.0	6,943,713.0	140.80	5.00	0.00	66	10.0	5.0	Y
R35	39	1	11,857,770.0	6,943,594.5	134.20	5.00	0.00	66	10.0	5.0	Y
R36	40	1	11,857,784.0	6,943,643.0	133.90	5.00	72.00	66	10.0	5.0	Y
R37/Site 4	41	1	11,857,788.0	6,943,539.5	145.00	5.00	0.00	66	10.0	5.0	Y
R38-Deck	42	1	11,857,918.0	6,943,555.5	128.20	15.00	0.00	66	10.0	5.0	Y
R39-Deck	43	1	11,857,944.0	6,943,649.0	126.50	15.00	0.00	66	10.0	5.0	Y
R40	44	1	11,858,054.0	6,943,499.5	128.70	5.00	0.00	66	10.0	5.0	Y
R41-Deck	45	1	11,858,271.0	6,943,507.0	131.50	15.00	0.00	66	10.0	5.0	Y
R42-Deck	46	1	11,858,367.0	6,943,545.0	127.50	15.00	0.00	66	10.0	5.0	Y
R43-Deck	47	1	11,858,461.0	6,943,621.5	123.50	15.00	0.00	66	10.0	5.0	Y
R44	48	1	11,858,572.0	6,943,572.5	107.00	5.00	63.00	66	10.0	5.0	Y
R45/Site 5	49	1	11,858,595.0	6,943,543.5	106.20	5.00	0.00	66	10.0	5.0	Y
R46	50	1	11,858,839.0	6,943,558.5	106.00	5.00	0.00	66	10.0	5.0	Y
R47/Site 6	51	1	11,858,920.0	6,943,530.5	105.60	5.00	0.00	66	10.0	5.0	Y
R48	52	1	11,858,958.0	6,943,514.0	106.20	5.00	0.00	66	10.0	5.0	Y
R49	53	1	11,859,078.0	6,943,597.0	105.70	5.00	0.00	66	10.0	5.0	Y
R50	54	1	11,859,239.0	6,943,730.0	101.00	5.00	54.00	66	10.0	5.0	Y
R51A	55	1	11,864,858.0	6,944,158.0	30.00	5.00	0.00	66	10.0	5.0	Y
R51/Site 7	56	1	11,865,194.0	6,944,182.0	33.00	5.00	0.00	66	10.0	5.0	Y
R52	57	1	11,865,314.0	6,944,316.5	34.50	5.00	0.00	66	10.0	5.0	Y
R53	58	1	11,865,671.0	6,944,404.5	43.00	5.00	0.00	66	10.0	5.0	Y

**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R54	59	1	11,865,804.0	6,944,317.5	46.20	5.00	0.00	66	10.0	5.0	Y
R54A	60	1	11,865,598.0	6,944,168.5	39.00	5.00	0.00	66	10.0	5.0	Y
R55	61	1	11,865,304.0	6,943,641.0	28.20	5.00	0.00	66	10.0	5.0	Y
R56	62	1	11,870,335.0	6,945,947.5	135.50	5.00	0.00	66	10.0	5.0	Y
R57	63	1	11,870,533.0	6,945,223.0	133.00	5.00	0.00	66	10.0	5.0	Y
R58	64	1	11,870,403.0	6,945,015.0	136.00	5.00	0.00	66	10.0	5.0	Y
R59	66	1	11,870,484.0	6,945,071.5	135.00	5.00	0.00	66	10.0	5.0	Y
R60	67	1	11,870,593.0	6,945,149.0	135.00	5.00	0.00	66	10.0	5.0	Y
R61	68	1	11,870,695.0	6,945,220.0	134.00	5.00	0.00	66	10.0	5.0	Y
R62	69	1	11,870,774.0	6,945,276.0	133.00	5.00	0.00	66	10.0	5.0	Y
R63	70	1	11,870,545.0	6,944,990.0	132.00	5.00	0.00	66	10.0	5.0	Y
R64	71	1	11,870,649.0	6,945,065.5	133.00	5.00	0.00	66	10.0	5.0	Y
R65	72	1	11,870,753.0	6,945,138.5	133.00	5.00	0.00	66	10.0	5.0	Y
R66	73	1	11,870,834.0	6,945,195.5	132.00	5.00	0.00	66	10.0	5.0	Y
R67	74	1	11,870,916.0	6,945,255.5	132.00	5.00	0.00	66	10.0	5.0	Y
R68A	75	1	11,871,155.0	6,945,813.0	122.50	5.00	0.00	66	10.0	5.0	Y
R68	76	1	11,871,258.0	6,945,768.5	121.80	5.00	0.00	66	10.0	5.0	Y
R69	77	1	11,871,171.0	6,945,956.5	123.20	5.00	0.00	66	10.0	5.0	Y
R70	78	1	11,872,106.0	6,946,573.0	54.00	5.00	0.00	66	10.0	5.0	Y
R71	79	1	11,872,192.0	6,946,634.5	51.00	5.00	0.00	66	10.0	5.0	Y
R72	80	1	11,872,268.0	6,946,690.5	48.00	5.00	0.00	66	10.0	5.0	Y
R73	81	1	11,872,352.0	6,946,745.5	45.50	5.00	0.00	66	10.0	5.0	Y
R74	82	1	11,872,447.0	6,946,809.5	43.00	5.00	0.00	66	10.0	5.0	Y
R75	83	1	11,872,533.0	6,946,868.5	42.00	5.00	0.00	66	10.0	5.0	Y
R76	84	1	11,872,620.0	6,946,928.0	41.00	5.00	0.00	66	10.0	5.0	Y
R77	85	1	11,872,050.0	6,946,658.5	58.00	5.00	0.00	66	10.0	5.0	Y
R78	86	1	11,872,135.0	6,946,717.0	54.00	5.00	0.00	66	10.0	5.0	Y
R79	87	1	11,872,213.0	6,946,770.5	49.00	5.00	0.00	66	10.0	5.0	Y
R80	88	1	11,872,299.0	6,946,829.0	46.00	5.00	0.00	66	10.0	5.0	Y
R81	89	1	11,872,398.0	6,946,895.5	44.00	5.00	0.00	66	10.0	5.0	Y
R82	90	1	11,872,479.0	6,946,954.0	43.00	5.00	0.00	66	10.0	5.0	Y
R83	91	1	11,872,561.0	6,947,009.0	42.00	5.00	0.00	66	10.0	5.0	Y
R84	92	1	11,872,646.0	6,947,067.0	40.00	5.00	0.00	66	10.0	5.0	Y
R85	93	1	11,871,996.0	6,946,739.0	62.00	5.00	0.00	66	10.0	5.0	Y
R86	94	1	11,872,078.0	6,946,798.5	56.00	5.00	0.00	66	10.0	5.0	Y
R87	95	1	11,872,160.0	6,946,855.0	51.00	5.00	0.00	66	10.0	5.0	Y

**INPUT: RECEIVERS****Route 1 / Fort Belvoir**

R88	96	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0	Y
R89	98	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0	Y
R90	99	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0	Y
R91	100	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0	Y
R92	101	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0	Y
R93	102	1	11,871,859.0	6,946,107.0	54.00	5.00	0.00	66	10.0	5.0	Y
R94	103	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0	Y
R95	104	1	11,872,369.0	6,946,145.5	39.50	5.00	0.00	66	10.0	5.0	Y
R96	106	1	11,872,417.0	6,946,234.5	39.50	5.00	0.00	66	10.0	5.0	Y
R97	107	1	11,872,467.0	6,946,320.5	38.50	5.00	0.00	66	10.0	5.0	Y
R98	109	1	11,872,515.0	6,946,403.5	36.50	5.00	0.00	66	10.0	5.0	Y
R99	110	1	11,872,452.0	6,946,096.0	37.00	5.00	0.00	66	10.0	5.0	Y
R100	112	1	11,872,504.0	6,946,185.5	37.50	5.00	0.00	66	10.0	5.0	Y
R101	113	1	11,872,552.0	6,946,267.5	37.50	5.00	0.00	66	10.0	5.0	Y
R102	114	1	11,872,604.0	6,946,356.5	36.00	5.00	0.00	66	10.0	5.0	Y
R103	115	1	11,855,752.0	6,944,598.5	144.00	5.00	0.00	66	10.0	5.0	Y
R104-Deck	116	1	11,855,767.0	6,944,817.5	145.00	15.00	0.00	66	10.0	5.0	Y
R105-Deck	117	1	11,855,746.0	6,944,815.5	143.00	15.00	0.00	66	10.0	5.0	Y
R106-Deck	118	1	11,855,726.0	6,944,819.0	142.00	15.00	0.00	66	10.0	5.0	Y
R107-Deck	119	1	11,855,708.0	6,944,818.5	142.00	15.00	0.00	66	10.0	5.0	Y
R108-Deck	120	1	11,855,741.0	6,944,979.0	141.00	15.00	0.00	66	10.0	5.0	Y
R109-Deck	121	1	11,855,762.0	6,944,981.0	143.00	15.00	0.00	66	10.0	5.0	Y
R110-Deck	123	1	11,855,784.0	6,944,985.5	144.00	15.00	0.00	66	10.0	5.0	Y
R111	124	1	11,855,987.0	6,944,931.0	144.00	5.00	0.00	66	10.0	5.0	Y
R112	126	1	11,855,997.0	6,944,779.5	147.00	5.00	0.00	66	10.0	5.0	Y
R113	127	1	11,856,115.0	6,944,647.5	148.00	5.00	0.00	66	10.0	5.0	Y

INPUT: BARRIERS

Route 1 / Fort Belvoir

Parsons	27 November 2012
Greg J Berg	TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: Route 1 / Fort Belvoir  
 RUN: Future No Build

Barrier Name	Type	Height		If Wall \$ per Unit Area	If Berm \$ per Unit Vol.	Top Width	Run:Rise	Add'tnl \$ per Unit Length	Points			Height at Point	Segment										
		Min	Max						Name	No.	Coordinates (bottom)			Seg Ht	Perturbs	On	Important						
		ft	ft								X		Y					Z	Incr-	#Up	#Dn	Struct?	Reflec-tions?
											ft		ft					ft					
3 story Building	W	0.00	99.99	0.00				0.00	1	1	11,864,761.0	6,943,854.5	31.00	40.00	0.00	0	0						
									2	2	11,864,768.0	6,944,026.0	31.00	40.00	0.00	0	0						
									3	3	11,864,961.0	6,944,060.0	31.00	40.00									
Stores	W	0.00	99.99	0.00				0.00	1	4	11,865,208.0	6,943,945.0	38.00	12.00	0.00	0	0						
									2	5	11,865,367.0	6,944,028.0	38.00	12.00									
House21	W	0.00	99.99	0.00				0.00	1	6	11,865,112.0	6,944,077.5	33.00	15.00	0.00	0	0						
									2	7	11,865,167.0	6,944,061.0	33.00	15.00									
Shed	W	0.00	99.99	0.00				0.00	1	8	11,865,169.0	6,944,137.0	33.50	8.00	0.00	0	0						
									2	9	11,865,215.0	6,944,147.0	33.50	8.00									
Baptist Church	W	0.00	99.99	0.00				0.00	1	10	11,871,129.0	6,945,807.0	123.00	25.00	0.00	0	0						
									2	11	11,871,126.0	6,945,924.5	123.00	25.00	0.00	0	0						
									3	12	11,871,231.0	6,945,929.0	123.00	25.00									
Pool House	W	0.00	99.99	0.00				0.00	1	13	11,858,542.0	6,943,540.5	107.00	15.00	0.00	0	0						
									2	14	11,858,556.0	6,943,496.0	107.00	15.00									
House1	W	0.00	99.99	0.00				0.00	1	15	11,854,305.0	6,944,440.0	144.00	30.00	0.00	0	0						
									2	16	11,854,386.0	6,944,279.0	148.00	30.00									
House2	W	0.00	99.99	0.00				0.00	1	17	11,854,499.0	6,944,369.0	144.00	30.00	0.00	0	0						
									2	18	11,854,387.0	6,944,514.5	154.00	30.00									
House3	W	0.00	99.99	0.00				0.00	1	19	11,854,806.0	6,944,451.0	154.00	30.00	0.00	0	0						
									2	20	11,854,690.0	6,944,567.5	156.00	30.00									
House4	W	0.00	99.99	0.00				0.00	1	21	11,854,979.0	6,944,396.5	154.00	30.00	0.00	0	0						
									2	22	11,855,018.0	6,944,470.0	150.00	30.00									
House5	W	0.00	99.99	0.00				0.00	1	23	11,855,484.0	6,944,495.0	141.00	30.00	0.00	0	0						
									2	24	11,855,462.0	6,944,578.5	138.00	30.00									
House6	W	0.00	99.99	0.00				0.00	1	25	11,855,568.0	6,944,649.0	137.00	30.00	0.00	0	0						
									2	26	11,855,607.0	6,944,536.5	142.00	30.00									
House7	W	0.00	99.99	0.00				0.00	1	27	11,856,789.0	6,943,892.5	139.00	40.00	0.00	0	0						
									2	28	11,856,701.0	6,944,135.5	132.00	40.00									
House8	W	0.00	99.99	0.00				0.00	1	29	11,856,847.0	6,944,152.5	130.00	40.00	0.00	0	0						
									2	30	11,856,942.0	6,943,887.5	137.00	40.00									
House9	W	0.00	99.99	0.00				0.00	1	31	11,857,179.0	6,944,044.0	128.00	40.00	0.00	0	0						
									2	32	11,857,156.0	6,943,857.0	131.00	40.00									
House10	W	0.00	99.99	0.00				0.00	1	33	11,857,237.0	6,943,771.5	132.00	40.00	0.00	0	0						
									2	34	11,857,407.0	6,943,753.5	138.00	40.00									
House11	W	0.00	99.99	0.00				0.00	1	35	11,857,605.0	6,943,632.0	144.00	40.00	0.00	0	0						



INPUT: BARRIERS

Route 1 / Fort Belvoir

									2	36	11,857,649.0	6,943,771.5	142.00	40.00					
House12	W	0.00	99.99	0.00			0.00	1	37	11,857,695.0	6,943,795.5	137.00	40.00	0.00	0	0			
									2	38	11,857,638.0	6,943,619.0	138.00	40.00					
House13	W	0.00	99.99	0.00			0.00	1	39	11,857,754.0	6,943,589.0	138.00	40.00	0.00	0	0			
									2	40	11,857,780.0	6,943,681.5	136.00	40.00					
House14	W	0.00	99.99	0.00			0.00	1	41	11,857,817.0	6,943,667.5	134.00	40.00	0.00	0	0			
									2	42	11,857,789.0	6,943,576.0	136.00	40.00					
House15	W	0.00	99.99	0.00			0.00	1	43	11,857,895.0	6,943,542.0	132.00	40.00	0.00	0	0			
									2	44	11,857,978.0	6,943,826.5	126.00	40.00					
House16	W	0.00	99.99	0.00			0.00	1	45	11,858,018.0	6,943,812.5	124.00	40.00	0.00	0	0			
									2	46	11,857,932.0	6,943,529.5	128.00	40.00					
House17	W	0.00	99.99	0.00			0.00	1	47	11,858,816.0	6,943,611.5	104.00	40.00	0.00	0	0			
									2	48	11,858,874.0	6,943,545.0	106.00	40.00					
House18	W	0.00	99.99	0.00			0.00	1	49	11,858,935.0	6,943,550.0	106.00	40.00	0.00	0	0			
									2	50	11,858,959.0	6,943,519.5	106.00	40.00	0.00	0	0		
									3	51	11,859,025.0	6,943,581.0	106.00	40.00					
House19	W	0.00	99.99	0.00			0.00	1	52	11,858,912.0	6,943,765.5	107.00	40.00	0.00	0	0			
									2	53	11,859,048.0	6,943,591.5	106.00	40.00	0.00	0	0		
									3	54	11,859,112.0	6,943,641.0	104.00	40.00					
House20	W	0.00	99.99	0.00			0.00	1	55	11,859,157.0	6,943,687.5	102.00	40.00	0.00	0	0			
									2	56	11,859,229.0	6,943,738.5	102.00	40.00					
Barrier28	W	0.00	99.99	0.00			0.00	1	57	11,865,545.0	6,944,090.5	40.00	25.00	0.00	0	0			
									2	58	11,865,673.0	6,944,094.0	40.00	25.00	0.00	0	0		
									3	59	11,865,671.0	6,944,008.5	40.00	25.00					
Barrier29	W	0.00	99.99	0.00			0.00	1	60	11,865,659.0	6,944,175.5	40.00	25.00	0.00	0	0			
									2	61	11,865,550.0	6,944,224.0	40.00	25.00					
Cemetary Wall	W	0.00	99.99	0.00			0.00	1	62	11,855,362.0	6,944,060.0	144.00	5.00	0.00	0	0			
									2	63	11,855,376.0	6,944,064.5	145.00	5.00	0.00	0	0		
									3	64	11,855,420.0	6,944,049.5	146.00	5.00	0.00	0	0		
									4	65	11,855,442.0	6,944,041.5	146.00	5.00	0.00	0	0		
									5	66	11,855,470.0	6,944,032.0	148.00	5.00	0.00	0	0		
									6	67	11,855,537.0	6,944,008.5	148.50	5.00	0.00	0	0		
									7	68	11,855,543.0	6,943,996.0	149.00	5.00					
Barrier31	W	0.00	99.99	0.00			0.00	point69	69	11,855,802.0	6,944,999.5	144.00	30.00	0.00	0	0			
									point70	70	11,855,692.0	6,944,999.0	140.00	30.00					
Barrier32	W	0.00	99.99	0.00			0.00	point71	71	11,855,684.0	6,944,790.0	142.00	30.00	0.00	0	0			
									point72	72	11,855,766.0	6,944,788.5	144.00	30.00					
Barrier33	W	0.00	99.99	0.00			0.00	1	73	11,871,883.0	6,946,150.0	54.00	12.00	0.00	0	0			
									2	74	11,872,030.0	6,946,181.5	51.00	12.00	0.00	0	0		
									3	75	11,872,177.0	6,946,209.0	47.00	12.00					
Existing SW	W	0.00	99.99	0.00			0.00	start	76	11,853,880.0	6,943,970.5	124.80	12.00	0.00	0	0			
									0+00	77	11,854,003.0	6,944,041.0	132.50	12.00	0.00	0	0		
									2+00	78	11,854,179.0	6,944,134.5	142.00	12.00	0.00	0	0		
									4+00	79	11,854,366.0	6,944,224.0	149.00	12.00	0.00	0	0		
									4+90	80	11,854,464.0	6,944,260.5	153.80	12.00	0.00	0	0		
									6+00	81	11,854,567.0	6,944,291.0	156.59	12.00	0.00	0	0		
									6+40	82	11,854,607.0	6,944,300.0	156.67	12.00	0.00	0	0		
									6+70	83	11,854,632.0	6,944,326.5	156.95	12.00					
Church Wall	W	0.00	99.99	0.00			0.00	1	84	11,855,584.0	6,943,990.5	149.83	5.00	0.00	0	0			

**INPUT: BARRIERS**

**Route 1 / Fort Belvoir**

									2	85	11,855,738.0	6,943,936.5	151.89	5.00				
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**INPUT: TERRAIN LINES**

**Route 1 / Fort Belvoir**

<b>Parsons</b>			<b>27 November 2012</b>	
<b>Greg J Berg</b>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 / Fort Belvoir</b>			
<b>RUN:</b>	<b>Future No Build</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
	9	11,855,042.0	6,944,337.0	162.90
	10	11,855,097.0	6,944,331.0	164.00
	11	11,855,125.0	6,944,327.0	163.30
	12	11,855,155.0	6,944,326.5	162.90
	13	11,855,188.0	6,944,317.5	160.70
	14	11,855,226.0	6,944,312.0	161.40
	15	11,855,314.0	6,944,286.0	160.00
	16	11,855,410.0	6,944,256.5	158.00
	17	11,855,497.0	6,944,232.5	156.50
	18	11,855,525.0	6,944,236.5	157.10
	19	11,855,568.0	6,944,248.5	156.00
	20	11,855,607.0	6,944,279.5	148.00
Terrain Line3	21	11,854,720.0	6,944,333.5	158.00
	22	11,854,749.0	6,944,327.5	158.00
	23	11,854,840.0	6,944,333.5	158.40
	24	11,855,027.0	6,944,327.5	157.80

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	25	11,855,062.0	6,944,320.0	156.20
	26	11,855,188.0	6,944,301.0	154.10
	27	11,855,298.0	6,944,273.0	152.00
	28	11,855,415.0	6,944,234.5	150.40
	29	11,855,554.0	6,944,188.5	150.80
	30	11,855,604.0	6,944,189.0	152.00
	31	11,855,623.0	6,944,227.5	150.00
	32	11,855,622.0	6,944,248.0	148.00
	33	11,855,599.0	6,944,298.5	147.80
	34	11,855,569.0	6,944,315.5	148.00
	35	11,855,516.0	6,944,294.0	144.00
	36	11,855,478.0	6,944,288.0	142.00
	37	11,855,466.0	6,944,284.0	142.00
	38	11,855,378.0	6,944,309.0	142.00
	39	11,855,300.0	6,944,324.5	146.00
	40	11,855,261.0	6,944,337.0	146.00
	41	11,855,178.0	6,944,350.5	152.10
	42	11,855,122.0	6,944,348.0	157.50
	43	11,855,001.0	6,944,363.0	156.10
	44	11,854,941.0	6,944,381.5	156.00
	45	11,854,841.0	6,944,372.0	158.00
	46	11,854,831.0	6,944,394.5	158.00
	47	11,854,756.0	6,944,356.5	159.40
Terrain Line17	48	11,856,688.0	6,943,853.0	154.00
	49	11,856,738.0	6,943,836.5	154.60
	50	11,856,769.0	6,943,834.5	155.10
	51	11,856,812.0	6,943,819.0	154.00
	52	11,856,866.0	6,943,800.0	152.00
	53	11,856,921.0	6,943,788.0	148.00
	54	11,856,993.0	6,943,783.5	140.00
	55	11,857,046.0	6,943,779.0	128.00
	56	11,857,114.0	6,943,780.0	128.00
	57	11,857,155.0	6,943,780.5	128.00
	58	11,857,188.0	6,943,747.5	130.00
	59	11,857,230.0	6,943,693.5	136.00
	60	11,857,268.0	6,943,676.0	138.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	61	11,857,304.0	6,943,662.0	140.00
Terrain Line20	85	11,858,137.0	6,943,439.0	138.00
	86	11,858,246.0	6,943,466.5	138.00
	87	11,858,300.0	6,943,487.0	134.00
Terrain Line22	102	11,857,498.0	6,943,629.5	146.00
	103	11,857,525.0	6,943,621.5	146.00
	104	11,857,550.0	6,943,608.5	144.00
	105	11,857,595.0	6,943,598.5	142.00
	106	11,857,629.0	6,943,589.5	138.00
	107	11,857,651.0	6,943,595.5	135.30
	108	11,857,665.0	6,943,584.0	138.00
	109	11,857,708.0	6,943,567.0	142.00
	110	11,857,744.0	6,943,570.5	144.00
	111	11,857,818.0	6,943,549.0	146.00
	112	11,857,856.0	6,943,537.0	146.00
	113	11,857,894.0	6,943,525.0	144.00
	114	11,857,920.0	6,943,516.5	140.00
	115	11,857,947.0	6,943,503.0	138.00
	116	11,857,963.0	6,943,495.5	136.00
	117	11,857,959.0	6,943,498.0	134.00
	118	11,857,937.0	6,943,513.0	132.00
	119	11,857,916.0	6,943,519.0	134.00
	120	11,857,879.0	6,943,531.5	136.00
	121	11,857,855.0	6,943,539.0	138.00
	122	11,857,790.0	6,943,560.5	140.00
	123	11,857,749.0	6,943,574.0	142.00
Terrain Line23	124	11,857,963.0	6,943,495.5	136.00
	125	11,857,999.0	6,943,492.0	134.00
	126	11,858,010.0	6,943,490.0	136.00
	127	11,858,036.0	6,943,483.0	136.00
	128	11,858,051.0	6,943,479.0	134.00
	129	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	150	11,858,058.0	6,943,477.0	132.00
	151	11,858,067.0	6,943,481.0	128.00
	152	11,858,095.0	6,943,482.0	128.00
	153	11,858,124.0	6,943,489.0	128.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	154	11,858,154.0	6,943,484.5	130.00
	155	11,858,172.0	6,943,479.0	132.00
	156	11,858,213.0	6,943,480.5	134.00
	157	11,858,299.0	6,943,488.5	134.00
Terrain Line28	158	11,858,816.0	6,943,467.0	102.00
	159	11,858,837.0	6,943,468.0	98.00
	160	11,858,917.0	6,943,485.5	96.00
	161	11,858,974.0	6,943,492.5	94.00
	162	11,858,995.0	6,943,501.0	92.00
	163	11,859,026.0	6,943,508.0	86.00
	164	11,859,094.0	6,943,534.0	84.00
	165	11,859,164.0	6,943,586.5	83.10
Terrain Line33	202	11,870,814.0	6,945,837.0	122.00
	203	11,870,960.0	6,945,964.5	122.00
	204	11,871,050.0	6,946,044.5	108.00
	205	11,871,090.0	6,945,944.0	118.00
	206	11,871,117.0	6,945,958.5	118.10
	207	11,871,094.0	6,946,036.5	113.00
	208	11,871,132.0	6,946,048.0	118.00
	209	11,871,189.0	6,946,066.0	122.00
	210	11,871,230.0	6,946,071.0	124.00
	211	11,871,293.0	6,946,054.5	124.00
	212	11,871,328.0	6,946,027.5	124.00
	213	11,871,350.0	6,945,975.0	124.00
Terrain Line35	222	11,859,164.0	6,943,586.0	83.10
	223	11,859,201.0	6,943,620.0	84.00
	224	11,859,236.0	6,943,656.5	84.00
	225	11,859,256.0	6,943,666.5	90.00
	226	11,859,291.0	6,943,695.5	90.00
	227	11,859,312.0	6,943,703.0	82.00

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

<b>Parsons</b>			<b>27 November 2012</b>		
<b>Greg J Berg</b>			<b>TNM 2.5</b>		
<b>INPUT: GROUND ZONES</b>					
<b>PROJECT/CONTRACT:</b>			<b>Route 1 / Fort Belvoir</b>		
<b>RUN:</b>			<b>Future No Build</b>		
<b>Ground Zone</b>			<b>Points</b>		
<b>Name</b>	<b>Type</b>	<b>Flow Resistivity</b>	<b>No.</b>	<b>Coordinates</b>	
		cgs rayls		<b>X</b>	<b>Y</b>
				ft	ft
Ground Zone2	Pavement	20000	86	11,853,692.0	6,943,795.5
			83	11,853,166.0	6,943,516.5
			84	11,853,178.0	6,943,502.5
			85	11,853,667.0	6,943,741.5
			1	11,853,861.0	6,943,849.5
			2	11,854,050.0	6,943,950.5
			3	11,854,226.0	6,944,046.0
			4	11,854,406.0	6,944,129.0
			5	11,854,592.0	6,944,188.0
			6	11,854,629.0	6,944,196.5
			7	11,854,788.0	6,944,216.5
			8	11,854,983.0	6,944,217.5
			9	11,855,176.0	6,944,188.5
			10	11,855,361.0	6,944,133.0
			11	11,855,551.0	6,944,075.5
			12	11,855,743.0	6,944,019.0
			13	11,855,802.0	6,944,001.0
			14	11,855,935.0	6,943,961.5
			15	11,856,126.0	6,943,902.0
			16	11,856,317.0	6,943,844.5
			17	11,856,509.0	6,943,787.5
			18	11,856,700.0	6,943,729.0
			19	11,856,893.0	6,943,676.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			20	11,857,276.0	6,943,561.0
			21	11,857,468.0	6,943,505.0
			22	11,857,661.0	6,943,452.0
			23	11,857,853.0	6,943,397.0
			24	11,858,050.0	6,943,353.5
			25	11,858,250.0	6,943,344.5
			26	11,858,450.0	6,943,349.5
			27	11,859,199.0	6,943,385.0
			56	11,859,459.0	6,943,397.5
			28	11,859,122.0	6,943,392.0
			29	11,858,449.0	6,943,366.5
			30	11,858,251.0	6,943,352.5
			31	11,858,053.0	6,943,365.0
			32	11,857,859.0	6,943,411.0
			33	11,857,667.0	6,943,470.5
			34	11,857,476.0	6,943,529.5
			35	11,857,285.0	6,943,589.5
			36	11,857,094.0	6,943,648.0
			37	11,856,903.0	6,943,707.5
			38	11,856,712.0	6,943,765.0
			39	11,856,520.0	6,943,824.0
			40	11,856,331.0	6,943,889.0
			41	11,856,140.0	6,943,948.5
			42	11,855,979.0	6,943,998.5
			43	11,855,949.0	6,944,006.5
			44	11,855,758.0	6,944,064.0
			45	11,855,566.0	6,944,121.5
			46	11,855,375.0	6,944,180.5
			47	11,855,182.0	6,944,235.5
			48	11,854,983.0	6,944,260.0
			49	11,854,781.0	6,944,263.0
			50	11,854,752.0	6,944,260.5
			51	11,854,582.0	6,944,233.0
			52	11,854,388.0	6,944,172.0
			53	11,854,206.0	6,944,084.0
			54	11,854,032.0	6,943,986.5



**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			55	11,853,873.0	6,943,897.0
Median 2	Pavement	20000	57	11,863,244.0	6,943,576.5
			58	11,863,444.0	6,943,586.5
			59	11,863,644.0	6,943,596.0
			81	11,863,844.0	6,943,608.0
			82	11,864,048.0	6,943,628.5
			60	11,864,247.0	6,943,662.0
			61	11,864,443.0	6,943,702.0
			62	11,864,640.0	6,943,738.0
			63	11,864,837.0	6,943,772.5
			64	11,865,033.0	6,943,812.0
			65	11,865,229.0	6,943,851.0
			66	11,865,425.0	6,943,889.5
			67	11,865,424.0	6,943,895.0
			68	11,865,228.0	6,943,857.5
			69	11,865,032.0	6,943,817.0
			70	11,864,836.0	6,943,778.0
			71	11,864,639.0	6,943,742.0
			72	11,864,441.0	6,943,709.5
			73	11,864,243.0	6,943,678.5
			74	11,864,181.0	6,943,666.5
			75	11,864,041.0	6,943,647.5
			76	11,863,842.0	6,943,626.5
			77	11,863,643.0	6,943,610.5
			78	11,863,444.0	6,943,594.0
			79	11,863,244.0	6,943,579.0



**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R21B	25	5	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	5	-5.0
R22-Deck	26	1	0.0	59.6	66	59.6	10	----	59.6	0.0	5	-5.0
R23-Deck	27	1	62.0	61.2	66	-0.8	10	----	61.2	0.0	5	-5.0
R24/Site 2-Deck	28	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R25-Deck	29	1	0.0	58.1	66	58.1	10	----	58.1	0.0	5	-5.0
R26-Deck	30	1	0.0	60.1	66	60.1	10	----	60.1	0.0	5	-5.0
R27	31	1	0.0	59.3	66	59.3	10	----	59.3	0.0	5	-5.0
R28	32	1	0.0	55.7	66	55.7	10	----	55.7	0.0	5	-5.0
R29-Deck	33	1	0.0	62.8	66	62.8	10	----	62.8	0.0	5	-5.0
R30	34	1	0.0	62.2	66	62.2	10	----	62.2	0.0	5	-5.0
R31-Deck	35	1	68.0	66.7	66	-1.3	10	Snd Lvl	66.7	0.0	5	-5.0
R32/Site 3-Deck	36	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	5	-5.0
R33-Deck	37	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R34	38	1	0.0	55.3	66	55.3	10	----	55.3	0.0	5	-5.0
R35	39	1	0.0	59.0	66	59.0	10	----	59.0	0.0	5	-5.0
R36	40	1	72.0	55.7	66	-16.3	10	----	55.7	0.0	5	-5.0
R37/Site 4	41	1	0.0	69.9	66	69.9	10	Snd Lvl	69.9	0.0	5	-5.0
R38-Deck	42	1	0.0	65.1	66	65.1	10	----	65.1	0.0	5	-5.0
R39-Deck	43	1	0.0	56.1	66	56.1	10	----	56.1	0.0	5	-5.0
R40	44	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	5	-5.0
R41-Deck	45	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	5	-5.0
R42-Deck	46	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	5	-5.0
R43-Deck	47	1	0.0	65.2	66	65.2	10	----	65.2	0.0	5	-5.0
R44	48	1	63.0	63.8	66	0.8	10	----	63.8	0.0	5	-5.0
R45/Site 5	49	1	0.0	65.6	66	65.6	10	----	65.6	0.0	5	-5.0
R46	50	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	5	-5.0
R47/Site 6	51	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	5	-5.0
R48	52	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	5	-5.0
R49	53	1	0.0	65.1	66	65.1	10	----	65.1	0.0	5	-5.0
R50	54	1	54.0	60.9	66	6.9	10	----	60.9	0.0	5	-5.0
R51A	55	1	0.0	56.2	66	56.2	10	----	56.2	0.0	5	-5.0
R51/Site 7	56	1	0.0	57.4	66	57.4	10	----	57.4	0.0	5	-5.0
R52	57	1	0.0	59.1	66	59.1	10	----	59.1	0.0	5	-5.0
R53	58	1	0.0	56.6	66	56.6	10	----	56.6	0.0	5	-5.0
R54	59	1	0.0	56.8	66	56.8	10	----	56.8	0.0	5	-5.0
R54A	60	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0
R55	61	1	0.0	62.8	66	62.8	10	----	62.8	0.0	5	-5.0
R56	62	1	0.0	60.9	66	60.9	10	----	60.9	0.0	5	-5.0
R57	63	1	0.0	60.4	66	60.4	10	----	60.4	0.0	5	-5.0
R58	64	1	0.0	59.7	66	59.7	10	----	59.7	0.0	5	-5.0
R59	66	1	0.0	59.2	66	59.2	10	----	59.2	0.0	5	-5.0

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R60	67	1	0.0	58.8	66	58.8	10	----	58.8	0.0	5	-5.0
R61	68	1	0.0	58.4	66	58.4	10	----	58.4	0.0	5	-5.0
R62	69	1	0.0	58.3	66	58.3	10	----	58.3	0.0	5	-5.0
R63	70	1	0.0	57.2	66	57.2	10	----	57.2	0.0	5	-5.0
R64	71	1	0.0	56.9	66	56.9	10	----	56.9	0.0	5	-5.0
R65	72	1	0.0	56.5	66	56.5	10	----	56.5	0.0	5	-5.0
R66	73	1	0.0	56.3	66	56.3	10	----	56.3	0.0	5	-5.0
R67	74	1	0.0	56.3	66	56.3	10	----	56.3	0.0	5	-5.0
R68A	75	1	0.0	54.2	66	54.2	10	----	54.2	0.0	5	-5.0
R68	76	1	0.0	56.7	66	56.7	10	----	56.7	0.0	5	-5.0
R69	77	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
R70	78	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	5	-5.0
R71	79	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	5	-5.0
R72	80	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	5	-5.0
R73	81	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	5	-5.0
R74	82	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R75	83	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R76	84	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	5	-5.0
R77	85	1	0.0	65.8	66	65.8	10	----	65.8	0.0	5	-5.0
R78	86	1	0.0	65.0	66	65.0	10	----	65.0	0.0	5	-5.0
R79	87	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0
R80	88	1	0.0	64.2	66	64.2	10	----	64.2	0.0	5	-5.0
R81	89	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0
R82	90	1	0.0	64.1	66	64.1	10	----	64.1	0.0	5	-5.0
R83	91	1	0.0	64.3	66	64.3	10	----	64.3	0.0	5	-5.0
R84	92	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0
R85	93	1	0.0	62.1	66	62.1	10	----	62.1	0.0	5	-5.0
R86	94	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R87	95	1	0.0	61.2	66	61.2	10	----	61.2	0.0	5	-5.0
R88	96	1	0.0	61.0	66	61.0	10	----	61.0	0.0	5	-5.0
R89	98	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0
R90	99	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R91	100	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R92	101	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R93	102	1	0.0	58.8	66	58.8	10	----	58.8	0.0	5	-5.0
R94	103	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R95	104	1	0.0	56.5	66	56.5	10	----	56.5	0.0	5	-5.0
R96	106	1	0.0	57.6	66	57.6	10	----	57.6	0.0	5	-5.0
R97	107	1	0.0	58.7	66	58.7	10	----	58.7	0.0	5	-5.0
R98	109	1	0.0	59.9	66	59.9	10	----	59.9	0.0	5	-5.0
R99	110	1	0.0	55.5	66	55.5	10	----	55.5	0.0	5	-5.0

**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R100	112	1	0.0	56.4	66	56.4	10	----	56.4	0.0	5	-5.0
R101	113	1	0.0	57.1	66	57.1	10	----	57.1	0.0	5	-5.0
R102	114	1	0.0	58.1	66	58.1	10	----	58.1	0.0	5	-5.0
R103	115	1	0.0	64.9	66	64.9	10	----	64.9	0.0	5	-5.0
R104-Deck	116	1	0.0	64.7	66	64.7	10	----	64.7	0.0	5	-5.0
R105-Deck	117	1	0.0	62.6	66	62.6	10	----	62.6	0.0	5	-5.0
R106-Deck	118	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R107-Deck	119	1	0.0	60.7	66	60.7	10	----	60.7	0.0	5	-5.0
R108-Deck	120	1	0.0	62.0	66	62.0	10	----	62.0	0.0	5	-5.0
R109-Deck	121	1	0.0	63.1	66	63.1	10	----	63.1	0.0	5	-5.0
R110-Deck	123	1	0.0	64.6	66	64.6	10	----	64.6	0.0	5	-5.0
R111	124	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	5	-5.0
R112	126	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	5	-5.0
R113	127	1	0.0	63.3	66	63.3	10	----	63.3	0.0	5	-5.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		124	0.0	0.0	0.0							
All Impacted		23	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							



**Traffic Noise Model for Future No Build Scenario  
with Alternative C Receivers**





**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012							
Greg J Berg				TNM 2.5							
<b>INPUT: ROADWAYS</b>							<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA</b>				
<b>PROJECT/CONTRACT:</b>		Route 1 / Fort Belvoir									
<b>RUN:</b>		Future No Build w/ Alt C Recievers									
<b>Roadway Name</b>	<b>Width</b>	<b>Points Name</b>	<b>No.</b>	<b>Coordinates (pavement)</b>			<b>Flow Control</b>			<b>Segment</b>	
				<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Control Device</b>	<b>Speed Constraint</b>	<b>Percent Vehicles Affected</b>	<b>Pvmt Type</b>	<b>On Struct?</b>
	ft			ft	ft	ft		mph	%		
Roadway4	36.0	Pohick	7	11,854,632.0	6,944,183.0	151.90	Signal	0.00	25	Average	
		8+00	8	11,854,788.0	6,944,202.5	153.00				Average	
		10+00	9	11,854,982.0	6,944,203.5	152.20				Average	
		12+00	10	11,855,173.0	6,944,175.0	149.90				Average	
		14+00	11	11,855,357.0	6,944,119.5	147.50				Average	
		16+00	12	11,855,547.0	6,944,062.5	147.20				Average	
		18+00	13	11,855,739.0	6,944,005.5	149.20				Average	
		Telegraph	14	11,855,798.0	6,943,987.5	150.00					
Roadway5	46.0	Telegraph	15	11,855,798.0	6,943,987.5	150.00	Signal	0.00	25	Average	
		20+00	16	11,855,931.0	6,943,948.0	151.40				Average	
		22+00	17	11,856,122.0	6,943,889.0	153.50				Average	
		24+00	18	11,856,313.0	6,943,831.0	154.70				Average	
		26+00	19	11,856,505.0	6,943,774.0	154.30				Average	
		28+00	20	11,856,696.0	6,943,715.5	152.60				Average	
		30+00	21	11,856,889.0	6,943,663.0	149.50				Average	
		32+00	22	11,857,081.0	6,943,605.0	147.70				Average	
		34+00	23	11,857,272.0	6,943,547.5	146.70				Average	
		36+00	24	11,857,464.0	6,943,491.5	145.80				Average	
		38+00	25	11,857,657.0	6,943,438.5	145.30				Average	
		40+00	26	11,857,850.0	6,943,383.5	142.10				Average	
		42+00	27	11,858,048.0	6,943,339.5	135.80				Average	
		44+00	28	11,858,250.0	6,943,330.5	126.80				Average	
		46+00	29	11,858,451.0	6,943,336.0	114.60				Average	
		48+00	30	11,858,650.0	6,943,345.0	107.10				Average	
		Cook Inlet	31	11,858,742.0	6,943,349.0	105.00					

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway6	30.0	Fairfax Co	32	11,864,058.0	6,943,615.5	20.80	Signal	0.00	25	Average
		104+00	33	11,864,250.0	6,943,648.5	18.80				Average
		106+00	34	11,864,446.0	6,943,688.0	17.60				Average
		108+00	35	11,864,642.0	6,943,724.0	22.70				Average
		110+00	36	11,864,840.0	6,943,759.0	29.70				Average
		112+00	37	11,865,036.0	6,943,798.5	34.30				Average
		114+00	38	11,865,232.0	6,943,837.0	37.90				Average
		116+00/Ba	39	11,865,428.0	6,943,875.5	39.00				
Roadway7	30.0	116+00/Ba	40	11,865,428.0	6,943,875.5	39.00	Signal	0.00	25	Average
		118+00	41	11,865,624.0	6,943,915.0	38.40				Average
		120+00	42	11,865,817.0	6,943,940.0	42.90				Average
		122+00	43	11,866,009.0	6,943,949.0	51.00				Average
		124+00	44	11,866,208.0	6,943,953.0	61.50				Average
		126+00	45	11,866,408.0	6,943,957.0	70.80				Average
		128+00	46	11,866,609.0	6,943,961.5	73.40				Average
		130+00	47	11,866,812.0	6,943,982.5	69.30				Average
		132+00	48	11,867,011.0	6,944,021.5	75.90				Average
		134+00	49	11,867,209.0	6,944,062.5	88.00				Average
		136+00	50	11,867,406.0	6,944,105.0	98.70				Average
		138+00	51	11,867,603.0	6,944,153.0	103.30				Average
		140+00	52	11,867,794.0	6,944,219.0	106.50				Average
		142+00	53	11,867,979.0	6,944,294.0	111.30				Average
		144+00	54	11,868,161.0	6,944,367.5	117.20				Average
		146+00	55	11,868,351.0	6,944,429.0	120.20				Average
		148+00	56	11,868,543.0	6,944,487.0	125.10				Average
		150+00	57	11,868,734.0	6,944,545.5	132.50				Average
		152+00	58	11,868,926.0	6,944,603.5	136.70				Average
		154+00	59	11,869,117.0	6,944,662.0	139.90				Average
		156+00	60	11,869,309.0	6,944,723.0	143.80				Average
		158+00	61	11,869,496.0	6,944,800.0	143.50				Average
		160+00	62	11,869,674.0	6,944,896.0	142.50				Average
		162+00	63	11,869,845.0	6,945,003.0	141.40				Average
		Belvoir	64	11,869,901.0	6,945,047.5	141.00				
Roadway8	30.0	Belvoir	65	11,869,901.0	6,945,047.5	141.00	Signal	0.00	25	Average
		164+00	66	11,870,003.0	6,945,137.0	140.10				Average
		166+00	67	11,870,148.0	6,945,274.0	138.80				Average
		168+00	68	11,870,293.0	6,945,410.0	136.90				Average
		170+00	69	11,870,439.0	6,945,548.5	136.00				Average
		172+00	70	11,870,585.0	6,945,687.5	133.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		174+00/W	71	11,870,714.0	6,945,816.0	128.10				
Roadway9	30.0	174+00/W	72	11,870,714.0	6,945,816.0	128.10	Signal	0.00	25	Average
		176+00	73	11,870,856.0	6,945,963.5	119.10				Average
		178+00	74	11,871,012.0	6,946,077.5	109.00				Average
		180+00	75	11,871,187.0	6,946,175.0	99.60				Average
		182+00	76	11,871,368.0	6,946,252.5	96.40				Average
		184+00	77	11,871,558.0	6,946,311.5	94.10				Average
		186+00	78	11,871,750.0	6,946,366.0	85.80				Average
		188+00	79	11,871,941.0	6,946,426.0	72.40				Average
		190+00	80	11,872,128.0	6,946,498.0	58.50				Average
		192+00	81	11,872,308.0	6,946,587.5	48.70				Average
		194+00	82	11,872,480.0	6,946,688.5	43.30				Average
		196+00	83	11,872,650.0	6,946,794.5	39.10				Average
		198+00	84	11,872,739.0	6,946,852.0	37.00				Average
		200+00/M	85	11,872,905.0	6,946,960.5	31.30				
Roadway10	30.0	200+00/M	86	11,872,905.0	6,946,960.5	31.30	Signal	0.00	25	Average
		202+00	87	11,873,074.0	6,947,069.5	27.00				Average
		204+00	88	11,873,243.0	6,947,177.0	25.20				Average
		206+00	89	11,873,412.0	6,947,284.5	21.90				Average
		208+00	90	11,873,579.0	6,947,393.5	17.90				Average
		210+00	91	11,873,747.0	6,947,502.0	13.70				Average
		212+00	92	11,873,915.0	6,947,610.5	13.00				Average
		214+00	93	11,874,082.0	6,947,720.5	13.00				Average
		End	94	11,874,514.0	6,948,000.5	16.00				
Roadway12	36.0	Telegraph	101	11,855,983.0	6,944,012.0	151.60	Signal	0.00	25	Average
		20+00	102	11,855,953.0	6,944,019.5	151.60				Average
		18+00	103	11,855,762.0	6,944,077.5	150.30				Average
		16+00	104	11,855,570.0	6,944,135.0	148.80				Average
		14+00	105	11,855,379.0	6,944,194.0	149.10				Average
		12+00	106	11,855,185.0	6,944,249.5	152.40				Average
		10+00	107	11,854,984.0	6,944,274.0	155.20				Average
		8+00	108	11,854,781.0	6,944,277.0	156.00				Average
		Pohick	109	11,854,751.0	6,944,274.5	156.20				
Roadway13	30.0	Cook Inlet	110	11,858,839.0	6,943,396.0	102.50	Signal	0.00	25	Average
		48+00	111	11,858,648.0	6,943,389.0	106.80				Average
		46+00	112	11,858,448.0	6,943,380.5	114.10				Average
		44+00	113	11,858,251.0	6,943,366.5	125.80				Average
		42+00	114	11,858,055.0	6,943,379.0	134.20				Average
		40+00	115	11,857,862.0	6,943,424.5	141.10				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		38+00	116	11,857,671.0	6,943,484.0	144.50				Average
		36+00	117	11,857,480.0	6,943,543.0	145.50				Average
		34+00	118	11,857,290.0	6,943,602.5	146.50				Average
		32+00	119	11,857,098.0	6,943,661.5	147.50				Average
		30+00	120	11,856,907.0	6,943,721.0	149.20				Average
		28+00	121	11,856,716.0	6,943,778.5	152.40				Average
		26+00	122	11,856,525.0	6,943,837.0	154.00				Average
		24+00	123	11,856,335.0	6,943,902.0	154.20				Average
		22+00	124	11,856,144.0	6,943,961.5	152.90				Average
		Telegraph	125	11,855,983.0	6,944,012.0	151.60				
Roadway14	30.0	Fairfax Co	126	11,864,179.0	6,943,684.5	18.40	Signal	0.00	25	Average
		102+00	127	11,864,041.0	6,943,663.5	19.60				Average
		100+00	128	11,863,842.0	6,943,642.5	20.50				Average
		98+00	129	11,863,642.0	6,943,626.0	19.60				Average
		96+00	130	11,863,443.0	6,943,605.0	18.80				Average
		94+00	131	11,863,244.0	6,943,586.0	17.80				Average
		92+00	132	11,863,044.0	6,943,575.5	19.30				Average
		90+00	133	11,862,844.0	6,943,567.0	20.30				Average
		88+00	134	11,862,644.0	6,943,557.5	20.80				Average
		86+00	135	11,862,445.0	6,943,548.5	23.80				Average
		84+00	136	11,862,245.0	6,943,539.0	27.70				Average
		82+00	137	11,862,045.0	6,943,529.5	31.60				Average
		80+00	138	11,861,845.0	6,943,522.5	35.40				Average
		78+00	139	11,861,645.0	6,943,512.5	39.80				Average
		76+00	140	11,861,446.0	6,943,502.5	45.00				Average
		74+00	141	11,861,246.0	6,943,493.5	49.50				Average
		72+00	142	11,861,046.0	6,943,484.5	55.20				Average
		70+00	143	11,860,847.0	6,943,475.5	62.10				Average
		68+00	144	11,860,647.0	6,943,464.5	69.30				Average
		66+00	145	11,860,447.0	6,943,456.5	76.50				Average
		64+00	146	11,860,247.0	6,943,447.0	82.30				Average
		62+00	147	11,860,047.0	6,943,437.5	87.00				Average
		60+00	148	11,859,847.0	6,943,427.5	84.90				Average
		58+00	149	11,859,648.0	6,943,417.5	82.50				Average
		56+00	150	11,859,448.0	6,943,409.0	85.70				Average
		54+00	151	11,859,248.0	6,943,405.5	93.40				Average
		52+00	152	11,859,048.0	6,943,401.0	97.80				Average
		50+00	153	11,858,848.0	6,943,396.5	102.30				Average
		Cook Inlet	154	11,858,839.0	6,943,396.0	102.50				

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

Roadway15	30.0	Backkick	155	11,865,535.0	6,943,930.5	38.70	Signal	0.00	25	Average	
		116+00	156	11,865,422.0	6,943,909.0	39.00				Average	
		114+00	157	11,865,225.0	6,943,871.0	37.60				Average	
		112+00	158	11,865,029.0	6,943,831.0	33.90				Average	
		110+00	159	11,864,833.0	6,943,792.0	29.60				Average	
		108+00	160	11,864,636.0	6,943,756.0	22.30				Average	
		106+00	161	11,864,438.0	6,943,726.0	17.00				Average	
		104+00	162	11,864,241.0	6,943,695.0	17.80				Average	
		Fairfax Co	163	11,864,179.0	6,943,684.5	18.40					
Roadway16	30.0	Belvoir	164	11,869,953.0	6,945,147.0	140.40	Signal	0.00	25	Average	
		162+00	165	11,869,825.0	6,945,036.0	141.30				Average	
		160+00	166	11,869,663.0	6,944,917.0	142.40				Average	
		158+00	167	11,869,488.0	6,944,819.5	143.60				Average	
		156+00	168	11,869,302.0	6,944,743.5	143.80				Average	
		154+00	169	11,869,110.0	6,944,682.5	140.00				Average	
		152+00	170	11,868,919.0	6,944,624.5	136.80				Average	
		150+00	171	11,868,728.0	6,944,566.5	132.50				Average	
		148+00	172	11,868,537.0	6,944,507.0	125.10				Average	
		146+00	173	11,868,345.0	6,944,451.0	120.20				Average	
		144+00	174	11,868,155.0	6,944,389.0	117.00				Average	
		142+00	175	11,867,971.0	6,944,313.5	111.00				Average	
		140+00	176	11,867,786.0	6,944,238.5	105.90				Average	
		138+00	177	11,867,596.0	6,944,173.5	102.90				Average	
		136+00	178	11,867,400.0	6,944,125.0	98.60				Average	
		134+00	179	11,867,204.0	6,944,084.0	88.10				Average	
		132+00	180	11,867,008.0	6,944,043.0	75.90				Average	
		130+00	181	11,866,810.0	6,944,005.0	68.80				Average	
		128+00	182	11,866,609.0	6,943,983.5	73.10				Average	
		126+00	183	11,866,408.0	6,943,979.0	70.70				Average	
		124+00	184	11,866,208.0	6,943,974.0	61.60				Average	
		122+00	185	11,866,009.0	6,943,972.0	51.20				Average	
		120+00	186	11,865,814.0	6,943,969.0	43.00				Average	
		118+00	187	11,865,618.0	6,943,945.5	39.00				Average	
		Backkick	188	11,865,535.0	6,943,930.5	38.70					
Roadway17	30.0	Woodlawn	189	11,870,755.0	6,945,914.5	124.50	Signal	0.00	25	Average	
		174+00	190	11,870,699.0	6,945,851.5	127.60				Average	
		172+00	191	11,870,553.0	6,945,713.5	133.50				Average	
		170+00	192	11,870,406.0	6,945,575.0	136.10				Average	
		168+00	193	11,870,262.0	6,945,437.5	137.40				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		166+00	194	11,870,119.0	6,945,304.5	138.70				Average
		164+00	195	11,869,977.0	6,945,171.0	140.20				Average
		Belvoir	196	11,869,953.0	6,945,147.0	140.40				
Roadway18	30.0	Mt Vernon	197	11,873,087.0	6,947,116.5	26.00	Signal	0.00	25	Average
		202+00	198	11,873,056.0	6,947,098.0	26.60				Average
		200+00	199	11,872,889.0	6,946,988.5	31.40				Average
		198+00	200	11,872,720.0	6,946,881.5	36.50				Average
		196+00	201	11,872,631.0	6,946,823.5	39.00				Average
		194+00	202	11,872,463.0	6,946,715.0	42.80				Average
		192+00	203	11,872,296.0	6,946,610.5	48.00				Average
		190+00	204	11,872,122.0	6,946,520.5	57.60				Average
		188+00	205	11,871,935.0	6,946,446.5	71.80				Average
		186+00	206	11,871,744.0	6,946,388.0	85.40				Average
		184+00	207	11,871,551.0	6,946,334.0	94.00				Average
		182+00	208	11,871,360.0	6,946,275.0	97.00				Average
		180+00	209	11,871,177.0	6,946,195.5	100.10				Average
		178+00	210	11,871,002.0	6,946,098.5	109.60				Average
		176+00	211	11,870,840.0	6,945,986.0	119.70				Average
		Woodlawn	212	11,870,755.0	6,945,914.5	124.50				
Roadway19	30.0	Begin	213	11,874,506.0	6,948,021.0	16.00				Average
		214+00	214	11,874,070.0	6,947,740.5	13.00				Average
		212+00	215	11,873,900.0	6,947,634.0	13.00				Average
		210+00	216	11,873,728.0	6,947,532.0	13.00				Average
		208+00	217	11,873,559.0	6,947,425.5	16.90				Average
		206+00	218	11,873,390.0	6,947,317.5	21.40				Average
		204+00	219	11,873,224.0	6,947,207.0	24.50				Average
		Mt Vernon	220	11,873,087.0	6,947,116.5	26.00				
Roadway5-2	30.0	Cook Inlet	221	11,858,742.0	6,943,349.0	105.00	Signal	0.00	25	Average
		50+00	222	11,858,850.0	6,943,354.0	102.50				Average
		52+00	223	11,859,050.0	6,943,364.0	98.00				Average
		54+00	224	11,859,250.0	6,943,374.5	93.50				Average
		56+00	225	11,859,449.0	6,943,384.0	85.60				Average
		58+00	226	11,859,649.0	6,943,395.0	82.30				Average
		60+00	227	11,859,849.0	6,943,404.0	84.90				Average
		62+00	228	11,860,049.0	6,943,414.0	87.00				Average
		64+00	229	11,860,249.0	6,943,423.5	83.40				Average
		66+00	230	11,860,449.0	6,943,433.5	76.50				Average
		68+00	231	11,860,649.0	6,943,442.5	69.20				Average
		70+00	232	11,860,848.0	6,943,451.5	62.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		72+00	233	11,861,048.0	6,943,461.0	55.40				Average
		74+00	234	11,861,247.0	6,943,470.5	49.70				Average
		76+00	235	11,861,447.0	6,943,479.0	44.60				Average
		78+00	236	11,861,647.0	6,943,488.5	40.00				Average
		80+00	237	11,861,846.0	6,943,498.5	35.70				Average
		82+00	238	11,862,046.0	6,943,507.0	31.50				Average
		84+00	239	11,862,246.0	6,943,516.5	27.70				Average
		86+00	240	11,862,446.0	6,943,526.0	23.70				Average
		88+00	241	11,862,646.0	6,943,534.5	20.70				Average
		90+00	242	11,862,846.0	6,943,544.5	20.30				Average
		92+00	243	11,863,045.0	6,943,554.0	19.40				Average
		94+00	244	11,863,245.0	6,943,562.5	17.90				Average
		96+00	245	11,863,445.0	6,943,572.5	18.90				Average
		98+00	246	11,863,645.0	6,943,582.0	20.00				Average
		100+00	247	11,863,844.0	6,943,591.5	21.50				Average
		102+00	248	11,864,046.0	6,943,614.0	20.80				Average
		Fairfax Co	249	11,864,058.0	6,943,615.5	20.80				
Belvoir Woods In	20.0	1	250	11,856,612.0	6,943,840.0	152.70				Average
		2	251	11,856,616.0	6,943,854.0	152.00				Average
		3	252	11,856,621.0	6,943,881.5	149.90				Average
		4	253	11,856,621.0	6,943,910.5	148.00				Average
		5	254	11,856,613.0	6,943,944.0	146.00				
Belvoir Woods Out	20.0	1	255	11,856,577.0	6,943,935.5	146.00				Average
		2	256	11,856,585.0	6,943,907.0	148.00				Average
		3	257	11,856,583.0	6,943,886.5	150.00				Average
		4	258	11,856,576.0	6,943,866.5	152.00				Average
		5	259	11,856,569.0	6,943,853.0	152.80				
Inlet Cove In	20.0	1	260	11,857,463.0	6,943,573.0	145.40				Average
		2	261	11,857,499.0	6,943,690.0	144.90				
Inlet Cove Out	20.0	1	262	11,857,461.0	6,943,702.0	144.40				Average
		2	263	11,857,425.0	6,943,585.5	145.60				
Roadway3	36.0	1	264	11,853,008.0	6,943,358.0	62.00				Average
		2	265	11,853,181.0	6,943,478.5	74.00				Average
		3	266	11,853,362.0	6,943,573.0	86.00				Average
		4	267	11,853,520.0	6,943,649.5	96.00				Average
		5	268	11,853,704.0	6,943,741.0	108.00				Average
		begin	1	11,853,882.0	6,943,845.0	120.00				Average
		0+00	2	11,854,057.0	6,943,938.0	131.00				Average
		2+00	3	11,854,233.0	6,944,033.5	140.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		4+00	4	11,854,411.0	6,944,116.0	146.00				Average
		6+00	5	11,854,596.0	6,944,174.5	151.40				Average
		Pohick	6	11,854,632.0	6,944,183.0	151.90				
Roadway11	48.0	Pohick	95	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	96	11,854,578.0	6,944,246.5	154.40				Average
		4+00	97	11,854,382.0	6,944,185.5	149.00				Average
		2+00	98	11,854,199.0	6,944,096.5	142.00				Average
		0+00	99	11,854,025.0	6,943,998.5	132.50				Average
		6	275	11,853,867.0	6,943,909.5	122.00				Average
		5	274	11,853,686.0	6,943,809.0	110.00				Average
		4	273	11,853,502.0	6,943,708.5	98.00				Average
		3	272	11,853,317.0	6,943,613.5	86.00				Average
		2	271	11,853,152.0	6,943,530.0	76.00				Average
		1	270	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	276	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	277	11,854,674.0	6,944,353.0	158.00				Average
		3	278	11,854,658.0	6,944,385.0	158.50				Average
		4	279	11,854,648.0	6,944,404.5	158.00				Average
		5	280	11,854,622.0	6,944,446.0	156.00				Average
		6	281	11,854,582.0	6,944,502.5	154.00				Average
		7	282	11,854,544.0	6,944,553.5	152.00				Average
		8	283	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	28.0	1	284	11,854,471.0	6,944,598.0	150.00				Average
		2	285	11,854,509.0	6,944,540.0	152.00				Average
		3	286	11,854,555.0	6,944,476.0	154.00				Average
		4	287	11,854,610.0	6,944,407.0	156.00				Average
		5	288	11,854,627.0	6,944,364.5	156.00				Average
		6	289	11,854,639.0	6,944,332.5	157.60				Average
		7	290	11,854,647.0	6,944,303.0	157.00				
WB Telegraph	40.0	1	291	11,855,956.0	6,944,101.0	150.00	Signal	10.00	100	Average
		2	292	11,855,967.0	6,944,295.0	148.00				Average
		3	293	11,855,962.0	6,944,391.0	148.00				Average
		4	294	11,855,960.0	6,944,489.0	148.00				
EB Telegraph	40.0	1	297	11,855,904.0	6,944,570.5	146.00	Signal	0.00	25	Average
		2	298	11,855,899.0	6,944,329.5	146.00				Average
		3	299	11,855,898.0	6,944,200.5	148.00				Average
		4	300	11,855,888.0	6,944,107.5	149.00				
WB Telegraph 2	24.0	1	302	11,855,780.0	6,943,550.5	134.00				Average
		2	303	11,855,797.0	6,943,606.5	138.00				Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		3	304	11,855,818.0	6,943,662.5	142.00				Average
		4	305	11,855,841.0	6,943,740.0	145.80				Average
		5	306	11,855,856.0	6,943,799.5	148.10				Average
		6	307	11,855,882.0	6,943,897.0	150.00				Average
		7	308	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	309	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	310	11,855,834.0	6,943,815.0	148.00				Average
		3	311	11,855,809.0	6,943,708.5	144.00				Average
		4	312	11,855,789.0	6,943,642.5	140.00				Average
		5	313	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	314	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	315	11,865,506.0	6,943,785.0	36.00				Average
		3	316	11,865,545.0	6,943,721.5	35.20				Average
		4	317	11,865,595.0	6,943,619.5	36.00				Average
		5	318	11,865,633.0	6,943,549.5	38.70				Average
		6	319	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	320	11,865,720.0	6,943,440.0	38.00				Average
		2	321	11,865,671.0	6,943,519.5	36.00				Average
		3	322	11,865,621.0	6,943,617.5	36.00				Average
		4	323	11,865,577.0	6,943,710.0	35.20				Average
		5	324	11,865,547.0	6,943,772.0	36.00				Average
		6	325	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	1	326	11,869,955.0	6,945,047.5	140.90	Signal	10.00	100	Average
		2	327	11,869,979.0	6,945,009.5	142.00				Average
		3	328	11,870,040.0	6,944,867.0	142.00				Average
		4	329	11,870,068.0	6,944,799.0	140.00				Average
		5	330	11,870,122.0	6,944,680.0	138.00				Average
		6	331	11,870,155.0	6,944,598.5	136.00				Average
		7	332	11,870,199.0	6,944,498.0	132.00				Average
		8	333	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	334	11,870,275.0	6,944,429.5	128.00				Average
		2	335	11,870,233.0	6,944,520.0	132.00				Average
		3	336	11,870,181.0	6,944,618.0	136.00				Average
		4	337	11,870,145.0	6,944,695.0	138.00				Average
		5	338	11,870,102.0	6,944,798.0	140.00				Average
		6	339	11,870,062.0	6,944,884.0	142.00				Average
		7	340	11,869,993.0	6,945,016.0	142.00				Average
		8	341	11,869,974.0	6,945,057.0	140.80				
EB Mnt Vernon	30.0	1	342	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		2	343	11,873,010.0	6,946,872.5	30.00				Average
		3	344	11,873,082.0	6,946,744.0	32.00				Average
		4	345	11,873,105.0	6,946,704.5	32.00				Average
		5	346	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	347	11,873,175.0	6,946,615.0	34.00				Average
		2	348	11,873,131.0	6,946,723.5	32.00				Average
		3	349	11,873,116.0	6,946,754.5	32.00				Average
		4	350	11,873,076.0	6,946,831.5	30.50				Average
		5	351	11,873,055.0	6,946,875.0	30.00				Average
		6	352	11,873,000.0	6,946,983.5	28.00				
Roadway42	18.0	1	353	11,865,502.0	6,943,951.0	38.40	Signal	10.00	100	Average
		2	354	11,865,476.0	6,944,307.5	38.00				Average
		3	355	11,865,464.0	6,944,680.0	40.00				
EB Backlick	18.0	1	356	11,865,447.0	6,944,680.0	40.00				Average
		2	357	11,865,466.0	6,944,283.0	38.00				Average
		3	358	11,865,483.0	6,943,952.0	38.40				
Cook Inlet In	20.0	1	359	11,858,794.0	6,943,442.5	102.60				Average
		2	360	11,858,788.0	6,943,510.0	103.30				Average
		3	361	11,858,773.0	6,943,688.5	102.00				
Cook Inlet Out	20.0	1	362	11,858,755.0	6,943,677.5	102.00				Average
		2	363	11,858,749.0	6,943,507.5	103.70				Average
		3	364	11,858,751.0	6,943,440.5	104.20				
Roadway47	40.0	4	379	11,855,960.0	6,944,489.0	148.00	Signal	10.00	25	Average
		5	380	11,855,956.0	6,944,589.0	146.00				Average
		6	393	11,855,942.0	6,944,759.5	148.00				Average
		7	382	11,855,940.0	6,945,006.0	146.00				Average
		8	383	11,855,940.0	6,945,116.5	144.00				Average
		9	384	11,855,939.0	6,945,189.5	142.00				Average
		10	385	11,855,939.0	6,945,244.5	140.00				Average
		point424	386	11,855,929.0	6,945,282.5	138.00				Average
		10	387	11,855,910.0	6,945,351.0	134.00				Average
		11	388	11,855,876.0	6,945,441.0	128.00				Average
		12	396	11,855,841.0	6,945,521.0	122.00				Average
		13	390	11,855,801.0	6,945,593.0	116.00				Average
		14	391	11,855,733.0	6,945,713.0	106.00				Average
		15	392	11,855,689.0	6,945,790.0	100.00				Average
		16	398	11,855,612.0	6,945,910.5	90.00				
Roadway46-2-Roadway46	40.0	point416	365	11,855,581.0	6,945,897.0	90.00	Signal	10.00	100	Average
		5	366	11,855,664.0	6,945,774.0	100.00				Average

**INPUT: ROADWAYS****Route 1 / Fort Belvoir**

		6	367	11,855,718.0	6,945,674.5	108.00				Average	
		7	395	11,855,775.0	6,945,572.0	116.00				Average	
		8	369	11,855,804.0	6,945,514.5	120.00				Average	
		9	370	11,855,840.0	6,945,442.5	126.00				Average	
		10	371	11,855,868.0	6,945,353.0	132.00				Average	
		11	372	11,855,878.0	6,945,289.0	136.00				Average	
		1	373	11,855,885.0	6,945,259.5	138.00				Average	
		2	374	11,855,894.0	6,945,162.0	138.00				Average	
		3	375	11,855,895.0	6,945,098.0	144.00				Average	
		4	376	11,855,895.0	6,945,020.5	146.00				Average	
		5	399	11,855,904.0	6,944,570.5	146.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012											
Greg J Berg		TNM 2.5											
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:		Route 1 / Fort Belvoir											
RUN:		Future No Build w/ Alt C Recievers											
Roadway	Points												
Name	Name	No.	Segment	Autos		MTrucks		HTrucks		Buses		Motorcycles	
				V	S	V	S	V	S	V	S	V	S
				veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Roadway4	Pohick	7	1498	45	47	45	24	45	0	0	0	0	
	8+00	8	1498	45	47	45	24	45	0	0	0	0	
	10+00	9	1498	45	47	45	24	45	0	0	0	0	
	12+00	10	1498	45	47	45	24	45	0	0	0	0	
	14+00	11	1498	45	47	45	24	45	0	0	0	0	
	16+00	12	1498	45	47	45	24	45	0	0	0	0	
	18+00	13	1498	45	47	45	24	45	0	0	0	0	
	Telegraph	14											
Roadway5	Telegraph	15	1498	45	47	45	24	45	0	0	0	0	
	20+00	16	1498	45	47	45	24	45	0	0	0	0	
	22+00	17	1498	45	47	45	24	45	0	0	0	0	
	24+00	18	1498	45	47	45	24	45	0	0	0	0	
	26+00	19	1498	45	47	45	24	45	0	0	0	0	
	28+00	20	1498	45	47	45	24	45	0	0	0	0	
	30+00	21	1498	45	47	45	24	45	0	0	0	0	
	32+00	22	1498	45	47	45	24	45	0	0	0	0	
	34+00	23	1498	45	47	45	24	45	0	0	0	0	
	36+00	24	1498	45	47	45	24	45	0	0	0	0	
	38+00	25	1498	45	47	45	24	45	0	0	0	0	
	40+00	26	1498	45	47	45	24	45	0	0	0	0	
	42+00	27	1498	45	47	45	24	45	0	0	0	0	
	44+00	28	1498	45	47	45	24	45	0	0	0	0	
	46+00	29	1498	45	47	45	24	45	0	0	0	0	

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	48+00	30	1498	45	47	45	24	45	0	0	0	0
	Cook Inlet	31										
Roadway6	Fairfax County	32	1498	45	47	45	24	45	0	0	0	0
	104+00	33	1498	45	47	45	24	45	0	0	0	0
	106+00	34	1498	45	47	45	24	45	0	0	0	0
	108+00	35	1498	45	47	45	24	45	0	0	0	0
	110+00	36	1498	45	47	45	24	45	0	0	0	0
	112+00	37	1498	45	47	45	24	45	0	0	0	0
	114+00	38	1498	45	47	45	24	45	0	0	0	0
	116+00/Backk	39										
Roadway7	116+00/Backk	40	1498	45	47	45	24	45	0	0	0	0
	118+00	41	1498	45	47	45	24	45	0	0	0	0
	120+00	42	1498	45	47	45	24	45	0	0	0	0
	122+00	43	1498	45	47	45	24	45	0	0	0	0
	124+00	44	1498	45	47	45	24	45	0	0	0	0
	126+00	45	1498	45	47	45	24	45	0	0	0	0
	128+00	46	1498	45	47	45	24	45	0	0	0	0
	130+00	47	1498	45	47	45	24	45	0	0	0	0
	132+00	48	1498	45	47	45	24	45	0	0	0	0
	134+00	49	1498	45	47	45	24	45	0	0	0	0
	136+00	50	1498	45	47	45	24	45	0	0	0	0
	138+00	51	1498	45	47	45	24	45	0	0	0	0
	140+00	52	1498	45	47	45	24	45	0	0	0	0
	142+00	53	1498	45	47	45	24	45	0	0	0	0
	144+00	54	1498	45	47	45	24	45	0	0	0	0
	146+00	55	1498	45	47	45	24	45	0	0	0	0
	148+00	56	1498	45	47	45	24	45	0	0	0	0
	150+00	57	1498	45	47	45	24	45	0	0	0	0
	152+00	58	1498	45	47	45	24	45	0	0	0	0
	154+00	59	1498	45	47	45	24	45	0	0	0	0
	156+00	60	1498	45	47	45	24	45	0	0	0	0
	158+00	61	1498	45	47	45	24	45	0	0	0	0
	160+00	62	1498	45	47	45	24	45	0	0	0	0
	162+00	63	1498	45	47	45	24	45	0	0	0	0
	Belvoir	64										
Roadway8	Belvoir	65	1498	45	47	45	24	45	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	164+00	66	1498	45	47	45	24	45	0	0	0	0
	166+00	67	1498	45	47	45	24	45	0	0	0	0
	168+00	68	1498	45	47	45	24	45	0	0	0	0
	170+00	69	1498	45	47	45	24	45	0	0	0	0
	172+00	70	1498	45	47	45	24	45	0	0	0	0
	174+00/Wood	71										
Roadway9	174+00/Wood	72	1498	45	47	45	24	45	0	0	0	0
	176+00	73	1498	45	47	45	24	45	0	0	0	0
	178+00	74	1498	45	47	45	24	45	0	0	0	0
	180+00	75	1498	45	47	45	24	45	0	0	0	0
	182+00	76	1498	45	47	45	24	45	0	0	0	0
	184+00	77	1498	45	47	45	24	45	0	0	0	0
	186+00	78	1498	45	47	45	24	45	0	0	0	0
	188+00	79	1498	45	47	45	24	45	0	0	0	0
	190+00	80	1498	45	47	45	24	45	0	0	0	0
	192+00	81	1498	45	47	45	24	45	0	0	0	0
	194+00	82	1498	45	47	45	24	45	0	0	0	0
	196+00	83	1498	45	47	45	24	45	0	0	0	0
	198+00	84	1498	45	47	45	24	45	0	0	0	0
	200+00/Mt Ver	85										
Roadway10	200+00/Mt Ver	86	1498	45	47	45	24	45	0	0	0	0
	202+00	87	1498	45	47	45	24	45	0	0	0	0
	204+00	88	1498	45	47	45	24	45	0	0	0	0
	206+00	89	1498	45	47	45	24	45	0	0	0	0
	208+00	90	1498	45	47	45	24	45	0	0	0	0
	210+00	91	1498	45	47	45	24	45	0	0	0	0
	212+00	92	1498	45	47	45	24	45	0	0	0	0
	214+00	93	1498	45	47	45	24	45	0	0	0	0
	End	94										
Roadway12	Telegraph	101	2333	30	58	30	137	30	0	0	0	0
	20+00	102	2333	30	58	30	137	30	0	0	0	0
	18+00	103	2333	30	58	30	137	30	0	0	0	0
	16+00	104	2333	30	58	30	137	30	0	0	0	0
	14+00	105	2333	30	58	30	137	30	0	0	0	0
	12+00	106	2333	30	58	30	137	30	0	0	0	0
	10+00	107	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	8+00	108	2333	30	58	30	137	30	0	0	0	0
	Pohick	109										
Roadway13	Cook Inlet	110	2333	30	58	30	137	30	0	0	0	0
	48+00	111	2333	30	58	30	137	30	0	0	0	0
	46+00	112	2333	30	58	30	137	30	0	0	0	0
	44+00	113	2333	30	58	30	137	30	0	0	0	0
	42+00	114	2333	30	58	30	137	30	0	0	0	0
	40+00	115	2333	30	58	30	137	30	0	0	0	0
	38+00	116	2333	30	58	30	137	30	0	0	0	0
	36+00	117	2333	30	58	30	137	30	0	0	0	0
	34+00	118	2333	30	58	30	137	30	0	0	0	0
	32+00	119	2333	30	58	30	137	30	0	0	0	0
	30+00	120	2333	30	58	30	137	30	0	0	0	0
	28+00	121	2333	30	58	30	137	30	0	0	0	0
	26+00	122	2333	30	58	30	137	30	0	0	0	0
	24+00	123	2333	30	58	30	137	30	0	0	0	0
	22+00	124	2333	30	58	30	137	30	0	0	0	0
	Telegraph	125										
Roadway14	Fairfax County	126	2333	30	58	30	137	30	0	0	0	0
	102+00	127	2333	30	58	30	137	30	0	0	0	0
	100+00	128	2333	30	58	30	137	30	0	0	0	0
	98+00	129	2333	30	58	30	137	30	0	0	0	0
	96+00	130	2333	30	58	30	137	30	0	0	0	0
	94+00	131	2333	30	58	30	137	30	0	0	0	0
	92+00	132	2333	30	58	30	137	30	0	0	0	0
	90+00	133	2333	30	58	30	137	30	0	0	0	0
	88+00	134	2333	30	58	30	137	30	0	0	0	0
	86+00	135	2333	30	58	30	137	30	0	0	0	0
	84+00	136	2333	30	58	30	137	30	0	0	0	0
	82+00	137	2333	30	58	30	137	30	0	0	0	0
	80+00	138	2333	30	58	30	137	30	0	0	0	0
	78+00	139	2333	30	58	30	137	30	0	0	0	0
	76+00	140	2333	30	58	30	137	30	0	0	0	0
	74+00	141	2333	30	58	30	137	30	0	0	0	0
	72+00	142	2333	30	58	30	137	30	0	0	0	0
	70+00	143	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	68+00	144	2333	30	58	30	137	30	0	0	0	0
	66+00	145	2333	30	58	30	137	30	0	0	0	0
	64+00	146	2333	30	58	30	137	30	0	0	0	0
	62+00	147	2333	30	58	30	137	30	0	0	0	0
	60+00	148	2333	30	58	30	137	30	0	0	0	0
	58+00	149	2333	30	58	30	137	30	0	0	0	0
	56+00	150	2333	30	58	30	137	30	0	0	0	0
	54+00	151	2333	30	58	30	137	30	0	0	0	0
	52+00	152	2333	30	58	30	137	30	0	0	0	0
	50+00	153	2333	30	58	30	137	30	0	0	0	0
	Cook Inlet	154										
Roadway15	Backkick	155	2333	30	58	30	137	30	0	0	0	0
	116+00	156	2333	30	58	30	137	30	0	0	0	0
	114+00	157	2333	30	58	30	137	30	0	0	0	0
	112+00	158	2333	30	58	30	137	30	0	0	0	0
	110+00	159	2333	30	58	30	137	30	0	0	0	0
	108+00	160	2333	30	58	30	137	30	0	0	0	0
	106+00	161	2333	30	58	30	137	30	0	0	0	0
	104+00	162	2333	30	58	30	137	30	0	0	0	0
	Fairfax County	163										
Roadway16	Belvoir	164	2333	30	58	30	137	30	0	0	0	0
	162+00	165	2333	30	58	30	137	30	0	0	0	0
	160+00	166	2333	30	58	30	137	30	0	0	0	0
	158+00	167	2333	30	58	30	137	30	0	0	0	0
	156+00	168	2333	30	58	30	137	30	0	0	0	0
	154+00	169	2333	30	58	30	137	30	0	0	0	0
	152+00	170	2333	30	58	30	137	30	0	0	0	0
	150+00	171	2333	30	58	30	137	30	0	0	0	0
	148+00	172	2333	30	58	30	137	30	0	0	0	0
	146+00	173	2333	30	58	30	137	30	0	0	0	0
	144+00	174	2333	30	58	30	137	30	0	0	0	0
	142+00	175	2333	30	58	30	137	30	0	0	0	0
	140+00	176	2333	30	58	30	137	30	0	0	0	0
	138+00	177	2333	30	58	30	137	30	0	0	0	0
	136+00	178	2333	30	58	30	137	30	0	0	0	0
	134+00	179	2333	30	58	30	137	30	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	132+00	180	2333	30	58	30	137	30	0	0	0	0
	130+00	181	2333	30	58	30	137	30	0	0	0	0
	128+00	182	2333	30	58	30	137	30	0	0	0	0
	126+00	183	2333	30	58	30	137	30	0	0	0	0
	124+00	184	2333	30	58	30	137	30	0	0	0	0
	122+00	185	2333	30	58	30	137	30	0	0	0	0
	120+00	186	2333	30	58	30	137	30	0	0	0	0
	118+00	187	2333	30	58	30	137	30	0	0	0	0
	Backkick	188										
Roadway17	Woodlawn	189	2333	30	58	30	137	30	0	0	0	0
	174+00	190	2333	30	58	30	137	30	0	0	0	0
	172+00	191	2333	30	58	30	137	30	0	0	0	0
	170+00	192	2333	30	58	30	137	30	0	0	0	0
	168+00	193	2333	30	58	30	137	30	0	0	0	0
	166+00	194	2333	30	58	30	137	30	0	0	0	0
	164+00	195	2333	30	58	30	137	30	0	0	0	0
	Belvoir	196										
Roadway18	Mt Vernon	197	2333	30	58	30	137	30	0	0	0	0
	202+00	198	2333	30	58	30	137	30	0	0	0	0
	200+00	199	2333	30	58	30	137	30	0	0	0	0
	198+00	200	2333	30	58	30	137	30	0	0	0	0
	196+00	201	2333	30	58	30	137	30	0	0	0	0
	194+00	202	2333	30	58	30	137	30	0	0	0	0
	192+00	203	2333	30	58	30	137	30	0	0	0	0
	190+00	204	2333	30	58	30	137	30	0	0	0	0
	188+00	205	2333	30	58	30	137	30	0	0	0	0
	186+00	206	2333	30	58	30	137	30	0	0	0	0
	184+00	207	2333	30	58	30	137	30	0	0	0	0
	182+00	208	2333	30	58	30	137	30	0	0	0	0
	180+00	209	2333	30	58	30	137	30	0	0	0	0
	178+00	210	2333	30	58	30	137	30	0	0	0	0
	176+00	211	2333	30	58	30	137	30	0	0	0	0
	Woodlawn	212										
Roadway19	Begin	213	2333	30	58	30	137	30	0	0	0	0
	214+00	214	2333	30	58	30	137	30	0	0	0	0
	212+00	215	2333	30	58	30	137	30	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	210+00	216	2333	30	58	30	137	30	0	0	0	0
	208+00	217	2333	30	58	30	137	30	0	0	0	0
	206+00	218	2333	30	58	30	137	30	0	0	0	0
	204+00	219	2333	30	58	30	137	30	0	0	0	0
	Mt Vernon	220										
Roadway5-2	Cook Inlet	221	1498	45	47	45	24	45	0	0	0	0
	50+00	222	1498	45	47	45	24	45	0	0	0	0
	52+00	223	1498	45	47	45	24	45	0	0	0	0
	54+00	224	1498	45	47	45	24	45	0	0	0	0
	56+00	225	1498	45	47	45	24	45	0	0	0	0
	58+00	226	1498	45	47	45	24	45	0	0	0	0
	60+00	227	1498	45	47	45	24	45	0	0	0	0
	62+00	228	1498	45	47	45	24	45	0	0	0	0
	64+00	229	1498	45	47	45	24	45	0	0	0	0
	66+00	230	1498	45	47	45	24	45	0	0	0	0
	68+00	231	1498	45	47	45	24	45	0	0	0	0
	70+00	232	1498	45	47	45	24	45	0	0	0	0
	72+00	233	1498	45	47	45	24	45	0	0	0	0
	74+00	234	1498	45	47	45	24	45	0	0	0	0
	76+00	235	1498	45	47	45	24	45	0	0	0	0
	78+00	236	1498	45	47	45	24	45	0	0	0	0
	80+00	237	1498	45	47	45	24	45	0	0	0	0
	82+00	238	1498	45	47	45	24	45	0	0	0	0
	84+00	239	1498	45	47	45	24	45	0	0	0	0
	86+00	240	1498	45	47	45	24	45	0	0	0	0
	88+00	241	1498	45	47	45	24	45	0	0	0	0
	90+00	242	1498	45	47	45	24	45	0	0	0	0
	92+00	243	1498	45	47	45	24	45	0	0	0	0
	94+00	244	1498	45	47	45	24	45	0	0	0	0
	96+00	245	1498	45	47	45	24	45	0	0	0	0
	98+00	246	1498	45	47	45	24	45	0	0	0	0
	100+00	247	1498	45	47	45	24	45	0	0	0	0
	102+00	248	1498	45	47	45	24	45	0	0	0	0
	Fairfax County	249										
Belvoir Woods In	1	250	0	0	0	0	0	0	0	0	0	0
	2	251	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	252	0	0	0	0	0	0	0	0	0	0
	4	253	0	0	0	0	0	0	0	0	0	0
	5	254										
Belvoir Woods Out	1	255	0	0	0	0	0	0	0	0	0	0
	2	256	0	0	0	0	0	0	0	0	0	0
	3	257	0	0	0	0	0	0	0	0	0	0
	4	258	0	0	0	0	0	0	0	0	0	0
	5	259										
Inlet Cove In	1	260	0	0	0	0	0	0	0	0	0	0
	2	261										
Inlet Cove Out	1	262	0	0	0	0	0	0	0	0	0	0
	2	263										
Roadway3	1	264	1498	45	47	45	24	45	0	0	0	0
	2	265	1498	45	47	45	24	45	0	0	0	0
	3	266	1498	45	47	45	24	45	0	0	0	0
	4	267	1498	45	47	45	24	45	0	0	0	0
	5	268	1498	45	47	45	24	45	0	0	0	0
	begin	1	1498	45	47	45	24	45	0	0	0	0
	0+00	2	1498	45	47	45	24	45	0	0	0	0
	2+00	3	1498	45	47	45	24	45	0	0	0	0
	4+00	4	1498	45	47	45	24	45	0	0	0	0
	6+00	5	1498	45	47	45	24	45	0	0	0	0
	Pohick	6										
Roadway11	Pohick	95	2333	30	58	30	137	30	0	0	0	0
	6+00	96	2333	30	58	30	137	30	0	0	0	0
	4+00	97	2333	30	58	30	137	30	0	0	0	0
	2+00	98	2333	30	58	30	137	30	0	0	0	0
	0+00	99	2333	30	58	30	137	30	0	0	0	0
	6	275	2333	30	58	30	137	30	0	0	0	0
	5	274	2333	30	58	30	137	30	0	0	0	0
	4	273	2333	30	58	30	137	30	0	0	0	0
	3	272	2333	30	58	30	137	30	0	0	0	0
	2	271	2333	30	58	30	137	30	0	0	0	0
	1	270										
WB Pohick West	1	276	978	29	27	29	38	29	0	0	0	0
	2	277	978	29	27	29	38	29	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	278	978	29	27	29	38	29	0	0	0	0
	4	279	978	29	27	29	38	29	0	0	0	0
	5	280	978	29	27	29	38	29	0	0	0	0
	6	281	978	29	27	29	38	29	0	0	0	0
	7	282	978	29	27	29	38	29	0	0	0	0
	8	283										
EB Pohick West	1	284	807	32	22	32	31	32	0	0	0	0
	2	285	807	32	22	32	31	32	0	0	0	0
	3	286	807	32	22	32	31	32	0	0	0	0
	4	287	807	32	22	32	31	32	0	0	0	0
	5	288	807	32	22	32	31	32	0	0	0	0
	6	289	807	32	22	32	31	32	0	0	0	0
	7	290										
WB Telegraph	1	291	539	41	15	41	21	41	0	0	0	0
	2	292	539	41	15	41	21	41	0	0	0	0
	3	293	539	41	15	41	21	41	0	0	0	0
	4	294										
EB Telegraph	1	297	2161	15	60	15	83	15	0	0	0	0
	2	298	2161	15	60	15	83	15	0	0	0	0
	3	299	2161	15	60	15	83	15	0	0	0	0
	4	300										
WB Telegraph 2	1	302	539	41	15	41	21	41	0	0	0	0
	2	303	539	41	15	41	21	41	0	0	0	0
	3	304	539	41	15	41	21	41	0	0	0	0
	4	305	539	41	15	41	21	41	0	0	0	0
	5	306	539	41	15	41	21	41	0	0	0	0
	6	307	539	41	15	41	21	41	0	0	0	0
	7	308										
EB Telegraph 2	1	309	2161	15	60	15	83	15	0	0	0	0
	2	310	2161	15	60	15	83	15	0	0	0	0
	3	311	2161	15	60	15	83	15	0	0	0	0
	4	312	2161	15	60	15	83	15	0	0	0	0
	5	313										
EB Pohick	1	314	316	33	9	33	12	33	0	0	0	0
	2	315	316	33	9	33	12	33	0	0	0	0
	3	316	316	33	9	33	12	33	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	317	316	33	9	33	12	33	0	0	0	0
	5	318	316	33	9	33	12	33	0	0	0	0
	6	319										
WB Pohick	1	320	821	23	23	23	32	23	0	0	0	0
	2	321	821	23	23	23	32	23	0	0	0	0
	3	322	821	23	23	23	32	23	0	0	0	0
	4	323	821	23	23	23	32	23	0	0	0	0
	5	324	821	23	23	23	32	23	0	0	0	0
	6	325										
EB Belvoir	1	326	292	33	8	33	11	33	0	0	0	0
	2	327	292	33	8	33	11	33	0	0	0	0
	3	328	292	33	8	33	11	33	0	0	0	0
	4	329	292	33	8	33	11	33	0	0	0	0
	5	330	292	33	8	33	11	33	0	0	0	0
	6	331	292	33	8	33	11	33	0	0	0	0
	7	332	292	33	8	33	11	33	0	0	0	0
	8	333										
WB Belvoir	1	334	887	21	25	21	34	21	0	0	0	0
	2	335	887	21	25	21	34	21	0	0	0	0
	3	336	887	21	25	21	34	21	0	0	0	0
	4	337	887	21	25	21	34	21	0	0	0	0
	5	338	887	21	25	21	34	21	0	0	0	0
	6	339	887	21	25	21	34	21	0	0	0	0
	7	340	887	21	25	21	34	21	0	0	0	0
	8	341										
EB Mnt Vernon	1	342	495	36	14	36	19	36	0	0	0	0
	2	343	495	36	14	36	19	36	0	0	0	0
	3	344	495	36	14	36	19	36	0	0	0	0
	4	345	495	36	14	36	19	36	0	0	0	0
	5	346										
WB Mnt Vernon	1	347	654	29	18	29	25	29	0	0	0	0
	2	348	654	29	18	29	25	29	0	0	0	0
	3	349	654	29	18	29	25	29	0	0	0	0
	4	350	654	29	18	29	25	29	0	0	0	0
	5	351	654	29	18	29	25	29	0	0	0	0
	6	352										

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Roadway42	1	353	310	30	9	30	12	30	0	0	0	0
	2	354	310	30	9	30	12	30	0	0	0	0
	3	355										
EB Backlick	1	356	100	30	3	30	4	30	0	0	0	0
	2	357	100	30	3	30	4	30	0	0	0	0
	3	358										
Cook Inlet In	1	359	0	0	0	0	0	0	0	0	0	0
	2	360	0	0	0	0	0	0	0	0	0	0
	3	361										
Cook Inlet Out	1	362	0	0	0	0	0	0	0	0	0	0
	2	363	0	0	0	0	0	0	0	0	0	0
	3	364										
Roadway47	4	379	539	41	15	41	21	41	0	0	0	0
	5	380	539	41	15	41	21	41	0	0	0	0
	6	393	539	41	15	41	21	41	0	0	0	0
	7	382	539	41	15	41	21	41	0	0	0	0
	8	383	539	41	15	41	21	41	0	0	0	0
	9	384	539	41	15	41	21	41	0	0	0	0
	10	385	539	41	15	41	21	41	0	0	0	0
	point424	386	539	41	15	41	21	41	0	0	0	0
	10	387	539	41	15	41	21	41	0	0	0	0
	11	388	539	41	15	41	21	41	0	0	0	0
	12	396	539	41	15	41	21	41	0	0	0	0
	13	390	539	41	15	41	21	41	0	0	0	0
	14	391	539	41	15	41	21	41	0	0	0	0
	15	392	539	41	15	41	21	41	0	0	0	0
	16	398										
Roadway46-2-Roadway46	point416	365	2161	15	60	15	83	15	0	0	0	0
	5	366	2161	15	60	15	83	15	0	0	0	0
	6	367	2161	15	60	15	83	15	0	0	0	0
	7	395	2161	15	60	15	83	15	0	0	0	0
	8	369	2161	15	60	15	83	15	0	0	0	0
	9	370	2161	15	60	15	83	15	0	0	0	0
	10	371	2161	15	60	15	83	15	0	0	0	0
	11	372	2161	15	60	15	83	15	0	0	0	0
	1	373	2161	15	60	15	83	15	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes****Route 1 / Fort Belvoir**

	2	374	2161	15	60	15	83	15	0	0	0	0
	3	375	2161	15	60	15	83	15	0	0	0	0
	4	376	2161	15	60	15	83	15	0	0	0	0
	5	399										





**INPUT: RECEIVERS****Route 1 / Fort Belvoir**

R88	23	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0	
R89	24	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0	
R90	25	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0	
R91	26	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0	
R92	27	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0	
R93	28	1	11,871,859.0	6,946,107.0	54.00	5.00	62.00	66	10.0	5.0	
R94	29	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0	
R114	30	1	11,870,750.0	6,945,703.0	127.00	5.00	0.00	66	10.0	5.0	
R115	31	1	11,870,683.0	6,945,497.5	130.00	5.00	0.00	66	10.0	5.0	
R116	32	1	11,870,747.0	6,945,580.5	127.50	5.00	0.00	66	10.0	5.0	
R117	33	1	11,870,823.0	6,945,638.0	127.00	5.00	0.00	66	10.0	5.0	
R118	34	1	11,870,890.0	6,945,713.0	126.50	5.00	0.00	66	10.0	5.0	
R119	35	1	11,870,955.0	6,945,789.5	125.00	5.00	0.00	66	10.0	5.0	
R120	36	1	11,870,834.0	6,945,497.5	128.00	5.00	68.00	66	10.0	5.0	
R121	37	1	11,870,899.0	6,945,571.5	128.00	5.00	0.00	66	10.0	5.0	
R122	38	1	11,870,967.0	6,945,645.5	126.50	5.00	0.00	66	10.0	5.0	
R123	39	1	11,872,061.0	6,946,338.0	57.00	5.00	0.00	66	10.0	5.0	
R124	40	1	11,872,158.0	6,946,366.5	53.00	5.00	0.00	66	10.0	5.0	
R125	41	1	11,872,254.0	6,946,397.0	47.50	5.00	72.00	66	10.0	5.0	
R126	42	1	11,872,338.0	6,946,450.0	43.50	5.00	0.00	66	10.0	5.0	
R127	43	1	11,872,422.0	6,946,504.0	40.00	5.00	0.00	66	10.0	5.0	
R128	44	1	11,872,308.0	6,946,312.5	45.00	5.00	0.00	66	10.0	5.0	
R129	45	1	11,872,391.0	6,946,366.5	41.00	5.00	0.00	66	10.0	5.0	
R130	124	1	11,872,476.0	6,946,419.5	37.50	5.00	0.00	66	10.0	5.0	Y
R131	126	1	11,872,362.0	6,946,228.5	41.00	5.00	0.00	66	10.0	5.0	Y
R132	127	1	11,872,445.0	6,946,281.5	39.00	5.00	0.00	66	10.0	5.0	Y
R133	128	1	11,872,530.0	6,946,335.5	37.00	5.00	0.00	66	10.0	5.0	Y

INPUT: BARRIERS

Route 1 / Fort Belvoir

Parsons									27 November 2012									
Greg J Berg									TNM 2.5									
INPUT: BARRIERS																		
PROJECT/CONTRACT: Route 1 / Fort Belvoir																		
RUN: Future No Build w/ Alt C Recievers																		
Barrier									Points									
Name	Type	Height		If Wall	If Berm	Run:Rise		Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment			
		Min	Max	\$ per Unit	\$ per Unit	Top Width	ft:ft	\$ per Unit			X	Y	Z	at Point	Seg Ht	Perturbs	On	
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft	#Up	#Dn	Struct?
				Area	Vol.			Length							ment			Reflec-tions?
3 story Building	W	0.00	99.99	0.00				0.00	1	1	11,864,761.0	6,943,854.5	31.00	40.00	0.00	0	0	
									2	2	11,864,768.0	6,944,026.0	31.00	40.00	0.00	0	0	
									3	3	11,864,961.0	6,944,060.0	31.00	40.00				
Stores	W	0.00	99.99	0.00				0.00	1	4	11,865,208.0	6,943,945.0	38.00	12.00	0.00	0	0	
									2	5	11,865,367.0	6,944,028.0	38.00	12.00				
House21	W	0.00	99.99	0.00				0.00	1	6	11,865,112.0	6,944,077.5	33.00	15.00	0.00	0	0	
									2	7	11,865,167.0	6,944,061.0	33.00	15.00				
Shed	W	0.00	99.99	0.00				0.00	1	8	11,865,169.0	6,944,137.0	33.50	8.00	0.00	0	0	
									2	9	11,865,215.0	6,944,147.0	33.50	8.00				
Baptist Church	W	0.00	99.99	0.00				0.00	1	10	11,871,129.0	6,945,807.0	123.00	25.00	0.00	0	0	
									2	11	11,871,126.0	6,945,924.5	123.00	25.00	0.00	0	0	
									3	12	11,871,231.0	6,945,929.0	123.00	25.00				
Pool House	W	0.00	99.99	0.00				0.00	1	13	11,858,542.0	6,943,540.5	107.00	15.00	0.00	0	0	
									2	14	11,858,556.0	6,943,496.0	107.00	15.00				
House1	W	0.00	99.99	0.00				0.00	1	15	11,854,305.0	6,944,440.0	144.00	30.00	0.00	0	0	
									2	16	11,854,386.0	6,944,279.0	148.00	30.00				
House2	W	0.00	99.99	0.00				0.00	1	17	11,854,499.0	6,944,369.0	144.00	30.00	0.00	0	0	
									2	18	11,854,387.0	6,944,514.5	154.00	30.00				
House3	W	0.00	99.99	0.00				0.00	1	19	11,854,806.0	6,944,451.0	154.00	30.00	0.00	0	0	
									2	20	11,854,690.0	6,944,567.5	156.00	30.00				
House4	W	0.00	99.99	0.00				0.00	1	21	11,854,979.0	6,944,396.5	154.00	30.00	0.00	0	0	
									2	22	11,855,018.0	6,944,470.0	150.00	30.00				
House5	W	0.00	99.99	0.00				0.00	1	23	11,855,484.0	6,944,495.0	141.00	30.00	0.00	0	0	
									2	24	11,855,462.0	6,944,578.5	138.00	30.00				
House6	W	0.00	99.99	0.00				0.00	1	25	11,855,568.0	6,944,649.0	137.00	30.00	0.00	0	0	
									2	26	11,855,607.0	6,944,536.5	142.00	30.00				
House7	W	0.00	99.99	0.00				0.00	1	27	11,856,789.0	6,943,892.5	139.00	40.00	0.00	0	0	
									2	28	11,856,701.0	6,944,135.5	132.00	40.00				
House8	W	0.00	99.99	0.00				0.00	1	29	11,856,847.0	6,944,152.5	130.00	40.00	0.00	0	0	
									2	30	11,856,942.0	6,943,887.5	137.00	40.00				
House9	W	0.00	99.99	0.00				0.00	1	31	11,857,179.0	6,944,044.0	128.00	40.00	0.00	0	0	
									2	32	11,857,156.0	6,943,857.0	131.00	40.00				
House10	W	0.00	99.99	0.00				0.00	1	33	11,857,237.0	6,943,771.5	132.00	40.00	0.00	0	0	
									2	34	11,857,407.0	6,943,753.5	138.00	40.00				
House11	W	0.00	99.99	0.00				0.00	1	35	11,857,605.0	6,943,632.0	144.00	40.00	0.00	0	0	

INPUT: BARRIERS

Route 1 / Fort Belvoir

									2	36	11,857,649.0	6,943,771.5	142.00	40.00				
House12	W	0.00	99.99	0.00			0.00	1	37	11,857,695.0	6,943,795.5	137.00	40.00	0.00	0	0		
								2	38	11,857,638.0	6,943,619.0	138.00	40.00					
House13	W	0.00	99.99	0.00			0.00	1	39	11,857,754.0	6,943,589.0	138.00	40.00	0.00	0	0		
								2	40	11,857,780.0	6,943,681.5	136.00	40.00					
House14	W	0.00	99.99	0.00			0.00	1	41	11,857,817.0	6,943,667.5	134.00	40.00	0.00	0	0		
								2	42	11,857,789.0	6,943,576.0	136.00	40.00					
House15	W	0.00	99.99	0.00			0.00	1	43	11,857,895.0	6,943,542.0	132.00	40.00	0.00	0	0		
								2	44	11,857,978.0	6,943,826.5	126.00	40.00					
House16	W	0.00	99.99	0.00			0.00	1	45	11,858,018.0	6,943,812.5	124.00	40.00	0.00	0	0		
								2	46	11,857,932.0	6,943,529.5	128.00	40.00					
House17	W	0.00	99.99	0.00			0.00	1	47	11,858,816.0	6,943,611.5	104.00	40.00	0.00	0	0		
								2	48	11,858,874.0	6,943,545.0	106.00	40.00					
House18	W	0.00	99.99	0.00			0.00	1	49	11,858,935.0	6,943,550.0	106.00	40.00	0.00	0	0		
								2	50	11,858,959.0	6,943,519.5	106.00	40.00	0.00	0	0		
								3	51	11,859,025.0	6,943,581.0	106.00	40.00					
House19	W	0.00	99.99	0.00			0.00	1	52	11,858,912.0	6,943,765.5	107.00	40.00	0.00	0	0		
								2	53	11,859,048.0	6,943,591.5	106.00	40.00	0.00	0	0		
								3	54	11,859,112.0	6,943,641.0	104.00	40.00					
House20	W	0.00	99.99	0.00			0.00	1	55	11,859,157.0	6,943,687.5	102.00	40.00	0.00	0	0		
								2	56	11,859,229.0	6,943,738.5	102.00	40.00					
Barrier28	W	0.00	99.99	0.00			0.00	1	57	11,865,545.0	6,944,090.5	40.00	25.00	0.00	0	0		
								2	58	11,865,673.0	6,944,094.0	40.00	25.00	0.00	0	0		
								3	59	11,865,671.0	6,944,008.5	40.00	25.00					
Barrier29	W	0.00	99.99	0.00			0.00	1	60	11,865,659.0	6,944,175.5	40.00	25.00	0.00	0	0		
								2	61	11,865,550.0	6,944,224.0	40.00	25.00					
Cemetary Wall	W	0.00	99.99	0.00			0.00	1	62	11,855,362.0	6,944,060.0	144.00	5.00	0.00	0	0		
								2	63	11,855,376.0	6,944,064.5	145.00	5.00	0.00	0	0		
								3	64	11,855,420.0	6,944,049.5	146.00	5.00	0.00	0	0		
								4	65	11,855,442.0	6,944,041.5	146.00	5.00	0.00	0	0		
								5	66	11,855,470.0	6,944,032.0	148.00	5.00	0.00	0	0		
								6	67	11,855,537.0	6,944,008.5	148.50	5.00	0.00	0	0		
								7	68	11,855,543.0	6,943,996.0	149.00	5.00					
Barrier31	W	0.00	99.99	0.00			0.00	point69	69	11,855,802.0	6,944,999.5	144.00	30.00	0.00	0	0		
								point70	70	11,855,692.0	6,944,999.0	140.00	30.00					
Barrier32	W	0.00	99.99	0.00			0.00	point71	71	11,855,684.0	6,944,790.0	142.00	30.00	0.00	0	0		
								point72	72	11,855,766.0	6,944,788.5	144.00	30.00					
Barrier33	W	0.00	99.99	0.00			0.00	1	73	11,871,883.0	6,946,150.0	54.00	12.00	0.00	0	0		
								2	74	11,872,030.0	6,946,181.5	51.00	12.00	0.00	0	0		
								3	75	11,872,177.0	6,946,209.0	47.00	12.00					

**INPUT: TERRAIN LINES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012
Greg J Berg				TNM 2.5
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 / Fort Belvoir</b>			
<b>RUN:</b>	<b>Future No Build w/ Alt C Recievers</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
	9	11,855,042.0	6,944,337.0	162.90
	10	11,855,097.0	6,944,331.0	164.00
	11	11,855,125.0	6,944,327.0	163.30
	12	11,855,155.0	6,944,326.5	162.90
	13	11,855,188.0	6,944,317.5	160.70
	14	11,855,226.0	6,944,312.0	161.40
	15	11,855,314.0	6,944,286.0	160.00
	16	11,855,410.0	6,944,256.5	158.00
	17	11,855,497.0	6,944,232.5	156.50
	18	11,855,525.0	6,944,236.5	157.10
	19	11,855,568.0	6,944,248.5	156.00
	20	11,855,607.0	6,944,279.5	148.00
Terrain Line3	21	11,854,720.0	6,944,333.5	158.00
	22	11,854,749.0	6,944,327.5	158.00
	23	11,854,840.0	6,944,333.5	158.40
	24	11,855,027.0	6,944,327.5	157.80

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	25	11,855,062.0	6,944,320.0	156.20
	26	11,855,188.0	6,944,301.0	154.10
	27	11,855,298.0	6,944,273.0	152.00
	28	11,855,415.0	6,944,234.5	150.40
	29	11,855,554.0	6,944,188.5	150.80
	30	11,855,604.0	6,944,189.0	152.00
	31	11,855,623.0	6,944,227.5	150.00
	32	11,855,622.0	6,944,248.0	148.00
	33	11,855,599.0	6,944,298.5	147.80
	34	11,855,569.0	6,944,315.5	148.00
	35	11,855,516.0	6,944,294.0	144.00
	36	11,855,478.0	6,944,288.0	142.00
	37	11,855,466.0	6,944,284.0	142.00
	38	11,855,378.0	6,944,309.0	142.00
	39	11,855,300.0	6,944,324.5	146.00
	40	11,855,261.0	6,944,337.0	146.00
	41	11,855,178.0	6,944,350.5	152.10
	42	11,855,122.0	6,944,348.0	157.50
	43	11,855,001.0	6,944,363.0	156.10
	44	11,854,941.0	6,944,381.5	156.00
	45	11,854,841.0	6,944,372.0	158.00
	46	11,854,831.0	6,944,394.5	158.00
	47	11,854,756.0	6,944,356.5	159.40
Terrain Line17	48	11,856,688.0	6,943,853.0	154.00
	49	11,856,738.0	6,943,836.5	154.60
	50	11,856,769.0	6,943,834.5	155.10
	51	11,856,812.0	6,943,819.0	154.00
	52	11,856,866.0	6,943,800.0	152.00
	53	11,856,921.0	6,943,788.0	148.00
	54	11,856,993.0	6,943,783.5	140.00
	55	11,857,046.0	6,943,779.0	128.00
	56	11,857,114.0	6,943,780.0	128.00
	57	11,857,155.0	6,943,780.5	128.00
	58	11,857,188.0	6,943,747.5	130.00
	59	11,857,230.0	6,943,693.5	136.00
	60	11,857,268.0	6,943,676.0	138.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	61	11,857,304.0	6,943,662.0	140.00
Terrain Line20	85	11,858,137.0	6,943,439.0	138.00
	86	11,858,246.0	6,943,466.5	138.00
	87	11,858,300.0	6,943,487.0	134.00
Terrain Line22	102	11,857,498.0	6,943,629.5	146.00
	103	11,857,525.0	6,943,621.5	146.00
	104	11,857,550.0	6,943,608.5	144.00
	105	11,857,595.0	6,943,598.5	142.00
	106	11,857,629.0	6,943,589.5	138.00
	107	11,857,651.0	6,943,595.5	135.30
	108	11,857,665.0	6,943,584.0	138.00
	109	11,857,708.0	6,943,567.0	142.00
	110	11,857,744.0	6,943,570.5	144.00
	111	11,857,818.0	6,943,549.0	146.00
	112	11,857,856.0	6,943,537.0	146.00
	113	11,857,894.0	6,943,525.0	144.00
	114	11,857,920.0	6,943,516.5	140.00
	115	11,857,947.0	6,943,503.0	138.00
	116	11,857,963.0	6,943,495.5	136.00
	117	11,857,959.0	6,943,498.0	134.00
	118	11,857,937.0	6,943,513.0	132.00
	119	11,857,916.0	6,943,519.0	134.00
	120	11,857,879.0	6,943,531.5	136.00
	121	11,857,855.0	6,943,539.0	138.00
	122	11,857,790.0	6,943,560.5	140.00
	123	11,857,749.0	6,943,574.0	142.00
Terrain Line23	124	11,857,963.0	6,943,495.5	136.00
	125	11,857,999.0	6,943,492.0	134.00
	126	11,858,010.0	6,943,490.0	136.00
	127	11,858,036.0	6,943,483.0	136.00
	128	11,858,051.0	6,943,479.0	134.00
	129	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	150	11,858,058.0	6,943,477.0	132.00
	151	11,858,067.0	6,943,481.0	128.00
	152	11,858,095.0	6,943,482.0	128.00
	153	11,858,124.0	6,943,489.0	128.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	154	11,858,154.0	6,943,484.5	130.00
	155	11,858,172.0	6,943,479.0	132.00
	156	11,858,213.0	6,943,480.5	134.00
	157	11,858,299.0	6,943,488.5	134.00
Terrain Line28	158	11,858,816.0	6,943,467.0	102.00
	159	11,858,837.0	6,943,468.0	98.00
	160	11,858,917.0	6,943,485.5	96.00
	161	11,858,974.0	6,943,492.5	94.00
	162	11,858,995.0	6,943,501.0	92.00
	163	11,859,026.0	6,943,508.0	86.00
	164	11,859,094.0	6,943,534.0	84.00
	165	11,859,164.0	6,943,586.5	83.10
Terrain Line33	202	11,870,814.0	6,945,837.0	122.00
	203	11,870,960.0	6,945,964.5	122.00
	204	11,871,050.0	6,946,044.5	108.00
	205	11,871,090.0	6,945,944.0	118.00
	206	11,871,117.0	6,945,958.5	118.10
	207	11,871,094.0	6,946,036.5	113.00
	208	11,871,132.0	6,946,048.0	118.00
	209	11,871,189.0	6,946,066.0	122.00
	210	11,871,230.0	6,946,071.0	124.00
	211	11,871,293.0	6,946,054.5	124.00
	212	11,871,328.0	6,946,027.5	124.00
	213	11,871,350.0	6,945,975.0	124.00
Terrain Line35	222	11,859,164.0	6,943,586.0	83.10
	223	11,859,201.0	6,943,620.0	84.00
	224	11,859,236.0	6,943,656.5	84.00
	225	11,859,256.0	6,943,666.5	90.00
	226	11,859,291.0	6,943,695.5	90.00
	227	11,859,312.0	6,943,703.0	82.00

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012	
Greg J Berg				TNM 2.5	
<b>INPUT: GROUND ZONES</b>					
<b>PROJECT/CONTRACT:</b>	Route 1 / Fort Belvoir				
<b>RUN:</b>	Future No Build w/ Alt C Recievers				
<b>Ground Zone</b>			<b>Points</b>		
<b>Name</b>	<b>Type</b>	<b>Flow</b>	<b>No.</b>	<b>Coordinates</b>	
		<b>Resistivity</b>		<b>X</b>	<b>Y</b>
		cgs rayls		ft	ft
Ground Zone2	Pavement	20000	86	11,853,692.0	6,943,795.5
			83	11,853,166.0	6,943,516.5
			84	11,853,178.0	6,943,502.5
			85	11,853,667.0	6,943,741.5
			1	11,853,861.0	6,943,849.5
			2	11,854,050.0	6,943,950.5
			3	11,854,226.0	6,944,046.0
			4	11,854,406.0	6,944,129.0
			5	11,854,592.0	6,944,188.0
			6	11,854,629.0	6,944,196.5
			7	11,854,788.0	6,944,216.5
			8	11,854,983.0	6,944,217.5
			9	11,855,176.0	6,944,188.5
			10	11,855,361.0	6,944,133.0
			11	11,855,551.0	6,944,075.5
			12	11,855,743.0	6,944,019.0
			13	11,855,802.0	6,944,001.0
			14	11,855,935.0	6,943,961.5
			15	11,856,126.0	6,943,902.0
			16	11,856,317.0	6,943,844.5
			17	11,856,509.0	6,943,787.5
			18	11,856,700.0	6,943,729.0
			19	11,856,893.0	6,943,676.5



**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			20	11,857,276.0	6,943,561.0
			21	11,857,468.0	6,943,505.0
			22	11,857,661.0	6,943,452.0
			23	11,857,853.0	6,943,397.0
			24	11,858,050.0	6,943,353.5
			25	11,858,250.0	6,943,344.5
			26	11,858,450.0	6,943,349.5
			27	11,859,199.0	6,943,385.0
			56	11,859,459.0	6,943,397.5
			28	11,859,122.0	6,943,392.0
			29	11,858,449.0	6,943,366.5
			30	11,858,251.0	6,943,352.5
			31	11,858,053.0	6,943,365.0
			32	11,857,859.0	6,943,411.0
			33	11,857,667.0	6,943,470.5
			34	11,857,476.0	6,943,529.5
			35	11,857,285.0	6,943,589.5
			36	11,857,094.0	6,943,648.0
			37	11,856,903.0	6,943,707.5
			38	11,856,712.0	6,943,765.0
			39	11,856,520.0	6,943,824.0
			40	11,856,331.0	6,943,889.0
			41	11,856,140.0	6,943,948.5
			42	11,855,979.0	6,943,998.5
			43	11,855,949.0	6,944,006.5
			44	11,855,758.0	6,944,064.0
			45	11,855,566.0	6,944,121.5
			46	11,855,375.0	6,944,180.5
			47	11,855,182.0	6,944,235.5
			48	11,854,983.0	6,944,260.0
			49	11,854,781.0	6,944,263.0
			50	11,854,752.0	6,944,260.5
			51	11,854,582.0	6,944,233.0
			52	11,854,388.0	6,944,172.0
			53	11,854,206.0	6,944,084.0
			54	11,854,032.0	6,943,986.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			55	11,853,873.0	6,943,897.0
Median 2	Pavement	20000	57	11,863,244.0	6,943,576.5
			58	11,863,444.0	6,943,586.5
			59	11,863,644.0	6,943,596.0
			81	11,863,844.0	6,943,608.0
			82	11,864,048.0	6,943,628.5
			60	11,864,247.0	6,943,662.0
			61	11,864,443.0	6,943,702.0
			62	11,864,640.0	6,943,738.0
			63	11,864,837.0	6,943,772.5
			64	11,865,033.0	6,943,812.0
			65	11,865,229.0	6,943,851.0
			66	11,865,425.0	6,943,889.5
			67	11,865,424.0	6,943,895.0
			68	11,865,228.0	6,943,857.5
			69	11,865,032.0	6,943,817.0
			70	11,864,836.0	6,943,778.0
			71	11,864,639.0	6,943,742.0
			72	11,864,441.0	6,943,709.5
			73	11,864,243.0	6,943,678.5
			74	11,864,181.0	6,943,666.5
			75	11,864,041.0	6,943,647.5
			76	11,863,842.0	6,943,626.5
			77	11,863,643.0	6,943,610.5
			78	11,863,444.0	6,943,594.0
			79	11,863,244.0	6,943,579.0



**RESULTS: SOUND LEVELS**

**Route 1 / Fort Belvoir**

R90	25	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R91	26	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
R92	27	1	0.0	61.6	66	61.6	10	----	61.6	0.0	5	-5.0
R93	28	1	62.0	58.8	66	-3.2	10	----	58.8	0.0	5	-5.0
R94	29	1	0.0	61.3	66	61.3	10	----	61.3	0.0	5	-5.0
R114	30	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	5	-5.0
R115	31	1	0.0	63.0	66	63.0	10	----	63.0	0.0	5	-5.0
R116	32	1	0.0	63.8	66	63.8	10	----	63.8	0.0	5	-5.0
R117	33	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
R118	34	1	0.0	64.0	66	64.0	10	----	64.0	0.0	5	-5.0
R119	35	1	0.0	64.2	66	64.2	10	----	64.2	0.0	5	-5.0
R120	36	1	68.0	60.7	66	-7.3	10	----	60.7	0.0	5	-5.0
R121	37	1	0.0	61.0	66	61.0	10	----	61.0	0.0	5	-5.0
R122	38	1	0.0	61.0	66	61.0	10	----	61.0	0.0	5	-5.0
R123	39	1	0.0	65.6	66	65.6	10	----	65.6	0.0	5	-5.0
R124	40	1	0.0	65.3	66	65.3	10	----	65.3	0.0	5	-5.0
R125	41	1	72.0	64.4	66	-7.6	10	----	64.4	0.0	5	-5.0
R126	42	1	0.0	64.8	66	64.8	10	----	64.8	0.0	5	-5.0
R127	43	1	0.0	65.2	66	65.2	10	----	65.2	0.0	5	-5.0
R128	44	1	0.0	60.3	66	60.3	10	----	60.3	0.0	5	-5.0
R129	45	1	0.0	60.6	66	60.6	10	----	60.6	0.0	5	-5.0
R130	124	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0
R131	126	1	0.0	57.9	66	57.9	10	----	57.9	0.0	5	-5.0
R132	127	1	0.0	58.2	66	58.2	10	----	58.2	0.0	5	-5.0
R133	128	1	0.0	58.4	66	58.4	10	----	58.4	0.0	5	-5.0
<b>Dwelling Units</b>		<b># DUs</b>	<b>Noise Reduction</b>									
			<b>Min</b>	<b>Avg</b>	<b>Max</b>							
			<b>dB</b>	<b>dB</b>	<b>dB</b>							
All Selected		49	0.0	0.0	0.0							
All Impacted		8	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

**Traffic Noise Model for Future Build Scenario  
Alternative B**



**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

Parsons				27 November 2012								
Greg J Berg				TNM 2.5								
<b>INPUT: ROADWAYS</b>							<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA</b>					
<b>PROJECT/CONTRACT:</b>		Route 1 /Fort Belvoir										
<b>RUN:</b>		Future Build Alternative B										
Roadway Name	Width	Points			Coordinates (pavement)			Flow Control			Segment	
		Name	No.		X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected		Pvmt Type
	ft				ft	ft	ft		mph	%		
Roadway19	30.0	Begin	1		11,874,506.0	6,948,021.0	16.00				Average	
		214+00	2		11,874,070.0	6,947,740.5	13.00				Average	
		212+00	3		11,873,900.0	6,947,634.0	13.00				Average	
		210+00	4		11,873,728.0	6,947,532.0	13.00				Average	
		208+00	5		11,873,559.0	6,947,425.5	16.90				Average	
		206+00	6		11,873,390.0	6,947,317.5	21.40				Average	
		204+00	7		11,873,224.0	6,947,207.0	24.50				Average	
		Mt Vernon	8		11,873,086.0	6,947,119.5	26.00					
Belvoir Woods In	20.0	2	9		11,856,616.0	6,943,854.0	152.00				Average	
		3	10		11,856,621.0	6,943,881.5	149.90				Average	
		4	11		11,856,621.0	6,943,910.5	148.00				Average	
		5	12		11,856,613.0	6,943,944.0	146.00					
Belvoir Woods Out	20.0	1	13		11,856,577.0	6,943,935.5	146.00				Average	
		2	14		11,856,585.0	6,943,907.0	148.00				Average	
		3	15		11,856,583.0	6,943,886.5	150.00				Average	
		4	16		11,856,576.0	6,943,866.5	152.00					
Inlet Cove In	20.0	1	17		11,857,463.0	6,943,579.0	145.40				Average	
		2	18		11,857,499.0	6,943,690.0	144.90					
Inlet Cove Out	20.0	1	19		11,857,461.0	6,943,702.0	144.40				Average	
		2	20		11,857,426.0	6,943,594.0	145.60					
Roadway3	36.0	1	21		11,853,008.0	6,943,358.0	62.00				Average	
		2	22		11,853,181.0	6,943,478.5	74.00				Average	
		3	23		11,853,362.0	6,943,573.0	86.00				Average	
		4	24		11,853,520.0	6,943,649.5	96.00				Average	
		5	25		11,853,704.0	6,943,741.0	108.00				Average	

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		begin	26	11,853,882.0	6,943,845.0	120.00				Average
		0+00	27	11,854,057.0	6,943,938.0	131.00				Average
		2+00	28	11,854,233.0	6,944,033.5	140.00				Average
		4+00	29	11,854,409.0	6,944,121.5	146.00				
Roadway11	48.0	Pohick	30	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	31	11,854,578.0	6,944,246.5	154.40				Average
		4+00	32	11,854,382.0	6,944,185.5	149.00				Average
		2+00	33	11,854,199.0	6,944,096.5	142.00				Average
		0+00	34	11,854,025.0	6,943,998.5	132.50				Average
		6	35	11,853,867.0	6,943,909.5	122.00				Average
		5	36	11,853,686.0	6,943,809.0	110.00				Average
		4	37	11,853,502.0	6,943,708.5	98.00				Average
		3	38	11,853,317.0	6,943,613.5	86.00				Average
		2	39	11,853,152.0	6,943,530.0	76.00				Average
		1	40	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	41	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	42	11,854,674.0	6,944,353.0	158.00				Average
		3	43	11,854,658.0	6,944,385.0	158.50				Average
		4	44	11,854,648.0	6,944,404.5	158.00				Average
		5	45	11,854,622.0	6,944,446.0	156.00				Average
		6	46	11,854,582.0	6,944,502.5	154.00				Average
		7	47	11,854,544.0	6,944,553.5	152.00				Average
		8	48	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	18.0	1	49	11,854,471.0	6,944,598.0	150.00				Average
		2	50	11,854,509.0	6,944,540.0	152.00				Average
		3	51	11,854,555.0	6,944,476.0	154.00				Average
		4	52	11,854,610.0	6,944,407.0	156.00				Average
		5	53	11,854,627.0	6,944,364.5	156.00				Average
		6	54	11,854,641.0	6,944,332.5	157.60				Average
		7	55	11,854,647.0	6,944,303.0	157.00				
WB Telegraph 2	24.0	1	56	11,855,780.0	6,943,550.5	134.00				Average
		2	57	11,855,797.0	6,943,606.5	138.00				Average
		3	58	11,855,818.0	6,943,662.5	142.00				Average
		4	59	11,855,841.0	6,943,740.0	145.80				Average
		5	60	11,855,856.0	6,943,799.5	148.10				Average
		6	61	11,855,882.0	6,943,897.0	150.00				Average
		7	62	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	63	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	64	11,855,834.0	6,943,815.0	148.00				Average



**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		3	65	11,855,809.0	6,943,708.5	144.00				Average
		4	66	11,855,789.0	6,943,642.5	140.00				Average
		5	67	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	68	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	69	11,865,506.0	6,943,785.0	36.00				Average
		3	70	11,865,545.0	6,943,721.5	35.20				Average
		4	71	11,865,595.0	6,943,619.5	36.00				Average
		5	72	11,865,633.0	6,943,549.5	38.70				Average
		6	73	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	74	11,865,720.0	6,943,440.0	38.00				Average
		2	75	11,865,671.0	6,943,519.5	36.00				Average
		3	76	11,865,621.0	6,943,617.5	36.00				Average
		4	77	11,865,577.0	6,943,710.0	35.20				Average
		5	78	11,865,547.0	6,943,772.0	36.00				Average
		6	79	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	2	80	11,869,979.0	6,945,009.5	142.00	Signal	10.00	100	Average
		3	81	11,870,040.0	6,944,867.0	142.00				Average
		4	82	11,870,068.0	6,944,799.0	140.00				Average
		5	83	11,870,122.0	6,944,680.0	138.00				Average
		6	84	11,870,155.0	6,944,598.5	136.00				Average
		7	85	11,870,199.0	6,944,498.0	132.00				Average
		8	86	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	87	11,870,275.0	6,944,429.5	128.00				Average
		2	88	11,870,233.0	6,944,520.0	132.00				Average
		3	89	11,870,181.0	6,944,618.0	136.00				Average
		4	90	11,870,145.0	6,944,695.0	138.00				Average
		5	91	11,870,102.0	6,944,798.0	140.00				Average
		6	92	11,870,062.0	6,944,884.0	142.00				Average
		7	93	11,869,993.0	6,945,016.0	142.00				
EB Mnt Vernon	30.0	1	94	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average
		2	95	11,873,010.0	6,946,872.5	30.00				Average
		3	96	11,873,082.0	6,946,744.0	32.00				Average
		4	97	11,873,105.0	6,946,704.5	32.00				Average
		5	98	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	99	11,873,175.0	6,946,615.0	34.00				Average
		2	100	11,873,131.0	6,946,723.5	32.00				Average
		3	101	11,873,116.0	6,946,754.5	32.00				Average
		4	102	11,873,076.0	6,946,831.5	30.50				Average
		5	103	11,873,055.0	6,946,875.0	30.00				Average

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		6	104	11,873,000.0	6,946,983.5	28.00					
Roadway42	18.0	point607	105	11,865,496.0	6,944,040.0	38.30	Signal	10.00	100	Average	
		point608	106	11,865,489.0	6,944,129.0	38.20				Average	
		point609	107	11,865,482.0	6,944,218.5	38.10				Average	
		2	108	11,865,476.0	6,944,307.5	38.00				Average	
		3	109	11,865,464.0	6,944,680.0	40.00					
EB Backlick	18.0	1	110	11,865,447.0	6,944,680.0	40.00				Average	
		2	111	11,865,466.0	6,944,283.0	38.00				Average	
		point610	112	11,865,470.0	6,944,200.0	38.10				Average	
		point611	113	11,865,474.0	6,944,117.5	38.20				Average	
		point612	114	11,865,479.0	6,944,035.0	38.30					
Cook Inlet In	20.0	1	115	11,858,794.0	6,943,442.5	102.60				Average	
		2	116	11,858,788.0	6,943,510.0	103.30				Average	
		3	117	11,858,773.0	6,943,688.5	102.00					
Cook Inlet Out	20.0	1	118	11,858,755.0	6,943,677.5	102.00				Average	
		2	119	11,858,749.0	6,943,507.5	103.70				Average	
		3	120	11,858,751.0	6,943,440.5	104.20					
Roadway46	48.0	4+00	121	11,854,409.0	6,944,121.5	146.00				Average	
		6+00	122	11,854,594.0	6,944,182.5	151.70				Average	
		Pohick	123	11,854,628.0	6,944,189.5	152.15					
Roadway46-2	48.0	Pohick	124	11,854,628.0	6,944,189.5	152.15	Signal	0.00	25	Average	
		8+00	125	11,854,786.0	6,944,215.0	153.50				Average	
		10+00	126	11,854,982.0	6,944,218.0	152.70				Average	
		12+00	127	11,855,176.0	6,944,191.0	150.50				Average	
		14+00	128	11,855,363.0	6,944,138.5	148.00				Average	
		16+00	129	11,855,553.0	6,944,081.5	147.90				Average	
		18+00	130	11,855,745.0	6,944,024.0	149.70				Average	
		Telegraph	131	11,855,821.0	6,944,001.0	150.50					
Roadway49	48.0	Telegraph	132	11,855,821.0	6,944,001.0	150.50	Signal	25.00	100	Average	
		20+00	133	11,855,936.0	6,943,964.0	151.80				Average	
		22+00	134	11,856,128.0	6,943,908.0	154.30				Average	
		24+00	135	11,856,320.0	6,943,852.5	155.40				Average	
		26+00	136	11,856,512.0	6,943,796.5	155.00				Average	
		28+00	137	11,856,703.0	6,943,737.5	153.10				Average	
		30+00	138	11,856,894.0	6,943,678.0	149.90				Average	
		32+00	139	11,857,085.0	6,943,618.5	148.00				Average	
		34+00	140	11,857,276.0	6,943,558.5	147.00				Average	
		36+00	141	11,857,467.0	6,943,499.0	146.00				Average	
		38+00	142	11,857,658.0	6,943,439.5	145.30				Average	

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		40+00	143	11,857,848.0	6,943,379.5	143.20				Average
		42+00	144	11,858,045.0	6,943,326.5	137.80				Average
		44+00	145	11,858,249.0	6,943,299.5	127.80				Average
		46+00	146	11,858,453.0	6,943,298.0	115.70				Average
		48+00	147	11,858,652.0	6,943,309.5	107.60				Average
		Cook Inlet	148	11,858,735.0	6,943,314.0	103.60				
Roadway50	48.0	Cook Inlet	149	11,858,735.0	6,943,314.0	103.60	Signal	0.00	25	Average
		50+00	150	11,858,852.0	6,943,321.0	102.60				Average
		52+00	151	11,859,051.0	6,943,332.5	97.60				Average
		54+00	152	11,859,251.0	6,943,344.0	92.70				Average
		56+00	153	11,859,450.0	6,943,355.5	87.80				Average
		58+00	154	11,859,651.0	6,943,367.0	84.60				Average
		60+00	155	11,859,851.0	6,943,380.5	85.20				Average
		62+00	156	11,860,050.0	6,943,396.0	86.50				Average
		64+00	157	11,860,250.0	6,943,411.5	83.60				Average
		66+00	158	11,860,449.0	6,943,427.0	77.00				Average
		68+00	159	11,860,649.0	6,943,442.5	69.80				Average
		70+00	160	11,860,848.0	6,943,458.0	62.60				Average
		72+00	161	11,861,047.0	6,943,473.5	55.40				Average
		74+00	162	11,861,246.0	6,943,486.5	50.30				Average
		76+00	163	11,861,446.0	6,943,498.0	46.30				Average
		78+00	164	11,861,646.0	6,943,509.5	42.30				Average
		80+00	165	11,861,845.0	6,943,521.0	38.20				Average
		82+00	166	11,862,045.0	6,943,532.5	34.20				Average
		84+00	167	11,862,245.0	6,943,544.0	30.30				Average
		86+00	168	11,862,444.0	6,943,555.5	27.80				Average
		88+00	169	11,862,644.0	6,943,567.0	26.80				Average
		90+00	170	11,862,844.0	6,943,578.0	25.80				Average
		92+00	171	11,863,043.0	6,943,589.5	24.70				Average
		94+00	172	11,863,243.0	6,943,601.0	23.80				Average
		96+00	173	11,863,443.0	6,943,612.5	22.80				Average
		98+00	174	11,863,642.0	6,943,624.0	21.80				Average
		100+00	175	11,863,842.0	6,943,635.5	20.80				Average
		102+00/Fa	176	11,864,042.0	6,943,652.5	19.80				
Roadway51	48.0	102+00/Fa	177	11,864,042.0	6,943,652.5	19.80	Signal	0.00	25	Average
		104+00	178	11,864,242.0	6,943,687.5	18.80				Average
		106+00	179	11,864,438.0	6,943,725.5	18.40				Average
		108+00	180	11,864,635.0	6,943,764.0	22.20				Average
		110+00	181	11,864,831.0	6,943,802.0	28.20				Average

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		112+00	182	11,865,027.0	6,943,840.5	33.50				Average
		114+00	183	11,865,224.0	6,943,878.5	35.70				Average
		116+00/Ba	184	11,865,420.0	6,943,917.0	37.70				
Roadway52	48.0	116+00/Ba	185	11,865,420.0	6,943,917.0	37.70	Signal	0.00	25	Average
		118+00	186	11,865,616.0	6,943,954.5	39.80				Average
		120+00	187	11,865,812.0	6,943,981.0	45.50				Average
		122+00	188	11,866,009.0	6,943,988.0	52.40				Average
		124+00	189	11,866,208.0	6,943,986.5	59.30				Average
		126+00	190	11,866,408.0	6,943,985.5	66.10				Average
		128+00	191	11,866,609.0	6,943,984.5	69.40				Average
		130+00	192	11,866,811.0	6,943,993.5	70.50				Average
		132+00	193	11,867,012.0	6,944,014.5	73.90				Average
		134+00	194	11,867,211.0	6,944,049.5	81.40				Average
		136+00	195	11,867,408.0	6,944,097.5	89.50				Average
		138+00	196	11,867,601.0	6,944,158.5	97.30				Average
		140+00	197	11,867,788.0	6,944,231.5	102.50				Average
		142+00	198	11,867,974.0	6,944,306.5	107.70				Average
		144+00	199	11,868,160.0	6,944,373.0	112.90				Average
		146+00	200	11,868,351.0	6,944,431.5	118.10				Average
		148+00	201	11,868,542.0	6,944,490.0	123.20				Average
		150+00	202	11,868,734.0	6,944,547.0	128.50				Average
		152+00	203	11,868,926.0	6,944,601.5	133.90				Average
		154+00	204	11,869,118.0	6,944,657.0	139.10				Average
		156+00	205	11,869,312.0	6,944,713.0	144.40				Average
		158+00	206	11,869,504.0	6,944,781.5	144.90				Average
		160+00	207	11,869,689.0	6,944,867.0	142.10				Average
		162+00	208	11,869,866.0	6,944,968.5	139.30				Average
		Belvoir	209	11,869,933.0	6,945,009.0	138.00				
Roadway53	48.0	Belvoir	210	11,869,933.0	6,945,009.0	138.00	Signal	0.00	25	Average
		164+00	211	11,870,037.0	6,945,072.0	137.70				Average
		166+00	212	11,870,208.0	6,945,175.5	134.30				Average
		168+00	213	11,870,379.0	6,945,279.0	130.10				Average
		170+00	214	11,870,550.0	6,945,382.5	128.00				Average
		172+00	215	11,870,720.0	6,945,471.5	126.00				Average
		174+00	216	11,870,902.0	6,945,531.0	124.10				Average
		174+66	217	11,870,966.0	6,945,541.0	123.40				
Roadway10-2	36.0	Mulligan	218	11,873,019.0	6,946,998.0	26.30	Signal	0.00	25	Average
		202+00	219	11,873,087.0	6,947,051.5	27.40				Average
		204+00	220	11,873,251.0	6,947,162.5	25.50				Average

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		206+00	221	11,873,420.0	6,947,270.5	22.70				Average
		208+00	222	11,873,588.0	6,947,379.5	17.90				Average
		210+00	223	11,873,747.0	6,947,502.0	13.70				Average
		212+00	224	11,873,915.0	6,947,610.5	13.00				Average
		214+00	225	11,874,082.0	6,947,720.5	13.00				Average
		End	226	11,874,514.0	6,948,000.5	16.00				
Roadway57	48.0	Telegraph	227	11,856,007.0	6,944,028.5	151.30	Signal	0.00	25	Average
		20+00	228	11,855,960.0	6,944,043.5	151.30				Average
		18+00	229	11,855,770.0	6,944,103.0	150.10				Average
		16+00	230	11,855,579.0	6,944,162.5	149.10				Average
		14+00	231	11,855,387.0	6,944,222.0	149.80				Average
		12+00	232	11,855,188.0	6,944,267.5	152.90				Average
		10+00	233	11,854,984.0	6,944,287.0	155.70				Average
		8+00	234	11,854,781.0	6,944,279.5	156.20				Average
		Pohick	235	11,854,751.0	6,944,274.5	156.20				
Roadway58	38.0	Cook Inlet	236	11,858,873.0	6,943,404.5	101.60	Signal	0.00	25	Average
		50+00	237	11,858,848.0	6,943,403.0	102.60				Average
		48+00	238	11,858,648.0	6,943,391.5	107.60				Average
		46+00	239	11,858,448.0	6,943,379.0	115.70				Average
		44+00	240	11,858,252.0	6,943,373.5	127.80				Average
		42+00	241	11,858,058.0	6,943,395.5	137.80				Average
		40+00	242	11,857,869.0	6,943,446.5	143.20				Average
		38+00	243	11,857,678.0	6,943,506.0	144.00				Average
		36+00	244	11,857,488.0	6,943,566.0	145.10				Average
		34+00	245	11,857,297.0	6,943,625.5	146.30				Average
		32+00	246	11,857,106.0	6,943,685.0	147.30				Average
		30+00	247	11,856,915.0	6,943,745.0	148.60				Average
		28+00	248	11,856,724.0	6,943,804.5	151.80				Average
		26+00	249	11,856,533.0	6,943,864.0	153.70				Average
		24+00	250	11,856,342.0	6,943,924.0	154.00				Average
		22+00	251	11,856,151.0	6,943,983.5	152.50				Average
		Telegraph	252	11,856,007.0	6,944,028.5	151.30				
Roadway59	48.0	Fairfax Co	253	11,864,274.0	6,943,789.5	18.80	Signal	0.00	25	Average
		104+00	254	11,864,224.0	6,943,778.0	18.80				Average
		102+00	255	11,864,034.0	6,943,746.0	19.80				Average
		100+00	256	11,863,837.0	6,943,729.5	20.80				Average
		98+00	257	11,863,637.0	6,943,718.0	21.80				Average
		96+00	258	11,863,437.0	6,943,704.0	22.80				Average
		94+00	259	11,863,238.0	6,943,688.5	23.80				Average

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		92+00	260	11,863,038.0	6,943,673.0	24.70				Average	
		90+00	261	11,862,839.0	6,943,657.5	25.80				Average	
		88+00	262	11,862,640.0	6,943,642.0	26.80				Average	
		86+00	263	11,862,440.0	6,943,626.5	27.80				Average	
		84+00	264	11,862,241.0	6,943,614.0	30.30				Average	
		82+00	265	11,862,041.0	6,943,602.5	34.20				Average	
		80+00	266	11,861,841.0	6,943,591.0	38.20				Average	
		78+00	267	11,861,642.0	6,943,579.5	42.30				Average	
		76+00	268	11,861,442.0	6,943,568.0	46.30				Average	
		74+00	269	11,861,242.0	6,943,556.5	50.30				Average	
		72+00	270	11,861,042.0	6,943,543.0	55.40				Average	
		70+00	271	11,860,843.0	6,943,527.5	62.60				Average	
		68+00	272	11,860,643.0	6,943,512.0	69.80				Average	
		66+00	273	11,860,444.0	6,943,496.5	77.00				Average	
		64+00	274	11,860,244.0	6,943,481.5	83.60				Average	
		62+00	275	11,860,045.0	6,943,466.0	86.50				Average	
		60+00	276	11,859,846.0	6,943,450.5	85.20				Average	
		58+00	277	11,859,647.0	6,943,437.0	84.60				Average	
		56+00	278	11,859,448.0	6,943,427.0	87.80				Average	
		54+00	279	11,859,248.0	6,943,419.0	92.70				Average	
		52+00	280	11,859,048.0	6,943,411.5	97.60				Average	
		Cook Inlet	281	11,858,873.0	6,943,404.5	101.60					
Roadway60	48.0	Backkick/1	282	11,865,601.0	6,944,035.5	39.80	Signal	0.00	25	Average	
		11600	283	11,865,405.0	6,943,996.0	37.70				Average	
		11400	284	11,865,208.0	6,943,961.5	35.70				Average	
		11200	285	11,865,010.0	6,943,927.0	33.50				Average	
		11000	286	11,864,814.0	6,943,892.5	28.20				Average	
		10800	287	11,864,617.0	6,943,856.0	22.20				Average	
		10600	288	11,864,420.0	6,943,818.0	18.40				Average	
		Fairfax Co	289	11,864,274.0	6,943,789.5	18.80					
Roadway61	48.0	Belvoir	290	11,870,038.0	6,945,182.5	137.70	Signal	0.00	25	Average	
		164+00	291	11,869,988.0	6,945,152.5	137.70				Average	
		162+00	292	11,869,818.0	6,945,049.0	139.30				Average	
		160+00	293	11,869,646.0	6,944,951.0	142.10				Average	
		158+00	294	11,869,467.0	6,944,868.0	144.90				Average	
		156+00	295	11,869,281.0	6,944,802.0	144.40				Average	
		154+00	296	11,869,092.0	6,944,742.5	139.10				Average	
		152+00	297	11,868,902.0	6,944,679.5	133.90				Average	
		150+00	298	11,868,712.0	6,944,617.0	128.50				Average	

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		148+00	299	11,868,521.0	6,944,557.0	123.20				Average
		146+00	300	11,868,330.0	6,944,498.5	118.10				Average
		144+00	301	11,868,139.0	6,944,439.5	112.90				Average
		142+00	302	11,867,948.0	6,944,371.5	107.70				Average
		140+00	303	11,867,762.0	6,944,296.5	102.50				Average
		138+00	304	11,867,577.0	6,944,224.5	97.30				Average
		136+00	305	11,867,389.0	6,944,165.0	89.50				Average
		134+00	306	11,867,197.0	6,944,118.0	81.40				Average
		132+00	307	11,867,002.0	6,944,083.5	73.90				Average
		130+00	308	11,866,806.0	6,944,062.5	70.50				Average
		128+00	309	11,866,608.0	6,944,054.5	69.40				Average
		126+00	310	11,866,409.0	6,944,059.0	66.10				Average
		124+00	311	11,866,209.0	6,944,064.0	59.30				Average
		122+00	312	11,866,008.0	6,944,069.0	52.40				Average
		120+00	313	11,865,803.0	6,944,063.5	45.50				Average
		Backkick/1	314	11,865,601.0	6,944,035.5	39.80				
Roadway62	42.0	Mt Vernon	315	11,873,086.0	6,947,119.5	26.00	Signal	0.00	25	Average
		202+00	316	11,873,055.0	6,947,100.0	27.40				Average
		200+00	317	11,872,887.0	6,946,991.5	30.10				Average
		198+00	318	11,872,718.0	6,946,883.5	33.20				Average
		196+00	319	11,872,555.0	6,946,757.5	35.90				Average
		194+00	320	11,872,421.0	6,946,600.0	38.40				Average
		192+00	321	11,872,323.0	6,946,419.0	41.90				Average
		190+00	322	11,872,239.0	6,946,240.5	48.00				Average
		188+00	323	11,872,131.0	6,946,079.5	58.10				Average
		186+00	324	11,871,997.0	6,945,940.0	70.30				Average
		184+00	325	11,871,841.0	6,945,826.5	82.20				Average
		182+00	326	11,871,666.0	6,945,742.0	94.20				Average
		180+00	327	11,871,480.0	6,945,690.0	106.30				Average
		178+00	328	11,871,284.0	6,945,665.0	116.40				Average
		176+00	329	11,871,085.0	6,945,642.0	122.00				
WB Future Telegraph	48.0	1	330	11,855,962.0	6,944,106.0	151.20	Signal	10.00	100	Average
		2	331	11,855,976.0	6,944,229.5	150.10				Average
		3	332	11,855,975.0	6,944,368.0	147.90				Average
		4	333	11,855,965.0	6,944,508.0	145.30				
EB Future Telegraph	48.0	2	334	11,855,897.0	6,944,565.5	146.00	Signal	0.00	25	Average
		3	335	11,855,903.0	6,944,364.0	147.00				
EB to SB Future Telegraph	30.0	3	336	11,855,903.0	6,944,364.0	147.00				Average
		4	337	11,855,882.0	6,944,308.0	147.00				Average

**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		5	338	11,855,824.0	6,944,225.5	147.20				Average
		6	339	11,855,768.0	6,944,189.5	151.50				Average
		7	340	11,855,685.0	6,944,172.0	151.00				Average
		8	341	11,855,628.0	6,944,179.0	150.80				
EB Future Telegraph 2	36.0	3	342	11,855,903.0	6,944,364.0	147.00				Average
		4	343	11,855,927.0	6,944,303.0	148.00				Average
		5	344	11,855,922.0	6,944,205.5	149.70				Average
		6	345	11,855,914.0	6,944,116.5	150.50				
Exist NB	30.0	174+00/W	346	11,870,714.0	6,945,816.0	128.10				Average
		176+00	347	11,870,856.0	6,945,963.5	119.10				Average
		178+00	348	11,871,012.0	6,946,077.5	109.00				Average
		180+00	349	11,871,187.0	6,946,175.0	99.60				Average
		182+00	350	11,871,368.0	6,946,252.5	96.40				Average
		184+00	351	11,871,558.0	6,946,311.5	94.10				Average
		186+00	352	11,871,750.0	6,946,366.0	85.80				Average
		188+00	353	11,871,941.0	6,946,426.0	72.40				Average
		190+00	354	11,872,128.0	6,946,498.0	58.50				
Exist SB	30.0	190+00	355	11,872,122.0	6,946,520.5	57.60				Average
		188+00	356	11,871,935.0	6,946,446.5	71.80				Average
		186+00	357	11,871,744.0	6,946,388.0	85.40				Average
		184+00	358	11,871,551.0	6,946,334.0	94.00				Average
		182+00	359	11,871,360.0	6,946,275.0	97.00				Average
		180+00	360	11,871,177.0	6,946,195.5	100.10				Average
		178+00	361	11,871,002.0	6,946,098.5	109.60				Average
		176+00	362	11,870,840.0	6,945,986.0	119.70				Average
		Woodlawn	363	11,870,755.0	6,945,914.5	124.50				
Roadway69	44.0	4	364	11,855,965.0	6,944,508.0	145.30	Signal	0.00	25	Average
		5	365	11,855,953.0	6,944,692.5	147.00				Average
		point651	366	11,855,949.0	6,944,799.0	148.00				Average
		point666	367	11,855,945.0	6,944,995.0	146.00				Average
		point653	368	11,855,944.0	6,945,125.5	144.00				Average
		point417	369	11,855,943.0	6,945,158.0	143.00				Average
		point654	370	11,855,940.0	6,945,190.0	142.00				Average
		point655	371	11,855,930.0	6,945,295.0	138.00				Average
		point656	372	11,855,919.0	6,945,371.5	134.00				Average
		point657	373	11,855,893.0	6,945,461.5	128.00				Average
		point658	374	11,855,847.0	6,945,561.0	120.00				Average
		point659	375	11,855,780.0	6,945,673.5	110.00				Average
		point660	376	11,855,705.0	6,945,807.0	100.00				Average



**INPUT: ROADWAYS**

**Route 1 /Fort Belvoir**

		point667	377	11,855,626.0	6,945,921.0	90.00				Average
		point662	378	11,855,556.0	6,946,026.5	84.00				Average
		point663	379	11,855,532.0	6,946,125.5	80.00				Average
		point664	380	11,855,500.0	6,946,263.5	76.00				
Roadway70	36.0	point649	381	11,855,462.0	6,946,309.0	76.00				Average
		point648	382	11,855,488.0	6,946,149.5	80.00				Average
		point647	383	11,855,530.0	6,946,002.5	84.00				Average
		point668	384	11,855,593.0	6,945,906.5	90.00				Average
		point645	385	11,855,674.0	6,945,781.0	100.00				Average
		point644	386	11,855,744.0	6,945,655.5	110.00				Average
		point643	387	11,855,783.0	6,945,579.0	116.00				Average
		point642	388	11,855,840.0	6,945,484.0	124.00				Average
		point641	389	11,855,872.0	6,945,395.5	130.00				Average
		point640	390	11,855,890.0	6,945,298.5	136.00				Average
		point639	391	11,855,893.0	6,945,210.0	140.00				Average
		point665	392	11,855,891.0	6,945,019.0	146.00				Average
		point637	393	11,855,893.0	6,944,839.5	148.00				Average
		1	394	11,855,896.0	6,944,693.0	147.00				Average
		2	395	11,855,897.0	6,944,565.5	146.00				
Roadway53-2	42.0	point669	396	11,870,966.0	6,945,541.0	123.40	Signal	0.00	25	Average
		176+00	397	11,871,095.0	6,945,561.0	122.00				Average
		178+00	398	11,871,293.0	6,945,587.5	116.40				Average
		180+00	399	11,871,494.0	6,945,616.5	106.30				Average
		182+00	400	11,871,693.0	6,945,672.5	94.20				Average
		184+00	401	11,871,878.0	6,945,763.5	82.20				Average
		186+00	402	11,872,045.0	6,945,885.5	70.30				Average
		188+00	403	11,872,187.0	6,946,035.0	58.10				Average
		190+00	404	11,872,300.0	6,946,207.0	48.00				Average
		192+00	405	11,872,384.0	6,946,391.0	41.90				Average
		194+00	406	11,872,475.0	6,946,563.0	38.40				Average
		196+00	407	11,872,600.0	6,946,710.0	35.90				Average
		198+00	408	11,872,755.0	6,946,827.5	33.20				Average
		200+00	409	11,872,923.0	6,946,936.0	30.10				Average
		Mulligan	410	11,873,019.0	6,946,998.0	26.30				
Roadway62-2	48.0	point670	411	11,871,085.0	6,945,642.0	122.00	Signal	0.00	25	Average
		174+00	412	11,870,884.0	6,945,611.0	124.10				Average
		172+00	413	11,870,687.0	6,945,552.0	126.00				Average
		170+00	414	11,870,502.0	6,945,462.5	128.00				Average
		168+00	415	11,870,331.0	6,945,359.5	130.10				Average

**INPUT: ROADWAYS****Route 1 /Fort Belvoir**

		166+00	416	11,870,160.0	6,945,256.0	134.30				Average	
		Belvoir	417	11,870,038.0	6,945,182.5	137.70					

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

Parsons		27 November 2012										
Greg J Berg		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		Route 1 /Fort Belvoir										
RUN:		Future Build Alternative B										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			Autos		V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Roadway19	Begin	1	2831	37	71	37	166	37	0	0	0	0
	214+00	2	2831	37	71	37	166	37	0	0	0	0
	212+00	3	2831	37	71	37	166	37	0	0	0	0
	210+00	4	2831	37	71	37	166	37	0	0	0	0
	208+00	5	2831	37	71	37	166	37	0	0	0	0
	206+00	6	2831	37	71	37	166	37	0	0	0	0
	204+00	7	2831	37	71	37	166	37	0	0	0	0
	Mt Vernon	8										
Belvoir Woods In	2	9	0	0	0	0	0	0	0	0	0	0
	3	10	0	0	0	0	0	0	0	0	0	0
	4	11	0	0	0	0	0	0	0	0	0	0
	5	12										
Belvoir Woods Out	1	13	0	0	0	0	0	0	0	0	0	0
	2	14	0	0	0	0	0	0	0	0	0	0
	3	15	0	0	0	0	0	0	0	0	0	0
	4	16										
Inlet Cove In	1	17	0	0	0	0	0	0	0	0	0	0
	2	18										
Inlet Cove Out	1	19	0	0	0	0	0	0	0	0	0	0
	2	20										
Roadway3	1	21	1813	49	57	49	28	49	0	0	0	0
	2	22	1813	49	57	49	28	49	0	0	0	0
	3	23	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	4	24	1813	49	57	49	28	49	0	0	0	0
	5	25	1813	49	57	49	28	49	0	0	0	0
	begin	26	1813	49	57	49	28	49	0	0	0	0
	0+00	27	1813	49	57	49	28	49	0	0	0	0
	2+00	28	1813	49	57	49	28	49	0	0	0	0
	4+00	29										
Roadway11	Pohick	30	2831	37	71	37	166	37	0	0	0	0
	6+00	31	2831	37	71	37	166	37	0	0	0	0
	4+00	32	2831	37	71	37	166	37	0	0	0	0
	2+00	33	2831	37	71	37	166	37	0	0	0	0
	0+00	34	2831	37	71	37	166	37	0	0	0	0
	6	35	2831	37	71	37	166	37	0	0	0	0
	5	36	2831	37	71	37	166	37	0	0	0	0
	4	37	2831	37	71	37	166	37	0	0	0	0
	3	38	2831	37	71	37	166	37	0	0	0	0
	2	39	2831	37	71	37	166	37	0	0	0	0
	1	40										
WB Pohick West	1	41	1051	28	29	28	40	28	0	0	0	0
	2	42	1051	28	29	28	40	28	0	0	0	0
	3	43	1051	28	29	28	40	28	0	0	0	0
	4	44	1051	28	29	28	40	28	0	0	0	0
	5	45	1051	28	29	28	40	28	0	0	0	0
	6	46	1051	28	29	28	40	28	0	0	0	0
	7	47	1051	28	29	28	40	28	0	0	0	0
	8	48										
EB Pohick West	1	49	857	31	24	31	33	31	0	0	0	0
	2	50	857	31	24	31	33	31	0	0	0	0
	3	51	857	31	24	31	33	31	0	0	0	0
	4	52	857	31	24	31	33	31	0	0	0	0
	5	53	857	31	24	31	33	31	0	0	0	0
	6	54	857	31	24	31	33	31	0	0	0	0
	7	55										
WB Telegraph 2	1	56	486	41	13	41	19	41	0	0	0	0
	2	57	486	41	13	41	19	41	0	0	0	0
	3	58	486	41	13	41	19	41	0	0	0	0
	4	59	486	41	13	41	19	41	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	5	60	486	41	13	41	19	41	0	0	0	0
	6	61	486	41	13	41	19	41	0	0	0	0
	7	62										
EB Telegraph 2	1	63	1985	17	55	17	76	17	0	0	0	0
	2	64	1985	17	55	17	76	17	0	0	0	0
	3	65	1985	17	55	17	76	17	0	0	0	0
	4	66	1985	17	55	17	76	17	0	0	0	0
	5	67										
EB Pohick	1	68	318	33	9	33	12	33	0	0	0	0
	2	69	318	33	9	33	12	33	0	0	0	0
	3	70	318	33	9	33	12	33	0	0	0	0
	4	71	318	33	9	33	12	33	0	0	0	0
	5	72	318	33	9	33	12	33	0	0	0	0
	6	73										
WB Pohick	1	74	853	22	24	22	33	22	0	0	0	0
	2	75	853	22	24	22	33	22	0	0	0	0
	3	76	853	22	24	22	33	22	0	0	0	0
	4	77	853	22	24	22	33	22	0	0	0	0
	5	78	853	22	24	22	33	22	0	0	0	0
	6	79										
EB Belvoir	2	80	310	33	9	33	12	33	0	0	0	0
	3	81	310	33	9	33	12	33	0	0	0	0
	4	82	310	33	9	33	0	33	0	0	0	0
	5	83	310	33	9	33	12	33	0	0	0	0
	6	84	310	33	9	33	12	33	0	0	0	0
	7	85	310	33	9	33	12	33	0	0	0	0
	8	86										
WB Belvoir	1	87	961	20	27	20	37	20	0	0	0	0
	2	88	961	20	27	20	37	20	0	0	0	0
	3	89	961	20	27	20	37	20	0	0	0	0
	4	90	961	20	27	20	37	20	0	0	0	0
	5	91	961	20	27	20	37	20	0	0	0	0
	6	92	961	20	27	20	37	20	0	0	0	0
	7	93										
EB Mnt Vernon	1	94	488	36	14	36	19	36	0	0	0	0
	2	95	488	36	14	36	19	36	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	3	96	488	36	14	36	19	36	0	0	0	0
	4	97	488	36	14	36	19	36	0	0	0	0
	5	98										
WB Mnt Vernon	1	99	678	28	19	28	26	28	0	0	0	0
	2	100	678	28	19	28	26	28	0	0	0	0
	3	101	678	28	19	28	26	28	0	0	0	0
	4	102	678	28	19	28	26	28	0	0	0	0
	5	103	678	28	19	28	26	28	0	0	0	0
	6	104										
Roadway42	point607	105	256	30	7	30	10	30	0	0	0	0
	point608	106	256	30	7	30	10	30	0	0	0	0
	point609	107	256	30	7	30	10	30	0	0	0	0
	2	108	256	30	7	30	10	30	0	0	0	0
	3	109										
EB Backlick	1	110	62	30	2	30	2	30	0	0	0	0
	2	111	62	30	2	30	2	30	0	0	0	0
	point610	112	62	30	2	30	2	30	0	0	0	0
	point611	113	62	30	2	30	2	30	0	0	0	0
	point612	114										
Cook Inlet In	1	115	0	0	0	0	0	0	0	0	0	0
	2	116	0	0	0	0	0	0	0	0	0	0
	3	117										
Cook Inlet Out	1	118	0	0	0	0	0	0	0	0	0	0
	2	119	0	0	0	0	0	0	0	0	0	0
	3	120										
Roadway46	4+00	121	1813	49	57	49	28	49	0	0	0	0
	6+00	122	1813	49	57	49	28	49	0	0	0	0
	Pohick	123										
Roadway46-2	Pohick	124	1813	49	57	49	28	49	0	0	0	0
	8+00	125	1813	49	57	49	28	49	0	0	0	0
	10+00	126	1813	49	57	49	28	49	0	0	0	0
	12+00	127	1813	49	57	49	28	49	0	0	0	0
	14+00	128	1813	49	57	49	28	49	0	0	0	0
	16+00	129	1813	49	57	49	28	49	0	0	0	0
	18+00	130	1813	49	57	49	28	49	0	0	0	0
	Telegraph	131										

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

Roadway49	Telegraph	132	1813	49	57	49	28	49	0	0	0	0
	20+00	133	1813	49	57	49	28	49	0	0	0	0
	22+00	134	1813	49	57	49	28	49	0	0	0	0
	24+00	135	1813	49	57	49	28	49	0	0	0	0
	26+00	136	1813	49	57	49	28	49	0	0	0	0
	28+00	137	1813	49	57	49	28	49	0	0	0	0
	30+00	138	1813	49	57	49	28	49	0	0	0	0
	32+00	139	1813	49	57	49	28	49	0	0	0	0
	34+00	140	1813	49	57	49	28	49	0	0	0	0
	36+00	141	1813	49	57	49	28	49	0	0	0	0
	38+00	142	1813	49	57	49	28	49	0	0	0	0
	40+00	143	1813	49	57	49	28	49	0	0	0	0
	42+00	144	1813	49	57	49	28	49	0	0	0	0
	44+00	145	1813	49	57	49	28	49	0	0	0	0
	46+00	146	1813	49	57	49	28	49	0	0	0	0
	48+00	147	1813	49	57	49	28	49	0	0	0	0
	Cook Inlet	148										
Roadway50	Cook Inlet	149	1813	49	57	49	28	49	0	0	0	0
	50+00	150	1813	49	57	49	28	49	0	0	0	0
	52+00	151	1813	49	57	49	28	49	0	0	0	0
	54+00	152	1813	49	57	49	28	49	0	0	0	0
	56+00	153	1813	49	57	49	28	49	0	0	0	0
	58+00	154	1813	49	57	49	28	49	0	0	0	0
	60+00	155	1813	49	57	49	28	49	0	0	0	0
	62+00	156	1813	49	57	49	28	49	0	0	0	0
	64+00	157	1813	49	57	49	28	49	0	0	0	0
	66+00	158	1813	49	57	49	28	49	0	0	0	0
	68+00	159	1813	49	57	49	28	49	0	0	0	0
	70+00	160	1813	49	57	49	28	49	0	0	0	0
	72+00	161	1813	49	57	49	28	49	0	0	0	0
	74+00	162	1813	49	57	49	28	49	0	0	0	0
	76+00	163	1813	49	57	49	28	49	0	0	0	0
	78+00	164	1813	49	57	49	28	49	0	0	0	0
	80+00	165	1813	49	57	49	28	49	0	0	0	0
	82+00	166	1813	49	57	49	28	49	0	0	0	0
	84+00	167	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	86+00	168	1813	49	57	49	28	49	0	0	0	0
	88+00	169	1813	49	57	49	28	49	0	0	0	0
	90+00	170	1813	49	57	49	28	49	0	0	0	0
	92+00	171	1813	49	57	49	28	49	0	0	0	0
	94+00	172	1813	49	57	49	28	49	0	0	0	0
	96+00	173	1813	49	57	49	28	49	0	0	0	0
	98+00	174	1813	49	57	49	28	49	0	0	0	0
	100+00	175	1813	49	57	49	28	49	0	0	0	0
	102+00/Fairfax	176										
Roadway51	102+00/Fairfax	177	1813	49	57	49	28	49	0	0	0	0
	104+00	178	1813	49	57	49	28	49	0	0	0	0
	106+00	179	1813	49	57	49	28	49	0	0	0	0
	108+00	180	1813	49	57	49	28	49	0	0	0	0
	110+00	181	1813	49	57	49	28	49	0	0	0	0
	112+00	182	1813	49	57	49	28	49	0	0	0	0
	114+00	183	1813	49	57	49	28	49	0	0	0	0
	116+00/Backk	184										
Roadway52	116+00/Backk	185	1813	49	57	49	28	49	0	0	0	0
	118+00	186	1813	49	57	49	28	49	0	0	0	0
	120+00	187	1813	49	57	49	28	49	0	0	0	0
	122+00	188	1813	49	57	49	28	49	0	0	0	0
	124+00	189	1813	49	57	49	28	49	0	0	0	0
	126+00	190	1813	49	57	49	28	49	0	0	0	0
	128+00	191	1813	49	57	49	28	49	0	0	0	0
	130+00	192	1813	49	57	49	28	49	0	0	0	0
	132+00	193	1813	49	57	49	28	49	0	0	0	0
	134+00	194	1813	49	57	49	28	49	0	0	0	0
	136+00	195	1813	49	57	49	28	49	0	0	0	0
	138+00	196	1813	49	57	49	28	49	0	0	0	0
	140+00	197	1813	49	57	49	28	49	0	0	0	0
	142+00	198	1813	49	57	49	28	49	0	0	0	0
	144+00	199	1813	49	57	49	28	49	0	0	0	0
	146+00	200	1813	49	57	49	28	49	0	0	0	0
	148+00	201	1813	49	57	49	28	49	0	0	0	0
	150+00	202	1813	49	57	49	28	49	0	0	0	0
	152+00	203	1813	49	57	49	28	49	0	0	0	0



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	154+00	204	1813	49	57	49	28	49	0	0	0	0
	156+00	205	1813	49	57	49	28	49	0	0	0	0
	158+00	206	1813	49	57	49	28	49	0	0	0	0
	160+00	207	1813	49	57	49	28	49	0	0	0	0
	162+00	208	1813	49	57	49	28	49	0	0	0	0
	Belvoir	209										
Roadway53	Belvoir	210	1813	49	57	49	28	49	0	0	0	0
	164+00	211	1813	49	57	49	28	49	0	0	0	0
	166+00	212	1813	49	57	49	28	49	0	0	0	0
	168+00	213	1813	49	57	49	28	49	0	0	0	0
	170+00	214	1813	49	57	49	28	49	0	0	0	0
	172+00	215	1813	49	57	49	28	49	0	0	0	0
	174+00	216	1813	49	57	49	28	49	0	0	0	0
	174+66	217										
Roadway10-2	Mulligan	218	1813	49	57	49	28	49	0	0	0	0
	202+00	219	1813	49	57	49	28	49	0	0	0	0
	204+00	220	1813	49	57	49	28	49	0	0	0	0
	206+00	221	1813	49	57	49	28	49	0	0	0	0
	208+00	222	1813	49	57	49	28	49	0	0	0	0
	210+00	223	1813	49	57	49	28	49	0	0	0	0
	212+00	224	1813	49	57	49	28	49	0	0	0	0
	214+00	225	1813	49	57	49	28	49	0	0	0	0
	End	226										
Roadway57	Telegraph	227	2831	37	71	37	166	37	0	0	0	0
	20+00	228	2831	37	71	37	166	37	0	0	0	0
	18+00	229	2831	37	71	37	166	37	0	0	0	0
	16+00	230	2831	37	71	37	166	37	0	0	0	0
	14+00	231	2831	37	71	37	166	37	0	0	0	0
	12+00	232	2831	37	71	37	166	37	0	0	0	0
	10+00	233	2831	37	71	37	166	37	0	0	0	0
	8+00	234	2831	37	71	37	166	37	0	0	0	0
	Pohick	235										
Roadway58	Cook Inlet	236	2831	37	71	37	166	37	0	0	0	0
	50+00	237	2831	37	71	37	166	37	0	0	0	0
	48+00	238	2831	37	71	37	166	37	0	0	0	0
	46+00	239	2831	37	71	37	166	37	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	44+00	240	2831	37	71	37	166	37	0	0	0	0
	42+00	241	2831	37	71	37	166	37	0	0	0	0
	40+00	242	2831	37	71	37	166	37	0	0	0	0
	38+00	243	2831	37	71	37	166	37	0	0	0	0
	36+00	244	2831	37	71	37	166	37	0	0	0	0
	34+00	245	2831	37	71	37	166	37	0	0	0	0
	32+00	246	2831	37	71	37	166	37	0	0	0	0
	30+00	247	2831	37	71	37	166	37	0	0	0	0
	28+00	248	2831	37	71	37	166	37	0	0	0	0
	26+00	249	2831	37	71	37	166	37	0	0	0	0
	24+00	250	2831	37	71	37	166	37	0	0	0	0
	22+00	251	2831	37	71	37	166	37	0	0	0	0
	Telegraph	252										
Roadway59	Fairfax County	253	2831	37	71	37	166	37	0	0	0	0
	104+00	254	2831	37	71	37	166	37	0	0	0	0
	102+00	255	2831	37	71	37	166	37	0	0	0	0
	100+00	256	2831	37	71	37	166	37	0	0	0	0
	98+00	257	2831	37	71	37	166	37	0	0	0	0
	96+00	258	2831	37	71	37	166	37	0	0	0	0
	94+00	259	2831	37	71	37	166	37	0	0	0	0
	92+00	260	2831	37	71	37	166	37	0	0	0	0
	90+00	261	2831	37	71	37	166	37	0	0	0	0
	88+00	262	2831	37	71	37	166	37	0	0	0	0
	86+00	263	2831	37	71	37	166	37	0	0	0	0
	84+00	264	2831	37	71	37	166	37	0	0	0	0
	82+00	265	2831	37	71	37	166	37	0	0	0	0
	80+00	266	2831	37	71	37	166	37	0	0	0	0
	78+00	267	2831	37	71	37	166	37	0	0	0	0
	76+00	268	2831	37	71	37	166	37	0	0	0	0
	74+00	269	2831	37	71	37	166	37	0	0	0	0
	72+00	270	2831	37	71	37	166	37	0	0	0	0
	70+00	271	2831	37	71	37	166	37	0	0	0	0
	68+00	272	2831	37	71	37	166	37	0	0	0	0
	66+00	273	2831	37	71	37	166	37	0	0	0	0
	64+00	274	2831	37	71	37	166	37	0	0	0	0
	62+00	275	2831	37	71	37	166	37	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	60+00	276	2831	37	71	37	166	37	0	0	0	0
	58+00	277	2831	37	71	37	166	37	0	0	0	0
	56+00	278	2831	37	71	37	166	37	0	0	0	0
	54+00	279	2831	37	71	37	166	37	0	0	0	0
	52+00	280	2831	37	71	37	166	37	0	0	0	0
	Cook Inlet	281										
Roadway60	Backkick/118+	282	2831	37	71	37	166	37	0	0	0	0
	11600	283	2831	37	71	37	166	37	0	0	0	0
	11400	284	2831	37	71	37	166	37	0	0	0	0
	11200	285	2831	37	71	37	166	37	0	0	0	0
	11000	286	2831	37	71	37	166	37	0	0	0	0
	10800	287	2831	37	71	37	166	37	0	0	0	0
	10600	288	2831	37	71	37	166	37	0	0	0	0
	Fairfax County	289										
Roadway61	Belvoir	290	2831	37	71	37	166	37	0	0	0	0
	164+00	291	2831	37	71	37	166	37	0	0	0	0
	162+00	292	2831	37	71	37	166	37	0	0	0	0
	160+00	293	2831	37	71	37	166	37	0	0	0	0
	158+00	294	2831	37	71	37	166	37	0	0	0	0
	156+00	295	2831	37	71	37	166	37	0	0	0	0
	154+00	296	2831	37	71	37	166	37	0	0	0	0
	152+00	297	2831	37	71	37	166	37	0	0	0	0
	150+00	298	2831	37	71	37	166	37	0	0	0	0
	148+00	299	2831	37	71	37	166	37	0	0	0	0
	146+00	300	2831	37	71	37	166	37	0	0	0	0
	144+00	301	2831	37	71	37	166	37	0	0	0	0
	142+00	302	2831	37	71	37	166	37	0	0	0	0
	140+00	303	2831	37	71	37	166	37	0	0	0	0
	138+00	304	2831	37	71	37	166	37	0	0	0	0
	136+00	305	2831	37	71	37	166	37	0	0	0	0
	134+00	306	2831	37	71	37	166	37	0	0	0	0
	132+00	307	2831	37	71	37	166	37	0	0	0	0
	130+00	308	2831	37	71	37	166	37	0	0	0	0
	128+00	309	2831	37	71	37	166	37	0	0	0	0
	126+00	310	2831	37	71	37	166	37	0	0	0	0
	124+00	311	2831	37	71	37	166	37	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	122+00	312	2831	37	71	37	166	37	0	0	0	0
	120+00	313	2831	37	71	37	166	37	0	0	0	0
	Backkick/118+	314										
Roadway62	Mt Vernon	315	2831	37	71	37	166	37	0	0	0	0
	202+00	316	2831	37	71	37	166	37	0	0	0	0
	200+00	317	2831	37	71	37	166	37	0	0	0	0
	198+00	318	2831	37	71	37	166	37	0	0	0	0
	196+00	319	2831	37	71	37	166	37	0	0	0	0
	194+00	320	2831	37	71	37	166	37	0	0	0	0
	192+00	321	2831	37	71	37	166	37	0	0	0	0
	190+00	322	2831	37	71	37	166	37	0	0	0	0
	188+00	323	2831	37	71	37	166	37	0	0	0	0
	186+00	324	2831	37	71	37	166	37	0	0	0	0
	184+00	325	2831	37	71	37	166	37	0	0	0	0
	182+00	326	2831	37	71	37	166	37	0	0	0	0
	180+00	327	2831	37	71	37	166	37	0	0	0	0
	178+00	328	2831	37	71	37	166	37	0	0	0	0
	176+00	329										
WB Future Telegraph	1	330	486	41	13	41	19	41	0	0	0	0
	2	331	486	41	13	41	19	41	0	0	0	0
	3	332	486	41	13	41	19	41	0	0	0	0
	4	333										
EB Future Telegraph	2	334	1985	17	55	17	76	17	0	0	0	0
	3	335										
EB to SB Future Telegraph	3	336	1323	17	37	17	51	17	0	0	0	0
	4	337	1323	17	37	17	51	17	0	0	0	0
	5	338	1323	17	37	17	51	17	0	0	0	0
	6	339	1323	17	37	17	51	17	0	0	0	0
	7	340	1323	17	37	17	51	17	0	0	0	0
	8	341										
EB Future Telegraph 2	3	342	662	17	18	17	25	17	0	0	0	0
	4	343	662	17	18	17	25	17	0	0	0	0
	5	344	662	17	18	17	25	17	0	0	0	0
	6	345										
Exist NB	174+00/Wood	346	0	0	0	0	0	0	0	0	0	0
	176+00	347	0	0	0	0	0	0	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	178+00	348	0	0	0	0	0	0	0	0	0	0
	180+00	349	0	0	0	0	0	0	0	0	0	0
	182+00	350	0	0	0	0	0	0	0	0	0	0
	184+00	351	0	0	0	0	0	0	0	0	0	0
	186+00	352	0	0	0	0	0	0	0	0	0	0
	188+00	353	0	0	0	0	0	0	0	0	0	0
	190+00	354										
Exist SB	190+00	355	0	0	0	0	0	0	0	0	0	0
	188+00	356	0	0	0	0	0	0	0	0	0	0
	186+00	357	0	0	0	0	0	0	0	0	0	0
	184+00	358	0	0	0	0	0	0	0	0	0	0
	182+00	359	0	0	0	0	0	0	0	0	0	0
	180+00	360	0	0	0	0	0	0	0	0	0	0
	178+00	361	0	0	0	0	0	0	0	0	0	0
	176+00	362	0	0	0	0	0	0	0	0	0	0
	Woodlawn	363										
Roadway69	4	364	486	41	13	41	19	41	0	0	0	0
	5	365	486	41	13	41	19	41	0	0	0	0
	point651	366	486	41	13	41	19	41	0	0	0	0
	point666	367	486	41	13	41	19	41	0	0	0	0
	point653	368	486	41	13	41	19	41	0	0	0	0
	point417	369	486	41	13	41	19	41	0	0	0	0
	point654	370	486	41	13	41	19	41	0	0	0	0
	point655	371	486	41	13	41	19	41	0	0	0	0
	point656	372	486	41	13	41	19	41	0	0	0	0
	point657	373	486	41	13	41	19	41	0	0	0	0
	point658	374	486	41	13	41	19	41	0	0	0	0
	point659	375	486	41	13	41	19	41	0	0	0	0
	point660	376	486	41	13	41	19	41	0	0	0	0
	point667	377	486	41	13	41	19	41	0	0	0	0
	point662	378	486	41	13	41	19	41	0	0	0	0
	point663	379	486	41	13	41	0	41	0	0	0	0
	point664	380										
Roadway70	point649	381	1985	17	55	17	76	17	0	0	0	0
	point648	382	1985	17	55	17	76	17	0	0	0	0
	point647	383	1985	17	55	17	76	17	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 /Fort Belvoir**

	point668	384	1985	17	55	17	76	17	0	0	0	0
	point645	385	1985	17	55	17	76	17	0	0	0	0
	point644	386	1985	17	55	17	76	17	0	0	0	0
	point643	387	1985	17	55	17	76	17	0	0	0	0
	point642	388	1985	17	55	17	76	17	0	0	0	0
	point641	389	1985	17	55	17	76	17	0	0	0	0
	point640	390	1985	17	55	17	76	17	0	0	0	0
	point639	391	1985	17	55	17	76	17	0	0	0	0
	point665	392	1985	17	55	17	76	17	0	0	0	0
	point637	393	1985	17	55	17	76	17	0	0	0	0
	1	394	1985	17	55	17	76	17	0	0	0	0
	2	395										
Roadway53-2	point669	396	1813	49	57	49	28	49	0	0	0	0
	176+00	397	1813	49	57	49	28	49	0	0	0	0
	178+00	398	1813	49	57	49	28	49	0	0	0	0
	180+00	399	1813	49	57	49	28	49	0	0	0	0
	182+00	400	1813	49	57	49	28	49	0	0	0	0
	184+00	401	1813	49	57	49	28	49	0	0	0	0
	186+00	402	1813	49	57	49	28	49	0	0	0	0
	188+00	403	1813	49	57	49	28	49	0	0	0	0
	190+00	404	1813	49	57	49	28	49	0	0	0	0
	192+00	405	1813	49	57	49	28	49	0	0	0	0
	194+00	406	1813	49	57	49	28	49	0	0	0	0
	196+00	407	1813	49	57	49	28	49	0	0	0	0
	198+00	408	1813	49	57	49	28	49	0	0	0	0
	200+00	409	1813	49	57	49	28	49	0	0	0	0
	Mulligan	410										
Roadway62-2	point670	411	2831	37	71	37	166	37	0	0	0	0
	174+00	412	2831	37	71	37	166	37	0	0	0	0
	172+00	413	2831	37	71	37	166	37	0	0	0	0
	170+00	414	2831	37	71	37	166	37	0	0	0	0
	168+00	415	2831	37	71	37	166	37	0	0	0	0
	166+00	416	2831	37	71	37	166	37	0	0	0	0
	Belvoir	417										



**INPUT: RECEIVERS**

**Route 1 /Fort Belvoir**

R21	23	1	11,855,337.0	6,943,849.0	144.00	5.00	0.00	66	10.0	5.0	Y
R21A	24	1	11,855,432.0	6,943,817.5	148.20	5.00	0.00	66	10.0	5.0	Y
R21B	25	5	11,855,663.0	6,943,946.5	151.50	5.00	0.00	66	10.0	5.0	Y
R22-Deck	26	1	11,856,693.0	6,944,114.5	132.00	15.00	0.00	66	10.0	5.0	
R23-Deck	27	1	11,856,738.0	6,943,987.5	134.20	15.00	62.00	66	10.0	5.0	
R24/Site 2-Deck	28	1	11,856,774.0	6,943,888.0	138.00	15.00	0.00	66	10.0	5.0	
R25-Deck	29	1	11,856,925.0	6,943,998.0	135.20	15.00	0.00	66	10.0	5.0	
R26-Deck	30	1	11,856,942.0	6,943,946.5	137.00	15.00	0.00	66	10.0	5.0	
R27	31	1	11,856,966.0	6,943,912.5	137.50	5.00	0.00	66	10.0	5.0	
R28	32	1	11,857,141.0	6,943,945.5	128.20	5.00	0.00	66	10.0	5.0	
R29-Deck	33	1	11,857,134.0	6,943,867.5	129.20	15.00	0.00	66	10.0	5.0	
R30	34	1	11,857,248.0	6,943,742.0	134.00	5.00	0.00	66	10.0	5.0	
R31-Deck	35	1	11,857,272.0	6,943,754.5	133.30	15.00	68.00	66	10.0	5.0	
R32/Site 3-Deck	36	1	11,857,402.0	6,943,734.0	139.00	15.00	0.00	66	10.0	5.0	
R33-Deck	37	1	11,857,626.0	6,943,640.0	141.00	15.00	0.00	66	10.0	5.0	
R34	38	1	11,857,649.0	6,943,713.0	140.80	5.00	0.00	66	10.0	5.0	
R35	39	1	11,857,770.0	6,943,594.5	134.20	5.00	0.00	66	10.0	5.0	
R36	40	1	11,857,784.0	6,943,643.0	133.90	5.00	72.00	66	10.0	5.0	
R37/Site 4	41	1	11,857,788.0	6,943,539.5	145.00	5.00	0.00	66	10.0	5.0	
R38-Deck	42	1	11,857,918.0	6,943,555.5	128.20	15.00	0.00	66	10.0	5.0	
R39-Deck	43	1	11,857,944.0	6,943,649.0	126.50	15.00	0.00	66	10.0	5.0	
R40	44	1	11,858,054.0	6,943,499.5	128.70	5.00	0.00	66	10.0	5.0	
R41-Deck	45	1	11,858,271.0	6,943,507.0	131.50	15.00	0.00	66	10.0	5.0	
R42-Deck	46	1	11,858,367.0	6,943,545.0	127.50	15.00	0.00	66	10.0	5.0	
R43-Deck	47	1	11,858,461.0	6,943,621.5	123.50	15.00	0.00	66	10.0	5.0	
R44	48	1	11,858,572.0	6,943,572.5	107.00	5.00	63.00	66	10.0	5.0	
R45/Site 5	49	1	11,858,595.0	6,943,543.5	106.20	5.00	0.00	66	10.0	5.0	
R46	50	1	11,858,839.0	6,943,558.5	106.00	5.00	0.00	66	10.0	5.0	
R47/Site 6	51	1	11,858,920.0	6,943,530.5	105.60	5.00	0.00	66	10.0	5.0	
R48	52	1	11,858,958.0	6,943,514.0	106.20	5.00	0.00	66	10.0	5.0	
R49	53	1	11,859,078.0	6,943,597.0	105.70	5.00	0.00	66	10.0	5.0	
R50	54	1	11,859,239.0	6,943,730.0	101.00	5.00	54.00	66	10.0	5.0	
R51A	55	1	11,864,858.0	6,944,158.0	30.00	5.00	0.00	66	10.0	5.0	
R51/Site 7	56	1	11,865,194.0	6,944,182.0	33.00	5.00	0.00	66	10.0	5.0	
R52	57	1	11,865,314.0	6,944,316.5	34.50	5.00	0.00	66	10.0	5.0	
R53	58	1	11,865,671.0	6,944,404.5	43.00	5.00	0.00	66	10.0	5.0	



**INPUT: RECEIVERS**

**Route 1 /Fort Belvoir**

R54	59	1	11,865,804.0	6,944,317.5	46.20	5.00	0.00	66	10.0	5.0
R54A	60	1	11,865,598.0	6,944,168.5	39.00	5.00	0.00	66	10.0	5.0
R55	61	1	11,865,304.0	6,943,641.0	28.20	5.00	0.00	66	10.0	5.0
R56	62	1	11,870,335.0	6,945,947.5	135.50	5.00	0.00	66	10.0	5.0
R57	63	1	11,870,533.0	6,945,223.0	133.00	5.00	0.00	66	10.0	5.0
R58	64	1	11,870,403.0	6,945,015.0	136.00	5.00	0.00	66	10.0	5.0
R59	66	1	11,870,484.0	6,945,071.5	135.00	5.00	0.00	66	10.0	5.0
R60	67	1	11,870,593.0	6,945,149.0	135.00	5.00	0.00	66	10.0	5.0
R61	68	1	11,870,695.0	6,945,220.0	134.00	5.00	0.00	66	10.0	5.0
R62	69	1	11,870,774.0	6,945,276.0	133.00	5.00	0.00	66	10.0	5.0
R63	70	1	11,870,545.0	6,944,990.0	132.00	5.00	0.00	66	10.0	5.0
R64	71	1	11,870,649.0	6,945,065.5	133.00	5.00	0.00	66	10.0	5.0
R65	72	1	11,870,753.0	6,945,138.5	133.00	5.00	0.00	66	10.0	5.0
R66	73	1	11,870,834.0	6,945,195.5	132.00	5.00	0.00	66	10.0	5.0
R67	74	1	11,870,916.0	6,945,255.5	132.00	5.00	0.00	66	10.0	5.0
R68A	75	1	11,871,155.0	6,945,813.0	122.50	5.00	0.00	66	10.0	5.0
R68	76	1	11,871,258.0	6,945,768.5	121.80	5.00	0.00	66	10.0	5.0
R69	77	1	11,871,171.0	6,945,956.5	123.20	5.00	0.00	66	10.0	5.0
R70	78	1	11,872,106.0	6,946,573.0	54.00	5.00	0.00	66	10.0	5.0
R71	79	1	11,872,192.0	6,946,634.5	51.00	5.00	0.00	66	10.0	5.0
R72	80	1	11,872,268.0	6,946,690.5	48.00	5.00	0.00	66	10.0	5.0
R73	81	1	11,872,352.0	6,946,745.5	45.50	5.00	0.00	66	10.0	5.0
R74	82	1	11,872,447.0	6,946,809.5	43.00	5.00	0.00	66	10.0	5.0
R75	83	1	11,872,533.0	6,946,868.5	42.00	5.00	0.00	66	10.0	5.0
R76	84	1	11,872,620.0	6,946,928.0	41.00	5.00	0.00	66	10.0	5.0
R77	85	1	11,872,050.0	6,946,658.5	58.00	5.00	0.00	66	10.0	5.0
R78	86	1	11,872,135.0	6,946,717.0	54.00	5.00	0.00	66	10.0	5.0
R79	87	1	11,872,213.0	6,946,770.5	49.00	5.00	0.00	66	10.0	5.0
R80	88	1	11,872,299.0	6,946,829.0	46.00	5.00	0.00	66	10.0	5.0
R81	89	1	11,872,398.0	6,946,895.5	44.00	5.00	0.00	66	10.0	5.0
R82	90	1	11,872,479.0	6,946,954.0	43.00	5.00	0.00	66	10.0	5.0
R83	91	1	11,872,561.0	6,947,009.0	42.00	5.00	0.00	66	10.0	5.0
R84	92	1	11,872,646.0	6,947,067.0	40.00	5.00	0.00	66	10.0	5.0
R85	93	1	11,871,996.0	6,946,739.0	62.00	5.00	0.00	66	10.0	5.0
R86	94	1	11,872,078.0	6,946,798.5	56.00	5.00	0.00	66	10.0	5.0
R87	95	1	11,872,160.0	6,946,855.0	51.00	5.00	0.00	66	10.0	5.0

**INPUT: RECEIVERS****Route 1 /Fort Belvoir**

R88	96	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0
R89	98	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0
R90	99	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0
R91	100	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0
R92	101	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0
R93	102	1	11,871,859.0	6,946,107.0	54.00	5.00	0.00	66	10.0	5.0
R94	103	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0
R95	104	1	11,872,369.0	6,946,145.5	39.50	5.00	0.00	66	10.0	5.0
R96	105	1	11,872,417.0	6,946,234.5	39.50	5.00	0.00	66	10.0	5.0
R97	106	1	11,872,467.0	6,946,320.5	38.50	5.00	0.00	66	10.0	5.0
R98	107	1	11,872,515.0	6,946,403.5	36.50	5.00	0.00	66	10.0	5.0
R99	108	1	11,872,452.0	6,946,096.0	37.00	5.00	0.00	66	10.0	5.0
R100	110	1	11,872,504.0	6,946,185.5	37.50	5.00	0.00	66	10.0	5.0
R101	111	1	11,872,552.0	6,946,267.5	37.50	5.00	0.00	66	10.0	5.0
R102	112	1	11,872,604.0	6,946,356.5	36.00	5.00	0.00	66	10.0	5.0
R103	113	1	11,855,752.0	6,944,598.5	144.00	5.00	0.00	66	10.0	5.0
R104-Deck	114	1	11,855,767.0	6,944,817.5	145.00	15.00	0.00	66	10.0	5.0
R105-Deck	115	1	11,855,746.0	6,944,815.5	143.00	15.00	0.00	66	10.0	5.0
R106-Deck	116	1	11,855,726.0	6,944,819.0	142.00	15.00	0.00	66	10.0	5.0
R107-Deck	117	1	11,855,708.0	6,944,818.5	142.00	15.00	0.00	66	10.0	5.0
R108-Deck	118	1	11,855,741.0	6,944,979.0	141.00	15.00	0.00	66	10.0	5.0
R109-Deck	119	1	11,855,762.0	6,944,981.0	143.00	15.00	0.00	66	10.0	5.0
R110-Deck	121	1	11,855,784.0	6,944,985.5	144.00	15.00	0.00	66	10.0	5.0
R111	122	1	11,855,987.0	6,944,932.0	144.00	5.00	0.00	66	10.0	5.0
R112	124	1	11,855,997.0	6,944,779.5	147.00	5.00	0.00	66	10.0	5.0
R113	125	1	11,856,115.0	6,944,647.5	148.00	5.00	0.00	66	10.0	5.0

**INPUT: RECEIVERS**

**Route 1 /Fort Belvoir**

<b>Parsons</b>												
<b>Greg J Berg</b>												

27 November 2012  
TNM 2.5

**INPUT: RECEIVERS**

**PROJECT/CONTRACT:** Route 1 /Fort Belvoir  
**RUN:** Future Build Alternative B

<b>Receiver</b>											
<b>Name</b>	<b>No.</b>	<b>#DUs</b>	<b>Coordinates (ground)</b>			<b>Height</b>	<b>Input Sound Levels and Criteria</b>				<b>Active</b>
			<b>X</b>	<b>Y</b>	<b>Z</b>	<b>above</b>	<b>Existing</b>	<b>Impact Criteria</b>		<b>NR</b>	<b>in</b>
						<b>Ground</b>	<b>LAeq1h</b>	<b>LAeq1h</b>	<b>Sub'l</b>	<b>Goal</b>	<b>Calc.</b>
			ft	ft	ft	ft	dBA	dBA	dB	dB	
R1	1	1	11,853,950.0	6,944,095.0	131.50	5.00	0.00	66	10.0	5.0	Y
R2	2	1	11,854,077.0	6,944,126.5	136.30	5.00	0.00	66	10.0	5.0	Y
R3	3	1	11,854,210.0	6,944,199.5	140.70	5.00	0.00	66	10.0	5.0	Y
R4	4	1	11,854,319.0	6,944,254.0	145.70	5.00	0.00	66	10.0	5.0	Y
R5	5	1	11,854,408.0	6,944,298.0	148.20	5.00	0.00	66	10.0	5.0	Y
R6	6	1	11,854,385.0	6,944,353.0	146.50	5.00	0.00	66	10.0	5.0	Y
R7	7	1	11,854,422.0	6,944,407.5	150.70	5.00	0.00	66	10.0	5.0	Y
R8-Deck	8	1	11,854,467.0	6,944,356.0	153.00	15.00	0.00	66	10.0	5.0	Y
R9	9	1	11,854,829.0	6,944,482.0	154.70	5.00	0.00	66	10.0	5.0	Y
R10	10	1	11,854,808.0	6,944,497.5	155.00	5.00	0.00	66	10.0	5.0	Y
R11-Deck	11	1	11,854,973.0	6,944,413.5	152.20	15.00	0.00	66	10.0	5.0	Y
R12/Site 1	12	1	11,855,157.0	6,944,378.5	152.00	5.00	57.00	66	10.0	5.0	Y
R13-Deck	13	1	11,855,228.0	6,944,377.5	147.00	15.00	0.00	66	10.0	5.0	Y
R14	14	1	11,855,292.0	6,944,396.5	143.80	5.00	0.00	66	10.0	5.0	Y
R15-Deck	15	1	11,855,351.0	6,944,444.0	141.50	15.00	0.00	66	10.0	5.0	Y
R16	16	1	11,855,377.0	6,944,448.5	141.00	5.00	0.00	66	10.0	5.0	Y
R17-Deck	17	1	11,855,466.0	6,944,492.5	140.50	15.00	0.00	66	10.0	5.0	Y
R18-Deck	18	1	11,855,624.0	6,944,544.0	142.20	15.00	0.00	66	10.0	5.0	Y
R19	19	1	11,855,403.0	6,944,038.0	144.00	5.00	0.00	66	10.0	5.0	Y
R19A	20	1	11,855,498.0	6,944,006.5	147.50	5.00	0.00	66	10.0	5.0	Y
R20	21	1	11,855,370.0	6,943,943.5	146.00	5.00	0.00	66	10.0	5.0	Y
R20A	22	1	11,855,465.0	6,943,912.0	149.00	5.00	0.00	66	10.0	5.0	Y

**INPUT: RECEIVERS**

**Route 1 /Fort Belvoir**

R21	23	1	11,855,337.0	6,943,849.0	144.00	5.00	0.00	66	10.0	5.0	Y
R21A	24	1	11,855,432.0	6,943,817.5	148.20	5.00	0.00	66	10.0	5.0	Y
R21B	25	5	11,855,663.0	6,943,946.5	151.50	5.00	0.00	66	10.0	5.0	Y
R22-Deck	26	1	11,856,693.0	6,944,114.5	132.00	15.00	0.00	66	10.0	5.0	
R23-Deck	27	1	11,856,738.0	6,943,987.5	134.20	15.00	62.00	66	10.0	5.0	
R24/Site 2-Deck	28	1	11,856,774.0	6,943,888.0	138.00	15.00	0.00	66	10.0	5.0	
R25-Deck	29	1	11,856,925.0	6,943,998.0	135.20	15.00	0.00	66	10.0	5.0	
R26-Deck	30	1	11,856,942.0	6,943,946.5	137.00	15.00	0.00	66	10.0	5.0	
R27	31	1	11,856,966.0	6,943,912.5	137.50	5.00	0.00	66	10.0	5.0	
R28	32	1	11,857,141.0	6,943,945.5	128.20	5.00	0.00	66	10.0	5.0	
R29-Deck	33	1	11,857,134.0	6,943,867.5	129.20	15.00	0.00	66	10.0	5.0	
R30	34	1	11,857,248.0	6,943,742.0	134.00	5.00	0.00	66	10.0	5.0	
R31-Deck	35	1	11,857,272.0	6,943,754.5	133.30	15.00	68.00	66	10.0	5.0	
R32/Site 3-Deck	36	1	11,857,402.0	6,943,734.0	139.00	15.00	0.00	66	10.0	5.0	
R33-Deck	37	1	11,857,626.0	6,943,640.0	141.00	15.00	0.00	66	10.0	5.0	
R34	38	1	11,857,649.0	6,943,713.0	140.80	5.00	0.00	66	10.0	5.0	
R35	39	1	11,857,770.0	6,943,594.5	134.20	5.00	0.00	66	10.0	5.0	
R36	40	1	11,857,784.0	6,943,643.0	133.90	5.00	72.00	66	10.0	5.0	
R37/Site 4	41	1	11,857,788.0	6,943,539.5	145.00	5.00	0.00	66	10.0	5.0	
R38-Deck	42	1	11,857,918.0	6,943,555.5	128.20	15.00	0.00	66	10.0	5.0	
R39-Deck	43	1	11,857,944.0	6,943,649.0	126.50	15.00	0.00	66	10.0	5.0	
R40	44	1	11,858,054.0	6,943,499.5	128.70	5.00	0.00	66	10.0	5.0	
R41-Deck	45	1	11,858,271.0	6,943,507.0	131.50	15.00	0.00	66	10.0	5.0	
R42-Deck	46	1	11,858,367.0	6,943,545.0	127.50	15.00	0.00	66	10.0	5.0	
R43-Deck	47	1	11,858,461.0	6,943,621.5	123.50	15.00	0.00	66	10.0	5.0	
R44	48	1	11,858,572.0	6,943,572.5	107.00	5.00	63.00	66	10.0	5.0	
R45/Site 5	49	1	11,858,595.0	6,943,543.5	106.20	5.00	0.00	66	10.0	5.0	
R46	50	1	11,858,839.0	6,943,558.5	106.00	5.00	0.00	66	10.0	5.0	
R47/Site 6	51	1	11,858,920.0	6,943,530.5	105.60	5.00	0.00	66	10.0	5.0	
R48	52	1	11,858,958.0	6,943,514.0	106.20	5.00	0.00	66	10.0	5.0	
R49	53	1	11,859,078.0	6,943,597.0	105.70	5.00	0.00	66	10.0	5.0	
R50	54	1	11,859,239.0	6,943,730.0	101.00	5.00	54.00	66	10.0	5.0	
R51A	55	1	11,864,858.0	6,944,158.0	30.00	5.00	0.00	66	10.0	5.0	
R51/Site 7	56	1	11,865,194.0	6,944,182.0	33.00	5.00	0.00	66	10.0	5.0	
R52	57	1	11,865,314.0	6,944,316.5	34.50	5.00	0.00	66	10.0	5.0	
R53	58	1	11,865,671.0	6,944,404.5	43.00	5.00	0.00	66	10.0	5.0	

**INPUT: RECEIVERS**

**Route 1 /Fort Belvoir**

R54	59	1	11,865,804.0	6,944,317.5	46.20	5.00	0.00	66	10.0	5.0
R54A	60	1	11,865,598.0	6,944,168.5	39.00	5.00	0.00	66	10.0	5.0
R55	61	1	11,865,304.0	6,943,641.0	28.20	5.00	0.00	66	10.0	5.0
R56	62	1	11,870,335.0	6,945,947.5	135.50	5.00	0.00	66	10.0	5.0
R57	63	1	11,870,533.0	6,945,223.0	133.00	5.00	0.00	66	10.0	5.0
R58	64	1	11,870,403.0	6,945,015.0	136.00	5.00	0.00	66	10.0	5.0
R59	66	1	11,870,484.0	6,945,071.5	135.00	5.00	0.00	66	10.0	5.0
R60	67	1	11,870,593.0	6,945,149.0	135.00	5.00	0.00	66	10.0	5.0
R61	68	1	11,870,695.0	6,945,220.0	134.00	5.00	0.00	66	10.0	5.0
R62	69	1	11,870,774.0	6,945,276.0	133.00	5.00	0.00	66	10.0	5.0
R63	70	1	11,870,545.0	6,944,990.0	132.00	5.00	0.00	66	10.0	5.0
R64	71	1	11,870,649.0	6,945,065.5	133.00	5.00	0.00	66	10.0	5.0
R65	72	1	11,870,753.0	6,945,138.5	133.00	5.00	0.00	66	10.0	5.0
R66	73	1	11,870,834.0	6,945,195.5	132.00	5.00	0.00	66	10.0	5.0
R67	74	1	11,870,916.0	6,945,255.5	132.00	5.00	0.00	66	10.0	5.0
R68A	75	1	11,871,155.0	6,945,813.0	122.50	5.00	0.00	66	10.0	5.0
R68	76	1	11,871,258.0	6,945,768.5	121.80	5.00	0.00	66	10.0	5.0
R69	77	1	11,871,171.0	6,945,956.5	123.20	5.00	0.00	66	10.0	5.0
R70	78	1	11,872,106.0	6,946,573.0	54.00	5.00	0.00	66	10.0	5.0
R71	79	1	11,872,192.0	6,946,634.5	51.00	5.00	0.00	66	10.0	5.0
R72	80	1	11,872,268.0	6,946,690.5	48.00	5.00	0.00	66	10.0	5.0
R73	81	1	11,872,352.0	6,946,745.5	45.50	5.00	0.00	66	10.0	5.0
R74	82	1	11,872,447.0	6,946,809.5	43.00	5.00	0.00	66	10.0	5.0
R75	83	1	11,872,533.0	6,946,868.5	42.00	5.00	0.00	66	10.0	5.0
R76	84	1	11,872,620.0	6,946,928.0	41.00	5.00	0.00	66	10.0	5.0
R77	85	1	11,872,050.0	6,946,658.5	58.00	5.00	0.00	66	10.0	5.0
R78	86	1	11,872,135.0	6,946,717.0	54.00	5.00	0.00	66	10.0	5.0
R79	87	1	11,872,213.0	6,946,770.5	49.00	5.00	0.00	66	10.0	5.0
R80	88	1	11,872,299.0	6,946,829.0	46.00	5.00	0.00	66	10.0	5.0
R81	89	1	11,872,398.0	6,946,895.5	44.00	5.00	0.00	66	10.0	5.0
R82	90	1	11,872,479.0	6,946,954.0	43.00	5.00	0.00	66	10.0	5.0
R83	91	1	11,872,561.0	6,947,009.0	42.00	5.00	0.00	66	10.0	5.0
R84	92	1	11,872,646.0	6,947,067.0	40.00	5.00	0.00	66	10.0	5.0
R85	93	1	11,871,996.0	6,946,739.0	62.00	5.00	0.00	66	10.0	5.0
R86	94	1	11,872,078.0	6,946,798.5	56.00	5.00	0.00	66	10.0	5.0
R87	95	1	11,872,160.0	6,946,855.0	51.00	5.00	0.00	66	10.0	5.0

**INPUT: RECEIVERS****Route 1 /Fort Belvoir**

R88	96	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0
R89	98	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0
R90	99	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0
R91	100	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0
R92	101	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0
R93	102	1	11,871,859.0	6,946,107.0	54.00	5.00	0.00	66	10.0	5.0
R94	103	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0
R95	104	1	11,872,369.0	6,946,145.5	39.50	5.00	0.00	66	10.0	5.0
R96	105	1	11,872,417.0	6,946,234.5	39.50	5.00	0.00	66	10.0	5.0
R97	106	1	11,872,467.0	6,946,320.5	38.50	5.00	0.00	66	10.0	5.0
R98	107	1	11,872,515.0	6,946,403.5	36.50	5.00	0.00	66	10.0	5.0
R99	108	1	11,872,452.0	6,946,096.0	37.00	5.00	0.00	66	10.0	5.0
R100	110	1	11,872,504.0	6,946,185.5	37.50	5.00	0.00	66	10.0	5.0
R101	111	1	11,872,552.0	6,946,267.5	37.50	5.00	0.00	66	10.0	5.0
R102	112	1	11,872,604.0	6,946,356.5	36.00	5.00	0.00	66	10.0	5.0
R103	113	1	11,855,752.0	6,944,598.5	144.00	5.00	0.00	66	10.0	5.0
R104-Deck	114	1	11,855,767.0	6,944,817.5	145.00	15.00	0.00	66	10.0	5.0
R105-Deck	115	1	11,855,746.0	6,944,815.5	143.00	15.00	0.00	66	10.0	5.0
R106-Deck	116	1	11,855,726.0	6,944,819.0	142.00	15.00	0.00	66	10.0	5.0
R107-Deck	117	1	11,855,708.0	6,944,818.5	142.00	15.00	0.00	66	10.0	5.0
R108-Deck	118	1	11,855,741.0	6,944,979.0	141.00	15.00	0.00	66	10.0	5.0
R109-Deck	119	1	11,855,762.0	6,944,981.0	143.00	15.00	0.00	66	10.0	5.0
R110-Deck	121	1	11,855,784.0	6,944,985.5	144.00	15.00	0.00	66	10.0	5.0
R111	122	1	11,855,987.0	6,944,932.0	144.00	5.00	0.00	66	10.0	5.0
R112	124	1	11,855,997.0	6,944,779.5	147.00	5.00	0.00	66	10.0	5.0
R113	125	1	11,856,115.0	6,944,647.5	148.00	5.00	0.00	66	10.0	5.0

**INPUT: TERRAIN LINES**

**Route 1 /Fort Belvoir**

<b>Parsons</b>				<b>27 November 2012</b>
<b>Greg J Berg</b>				<b>TNM 2.5</b>
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 /Fort Belvoir</b>			
<b>RUN:</b>	<b>Future Build Alternative B</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
Terrain Line17	9	11,856,688.0	6,943,853.0	154.00
	10	11,856,738.0	6,943,836.5	154.60
	11	11,856,769.0	6,943,834.5	155.10
	12	11,856,812.0	6,943,819.0	154.00
	13	11,856,866.0	6,943,800.0	152.00
	14	11,856,921.0	6,943,788.0	148.00
	15	11,856,993.0	6,943,783.5	140.00
	16	11,857,046.0	6,943,779.0	128.00
	17	11,857,114.0	6,943,780.0	128.00
	18	11,857,155.0	6,943,780.5	128.00
	19	11,857,188.0	6,943,747.5	130.00
	20	11,857,230.0	6,943,693.5	136.00
	21	11,857,268.0	6,943,676.0	138.00
	22	11,857,304.0	6,943,662.0	140.00
Terrain Line20	23	11,858,137.0	6,943,439.0	138.00
	24	11,858,246.0	6,943,466.5	138.00

**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	25	11,858,300.0	6,943,487.0	134.00
Terrain Line22	26	11,857,498.0	6,943,629.5	146.00
	27	11,857,525.0	6,943,621.5	146.00
	28	11,857,550.0	6,943,608.5	144.00
	29	11,857,595.0	6,943,598.5	142.00
	30	11,857,629.0	6,943,589.5	138.00
	31	11,857,651.0	6,943,595.5	135.30
	32	11,857,665.0	6,943,584.0	138.00
	33	11,857,708.0	6,943,567.0	142.00
	34	11,857,744.0	6,943,570.5	144.00
	35	11,857,818.0	6,943,549.0	146.00
	36	11,857,856.0	6,943,537.0	146.00
	37	11,857,894.0	6,943,525.0	144.00
	38	11,857,920.0	6,943,516.5	140.00
	39	11,857,947.0	6,943,503.0	138.00
	40	11,857,963.0	6,943,495.5	136.00
	41	11,857,959.0	6,943,498.0	134.00
	42	11,857,937.0	6,943,513.0	132.00
	43	11,857,916.0	6,943,519.0	134.00
	44	11,857,879.0	6,943,531.5	136.00
	45	11,857,855.0	6,943,539.0	138.00
	46	11,857,790.0	6,943,560.5	140.00
	47	11,857,749.0	6,943,574.0	142.00
Terrain Line23	48	11,857,963.0	6,943,495.5	136.00
	49	11,857,999.0	6,943,492.0	134.00
	50	11,858,010.0	6,943,490.0	136.00
	51	11,858,036.0	6,943,483.0	136.00
	52	11,858,051.0	6,943,479.0	134.00
	53	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	54	11,858,058.0	6,943,477.0	132.00
	55	11,858,067.0	6,943,481.0	128.00
	56	11,858,095.0	6,943,482.0	128.00
	57	11,858,124.0	6,943,489.0	128.00
	58	11,858,154.0	6,943,484.5	130.00
	59	11,858,172.0	6,943,479.0	132.00
	60	11,858,213.0	6,943,480.5	134.00



**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	61	11,858,299.0	6,943,488.5	134.00
Terrain Line28	62	11,858,816.0	6,943,467.0	102.00
	63	11,858,837.0	6,943,468.0	98.00
	64	11,858,917.0	6,943,485.5	96.00
	65	11,858,974.0	6,943,492.5	94.00
	66	11,858,995.0	6,943,501.0	92.00
	67	11,859,026.0	6,943,508.0	86.00
	68	11,859,094.0	6,943,534.0	84.00
	69	11,859,164.0	6,943,586.5	83.10
Terrain Line33	70	11,870,814.0	6,945,837.0	122.00
	71	11,870,960.0	6,945,964.5	122.00
	72	11,871,050.0	6,946,044.5	108.00
	73	11,871,090.0	6,945,944.0	118.00
	74	11,871,117.0	6,945,958.5	118.10
	75	11,871,094.0	6,946,036.5	113.00
	76	11,871,132.0	6,946,048.0	118.00
	77	11,871,189.0	6,946,066.0	122.00
	78	11,871,230.0	6,946,071.0	124.00
	79	11,871,293.0	6,946,054.5	124.00
	80	11,871,328.0	6,946,027.5	124.00
	81	11,871,350.0	6,945,975.0	124.00
Terrain Line35	82	11,871,601.0	6,945,843.0	120.00
	83	11,871,721.0	6,945,893.0	88.00
	84	11,871,818.0	6,945,939.5	70.00
	85	11,871,961.0	6,946,019.0	54.00
	86	11,872,034.0	6,946,108.0	44.00
Terrain Line36	87	11,859,164.0	6,943,586.0	83.10
	88	11,859,201.0	6,943,620.0	84.00
	89	11,859,236.0	6,943,656.5	84.00
	90	11,859,256.0	6,943,666.5	90.00
	91	11,859,291.0	6,943,695.5	90.00
	92	11,859,312.0	6,943,703.0	82.00
Terrain Line3-2	93	11,855,623.0	6,944,227.5	150.00
	94	11,855,622.0	6,944,248.0	148.00
	95	11,855,599.0	6,944,298.5	147.80
	96	11,855,569.0	6,944,315.5	148.00

**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	97	11,855,516.0	6,944,294.0	144.00
	98	11,855,478.0	6,944,288.0	142.00
	99	11,855,466.0	6,944,284.0	142.00
	100	11,855,378.0	6,944,309.0	142.00
	101	11,855,300.0	6,944,324.5	146.00
	102	11,855,261.0	6,944,337.0	146.00
	103	11,855,178.0	6,944,350.5	152.10
	104	11,855,122.0	6,944,348.0	157.50
	105	11,855,001.0	6,944,363.0	156.10
	106	11,854,941.0	6,944,381.5	156.00
	107	11,854,841.0	6,944,372.0	158.00
	108	11,854,831.0	6,944,394.5	158.00
	109	11,854,756.0	6,944,356.5	159.40
Terrain Line40	110	11,871,297.0	6,945,552.5	126.30
	111	11,871,500.0	6,945,581.5	123.10
	112	11,871,534.0	6,945,590.0	122.00
	113	11,871,657.0	6,945,624.5	94.00
	114	11,871,714.0	6,945,641.5	90.00
	115	11,871,829.0	6,945,697.5	82.00
	116	11,871,915.0	6,945,745.0	74.00
	117	11,872,009.0	6,945,814.0	62.00
	118	11,872,081.0	6,945,871.5	58.00
	119	11,872,130.0	6,945,922.5	47.70
	120	11,872,185.0	6,945,978.5	36.20
	121	11,872,211.0	6,946,010.0	35.90
	122	11,872,271.0	6,946,092.0	42.00
	123	11,872,333.0	6,946,189.0	42.50
Terrain Line39-2	124	11,871,656.0	6,945,776.0	108.00
	125	11,871,753.0	6,945,819.5	88.00
	126	11,871,824.0	6,945,854.0	78.60
	127	11,871,902.0	6,945,913.0	70.00
	128	11,871,973.0	6,945,967.5	61.50
	129	11,872,014.0	6,946,008.0	50.00
	130	11,872,086.0	6,946,084.5	41.40
	131	11,872,114.0	6,946,125.5	44.00
	132	11,872,200.0	6,946,261.5	49.60

**INPUT: TERRAIN LINES**

**Route 1 /Fort Belvoir**

<b>Parsons</b>				<b>27 November 2012</b>
<b>Greg J Berg</b>				<b>TNM 2.5</b>
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 /Fort Belvoir</b>			
<b>RUN:</b>	<b>Future Build Alternative B</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
Terrain Line17	9	11,856,688.0	6,943,853.0	154.00
	10	11,856,738.0	6,943,836.5	154.60
	11	11,856,769.0	6,943,834.5	155.10
	12	11,856,812.0	6,943,819.0	154.00
	13	11,856,866.0	6,943,800.0	152.00
	14	11,856,921.0	6,943,788.0	148.00
	15	11,856,993.0	6,943,783.5	140.00
	16	11,857,046.0	6,943,779.0	128.00
	17	11,857,114.0	6,943,780.0	128.00
	18	11,857,155.0	6,943,780.5	128.00
	19	11,857,188.0	6,943,747.5	130.00
	20	11,857,230.0	6,943,693.5	136.00
	21	11,857,268.0	6,943,676.0	138.00
	22	11,857,304.0	6,943,662.0	140.00
Terrain Line20	23	11,858,137.0	6,943,439.0	138.00
	24	11,858,246.0	6,943,466.5	138.00

**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	25	11,858,300.0	6,943,487.0	134.00
Terrain Line22	26	11,857,498.0	6,943,629.5	146.00
	27	11,857,525.0	6,943,621.5	146.00
	28	11,857,550.0	6,943,608.5	144.00
	29	11,857,595.0	6,943,598.5	142.00
	30	11,857,629.0	6,943,589.5	138.00
	31	11,857,651.0	6,943,595.5	135.30
	32	11,857,665.0	6,943,584.0	138.00
	33	11,857,708.0	6,943,567.0	142.00
	34	11,857,744.0	6,943,570.5	144.00
	35	11,857,818.0	6,943,549.0	146.00
	36	11,857,856.0	6,943,537.0	146.00
	37	11,857,894.0	6,943,525.0	144.00
	38	11,857,920.0	6,943,516.5	140.00
	39	11,857,947.0	6,943,503.0	138.00
	40	11,857,963.0	6,943,495.5	136.00
	41	11,857,959.0	6,943,498.0	134.00
	42	11,857,937.0	6,943,513.0	132.00
	43	11,857,916.0	6,943,519.0	134.00
	44	11,857,879.0	6,943,531.5	136.00
	45	11,857,855.0	6,943,539.0	138.00
	46	11,857,790.0	6,943,560.5	140.00
	47	11,857,749.0	6,943,574.0	142.00
Terrain Line23	48	11,857,963.0	6,943,495.5	136.00
	49	11,857,999.0	6,943,492.0	134.00
	50	11,858,010.0	6,943,490.0	136.00
	51	11,858,036.0	6,943,483.0	136.00
	52	11,858,051.0	6,943,479.0	134.00
	53	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	54	11,858,058.0	6,943,477.0	132.00
	55	11,858,067.0	6,943,481.0	128.00
	56	11,858,095.0	6,943,482.0	128.00
	57	11,858,124.0	6,943,489.0	128.00
	58	11,858,154.0	6,943,484.5	130.00
	59	11,858,172.0	6,943,479.0	132.00
	60	11,858,213.0	6,943,480.5	134.00

**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	61	11,858,299.0	6,943,488.5	134.00
Terrain Line28	62	11,858,816.0	6,943,467.0	102.00
	63	11,858,837.0	6,943,468.0	98.00
	64	11,858,917.0	6,943,485.5	96.00
	65	11,858,974.0	6,943,492.5	94.00
	66	11,858,995.0	6,943,501.0	92.00
	67	11,859,026.0	6,943,508.0	86.00
	68	11,859,094.0	6,943,534.0	84.00
	69	11,859,164.0	6,943,586.5	83.10
Terrain Line33	70	11,870,814.0	6,945,837.0	122.00
	71	11,870,960.0	6,945,964.5	122.00
	72	11,871,050.0	6,946,044.5	108.00
	73	11,871,090.0	6,945,944.0	118.00
	74	11,871,117.0	6,945,958.5	118.10
	75	11,871,094.0	6,946,036.5	113.00
	76	11,871,132.0	6,946,048.0	118.00
	77	11,871,189.0	6,946,066.0	122.00
	78	11,871,230.0	6,946,071.0	124.00
	79	11,871,293.0	6,946,054.5	124.00
	80	11,871,328.0	6,946,027.5	124.00
	81	11,871,350.0	6,945,975.0	124.00
Terrain Line35	82	11,871,601.0	6,945,843.0	120.00
	83	11,871,721.0	6,945,893.0	88.00
	84	11,871,818.0	6,945,939.5	70.00
	85	11,871,961.0	6,946,019.0	54.00
	86	11,872,034.0	6,946,108.0	44.00
Terrain Line36	87	11,859,164.0	6,943,586.0	83.10
	88	11,859,201.0	6,943,620.0	84.00
	89	11,859,236.0	6,943,656.5	84.00
	90	11,859,256.0	6,943,666.5	90.00
	91	11,859,291.0	6,943,695.5	90.00
	92	11,859,312.0	6,943,703.0	82.00
Terrain Line3-2	93	11,855,623.0	6,944,227.5	150.00
	94	11,855,622.0	6,944,248.0	148.00
	95	11,855,599.0	6,944,298.5	147.80
	96	11,855,569.0	6,944,315.5	148.00

**INPUT: TERRAIN LINES****Route 1 /Fort Belvoir**

	97	11,855,516.0	6,944,294.0	144.00
	98	11,855,478.0	6,944,288.0	142.00
	99	11,855,466.0	6,944,284.0	142.00
	100	11,855,378.0	6,944,309.0	142.00
	101	11,855,300.0	6,944,324.5	146.00
	102	11,855,261.0	6,944,337.0	146.00
	103	11,855,178.0	6,944,350.5	152.10
	104	11,855,122.0	6,944,348.0	157.50
	105	11,855,001.0	6,944,363.0	156.10
	106	11,854,941.0	6,944,381.5	156.00
	107	11,854,841.0	6,944,372.0	158.00
	108	11,854,831.0	6,944,394.5	158.00
	109	11,854,756.0	6,944,356.5	159.40
Terrain Line40	110	11,871,297.0	6,945,552.5	126.30
	111	11,871,500.0	6,945,581.5	123.10
	112	11,871,534.0	6,945,590.0	122.00
	113	11,871,657.0	6,945,624.5	94.00
	114	11,871,714.0	6,945,641.5	90.00
	115	11,871,829.0	6,945,697.5	82.00
	116	11,871,915.0	6,945,745.0	74.00
	117	11,872,009.0	6,945,814.0	62.00
	118	11,872,081.0	6,945,871.5	58.00
	119	11,872,130.0	6,945,922.5	47.70
	120	11,872,185.0	6,945,978.5	36.20
	121	11,872,211.0	6,946,010.0	35.90
	122	11,872,271.0	6,946,092.0	42.00
	123	11,872,333.0	6,946,189.0	42.50
Terrain Line39-2	124	11,871,656.0	6,945,776.0	108.00
	125	11,871,753.0	6,945,819.5	88.00
	126	11,871,824.0	6,945,854.0	78.60
	127	11,871,902.0	6,945,913.0	70.00
	128	11,871,973.0	6,945,967.5	61.50
	129	11,872,014.0	6,946,008.0	50.00
	130	11,872,086.0	6,946,084.5	41.40
	131	11,872,114.0	6,946,125.5	44.00
	132	11,872,200.0	6,946,261.5	49.60

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

Parsons						27 November 2012					
Greg J Berg						TNM 2.5					
						Calculated with TNM 2.5					
<b>RESULTS: BARRIER DESIGN</b>											
<b>PROJECT/CONTRACT:</b>		Route 1 /Fort Belvoir									
<b>RUN:</b>		Future Build Alternative B									
<b>BARRIER DESIGN:</b>		No Barrier									
<b>ATMOSPHERICS:</b>											
		68 deg F, 50% RH									
<b>Selected Receivers</b>											
<b>Name</b>		<b>No.</b>	<b>Calc</b>	<b>Noise Reduction</b>			<b>Barrier Reviewed</b>	<b>Important Segments</b>			<b>Partial</b>
			<b>LAeq1h</b>	<b>Calc</b>	<b>Goal</b>	<b>Calc-Goal</b>		<b>Name</b>	<b>No.</b>	<b>Height</b>	<b>LAeq1h</b>
			dBA	dB	dB	dB				ft	dBA
R1		1	61.3	6.8	5	1.8	Existing SW	0+00	155	12.0	54.5
R2		2	60.0	10.0	5	5.0	Existing SW	0+00	155	12.0	58.0
R3		3	59.1	10.4	5	5.4	Existing SW	2+00	156	12.0	57.7
R4		4	59.3	10.5	5	5.5	Existing SW	2+00	156	12.0	56.6
R5		5	59.7	8.6	5	3.6	Existing SW	4+00	157	12.0	54.5
R6		6	56.8	5.1	5	0.1	Existing SW	4+90	158	12.0	49.9
R7		7	54.8	6.4	5	1.4	Existing SW	4+90	158	12.0	49.2
R8-Deck		8	63.6	6.2	5	1.2	Existing SW	4+90	158	12.0	55.1
R9		9	60.3	-0.0	5	-5.0	SW13	10+00	61	0.0	53.3
R10		10	57.2	-0.0	5	-5.0	SW13	10+00	61	0.0	52.3
R11-Deck		11	63.3	-0.0	5	-5.0	SW13	9+00	60	0.0	59.4
R12/Site 1		12	68.5	-0.0	5	-5.0	SW13	10+00	61	0.0	66.5
R13-Deck		13	70.1	-0.0	5	-5.0	SW13	12+00	62	0.0	67.3
R14		14	63.8	-0.0	5	-5.0	SW13	12+00	62	0.0	60.9
R15-Deck		15	66.8	0.0	5	-5.0	SW13	12+00	62	0.0	63.2
R16		16	61.6	-0.0	5	-5.0	SW13	12+00	62	0.0	57.2
R17-Deck		17	65.5	-0.0	5	-5.0	SW13	14+00	63	0.0	60.2
R18-Deck		18	65.2	-0.0	5	-5.0	SW13	14+00	63	0.0	57.9
R19		19	65.3	0.0	5	-5.0	Barrier35	1	89	0.0	63.6
R19A		20	66.3	0.0	5	-5.0	Barrier35	3	91	0.0	62.0
R20		21	65.5	0.0	5	-5.0	Barrier35	1	89	0.0	59.0

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R20A	22	65.6	-0.0	5	-5.0	Barrier35	2	90	0.0	57.3
R21	23	62.5	-0.0	5	-5.0	Barrier35	1	89	0.0	53.0
R21A	24	63.2	0.0	5	-5.0	Barrier35	1	89	0.0	53.7
R21B	25	68.9	0.0	5	-5.0	Barrier35	2	90	0.0	46.5
R22-Deck	26	61.4	0.0	5	-5.0	SW31	27+36	65	0.0	51.0
R23-Deck	27	63.8	-0.0	5	-5.0	SW31	27+36	65	0.0	55.5
R24/Site 2-Deck	28	68.3	0.0	5	-5.0	SW31	28+00	66	0.0	63.7
R25-Deck	29	60.7	-0.0	5	-5.0	SW31	32+00	69	0.0	55.5
R26-Deck	30	62.7	0.0	5	-5.0	SW31	30+00	67	0.0	57.8
R27	31	61.4	-0.0	5	-5.0	SW31	30+00	67	0.0	55.0
R28	32	57.5	0.0	5	-5.0	SW31	31+00	68	0.0	52.6
R29-Deck	33	64.4	-0.0	5	-5.0	SW31	32+00	69	0.0	59.9
R30	34	64.7	0.0	5	-5.0	SW31	32+00	69	0.0	62.3
R31-Deck	35	69.8	-0.0	5	-5.0	SW31	32+00	69	0.0	67.0
R32/Site 3-Deck	36	69.6	-0.0	5	-5.0	SW31	34+00	70	0.0	65.3
R33-Deck	37	68.9	0.0	5	-5.0	SW43	36+32	72	0.0	68.6
R34	38	58.2	0.0	5	-5.0	SW43	36+32	72	0.0	58.1
R35	39	61.9	0.0	5	-5.0	SW43	38+00	73	0.0	60.8
R36	40	57.5	-0.0	5	-5.0	SW43	38+00	73	0.0	57.4
R37/Site 4	41	73.1	-0.0	5	-5.0	SW43	38+00	73	0.0	72.6
R38-Deck	42	67.2	0.0	5	-5.0	SW43	40+00	74	0.0	65.4
R39-Deck	43	58.1	-0.0	5	-5.0	SW43	40+00	74	0.0	56.9
R40	44	66.6	-0.0	5	-5.0	SW43	40+92	75	0.0	62.6
R41-Deck	45	70.5	-0.0	5	-5.0	SW43	42+00	76	0.0	65.7
R42-Deck	46	69.2	0.0	5	-5.0	SW43	45+00	78	0.0	62.9
R43-Deck	47	67.1	0.0	5	-5.0	SW43	46+00	79	0.0	62.3
R44	48	66.0	0.0	5	-5.0	SW43	46+00	79	0.0	62.1
R45/Site 5	49	68.0	-0.0	5	-5.0	SW43	46+00	79	0.0	65.0
R46	50	68.8	0.0	5	-5.0	SW53	50+14	82	0.0	64.0
R47/Site 6	51	69.8	-0.0	5	-5.0	SW53	50+14	82	0.0	67.6
R48	52	70.6	-0.0	5	-5.0	SW53	50+14	82	0.0	68.8
R49	53	67.3	-0.0	5	-5.0	SW53	52+00	83	0.0	63.4
R50	54	64.1	-0.0	5	-5.0	SW53	52+00	83	0.0	58.6
R51A	55	64.9	-0.0	5	-5.0	Barrier51	118	151	0.0	43.8
R51/Site 7	56	64.2	-0.0	5	-5.0	Barrier51	118	151	0.0	48.9
R52	57	63.2	-0.0	5	-5.0	Barrier51	118	151	0.0	52.4



**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R53	58	60.9	-0.0	5	-5.0	Barrier51	118	151	0.0	55.1
R54	59	63.8	0.0	5	-5.0	Barrier51	118	151	0.0	59.6
R54A	60	69.4	0.0	5	-5.0	Barrier51	118	151	0.0	65.7
R55	61	63.8	0.0	5	-5.0					
R56	62	59.3	0.0	5	-5.0	Soundwall Church	176	164	0.0	43.1
R57	63	69.2	-0.0	5	-5.0	Barrier36	168+00	97	0.0	67.1
R58	64	65.3	-0.0	5	-5.0	Barrier36	166+00	96	0.0	60.8
R59	66	65.4	0.0	5	-5.0	Barrier36	166+00	96	0.0	60.6
R60	67	65.9	-0.0	5	-5.0	Barrier36	168+00	97	0.0	61.8
R61	68	66.4	0.0	5	-5.0	Barrier36	170+00	98	0.0	62.1
R62	69	67.1	0.0	5	-5.0	Barrier36	170+00	98	0.0	62.8
R63	70	62.5	0.0	5	-5.0	Barrier36	166+00	96	0.0	56.4
R64	71	62.9	0.0	5	-5.0	Barrier36	168+00	97	0.0	57.3
R65	72	63.4	0.0	5	-5.0	Barrier36	170+00	98	0.0	57.7
R66	73	63.7	-0.0	5	-5.0	Barrier36	172+00	99	0.0	58.0
R67	74	64.7	0.0	5	-5.0	Barrier36	172+00	99	0.0	59.6
R68A	75	67.2	0.0	5	-5.0	Soundwall Church	176	164	0.0	64.5
R68	76	68.4	0.0	5	-5.0	Soundwall Church	176	164	0.0	66.8
R69	77	53.5	0.0	5	-5.0	Soundwall Stable	184	139	0.0	47.8
R70	78	63.8	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	62.2
R71	79	65.5	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	63.6
R72	80	66.6	-0.0	5	-5.0	SW195	192+00-Exist	108	0.0	64.0
R73	81	67.8	-0.0	5	-5.0	SW195	192+00-Exist	108	0.0	65.7
R74	82	69.6	-0.0	5	-5.0	SW195	196+00	111	0.0	64.4
R75	83	70.8	0.0	5	-5.0	SW195	196+00	111	0.0	69.4
R76	84	71.1	-0.0	5	-5.0	SW195	196+00	111	0.0	69.9
R77	85	62.0	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	58.0
R78	86	62.8	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	59.3
R79	87	62.9	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	57.2
R80	88	63.9	-0.0	5	-5.0	SW195	192+00-Exist	108	0.0	58.7
R81	89	65.6	-0.0	5	-5.0	SW195	196+00	111	0.0	61.5
R82	90	66.5	-0.0	5	-5.0	SW195	196+00	111	0.0	63.4
R83	91	67.0	0.0	5	-5.0	SW195	196+00	111	0.0	63.7
R84	92	67.3	0.0	5	-5.0	SW195	198+00	112	0.0	63.7
R85	93	60.3	-0.0	5	-5.0	SW195	190+00-Exist	107	0.0	55.1
R86	94	60.6	-0.0	5	-5.0	SW195	190+00-Exist	107	0.0	55.8

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R87	95	60.5	0.0	5	-5.0	SW195	190+00-Exist	107	0.0	55.0
R88	96	61.1	0.0	5	-5.0	SW195	196+00	111	0.0	55.6
R89	98	62.2	-0.0	5	-5.0	SW195	196+00	111	0.0	57.6
R90	99	63.0	-0.0	5	-5.0	SW195	196+00	111	0.0	58.7
R91	100	63.6	0.0	5	-5.0	SW195	196+00	111	0.0	59.0
R92	101	63.6	-0.0	5	-5.0	SW195	198+00	112	0.0	59.0
R93	102	63.1	-0.0	5	-5.0	Soundwall Stable	186	140	0.0	59.3
R94	103	69.1	0.0	5	-5.0	Soundwall Stable	188	141	0.0	66.5
R95	104	66.1	-0.0	5	-5.0	Barrier49	188	144	0.0	63.4
R96	105	68.5	-0.0	5	-5.0	Barrier49	190	145	0.0	67.1
R97	106	69.5	0.0	5	-5.0	Barrier49	190	145	0.0	66.9
R98	107	69.5	-0.0	5	-5.0	Barrier49	192	146	0.0	67.7
R99	108	63.8	-0.0	5	-5.0	Barrier49	188	144	0.0	59.4
R100	110	64.5	0.0	5	-5.0	Barrier49	190	145	0.0	60.9
R101	111	65.3	0.0	5	-5.0	Barrier49	190	145	0.0	61.3
R102	112	65.6	0.0	5	-5.0	Barrier49	192	146	0.0	61.6
R103	113	64.9	-0.0	5	-5.0	Barrier42	1	118	0.0	60.2
R104-Deck	114	64.3	-0.0	5	-5.0	Barrier42	1	118	0.0	62.6
R105-Deck	115	61.9	0.0	5	-5.0	Barrier42	1	118	0.0	60.6
R106-Deck	116	60.6	-0.0	5	-5.0	Barrier42	1	118	0.0	58.8
R107-Deck	117	59.8	0.0	5	-5.0	Barrier42	1	118	0.0	57.4
R108-Deck	118	61.6	-0.0	5	-5.0	Barrier42	1	118	0.0	58.0
R109-Deck	119	62.5	0.0	5	-5.0	Barrier42	2	119	0.0	58.5
R110-Deck	121	63.7	-0.0	5	-5.0	Barrier42	2	119	0.0	60.1
R111	122	68.0	0.0	5	-5.0	Barrier41	1	115	0.0	67.9
R112	124	67.9	-0.0	5	-5.0	Barrier41	1	115	0.0	67.6
R113	125	63.8	0.0	5	-5.0	Barrier41	1	115	0.0	59.9



**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

Parsons						27 November 2012						
Greg J Berg						TNM 2.5						
						Calculated with TNM 2.5						
<b>RESULTS: BARRIER DESIGN</b>												
<b>PROJECT/CONTRACT:</b>		Route 1 /Fort Belvoir										
<b>RUN:</b>		Future Build Alternative B										
<b>BARRIER DESIGN:</b>		Design										
<b>ATMOSPHERICS:</b>												
		68 deg F, 50% RH										
<b>Selected Receivers</b>												
<b>Name</b>		<b>No.</b>										
		<b>Calc</b>	<b>Noise Reduction</b>			<b>Barrier Reviewed</b>		<b>Important Segments</b>			<b>Partial</b>	
		<b>LAeq1h</b>	<b>Calc</b>	<b>Goal</b>	<b>Calc-Goal</b>			<b>Name</b>	<b>No.</b>	<b>Height</b>	<b>LAeq1h</b>	
		dBA	dB	dB	dB					ft	dBA	
R1		1	61.3	6.8	5	1.8	Existing SW		0+00	155	20.0	54.5
R2		2	60.0	10.0	5	5.0	Existing SW		0+00	155	12.0	58.0
R3		3	59.1	10.4	5	5.4	Existing SW		2+00	156	12.0	57.7
R4		4	59.3	10.5	5	5.5	Existing SW		2+00	156	12.0	56.6
R5		5	59.7	8.6	5	3.6	Existing SW		4+00	157	12.0	54.5
R6		6	56.8	5.1	5	0.1	Existing SW		4+90	158	12.0	49.9
R7		7	54.7	6.5	5	1.5	Existing SW		4+90	158	12.0	49.2
R8-Deck		8	63.6	6.2	5	1.2	Existing SW		4+90	158	12.0	55.1
R9		9	58.9	1.4	5	-3.6	SW13		8+00	59	12.0	49.3
R10		10	54.2	3.0	5	-2.0	SW13		8+00	59	12.0	47.6
R11-Deck		11	60.7	2.6	5	-2.4	SW13		9+00	60	12.0	55.3
R12/Site 1		12	59.3	9.2	5	4.2	SW13		10+00	61	12.0	55.4
R13-Deck		13	61.6	8.5	5	3.5	SW13		12+00	62	20.0	56.9
R14		14	58.5	5.3	5	0.3	SW13		12+00	62	20.0	53.0
R15-Deck		15	61.1	5.7	5	0.7	SW13		12+00	62	12.0	52.2
R16		16	57.9	3.7	5	-1.3	SW13		12+00	62	12.0	50.1
R17-Deck		17	61.5	4.0	5	-1.0	SW13		14+00	63	12.0	49.4
R18-Deck		18	63.6	1.6	5	-3.4	Barrier42		1	118	0.0	54.8
R19		19	59.8	5.5	5	0.5	Barrier35		1	89	20.0	52.4
R19A		20	59.8	6.5	5	1.5	Barrier35		3	91	20.0	50.9
R20		21	63.8	1.7	5	-3.3	Barrier35		1	89	20.0	47.7

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R20A	22	63.7	1.9	5	-3.1	Barrier35	2	90	20.0	47.2
R21	23	61.6	0.9	5	-4.1	Barrier35	1	89	20.0	44.0
R21A	24	62.2	1.0	5	-4.0	Barrier35	2	90	20.0	43.8
R21B	25	68.9	0.0	5	-5.0	Barrier35	2	90	18.0	37.5
R22-Deck	26	60.7	0.7	5	-4.3	SW31	28+00	66	12.0	44.0
R23-Deck	27	62.6	1.2	5	-3.8	SW31	28+00	66	12.0	48.1
R24/Site 2-Deck	28	64.6	3.7	5	-1.3	SW31	28+00	66	12.0	54.8
R25-Deck	29	52.5	8.2	5	3.2	SW31	32+00	69	12.0	44.7
R26-Deck	30	54.7	8.0	5	3.0	SW31	32+00	69	12.0	45.9
R27	31	54.4	7.0	5	2.0	SW31	28+00	66	12.0	47.1
R28	32	50.4	7.1	5	2.1	SW31	28+00	66	12.0	44.6
R29-Deck	33	55.8	8.6	5	3.6	SW31	32+00	69	12.0	48.9
R30	34	58.0	6.7	5	1.7	SW31	32+00	69	12.0	52.9
R31-Deck	35	62.0	7.8	5	2.8	SW31	32+00	69	12.0	53.1
R32/Site 3-Deck	36	64.9	4.7	5	-0.3	SW31	34+00	70	12.0	54.3
R33-Deck	37	60.8	8.1	5	3.1	SW43	36+32	72	12.0	58.0
R34	38	49.3	8.9	5	3.9	SW43	36+32	72	12.0	48.2
R35	39	54.1	7.8	5	2.8	SW43	38+00	73	12.0	53.1
R36	40	49.5	8.0	5	3.0	SW43	38+00	73	12.0	48.8
R37/Site 4	41	62.2	10.9	5	5.9	SW43	38+00	73	12.0	61.1
R38-Deck	42	55.0	12.2	5	7.2	SW43	40+00	74	12.0	51.6
R39-Deck	43	49.2	8.9	5	3.9	SW43	40+00	74	12.0	45.8
R40	44	57.3	9.3	5	4.3	SW43	42+00	76	12.0	52.5
R41-Deck	45	63.6	6.9	5	1.9	SW43	42+00	76	12.0	59.5
R42-Deck	46	62.1	7.1	5	2.1	SW43	42+00	76	12.0	55.1
R43-Deck	47	60.5	6.6	5	1.6	SW43	46+00	79	14.0	52.4
R44	48	60.6	5.4	5	0.4	SW43	46+00	79	14.0	49.4
R45/Site 5	49	62.0	6.0	5	1.0	SW43	46+00	79	14.0	51.8
R46	50	65.8	3.0	5	-2.0	SW53	50+14	82	14.0	52.0
R47/Site 6	51	64.4	5.4	5	0.4	SW53	50+14	82	14.0	56.0
R48	52	63.9	6.7	5	1.7	SW53	50+14	82	14.0	57.9
R49	53	60.2	7.1	5	2.1	SW53	52+00	83	14.0	52.3
R50	54	59.4	4.7	5	-0.3	SW53	56+00	86	0.0	53.3
R51A	55	64.9	-0.0	5	-5.0	Barrier51	118	151	0.0	43.8
R51/Site 7	56	64.2	-0.0	5	-5.0	Barrier51	118	151	0.0	48.9
R52	57	63.2	-0.0	5	-5.0	Barrier51	118	151	0.0	52.4

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R53	58	60.9	-0.0	5	-5.0	Barrier51	118	151	0.0	55.1
R54	59	63.8	0.0	5	-5.0	Barrier51	118	151	0.0	59.6
R54A	60	69.4	0.0	5	-5.0	Barrier51	118	151	0.0	65.7
R55	61	63.8	0.0	5	-5.0					
R56	62	59.2	0.1	5	-4.9	Soundwall Church	176	164	14.0	37.7
R57	63	60.3	8.9	5	3.9	Barrier36	168+00	97	12.0	56.2
R58	64	60.4	4.9	5	-0.1	Barrier36	164+00	94	0.0	54.5
R59	66	59.4	6.0	5	1.0	Barrier36	164+00	94	0.0	52.0
R60	67	59.4	6.5	5	1.5	Barrier36	168+00	97	12.0	52.6
R61	68	59.5	6.9	5	1.9	Barrier36	170+00	98	12.0	52.8
R62	69	59.9	7.2	5	2.2	Barrier36	172+00	99	12.0	53.4
R63	70	57.4	5.1	5	0.1	Barrier36	164+00	94	0.0	50.2
R64	71	57.3	5.6	5	0.6	Barrier36	168+00	97	12.0	48.8
R65	72	57.7	5.7	5	0.7	Barrier36	170+00	98	12.0	49.3
R66	73	58.0	5.7	5	0.7	Barrier36	172+00	99	12.0	49.7
R67	74	59.8	4.9	5	-0.1	Barrier36	172+00	99	12.0	53.0
R68A	75	63.9	3.3	5	-1.7	Soundwall Church	176	164	14.0	53.1
R68	76	61.5	6.9	5	1.9	Soundwall Church	176	164	20.0	55.4
R69	77	52.6	0.9	5	-4.1	Soundwall Stable	184	139	0.0	47.8
R70	78	56.1	7.7	5	2.7	SW195	190+00-Exist	107	20.0	51.8
R71	79	57.6	7.9	5	2.9	SW195	190+00-Exist	107	20.0	53.7
R72	80	58.7	7.9	5	2.9	SW195	192+00-Exist	108	20.0	54.2
R73	81	60.3	7.5	5	2.5	SW195	192+00-Exist	108	10.0	55.9
R74	82	62.6	7.0	5	2.0	SW195	196+00	111	10.0	58.9
R75	83	65.4	5.4	5	0.4	SW195	196+00	111	10.0	63.4
R76	84	66.1	5.0	5	-0.0	SW195	196+00	111	20.0	64.7
R77	85	55.7	6.3	5	1.3	SW195	190+00-Exist	107	20.0	49.8
R78	86	56.6	6.2	5	1.2	SW195	190+00-Exist	107	20.0	51.0
R79	87	57.3	5.6	5	0.6	SW195	196+00	111	10.0	50.7
R80	88	58.5	5.4	5	0.4	SW195	196+00	111	10.0	53.0
R81	89	60.2	5.4	5	0.4	SW195	196+00	111	10.0	56.1
R82	90	61.2	5.3	5	0.3	SW195	196+00	111	10.0	57.7
R83	91	62.1	4.9	5	-0.1	SW195	196+00	111	10.0	57.8
R84	92	62.9	4.4	5	-0.6	SW195	198+00	112	10.0	58.3
R85	93	55.0	5.3	5	0.3	SW195	190+00-Exist	107	20.0	47.7
R86	94	55.4	5.2	5	0.2	SW195	196+00	111	10.0	48.0

**RESULTS: BARRIER DESIGN**

**Route 1 /Fort Belvoir**

R87	95	55.9	4.6	5	-0.4	SW195	196+00	111	10.0	49.5
R88	96	56.7	4.4	5	-0.6	SW195	196+00	111	10.0	51.1
R89	98	58.0	4.2	5	-0.8	SW195	196+00	111	10.0	52.9
R90	99	58.9	4.1	5	-0.9	SW195	196+00	111	10.0	53.8
R91	100	59.7	3.9	5	-1.1	SW195	196+00	111	10.0	53.9
R92	101	60.1	3.5	5	-1.5	SW195	198+00	112	10.0	54.3
R93	102	60.0	3.1	5	-1.9	Soundwall Stable	184	139	0.0	57.7
R94	103	61.6	7.5	5	2.5	Soundwall Stable	188	141	12.0	54.7
R95	104	59.0	7.1	5	2.1	Barrier49	188	144	20.0	55.6
R96	105	59.8	8.7	5	3.7	Barrier49	190	145	20.0	56.6
R97	106	60.4	9.1	5	4.1	Barrier49	190	145	20.0	56.6
R98	107	61.0	8.5	5	3.5	Barrier49	192	146	10.0	55.6
R99	108	58.3	5.5	5	0.5	Barrier49	188	144	20.0	52.0
R100	110	58.9	5.6	5	0.6	Barrier49	190	145	10.0	53.1
R101	111	59.6	5.7	5	0.7	Barrier49	190	145	20.0	53.2
R102	112	60.4	5.2	5	0.2	Barrier49	192	146	10.0	52.3
R103	113	64.7	0.2	5	-4.8	Barrier42	1	118	0.0	60.2
R104-Deck	114	64.2	0.1	5	-4.9	Barrier42	1	118	20.0	62.6
R105-Deck	115	61.9	0.0	5	-5.0	Barrier42	1	118	20.0	60.6
R106-Deck	116	60.6	-0.0	5	-5.0	Barrier42	1	118	20.0	58.8
R107-Deck	117	59.6	0.2	5	-4.8	Barrier42	1	118	20.0	57.4
R108-Deck	118	61.4	0.2	5	-4.8	Barrier42	1	118	20.0	58.0
R109-Deck	119	62.4	0.1	5	-4.9	Barrier42	2	119	20.0	58.5
R110-Deck	121	63.6	0.1	5	-4.9	Barrier42	2	119	20.0	60.1
R111	122	58.6	9.4	5	4.4	Barrier41	1	115	8.0	57.9
R112	124	62.1	5.8	5	0.8	Barrier41	1	115	8.0	61.3
R113	125	62.4	1.4	5	-3.6	Barrier41	1	115	8.0	55.8





**Traffic Noise Model for Future Build Scenario  
Alternative C**





**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		begin	1	11,853,882.0	6,943,845.0	120.00				Average
		0+00	2	11,854,057.0	6,943,938.0	131.00				Average
		2+00	3	11,854,233.0	6,944,033.5	140.00				Average
		4+00	4	11,854,409.0	6,944,121.5	146.00				
Roadway11	48.0	Pohick	95	11,854,751.0	6,944,274.5	156.20	Signal	0.00	25	Average
		6+00	96	11,854,578.0	6,944,246.5	154.40				Average
		4+00	97	11,854,382.0	6,944,185.5	149.00				Average
		2+00	98	11,854,199.0	6,944,096.5	142.00				Average
		0+00	99	11,854,025.0	6,943,998.5	132.50				Average
		6	275	11,853,867.0	6,943,909.5	122.00				Average
		5	274	11,853,686.0	6,943,809.0	110.00				Average
		4	273	11,853,502.0	6,943,708.5	98.00				Average
		3	272	11,853,317.0	6,943,613.5	86.00				Average
		2	271	11,853,152.0	6,943,530.0	76.00				Average
		1	270	11,852,991.0	6,943,426.0	66.00				
WB Pohick West	28.0	1	276	11,854,688.0	6,944,314.0	157.50	Signal	10.00	100	Average
		2	277	11,854,674.0	6,944,353.0	158.00				Average
		3	278	11,854,658.0	6,944,385.0	158.50				Average
		4	279	11,854,648.0	6,944,404.5	158.00				Average
		5	280	11,854,622.0	6,944,446.0	156.00				Average
		6	281	11,854,582.0	6,944,502.5	154.00				Average
		7	282	11,854,544.0	6,944,553.5	152.00				Average
		8	283	11,854,493.0	6,944,616.0	150.00				
EB Pohick West	28.0	1	284	11,854,471.0	6,944,598.0	150.00				Average
		2	285	11,854,509.0	6,944,540.0	152.00				Average
		3	286	11,854,555.0	6,944,476.0	154.00				Average
		4	287	11,854,610.0	6,944,407.0	156.00				Average
		5	288	11,854,627.0	6,944,364.5	156.00				Average
		6	289	11,854,639.0	6,944,332.5	157.60				Average
		7	290	11,854,647.0	6,944,303.0	157.00				
WB Telegraph 2	24.0	1	302	11,855,780.0	6,943,550.5	134.00				Average
		2	303	11,855,797.0	6,943,606.5	138.00				Average
		3	304	11,855,818.0	6,943,662.5	142.00				Average
		4	305	11,855,841.0	6,943,740.0	145.80				Average
		5	306	11,855,856.0	6,943,799.5	148.10				Average
		6	307	11,855,882.0	6,943,897.0	150.00				Average
		7	308	11,855,889.0	6,943,923.5	150.20				
EB Telegraph 2	24.0	1	309	11,855,863.0	6,943,930.5	149.90	Signal	10.00	100	Average
		2	310	11,855,834.0	6,943,815.0	148.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		3	311	11,855,809.0	6,943,708.5	144.00				Average
		4	312	11,855,789.0	6,943,642.5	140.00				Average
		5	313	11,855,762.0	6,943,558.5	134.00				
EB Pohick	24.0	1	314	11,865,475.0	6,943,847.5	37.70	Signal	10.00	100	Average
		2	315	11,865,506.0	6,943,785.0	36.00				Average
		3	316	11,865,545.0	6,943,721.5	35.20				Average
		4	317	11,865,595.0	6,943,619.5	36.00				Average
		5	318	11,865,633.0	6,943,549.5	38.70				Average
		6	319	11,865,704.0	6,943,430.5	38.00				
WB Pohick	24.0	1	320	11,865,720.0	6,943,440.0	38.00				Average
		2	321	11,865,671.0	6,943,519.5	36.00				Average
		3	322	11,865,621.0	6,943,617.5	36.00				Average
		4	323	11,865,577.0	6,943,710.0	35.20				Average
		5	324	11,865,547.0	6,943,772.0	36.00				Average
		6	325	11,865,509.0	6,943,855.0	37.80				
EB Belvoir	24.0	2	327	11,869,979.0	6,945,009.5	142.00	Signal	10.00	100	Average
		3	328	11,870,040.0	6,944,867.0	142.00				Average
		4	329	11,870,068.0	6,944,799.0	140.00				Average
		5	330	11,870,122.0	6,944,680.0	138.00				Average
		6	331	11,870,155.0	6,944,598.5	136.00				Average
		7	332	11,870,199.0	6,944,498.0	132.00				Average
		8	333	11,870,241.0	6,944,384.0	128.00				
WB Belvoir	24.0	1	334	11,870,275.0	6,944,429.5	128.00				Average
		2	335	11,870,233.0	6,944,520.0	132.00				Average
		3	336	11,870,181.0	6,944,618.0	136.00				Average
		4	337	11,870,145.0	6,944,695.0	138.00				Average
		5	338	11,870,102.0	6,944,798.0	140.00				Average
		6	339	11,870,062.0	6,944,884.0	142.00				Average
		7	340	11,869,993.0	6,945,016.0	142.00				
EB Mnt Vernon	30.0	1	342	11,872,962.0	6,946,957.5	29.20	Signal	10.00	100	Average
		2	343	11,873,010.0	6,946,872.5	30.00				Average
		3	344	11,873,082.0	6,946,744.0	32.00				Average
		4	345	11,873,105.0	6,946,704.5	32.00				Average
		5	346	11,873,161.0	6,946,606.0	34.00				
WB Mnt Vernon	30.0	1	347	11,873,175.0	6,946,615.0	34.00				Average
		2	348	11,873,131.0	6,946,723.5	32.00				Average
		3	349	11,873,116.0	6,946,754.5	32.00				Average
		4	350	11,873,076.0	6,946,831.5	30.50				Average
		5	351	11,873,055.0	6,946,875.0	30.00				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		6	352	11,873,000.0	6,946,983.5	28.00					
Roadway42	18.0	point607	607	11,865,496.0	6,944,040.0	38.30	Signal	10.00	100	Average	
		point608	608	11,865,489.0	6,944,129.0	38.20				Average	
		point609	609	11,865,482.0	6,944,218.5	38.10				Average	
		2	354	11,865,476.0	6,944,307.5	38.00				Average	
		3	355	11,865,464.0	6,944,680.0	40.00					
EB Backlick	18.0	1	356	11,865,447.0	6,944,680.0	40.00				Average	
		2	357	11,865,466.0	6,944,283.0	38.00				Average	
		point610	610	11,865,470.0	6,944,200.0	38.10				Average	
		point611	611	11,865,474.0	6,944,117.5	38.20				Average	
		point612	612	11,865,479.0	6,944,035.0	38.30					
Cook Inlet In	20.0	1	359	11,858,794.0	6,943,442.5	102.60				Average	
		2	360	11,858,788.0	6,943,510.0	103.30				Average	
		3	361	11,858,773.0	6,943,688.5	102.00					
Cook Inlet Out	20.0	1	362	11,858,755.0	6,943,677.5	102.00				Average	
		2	363	11,858,749.0	6,943,507.5	103.70				Average	
		3	364	11,858,751.0	6,943,440.5	104.20					
Roadway46	48.0	4+00	365	11,854,409.0	6,944,121.5	146.00				Average	
		6+00	366	11,854,594.0	6,944,182.5	151.70				Average	
		Pohick	376	11,854,628.0	6,944,189.5	152.15					
Roadway46-2	48.0	Pohick	377	11,854,628.0	6,944,189.5	152.15	Signal	0.00	25	Average	
		8+00	367	11,854,786.0	6,944,215.0	153.50				Average	
		10+00	368	11,854,982.0	6,944,218.0	152.70				Average	
		12+00	369	11,855,176.0	6,944,191.0	150.50				Average	
		14+00	370	11,855,363.0	6,944,138.5	148.00				Average	
		16+00	371	11,855,553.0	6,944,081.5	147.90				Average	
		18+00	372	11,855,745.0	6,944,024.0	149.70				Average	
		Telegraph	373	11,855,821.0	6,944,001.0	150.50					
Roadway49	48.0	Telegraph	598	11,855,821.0	6,944,001.0	150.50	Signal	25.00	100	Average	
		20+00	378	11,855,936.0	6,943,964.0	151.80				Average	
		22+00	379	11,856,128.0	6,943,908.0	154.30				Average	
		24+00	380	11,856,320.0	6,943,852.5	155.40				Average	
		26+00	381	11,856,512.0	6,943,796.5	155.00				Average	
		28+00	382	11,856,703.0	6,943,737.5	153.10				Average	
		30+00	383	11,856,894.0	6,943,678.0	149.90				Average	
		32+00	384	11,857,085.0	6,943,618.5	148.00				Average	
		34+00	385	11,857,276.0	6,943,558.5	147.00				Average	
		36+00	386	11,857,467.0	6,943,499.0	146.00				Average	
		38+00	387	11,857,658.0	6,943,439.5	145.30				Average	

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		40+00	388	11,857,848.0	6,943,379.5	143.20				Average
		42+00	389	11,858,045.0	6,943,326.5	137.80				Average
		44+00	390	11,858,249.0	6,943,299.5	127.80				Average
		46+00	391	11,858,453.0	6,943,298.0	115.70				Average
		48+00	392	11,858,652.0	6,943,309.5	107.60				Average
		Cook Inlet	393	11,858,735.0	6,943,314.0	103.60				
Roadway50	48.0	Cook Inlet	599	11,858,735.0	6,943,314.0	103.60	Signal	0.00	25	Average
		50+00	394	11,858,852.0	6,943,321.0	102.60				Average
		52+00	395	11,859,051.0	6,943,332.5	97.60				Average
		54+00	396	11,859,251.0	6,943,344.0	92.70				Average
		56+00	397	11,859,450.0	6,943,355.5	87.80				Average
		58+00	398	11,859,651.0	6,943,367.0	84.60				Average
		60+00	399	11,859,851.0	6,943,380.5	85.20				Average
		62+00	400	11,860,050.0	6,943,396.0	86.50				Average
		64+00	401	11,860,250.0	6,943,411.5	83.60				Average
		66+00	402	11,860,449.0	6,943,427.0	77.00				Average
		68+00	403	11,860,649.0	6,943,442.5	69.80				Average
		70+00	404	11,860,848.0	6,943,458.0	62.60				Average
		72+00	405	11,861,047.0	6,943,473.5	55.40				Average
		74+00	406	11,861,246.0	6,943,486.5	50.30				Average
		76+00	407	11,861,446.0	6,943,498.0	46.30				Average
		78+00	408	11,861,646.0	6,943,509.5	42.30				Average
		80+00	409	11,861,845.0	6,943,521.0	38.20				Average
		82+00	410	11,862,045.0	6,943,532.5	34.20				Average
		84+00	411	11,862,245.0	6,943,544.0	30.30				Average
		86+00	412	11,862,444.0	6,943,555.5	27.80				Average
		88+00	413	11,862,644.0	6,943,567.0	26.80				Average
		90+00	414	11,862,844.0	6,943,578.0	25.80				Average
		92+00	415	11,863,043.0	6,943,589.5	24.70				Average
		94+00	416	11,863,243.0	6,943,601.0	23.80				Average
		96+00	417	11,863,443.0	6,943,612.5	22.80				Average
		98+00	418	11,863,642.0	6,943,624.0	21.80				Average
		100+00	419	11,863,842.0	6,943,635.5	20.80				Average
		102+00/Fa	420	11,864,042.0	6,943,652.5	19.80				
Roadway51	48.0	102+00/Fa	600	11,864,042.0	6,943,652.5	19.80	Signal	0.00	25	Average
		104+00	421	11,864,242.0	6,943,687.5	18.80				Average
		106+00	422	11,864,438.0	6,943,725.5	18.40				Average
		108+00	423	11,864,635.0	6,943,764.0	22.20				Average
		110+00	424	11,864,831.0	6,943,802.0	28.20				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		112+00	425	11,865,027.0	6,943,840.5	33.50				Average
		114+00	426	11,865,224.0	6,943,878.5	35.70				Average
		116+00/Ba	427	11,865,420.0	6,943,917.0	37.70				
Roadway52	48.0	116+00/Ba	601	11,865,420.0	6,943,917.0	37.70	Signal	0.00	25	Average
		118+00	428	11,865,616.0	6,943,954.5	39.80				Average
		120+00	429	11,865,812.0	6,943,981.0	45.50				Average
		122+00	430	11,866,009.0	6,943,988.0	52.40				Average
		124+00	431	11,866,208.0	6,943,986.5	59.30				Average
		126+00	432	11,866,408.0	6,943,985.5	66.10				Average
		128+00	433	11,866,609.0	6,943,984.5	69.40				Average
		130+00	434	11,866,811.0	6,943,993.5	70.50				Average
		132+00	435	11,867,012.0	6,944,014.5	73.90				Average
		134+00	436	11,867,211.0	6,944,049.5	81.40				Average
		136+00	437	11,867,408.0	6,944,097.5	89.50				Average
		138+00	438	11,867,601.0	6,944,158.5	97.30				Average
		140+00	439	11,867,788.0	6,944,231.5	102.50				Average
		142+00	440	11,867,974.0	6,944,306.5	107.70				Average
		144+00	441	11,868,160.0	6,944,373.0	112.90				Average
		146+00	442	11,868,351.0	6,944,431.5	118.10				Average
		148+00	443	11,868,542.0	6,944,490.0	123.20				Average
		150+00	444	11,868,734.0	6,944,547.0	128.50				Average
		152+00	445	11,868,926.0	6,944,601.5	133.90				Average
		154+00	446	11,869,118.0	6,944,657.0	139.10				Average
		156+00	447	11,869,312.0	6,944,713.0	144.40				Average
		158+00	448	11,869,504.0	6,944,781.5	144.90				Average
		160+00	449	11,869,689.0	6,944,867.0	142.10				Average
		162+00	450	11,869,866.0	6,944,968.5	139.30				Average
		Belvoir	451	11,869,933.0	6,945,009.0	138.00				
Roadway10-2	36.0	Mulligan	603	11,873,019.0	6,946,998.0	26.30	Signal	0.00	25	Average
		202+00	473	11,873,087.0	6,947,051.5	27.40				Average
		204+00	474	11,873,251.0	6,947,162.5	25.50				Average
		206+00	475	11,873,420.0	6,947,270.5	22.70				Average
		208+00	477	11,873,588.0	6,947,379.5	17.90				Average
		210+00	91	11,873,747.0	6,947,502.0	13.70				Average
		212+00	92	11,873,915.0	6,947,610.5	13.00				Average
		214+00	93	11,874,082.0	6,947,720.5	13.00				Average
		End	94	11,874,514.0	6,948,000.5	16.00				
Roadway57	48.0	Telegraph	615	11,856,007.0	6,944,028.5	151.30	Signal	0.00	25	Average
		20+00	484	11,855,960.0	6,944,043.5	151.30				Average



**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		18+00	483	11,855,770.0	6,944,103.0	150.10				Average
		16+00	482	11,855,579.0	6,944,162.5	149.10				Average
		14+00	481	11,855,387.0	6,944,222.0	149.80				Average
		12+00	480	11,855,188.0	6,944,267.5	152.90				Average
		10+00	479	11,854,984.0	6,944,287.0	155.70				Average
		8+00	478	11,854,781.0	6,944,279.5	156.20				Average
		Pohick	617	11,854,751.0	6,944,274.5	156.20				
Roadway58	38.0	Cook Inlet	614	11,858,873.0	6,943,404.5	101.60	Signal	0.00	25	Average
		50+00	500	11,858,848.0	6,943,403.0	102.60				Average
		48+00	499	11,858,648.0	6,943,391.5	107.60				Average
		46+00	498	11,858,448.0	6,943,379.0	115.70				Average
		44+00	497	11,858,252.0	6,943,373.5	127.80				Average
		42+00	496	11,858,058.0	6,943,395.5	137.80				Average
		40+00	495	11,857,869.0	6,943,446.5	143.20				Average
		38+00	494	11,857,678.0	6,943,506.0	144.00				Average
		36+00	493	11,857,488.0	6,943,566.0	145.10				Average
		34+00	492	11,857,297.0	6,943,625.5	146.30				Average
		32+00	491	11,857,106.0	6,943,685.0	147.30				Average
		30+00	490	11,856,915.0	6,943,745.0	148.60				Average
		28+00	489	11,856,724.0	6,943,804.5	151.80				Average
		26+00	488	11,856,533.0	6,943,864.0	153.70				Average
		24+00	487	11,856,342.0	6,943,924.0	154.00				Average
		22+00	486	11,856,151.0	6,943,983.5	152.50				Average
		Telegraph	485	11,856,007.0	6,944,028.5	151.30				
Roadway59	48.0	Fairfax Co	616	11,864,274.0	6,943,789.5	18.80	Signal	0.00	25	Average
		104+00	613	11,864,224.0	6,943,778.0	18.80				Average
		102+00	528	11,864,034.0	6,943,746.0	19.80				Average
		100+00	527	11,863,837.0	6,943,729.5	20.80				Average
		98+00	526	11,863,637.0	6,943,718.0	21.80				Average
		96+00	525	11,863,437.0	6,943,704.0	22.80				Average
		94+00	524	11,863,238.0	6,943,688.5	23.80				Average
		92+00	523	11,863,038.0	6,943,673.0	24.70				Average
		90+00	522	11,862,839.0	6,943,657.5	25.80				Average
		88+00	521	11,862,640.0	6,943,642.0	26.80				Average
		86+00	520	11,862,440.0	6,943,626.5	27.80				Average
		84+00	519	11,862,241.0	6,943,614.0	30.30				Average
		82+00	518	11,862,041.0	6,943,602.5	34.20				Average
		80+00	517	11,861,841.0	6,943,591.0	38.20				Average
		78+00	516	11,861,642.0	6,943,579.5	42.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		76+00	515	11,861,442.0	6,943,568.0	46.30				Average
		74+00	514	11,861,242.0	6,943,556.5	50.30				Average
		72+00	513	11,861,042.0	6,943,543.0	55.40				Average
		70+00	512	11,860,843.0	6,943,527.5	62.60				Average
		68+00	511	11,860,643.0	6,943,512.0	69.80				Average
		66+00	510	11,860,444.0	6,943,496.5	77.00				Average
		64+00	509	11,860,244.0	6,943,481.5	83.60				Average
		62+00	508	11,860,045.0	6,943,466.0	86.50				Average
		60+00	507	11,859,846.0	6,943,450.5	85.20				Average
		58+00	506	11,859,647.0	6,943,437.0	84.60				Average
		56+00	505	11,859,448.0	6,943,427.0	87.80				Average
		54+00	504	11,859,248.0	6,943,419.0	92.70				Average
		52+00	503	11,859,048.0	6,943,411.5	97.60				Average
		Cook Inlet	502	11,858,873.0	6,943,404.5	101.60				
Roadway60	48.0	Backkick/1	606	11,865,601.0	6,944,035.5	39.80	Signal	0.00	25	Average
		11600	535	11,865,405.0	6,943,996.0	37.70				Average
		11400	534	11,865,208.0	6,943,961.5	35.70				Average
		11200	533	11,865,010.0	6,943,927.0	33.50				Average
		11000	532	11,864,814.0	6,943,892.5	28.20				Average
		10800	531	11,864,617.0	6,943,856.0	22.20				Average
		10600	530	11,864,420.0	6,943,818.0	18.40				Average
		Fairfax Co	529	11,864,274.0	6,943,789.5	18.80				
Roadway61	48.0	Belvoir	605	11,870,008.0	6,945,189.5	139.90	Signal	0.00	25	Average
		162+00	558	11,869,818.0	6,945,049.0	139.30				Average
		160+00	557	11,869,646.0	6,944,951.0	142.10				Average
		158+00	556	11,869,467.0	6,944,868.0	144.90				Average
		156+00	555	11,869,281.0	6,944,802.0	144.40				Average
		154+00	554	11,869,092.0	6,944,742.5	139.10				Average
		152+00	553	11,868,902.0	6,944,679.5	133.90				Average
		150+00	552	11,868,712.0	6,944,617.0	128.50				Average
		148+00	551	11,868,521.0	6,944,557.0	123.20				Average
		146+00	550	11,868,330.0	6,944,498.5	118.10				Average
		144+00	549	11,868,139.0	6,944,439.5	112.90				Average
		142+00	548	11,867,948.0	6,944,371.5	107.70				Average
		140+00	547	11,867,762.0	6,944,296.5	102.50				Average
		138+00	546	11,867,577.0	6,944,224.5	97.30				Average
		136+00	545	11,867,389.0	6,944,165.0	89.50				Average
		134+00	544	11,867,197.0	6,944,118.0	81.40				Average
		132+00	543	11,867,002.0	6,944,083.5	73.90				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		130+00	542	11,866,806.0	6,944,062.5	70.50				Average
		128+00	541	11,866,608.0	6,944,054.5	69.40				Average
		126+00	540	11,866,409.0	6,944,059.0	66.10				Average
		124+00	539	11,866,209.0	6,944,064.0	59.30				Average
		122+00	538	11,866,008.0	6,944,069.0	52.40				Average
		120+00	537	11,865,803.0	6,944,063.5	45.50				Average
		Backkick/1	536	11,865,601.0	6,944,035.5	39.80				
Roadway62	48.0	Mt Vernon	604	11,873,086.0	6,947,119.5	26.00	Signal	0.00	25	Average
		202+00	579	11,873,055.0	6,947,100.0	27.40				Average
		200+00	578	11,872,887.0	6,946,991.5	30.10				
WB Future Telegraph	48.0	1	580	11,855,962.0	6,944,106.0	151.20				Average
		2	581	11,855,976.0	6,944,229.5	150.10				Average
		3	582	11,855,975.0	6,944,368.0	147.90				Average
		4	583	11,855,965.0	6,944,508.0	145.30				Average
		5	584	11,855,953.0	6,944,692.5	147.00				
EB Future Telegraph	48.0	1	585	11,855,896.0	6,944,693.0	147.00				Average
		2	586	11,855,897.0	6,944,565.5	146.00				Average
		3	587	11,855,903.0	6,944,364.0	147.00				
EB to SB Future Telegraph	30.0	3	596	11,855,903.0	6,944,364.0	147.00				Average
		4	588	11,855,882.0	6,944,308.0	147.00				Average
		5	589	11,855,824.0	6,944,225.5	147.20				Average
		6	590	11,855,768.0	6,944,189.5	151.50				Average
		7	591	11,855,685.0	6,944,172.0	151.00				Average
		8	592	11,855,628.0	6,944,179.0	150.80				
EB Future Telegraph 2	36.0	3	597	11,855,903.0	6,944,364.0	147.00				Average
		4	593	11,855,927.0	6,944,303.0	148.00				Average
		5	594	11,855,922.0	6,944,205.5	149.70				Average
		6	595	11,855,914.0	6,944,116.5	150.50				
Roadway69	38.0	Belvoir	656	11,869,933.0	6,945,009.0	138.00	Signal	0.00	25	Average
		164	636	11,870,038.0	6,945,093.0	140.20				Average
		166	637	11,870,193.0	6,945,226.5	138.80				Average
		168	638	11,870,334.0	6,945,374.0	137.20				Average
		170	639	11,870,464.0	6,945,528.0	136.10				Average
		172	640	11,870,588.0	6,945,685.0	133.40				Average
		174	641	11,870,713.0	6,945,838.0	127.90				Average
		174+53	642	11,870,750.0	6,945,875.5	124.50				
Roadway70	40.0	174+53	679	11,870,750.0	6,945,875.5	124.50	Signal	0.00	25	Average
		176	643	11,870,855.0	6,945,966.0	119.40				Average
		178	644	11,871,019.0	6,946,063.5	109.30				Average

**INPUT: ROADWAYS**

**Route 1 / Fort Belvoir**

		180	645	11,871,197.0	6,946,155.0	99.90				Average
		182	646	11,871,375.0	6,946,233.0	96.70				Average
		184	647	11,871,562.0	6,946,299.0	94.10				Average
		186	648	11,871,752.0	6,946,360.0	85.60				Average
		188	649	11,871,945.0	6,946,418.0	72.10				Average
		190	650	11,872,135.0	6,946,475.5	58.10				Average
		192	651	11,872,326.0	6,946,553.5	48.40				Average
		194	652	11,872,496.0	6,946,664.0	43.10				Average
		196	653	11,872,664.0	6,946,773.0	39.10				Average
		198 Alt B	654	11,872,752.0	6,946,831.0	36.80				Average
		200 Alt B	655	11,872,920.0	6,946,940.0	31.40				Average
		Mulligan	657	11,873,019.0	6,946,998.0	26.30				
Roadway71	48.0	175+58	680	11,870,765.0	6,946,014.0	121.20	Signal	0.00	25	Average
		174	663	11,870,644.0	6,945,899.5	127.90				Average
		172	662	11,870,516.0	6,945,743.0	133.40				Average
		170	661	11,870,391.0	6,945,587.5	136.10				Average
		168	660	11,870,265.0	6,945,435.0	137.20				Average
		166	659	11,870,128.0	6,945,295.5	138.80				Average
		164+36	658	11,870,008.0	6,945,189.5	139.90				
Roadway72	48.0	200+00	677	11,872,887.0	6,946,991.5	30.10	Signal	0.00	25	Average
		197	676	11,872,716.0	6,946,886.5	36.80				Average
		196	675	11,872,628.0	6,946,828.5	39.10				Average
		194	674	11,872,460.0	6,946,719.5	43.10				Average
		192	673	11,872,294.0	6,946,615.0	48.40				Average
		190	672	11,872,115.0	6,946,541.5	58.10				Average
		188	671	11,871,923.0	6,946,487.5	72.10				Average
		186	670	11,871,730.0	6,946,432.0	85.60				Average
		184	669	11,871,538.0	6,946,378.5	94.10				Average
		182	668	11,871,344.0	6,946,318.5	96.70				Average
		180	667	11,871,155.0	6,946,238.0	99.90				Average
		178	666	11,870,976.0	6,946,148.5	109.30				Average
		176	665	11,870,797.0	6,946,039.5	119.40				Average
		175+58	664	11,870,765.0	6,946,014.0	121.20				

INPUT: TRAFFIC FOR LAeq1h Volumes

Route 1 / Fort Belvoir

Parsons		27 November 2012										
Greg J Berg		TNM 2.5										
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:		Route 1 / Fort Belvoir										
RUN:		Future Build Alternative C										
Roadway	Points											
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles	
			Autos		V	S	V	S	V	S	V	S
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Roadway19	Begin	213	2831	37	71	37	166	37	0	0	0	0
	214+00	214	2831	37	71	37	166	37	0	0	0	0
	212+00	215	2831	37	71	37	166	37	0	0	0	0
	210+00	216	2831	37	71	37	166	37	0	0	0	0
	208+00	217	2831	37	71	37	166	37	0	0	0	0
	206+00	218	2831	37	71	37	166	37	0	0	0	0
	204+00	219	2831	37	71	37	166	37	0	0	0	0
	Mt Vernon	220										
Belvoir Woods In	2	251	0	0	0	0	0	0	0	0	0	0
	3	252	0	0	0	0	0	0	0	0	0	0
	4	253	0	0	0	0	0	0	0	0	0	0
	5	254										
Belvoir Woods Out	1	255	0	0	0	0	0	0	0	0	0	0
	2	256	0	0	0	0	0	0	0	0	0	0
	3	257	0	0	0	0	0	0	0	0	0	0
	4	258										
Inlet Cove In	1	260	0	0	0	0	0	0	0	0	0	0
	2	261										
Inlet Cove Out	1	262	0	0	0	0	0	0	0	0	0	0
	2	263										
Roadway3	1	264	1813	49	57	49	28	49	0	0	0	0
	2	265	1813	49	57	49	28	49	0	0	0	0
	3	266	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	267	1813	49	57	49	28	49	0	0	0	0
	5	268	1813	49	57	49	28	49	0	0	0	0
	begin	1	1813	49	57	49	28	49	0	0	0	0
	0+00	2	1813	49	57	49	28	49	0	0	0	0
	2+00	3	1813	49	57	49	28	49	0	0	0	0
	4+00	4										
Roadway11	Pohick	95	2831	37	71	37	166	37	0	0	0	0
	6+00	96	2831	37	71	37	166	37	0	0	0	0
	4+00	97	2831	37	71	37	166	37	0	0	0	0
	2+00	98	2831	37	71	37	166	37	0	0	0	0
	0+00	99	2831	37	71	37	166	37	0	0	0	0
	6	275	2831	37	71	37	166	37	0	0	0	0
	5	274	2831	37	71	37	166	37	0	0	0	0
	4	273	2831	37	71	37	166	37	0	0	0	0
	3	272	2831	37	71	37	166	37	0	0	0	0
	2	271	2831	37	71	37	166	37	0	0	0	0
	1	270										
WB Pohick West	1	276	1051	28	29	28	40	28	0	0	0	0
	2	277	1051	28	29	28	40	28	0	0	0	0
	3	278	1051	28	29	28	40	28	0	0	0	0
	4	279	1051	28	29	28	40	28	0	0	0	0
	5	280	1051	28	29	28	40	28	0	0	0	0
	6	281	1051	28	29	28	40	28	0	0	0	0
	7	282	1051	28	29	28	40	28	0	0	0	0
	8	283										
EB Pohick West	1	284	857	31	24	31	33	31	0	0	0	0
	2	285	857	31	24	31	33	31	0	0	0	0
	3	286	857	31	24	31	33	31	0	0	0	0
	4	287	857	31	24	31	33	31	0	0	0	0
	5	288	857	31	24	31	33	31	0	0	0	0
	6	289	857	31	24	31	33	31	0	0	0	0
	7	290										
WB Telegraph 2	1	302	486	41	13	41	19	41	0	0	0	0
	2	303	486	41	13	41	19	41	0	0	0	0
	3	304	486	41	13	41	19	41	0	0	0	0
	4	305	486	41	13	41	19	41	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	5	306	486	41	13	41	19	41	0	0	0	0
	6	307	486	41	13	41	19	41	0	0	0	0
	7	308										
EB Telegraph 2	1	309	1985	17	55	17	76	17	0	0	0	0
	2	310	1985	17	55	17	76	17	0	0	0	0
	3	311	1985	17	55	17	76	17	0	0	0	0
	4	312	1985	17	55	17	76	17	0	0	0	0
	5	313										
EB Pohick	1	314	318	33	9	33	12	33	0	0	0	0
	2	315	318	33	9	33	12	33	0	0	0	0
	3	316	318	33	9	33	12	33	0	0	0	0
	4	317	318	33	9	33	12	33	0	0	0	0
	5	318	318	33	9	33	12	33	0	0	0	0
	6	319										
WB Pohick	1	320	853	22	24	22	33	22	0	0	0	0
	2	321	853	22	24	22	33	22	0	0	0	0
	3	322	853	22	24	22	33	22	0	0	0	0
	4	323	853	22	24	22	33	22	0	0	0	0
	5	324	853	22	24	22	33	22	0	0	0	0
	6	325										
EB Belvoir	2	327	310	33	9	33	12	33	0	0	0	0
	3	328	310	33	9	33	12	33	0	0	0	0
	4	329	310	33	9	33	12	33	0	0	0	0
	5	330	310	33	9	33	12	33	0	0	0	0
	6	331	310	33	9	33	12	33	0	0	0	0
	7	332	310	33	9	33	12	33	0	0	0	0
	8	333										
WB Belvoir	1	334	961	20	27	20	37	20	0	0	0	0
	2	335	961	20	27	20	37	20	0	0	0	0
	3	336	961	20	27	20	37	20	0	0	0	0
	4	337	961	20	27	20	37	20	0	0	0	0
	5	338	961	20	27	20	37	20	0	0	0	0
	6	339	961	20	27	20	37	20	0	0	0	0
	7	340										
EB Mnt Vernon	1	342	488	36	14	36	19	36	0	0	0	0
	2	343	488	36	14	36	19	36	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	3	344	488	36	14	36	19	36	0	0	0	0
	4	345	488	36	14	36	19	36	0	0	0	0
	5	346										
WB Mnt Vernon	1	347	678	28	19	28	26	28	0	0	0	0
	2	348	678	28	19	28	26	28	0	0	0	0
	3	349	678	28	19	28	26	28	0	0	0	0
	4	350	678	28	19	28	26	28	0	0	0	0
	5	351	678	28	19	28	26	28	0	0	0	0
	6	352										
Roadway42	point607	607	256	30	7	30	10	30	0	0	0	0
	point608	608	256	30	7	30	10	30	0	0	0	0
	point609	609	256	30	7	30	10	30	0	0	0	0
	2	354	256	30	7	30	10	30	0	0	0	0
	3	355										
EB Backlick	1	356	62	30	2	30	2	30	0	0	0	0
	2	357	62	30	2	30	2	30	0	0	0	0
	point610	610	62	30	2	30	2	30	0	0	0	0
	point611	611	62	30	2	30	2	30	0	0	0	0
	point612	612										
Cook Inlet In	1	359	0	0	0	0	0	0	0	0	0	0
	2	360	0	0	0	0	0	0	0	0	0	0
	3	361										
Cook Inlet Out	1	362	0	0	0	0	0	0	0	0	0	0
	2	363	0	0	0	0	0	0	0	0	0	0
	3	364										
Roadway46	4+00	365	1813	49	57	0	28	49	0	0	0	0
	6+00	366	1813	49	57	49	28	49	0	0	0	0
	Pohick	376										
Roadway46-2	Pohick	377	1813	49	57	49	28	49	0	0	0	0
	8+00	367	1813	49	57	49	28	49	0	0	0	0
	10+00	368	1813	49	57	49	28	49	0	0	0	0
	12+00	369	1813	49	57	49	28	49	0	0	0	0
	14+00	370	1813	49	57	49	28	49	0	0	0	0
	16+00	371	1813	49	57	49	28	49	0	0	0	0
	18+00	372	1813	49	57	49	28	49	0	0	0	0
	Telegraph	373										



**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

Roadway49	Telegraph	598	1813	49	57	49	28	49	0	0	0	0
	20+00	378	1813	49	57	49	28	49	0	0	0	0
	22+00	379	1813	49	57	49	28	49	0	0	0	0
	24+00	380	1813	49	57	49	28	49	0	0	0	0
	26+00	381	1813	49	57	49	28	49	0	0	0	0
	28+00	382	1813	49	57	49	28	49	0	0	0	0
	30+00	383	1813	49	57	49	28	49	0	0	0	0
	32+00	384	1813	49	57	49	28	49	0	0	0	0
	34+00	385	1813	49	57	49	28	49	0	0	0	0
	36+00	386	1813	49	57	49	28	49	0	0	0	0
	38+00	387	1813	49	57	49	28	49	0	0	0	0
	40+00	388	1813	49	57	49	28	49	0	0	0	0
	42+00	389	1813	49	57	49	28	49	0	0	0	0
	44+00	390	1813	49	57	49	28	49	0	0	0	0
	46+00	391	1813	49	57	49	28	49	0	0	0	0
	48+00	392	1813	49	57	49	28	49	0	0	0	0
	Cook Inlet	393										
Roadway50	Cook Inlet	599	1813	49	57	49	28	49	0	0	0	0
	50+00	394	1813	49	57	49	28	49	0	0	0	0
	52+00	395	1813	49	57	49	28	49	0	0	0	0
	54+00	396	1813	49	57	49	28	49	0	0	0	0
	56+00	397	1813	49	57	49	28	49	0	0	0	0
	58+00	398	1813	49	57	49	28	49	0	0	0	0
	60+00	399	1813	49	57	49	28	49	0	0	0	0
	62+00	400	1813	49	57	49	28	49	0	0	0	0
	64+00	401	1813	49	57	49	28	49	0	0	0	0
	66+00	402	1813	49	57	49	28	49	0	0	0	0
	68+00	403	1813	49	57	49	28	49	0	0	0	0
	70+00	404	1813	49	57	49	28	49	0	0	0	0
	72+00	405	1813	49	57	49	28	49	0	0	0	0
	74+00	406	1813	49	57	49	28	49	0	0	0	0
	76+00	407	1813	49	57	49	28	49	0	0	0	0
	78+00	408	1813	49	57	49	28	49	0	0	0	0
	80+00	409	1813	49	57	49	28	49	0	0	0	0
	82+00	410	1813	49	57	49	28	49	0	0	0	0
	84+00	411	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	86+00	412	1813	49	57	49	28	49	0	0	0	0
	88+00	413	1813	49	57	49	28	49	0	0	0	0
	90+00	414	1813	49	57	49	28	49	0	0	0	0
	92+00	415	1813	49	57	49	28	49	0	0	0	0
	94+00	416	1813	49	57	49	28	49	0	0	0	0
	96+00	417	1813	49	57	49	28	49	0	0	0	0
	98+00	418	1813	49	57	49	28	49	0	0	0	0
	100+00	419	1813	49	57	49	28	49	0	0	0	0
	102+00/Fairfa	420										
Roadway51	102+00/Fairfa	600	1813	49	57	49	28	49	0	0	0	0
	104+00	421	1813	49	57	49	28	49	0	0	0	0
	106+00	422	1813	49	57	49	28	49	0	0	0	0
	108+00	423	1813	49	57	49	28	49	0	0	0	0
	110+00	424	1813	49	57	49	28	49	0	0	0	0
	112+00	425	1813	49	57	49	28	49	0	0	0	0
	114+00	426	1813	49	57	49	28	49	0	0	0	0
	116+00/Backk	427										
Roadway52	116+00/Backk	601	1813	49	57	49	28	49	0	0	0	0
	118+00	428	1813	49	57	49	28	49	0	0	0	0
	120+00	429	1813	49	57	49	28	49	0	0	0	0
	122+00	430	1813	49	57	49	28	49	0	0	0	0
	124+00	431	1813	49	57	49	28	49	0	0	0	0
	126+00	432	1813	49	57	49	28	49	0	0	0	0
	128+00	433	1813	49	57	49	28	49	0	0	0	0
	130+00	434	1813	49	57	49	28	49	0	0	0	0
	132+00	435	1813	49	57	49	28	49	0	0	0	0
	134+00	436	1813	49	57	49	28	49	0	0	0	0
	136+00	437	1813	49	57	49	28	49	0	0	0	0
	138+00	438	1813	49	57	49	28	49	0	0	0	0
	140+00	439	1813	49	57	49	28	49	0	0	0	0
	142+00	440	1813	49	57	49	28	49	0	0	0	0
	144+00	441	1813	49	57	49	28	49	0	0	0	0
	146+00	442	1813	49	57	49	28	49	0	0	0	0
	148+00	443	1813	49	57	49	28	49	0	0	0	0
	150+00	444	1813	49	57	49	28	49	0	0	0	0
	152+00	445	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	154+00	446	1813	49	57	49	28	49	0	0	0	0
	156+00	447	1813	49	57	49	28	49	0	0	0	0
	158+00	448	1813	49	57	49	28	49	0	0	0	0
	160+00	449	1813	49	57	49	28	49	0	0	0	0
	162+00	450	1813	49	57	49	28	49	0	0	0	0
	Belvoir	451										
Roadway10-2	Mulligan	603	1813	49	57	49	28	49	0	0	0	0
	202+00	473	1813	49	57	49	28	49	0	0	0	0
	204+00	474	1813	49	57	49	28	49	0	0	0	0
	206+00	475	1813	49	57	49	28	49	0	0	0	0
	208+00	477	1813	49	57	49	28	49	0	0	0	0
	210+00	91	1813	49	57	49	28	49	0	0	0	0
	212+00	92	1813	49	57	49	28	49	0	0	0	0
	214+00	93	1813	49	57	49	28	49	0	0	0	0
	End	94										
Roadway57	Telegraph	615	2831	37	71	37	166	37	0	0	0	0
	20+00	484	2831	37	71	37	166	37	0	0	0	0
	18+00	483	2831	37	71	37	166	37	0	0	0	0
	16+00	482	2831	37	71	37	166	37	0	0	0	0
	14+00	481	2831	37	71	37	166	37	0	0	0	0
	12+00	480	2831	37	71	37	166	37	0	0	0	0
	10+00	479	2831	37	71	37	166	37	0	0	0	0
	8+00	478	2831	37	71	37	166	37	0	0	0	0
	Pohick	617										
Roadway58	Cook Inlet	614	2831	37	71	37	166	37	0	0	0	0
	50+00	500	2831	37	71	37	166	37	0	0	0	0
	48+00	499	2831	37	71	37	166	37	0	0	0	0
	46+00	498	2831	37	71	37	166	37	0	0	0	0
	44+00	497	2831	37	71	37	166	37	0	0	0	0
	42+00	496	2831	37	71	37	166	37	0	0	0	0
	40+00	495	2831	37	71	37	166	37	0	0	0	0
	38+00	494	2831	37	71	37	166	37	0	0	0	0
	36+00	493	2831	37	71	37	166	37	0	0	0	0
	34+00	492	2831	37	71	37	166	37	0	0	0	0
	32+00	491	2831	37	71	37	166	37	0	0	0	0
	30+00	490	2831	37	71	37	166	37	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	28+00	489	2831	37	71	37	166	37	0	0	0	0
	26+00	488	2831	37	71	37	166	37	0	0	0	0
	24+00	487	2831	37	71	37	166	37	0	0	0	0
	22+00	486	2831	37	71	37	166	37	0	0	0	0
	Telegraph	485										
Roadway59	Fairfax County	616	2831	37	71	37	166	37	0	0	0	0
	104+00	613	2831	37	71	37	166	37	0	0	0	0
	102+00	528	2831	37	71	37	166	37	0	0	0	0
	100+00	527	2831	37	71	37	166	37	0	0	0	0
	98+00	526	2831	37	71	37	166	37	0	0	0	0
	96+00	525	2831	37	71	37	166	37	0	0	0	0
	94+00	524	2831	37	71	37	166	37	0	0	0	0
	92+00	523	2831	37	71	37	166	37	0	0	0	0
	90+00	522	2831	37	71	37	166	37	0	0	0	0
	88+00	521	2831	37	71	37	166	37	0	0	0	0
	86+00	520	2831	37	71	37	166	37	0	0	0	0
	84+00	519	2831	37	71	37	166	37	0	0	0	0
	82+00	518	2831	37	71	37	166	37	0	0	0	0
	80+00	517	2831	37	71	37	166	37	0	0	0	0
	78+00	516	2831	37	71	37	166	37	0	0	0	0
	76+00	515	2831	37	71	37	166	37	0	0	0	0
	74+00	514	2831	37	71	37	166	37	0	0	0	0
	72+00	513	2831	37	71	37	166	37	0	0	0	0
	70+00	512	2831	37	71	37	166	37	0	0	0	0
	68+00	511	2831	37	71	37	166	37	0	0	0	0
	66+00	510	2831	37	71	37	166	37	0	0	0	0
	64+00	509	2831	37	71	37	166	37	0	0	0	0
	62+00	508	2831	37	71	37	166	37	0	0	0	0
	60+00	507	2831	37	71	37	166	37	0	0	0	0
	58+00	506	2831	37	71	37	166	37	0	0	0	0
	56+00	505	2831	37	71	37	166	37	0	0	0	0
	54+00	504	2831	37	71	37	166	37	0	0	0	0
	52+00	503	2831	37	71	37	166	37	0	0	0	0
	Cook Inlet	502										
Roadway60	Backkick/118+	606	2831	37	71	37	166	37	0	0	0	0
	11600	535	2831	37	71	37	166	37	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	11400	534	2831	37	71	37	166	37	0	0	0	0
	11200	533	2831	37	71	37	166	37	0	0	0	0
	11000	532	2831	37	71	37	166	37	0	0	0	0
	10800	531	2831	37	71	37	166	37	0	0	0	0
	10600	530	2831	37	71	37	166	37	0	0	0	0
	Fairfax County	529										
Roadway61	Belvoir	605	2831	37	71	37	166	37	0	0	0	0
	162+00	558	2831	37	71	37	166	37	0	0	0	0
	160+00	557	2831	37	71	37	166	37	0	0	0	0
	158+00	556	2831	37	71	37	166	37	0	0	0	0
	156+00	555	2831	37	71	37	166	37	0	0	0	0
	154+00	554	2831	37	71	37	166	37	0	0	0	0
	152+00	553	2831	37	71	37	166	37	0	0	0	0
	150+00	552	2831	37	71	37	166	37	0	0	0	0
	148+00	551	2831	0	71	37	166	37	0	0	0	0
	146+00	550	2831	37	71	37	166	37	0	0	0	0
	144+00	549	2831	37	71	37	166	37	0	0	0	0
	142+00	548	2831	37	71	37	166	37	0	0	0	0
	140+00	547	2831	37	71	37	166	37	0	0	0	0
	138+00	546	2831	37	71	37	166	37	0	0	0	0
	136+00	545	2831	37	71	37	166	37	0	0	0	0
	134+00	544	2831	37	71	37	166	37	0	0	0	0
	132+00	543	2831	37	71	37	166	37	0	0	0	0
	130+00	542	2831	37	71	37	166	37	0	0	0	0
	128+00	541	2831	37	71	37	166	37	0	0	0	0
	126+00	540	2831	37	71	37	166	37	0	0	0	0
	124+00	539	2831	37	71	37	166	37	0	0	0	0
	122+00	538	2831	37	71	37	166	37	0	0	0	0
	120+00	537	2831	37	71	37	166	37	0	0	0	0
	Backkick/118+	536										
Roadway62	Mt Vernon	604	2831	37	71	37	166	37	0	0	0	0
	202+00	579	2831	37	71	37	166	37	0	0	0	0
	200+00	578										
WB Future Telegraph	1	580	486	41	13	41	19	41	0	0	0	0
	2	581	486	41	13	41	19	41	0	0	0	0
	3	582	486	41	13	41	19	41	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	4	583	486	41	13	41	19	41	0	0	0	0
	5	584										
EB Future Telegraph	1	585	1985	17	55	17	76	17	0	0	0	0
	2	586	1985	17	55	17	76	17	0	0	0	0
	3	587										
EB to SB Future Telegraph	3	596	1323	17	37	17	51	17	0	0	0	0
	4	588	1323	17	37	17	51	17	0	0	0	0
	5	589	1323	17	37	17	51	17	0	0	0	0
	6	590	1323	17	37	17	51	17	0	0	0	0
	7	591	1323	17	37	17	51	17	0	0	0	0
	8	592										
EB Future Telegraph 2	3	597	662	17	18	17	25	17	0	0	0	0
	4	593	662	17	18	17	25	17	0	0	0	0
	5	594	662	17	18	17	25	17	0	0	0	0
	6	595										
Roadway69	Belvoir	656	1813	49	57	49	28	49	0	0	0	0
	164	636	1813	49	57	49	28	49	0	0	0	0
	166	637	1813	49	57	49	28	49	0	0	0	0
	168	638	1813	49	57	49	28	49	0	0	0	0
	170	639	1813	49	57	49	28	49	0	0	0	0
	172	640	1813	49	57	49	28	49	0	0	0	0
	174	641	1813	49	57	49	28	49	0	0	0	0
	174+53	642										
Roadway70	174+53	679	1813	49	57	49	28	49	0	0	0	0
	176	643	1813	49	57	49	28	49	0	0	0	0
	178	644	1813	49	57	49	28	49	0	0	0	0
	180	645	1813	49	57	49	28	49	0	0	0	0
	182	646	1813	49	57	49	28	49	0	0	0	0
	184	647	1813	49	57	49	28	49	0	0	0	0
	186	648	1813	49	57	49	28	49	0	0	0	0
	188	649	1813	49	57	49	28	49	0	0	0	0
	190	650	1813	49	57	49	28	49	0	0	0	0
	192	651	1813	49	57	49	28	49	0	0	0	0
	194	652	1813	49	57	49	28	49	0	0	0	0
	196	653	1813	49	57	49	28	49	0	0	0	0
	198 Alt B	654	1813	49	57	49	28	49	0	0	0	0

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Route 1 / Fort Belvoir**

	200 Alt B	655	1813	49	57	49	28	49	0	0	0	0
	Mulligan	657										
Roadway71	175+58	680	2831	37	71	37	166	37	0	0	0	0
	174	663	2831	37	71	37	166	37	0	0	0	0
	172	662	2831	37	71	37	166	37	0	0	0	0
	170	661	2831	37	71	37	166	37	0	0	0	0
	168	660	2831	37	71	37	166	37	0	0	0	0
	166	659	2831	37	71	37	166	37	0	0	0	0
	164+36	658										
Roadway72	200+00	677	2831	37	71	37	166	37	0	0	0	0
	197	676	2831	37	71	37	166	37	0	0	0	0
	196	675	2831	37	71	37	166	37	0	0	0	0
	194	674	2831	37	71	37	166	37	0	0	0	0
	192	673	2831	37	71	37	166	37	0	0	0	0
	190	672	2831	37	71	37	166	37	0	0	0	0
	188	671	2831	37	71	37	166	37	0	0	0	0
	186	670	2831	37	71	37	166	37	0	0	0	0
	184	669	2831	37	71	37	166	37	0	0	0	0
	182	668	2831	37	71	37	166	37	0	0	0	0
	180	667	2831	37	71	37	166	37	0	0	0	0
	178	666	2831	37	71	37	166	37	0	0	0	0
	176	665	2831	37	71	37	166	37	0	0	0	0
	175+58	664										





**INPUT: RECEIVERS**

**Route 1 / Fort Belvoir**

R88	23	1	11,872,239.0	6,946,909.0	47.50	5.00	0.00	66	10.0	5.0	
R89	24	1	11,872,341.0	6,946,979.5	45.00	5.00	0.00	66	10.0	5.0	
R90	25	1	11,872,421.0	6,947,034.0	44.00	5.00	0.00	66	10.0	5.0	
R91	26	1	11,872,510.0	6,947,087.0	42.00	5.00	0.00	66	10.0	5.0	
R92	27	1	11,872,587.0	6,947,148.0	39.00	5.00	0.00	66	10.0	5.0	
R93	28	1	11,871,859.0	6,946,107.0	54.00	5.00	62.00	66	10.0	5.0	
R94	29	1	11,872,090.0	6,946,255.5	49.00	5.00	0.00	66	10.0	5.0	Y
R114	30	1	11,870,750.0	6,945,703.0	127.00	5.00	0.00	66	10.0	5.0	
R115	31	1	11,870,683.0	6,945,497.5	130.00	5.00	0.00	66	10.0	5.0	
R116	32	1	11,870,747.0	6,945,580.5	127.50	5.00	0.00	66	10.0	5.0	
R117	33	1	11,870,823.0	6,945,638.0	127.00	5.00	0.00	66	10.0	5.0	
R118	34	1	11,870,890.0	6,945,713.0	126.50	5.00	0.00	66	10.0	5.0	
R119	35	1	11,870,955.0	6,945,789.5	125.00	5.00	0.00	66	10.0	5.0	
R120	36	1	11,870,834.0	6,945,497.5	128.00	5.00	68.00	66	10.0	5.0	
R121	37	1	11,870,899.0	6,945,571.5	128.00	5.00	0.00	66	10.0	5.0	
R122	38	1	11,870,967.0	6,945,645.5	126.50	5.00	0.00	66	10.0	5.0	
R123	39	1	11,872,061.0	6,946,338.0	57.00	5.00	0.00	66	10.0	5.0	
R124	40	1	11,872,158.0	6,946,366.5	53.00	5.00	0.00	66	10.0	5.0	
R125	41	1	11,872,254.0	6,946,397.0	47.50	5.00	72.00	66	10.0	5.0	
R126	42	1	11,872,338.0	6,946,450.0	43.50	5.00	0.00	66	10.0	5.0	
R127	43	1	11,872,422.0	6,946,504.0	40.00	5.00	0.00	66	10.0	5.0	
R128	44	1	11,872,308.0	6,946,312.5	45.00	5.00	0.00	66	10.0	5.0	
R129	45	1	11,872,391.0	6,946,366.5	41.00	5.00	0.00	66	10.0	5.0	
R130	96	1	11,872,476.0	6,946,419.5	37.50	5.00	0.00	66	10.0	5.0	
R131	98	1	11,872,362.0	6,946,228.5	41.00	5.00	0.00	66	10.0	5.0	
R132	99	1	11,872,445.0	6,946,281.5	39.00	5.00	0.00	66	10.0	5.0	
R133	100	1	11,872,530.0	6,946,335.5	37.00	5.00	0.00	66	10.0	5.0	

INPUT: BARRIERS

Route 1 / Fort Belvoir

Parsons	27 November 2012
Greg J Berg	TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: Route 1 / Fort Belvoir  
 RUN: Future Build Alternative C

Barrier Name	Type	Height		If Wall		If Berm		Add'tnl	Points			Height at Point	Segment							
		Min	Max	\$ per Unit Area	\$ per Unit Vol.	Top Width	Run:Rise	\$ per Unit Length	Name	No.	Coordinates (bottom)			Seg	Ht	Perturbs	On	Important		
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			X		Y	Z	ft	Incr-	#Up	#Dn	Struct?	Reflec-tions?
													ft	ft	ft	ft	ft			
Shed	W	0.00	99.99	0.00				0.00	1	8	11,865,169.0	6,944,137.0	33.50	8.00	0.00	0	0			
									2	9	11,865,215.0	6,944,147.0	33.50	8.00						
Baptist Church	W	0.00	99.99	0.00				0.00	1	10	11,871,129.0	6,945,807.0	123.00	25.00	0.00	0	0			
									2	11	11,871,126.0	6,945,924.5	123.00	25.00	0.00	0	0			
									3	12	11,871,231.0	6,945,929.0	123.00	25.00						
Pool House	W	0.00	99.99	0.00				0.00	1	13	11,858,542.0	6,943,540.5	107.00	15.00	0.00	0	0			
									2	14	11,858,556.0	6,943,496.0	107.00	15.00						
House1	W	0.00	99.99	0.00				0.00	1	15	11,854,305.0	6,944,440.0	144.00	30.00	0.00	0	0			
									2	16	11,854,386.0	6,944,279.0	148.00	30.00						
House2	W	0.00	99.99	0.00				0.00	1	17	11,854,499.0	6,944,369.0	144.00	30.00	0.00	0	0			
									2	18	11,854,387.0	6,944,514.5	154.00	30.00						
House3	W	0.00	99.99	0.00				0.00	1	19	11,854,806.0	6,944,451.0	154.00	30.00	0.00	0	0			
									2	20	11,854,690.0	6,944,567.5	156.00	30.00						
House4	W	0.00	99.99	0.00				0.00	1	21	11,854,979.0	6,944,396.5	154.00	30.00	0.00	0	0			
									2	22	11,855,018.0	6,944,470.0	150.00	30.00						
House5	W	0.00	99.99	0.00				0.00	1	23	11,855,484.0	6,944,495.0	141.00	30.00	0.00	0	0			
									2	24	11,855,462.0	6,944,578.5	138.00	30.00						
House6	W	0.00	99.99	0.00				0.00	1	25	11,855,568.0	6,944,649.0	137.00	30.00	0.00	0	0			
									2	26	11,855,607.0	6,944,536.5	142.00	30.00						
House7	W	0.00	99.99	0.00				0.00	1	27	11,856,789.0	6,943,892.5	139.00	40.00	0.00	0	0			
									2	28	11,856,701.0	6,944,135.5	132.00	40.00						
House8	W	0.00	99.99	0.00				0.00	1	29	11,856,847.0	6,944,152.5	130.00	40.00	0.00	0	0			
									2	30	11,856,942.0	6,943,887.5	137.00	40.00						
House9	W	0.00	99.99	0.00				0.00	1	31	11,857,179.0	6,944,044.0	128.00	40.00	0.00	0	0			
									2	32	11,857,156.0	6,943,857.0	131.00	40.00						
House10	W	0.00	99.99	0.00				0.00	1	33	11,857,237.0	6,943,771.5	132.00	40.00	0.00	0	0			
									2	34	11,857,407.0	6,943,753.5	138.00	40.00						
House11	W	0.00	99.99	0.00				0.00	1	35	11,857,605.0	6,943,632.0	144.00	40.00	0.00	0	0			
									2	36	11,857,649.0	6,943,771.5	142.00	40.00						
House12	W	0.00	99.99	0.00				0.00	1	37	11,857,695.0	6,943,795.5	137.00	40.00	0.00	0	0			
									2	38	11,857,638.0	6,943,619.0	138.00	40.00						
House13	W	0.00	99.99	0.00				0.00	1	39	11,857,754.0	6,943,589.0	138.00	40.00	0.00	0	0			
									2	40	11,857,780.0	6,943,681.5	136.00	40.00						
House14	W	0.00	99.99	0.00				0.00	1	41	11,857,817.0	6,943,667.5	134.00	40.00	0.00	0	0			
									2	42	11,857,789.0	6,943,576.0	136.00	40.00						

**INPUT: BARRIERS**

**Route 1 / Fort Belvoir**

House15	W	0.00	99.99	0.00				0.00	1	43	11,857,895.0	6,943,542.0	132.00	40.00	0.00	0	0		
									2	44	11,857,978.0	6,943,826.5	126.00	40.00					
House16	W	0.00	99.99	0.00				0.00	1	45	11,858,018.0	6,943,812.5	124.00	40.00	0.00	0	0		
									2	46	11,857,932.0	6,943,529.5	128.00	40.00					
House17	W	0.00	99.99	0.00				0.00	1	47	11,858,816.0	6,943,611.5	104.00	40.00	0.00	0	0		
									2	48	11,858,874.0	6,943,545.0	106.00	40.00					
House18	W	0.00	99.99	0.00				0.00	1	49	11,858,935.0	6,943,550.0	106.00	40.00	0.00	0	0		
									2	50	11,858,959.0	6,943,519.5	106.00	40.00	0.00	0	0		
									3	51	11,859,025.0	6,943,581.0	106.00	40.00					
House19	W	0.00	99.99	0.00				0.00	1	52	11,858,912.0	6,943,765.5	107.00	40.00	0.00	0	0		
									2	53	11,859,048.0	6,943,591.5	106.00	40.00	0.00	0	0		
									3	54	11,859,112.0	6,943,641.0	104.00	40.00					
House20	W	0.00	99.99	0.00				0.00	1	55	11,859,157.0	6,943,687.5	102.00	40.00	0.00	0	0		
									2	56	11,859,229.0	6,943,738.5	102.00	40.00					
Barrier28	W	0.00	99.99	0.00				0.00	1	57	11,865,659.0	6,944,175.5	40.00	25.00	0.00	0	0		
									2	58	11,865,550.0	6,944,224.0	40.00	25.00					
Cemetary Wall	W	0.00	99.99	0.00				0.00	1	59	11,855,362.0	6,944,060.0	144.00	5.00	0.00	0	0		
									2	60	11,855,376.0	6,944,064.5	145.00	5.00	0.00	0	0		
									3	61	11,855,420.0	6,944,049.5	146.00	5.00	0.00	0	0		
									4	62	11,855,442.0	6,944,041.5	146.00	5.00	0.00	0	0		
									5	96	11,855,470.0	6,944,032.0	148.00	5.00	0.00	0	0		
									6	97	11,855,537.0	6,944,008.5	148.50	5.00	0.00	0	0		
									7	98	11,855,543.0	6,943,996.0	149.00	5.00					
SW3	W	0.00	99.99	0.00				0.00	-2+00	63	11,853,828.0	6,943,943.5	122.00	8.00	2.00	11	0		
									-1+00	126	11,853,916.0	6,943,992.0	127.25	8.00	2.00	11	0		
									0+00	64	11,854,003.0	6,944,041.0	132.50	8.00	2.00	11	0		
									2+00	65	11,854,179.0	6,944,134.5	142.00	8.00	2.00	11	0		
									4+00	66	11,854,366.0	6,944,224.0	149.00	8.00	2.00	11	0		
									6+00	67	11,854,568.0	6,944,286.5	154.40	8.00	2.00	11	0		
									6+24	68	11,854,592.0	6,944,292.5	156.20	8.00	2.00	11	0		
									6+51	69	11,854,615.0	6,944,320.0	157.70	8.00					
SW13	W	0.00	99.99	0.00				0.00	8+00	70	11,854,776.0	6,944,330.0	156.17	8.00	2.00	11	0		
									9+00	127	11,854,880.0	6,944,332.0	155.94	8.00	2.00	11	0		
									10+00	71	11,854,985.0	6,944,333.5	155.71	8.00	2.00	11	0		
									12+00	72	11,855,195.0	6,944,313.0	152.94	8.00	2.00	11	0		
									14+00	73	11,855,399.0	6,944,267.0	149.80	8.00	2.00	11	0		
									16+00	74	11,855,592.0	6,944,207.0	149.07	8.00					
SW31	W	0.00	99.99	0.00				0.00	27+36	76	11,856,669.0	6,943,843.0	153.20	8.00	2.00	11	0		
									28+00	77	11,856,730.0	6,943,823.5	151.80	8.00	2.00	11	0		
									30+00	78	11,856,921.0	6,943,764.0	148.60	8.00	2.00	11	0		
									31+00	134	11,857,016.0	6,943,734.0	147.96	8.00	2.00	11	0		
									32+00	79	11,857,112.0	6,943,704.5	147.33	8.00	2.00	11	0		
									34+00	80	11,857,303.0	6,943,647.5	146.32	8.00	2.00	11	0		
									35+12	81	11,857,411.0	6,943,610.5	145.90	8.00					
SW43	W	0.00	99.99	0.00				0.00	36+32	82	11,857,528.0	6,943,588.5	146.26	8.00	2.00	11	0		
									38+00	83	11,857,688.0	6,943,538.5	143.99	8.00	2.00	11	0		
									40+00	84	11,857,879.0	6,943,477.5	143.16	8.00	2.00	11	0		
									40+92	85	11,857,963.0	6,943,441.5	141.29	8.00	2.00	11	0		
									42+00	86	11,858,062.0	6,943,417.0	137.85	8.00	2.00	11	0		

INPUT: BARRIERS

Route 1 / Fort Belvoir

										44+00	87	11,858,252.0	6,943,395.5	127.79	8.00	2.00	11	0		
										45+00	130	11,858,350.0	6,943,399.0	121.74	8.00	2.00	11	0		
										46+00	88	11,858,447.0	6,943,402.5	115.70	8.00	2.00	11	0		
										48+00	89	11,858,647.0	6,943,413.5	107.59	8.00	2.00	11	0		
										48+84	90	11,858,731.0	6,943,418.5	105.31	8.00					
SW53	W	0.00	99.99	0.00				0.00		50+14	91	11,858,859.0	6,943,438.0	102.18	8.00	2.00	11	0		
										52+00	92	11,859,047.0	6,943,445.0	97.64	8.00	2.00	11	0		
										54+00	93	11,859,246.0	6,943,453.0	92.72	8.00	2.00	11	0		
										55+00	128	11,859,346.0	6,943,457.0	90.28	8.00	2.00	11	0		
										56+00	94	11,859,446.0	6,943,461.0	87.83	8.00	2.00	11	0		
										57+00	129	11,859,546.0	6,943,462.5	86.19	8.00	2.00	11	0		
										58+00	95	11,859,645.0	6,943,464.0	84.55	8.00					
Barrier35	W	0.00	99.99	0.00				0.00		1	99	11,855,358.0	6,944,071.5	146.00	8.00	2.00	11	0		
										2	100	11,855,432.0	6,944,047.0	146.95	8.00	2.00	11	0		
										3	101	11,855,499.0	6,944,024.5	148.00	8.00	2.00	11	0		
										16+00	102	11,855,532.0	6,944,013.0	148.85	8.00	2.00	11	0		
										4	103	11,855,549.0	6,944,006.5	148.98	8.00					
SW195	W	0.00	99.99	0.00				0.00		188	119	11,871,911.0	6,946,526.0	72.10	8.00	2.00	6	0		
										190	125	11,872,102.0	6,946,580.0	58.10	8.00	2.00	6	0		
										192	120	11,872,274.0	6,946,653.5	48.40	8.00	2.00	6	0		
										194	121	11,872,438.0	6,946,754.0	43.10	8.00	2.00	6	0		
										196	122	11,872,605.0	6,946,862.0	39.10	8.00	2.00	6	0		
										198+00	116	11,872,697.0	6,946,916.5	36.80	8.00	2.00	6	0		
										200+00	117	11,872,863.0	6,947,026.0	30.06	8.00	2.00	6	0		
										201+19	118	11,872,965.0	6,947,092.0	28.77	8.00					
Barrier41	W	0.00	99.99	0.00				0.00		169	150	11,870,415.0	6,945,437.5	136.65	8.00	2.00	6	0		
										170	148	11,870,480.0	6,945,517.5	136.10	8.00	2.00	6	0		
										172	147	11,870,605.0	6,945,673.0	133.40	8.00	2.00	6	0		
										174	146	11,870,733.0	6,945,820.5	127.90	8.00	2.00	6	0		
										174+50	152	11,870,766.0	6,945,852.5	125.78	8.00					
Barrier42	W	0.00	99.99	0.00				0.00		184	139	11,871,568.0	6,946,277.5	94.10	8.00	2.00	6	0		
										185	198	11,871,664.0	6,946,308.0	89.85	8.00	2.00	6	0		
										186	140	11,871,759.0	6,946,339.0	85.60	8.00	2.00	6	0		
										187	188	11,871,855.0	6,946,368.0	78.85	8.00	2.00	6	0		
										188	141	11,871,951.0	6,946,396.5	72.10	8.00	2.00	6	0		
										190	142	11,872,141.0	6,946,455.0	58.10	8.00	2.00	6	0		
										192	143	11,872,334.0	6,946,534.0	48.40	8.00	2.00	6	0		
										194	144	11,872,509.0	6,946,644.5	43.10	8.00	2.00	6	0		
										195	189	11,872,592.0	6,946,700.0	41.10	8.00	2.00	6	0		
										196	145	11,872,676.0	6,946,755.5	39.10	8.00					
Barrier41-2	W	0.00	99.99	0.00				0.00		175+30	157	11,870,822.0	6,945,891.0	122.00	8.00	2.00	6	0		
										2	186	11,870,847.0	6,945,912.5	120.00	8.00	2.00	6	0		
										3	187	11,870,870.0	6,945,930.0	118.00	8.00	2.00	6	0		
										4	135	11,870,908.0	6,945,957.5	116.00	8.00	2.00	6	0		
										5	170	11,870,946.0	6,945,982.0	114.00	8.00	2.00	6	0		
										6	171	11,870,975.0	6,945,999.0	114.00	8.00	2.00	6	0		
										7	172	11,870,983.0	6,946,004.0	114.00	8.00	2.00	6	0		
										8	173	11,871,004.0	6,946,014.5	116.00	8.00	2.00	6	0		
										9	174	11,871,017.0	6,946,021.5	116.00	8.00	2.00	6	0		

INPUT: BARRIERS

Route 1 / Fort Belvoir

									10	175	11,871,031.0	6,946,028.5	116.00	8.00	2.00	6	0		
									178+00	176	11,871,036.0	6,946,031.5	115.00	8.00	2.00	6	0		
									12	177	11,871,039.0	6,946,033.0	114.00	8.00	2.00	6	0		
									13	178	11,871,044.0	6,946,035.5	112.00	8.00	2.00	6	0		
									14	136	11,871,048.0	6,946,037.5	110.00	8.00	2.00	6	0		
									15	161	11,871,087.0	6,946,058.5	108.00	8.00	2.00	6	0		
									16	162	11,871,150.0	6,946,088.0	110.00	8.00	2.00	6	0		
									17	163	11,871,170.0	6,946,097.5	110.00	8.00	2.00	6	0		
									18	164	11,871,188.0	6,946,107.5	108.00	8.00	2.00	6	0		
									180+00	165	11,871,214.0	6,946,120.0	104.00	8.00	2.00	6	0		
									20	166	11,871,237.0	6,946,132.0	100.00	8.00	2.00	6	0		
									21	167	11,871,250.0	6,946,138.0	98.00	8.00	2.00	6	0		
									22	168	11,871,273.0	6,946,149.5	96.00	8.00	2.00	6	0		
									181+00	169	11,871,302.0	6,946,163.0	94.00	8.00	2.00	6	0		
									24	137	11,871,308.0	6,946,164.5	92.00	8.00	2.00	6	0		
									25	179	11,871,317.0	6,946,168.5	86.00	8.00	2.00	6	0		
									26	180	11,871,329.0	6,946,173.5	82.00	8.00	2.00	6	0		
									27	181	11,871,337.0	6,946,176.5	82.00	8.00	2.00	6	0		
									28	182	11,871,356.0	6,946,185.0	84.00	8.00	2.00	6	0		
									29	183	11,871,366.0	6,946,188.5	82.00	8.00	2.00	6	0		
									30	184	11,871,374.0	6,946,191.0	80.00	8.00	2.00	6	0		
									31	185	11,871,382.0	6,946,194.0	80.00	8.00	2.00	6	0		
									182+00	138	11,871,387.0	6,946,195.5	82.00	8.00					
Barrier44	W	0.00	99.99	0.00				0.00	168+00	190	11,870,225.0	6,945,470.0	137.20	8.00	2.00	6	0		
									169+00	197	11,870,288.0	6,945,545.5	136.65	8.00	2.00	6	0		
									170+00	191	11,870,350.0	6,945,621.0	136.10	8.00	2.00	6	0		
									172+00	192	11,870,476.0	6,945,776.5	133.40	8.00	2.00	6	0		
									174+00	193	11,870,614.0	6,945,926.5	127.90	8.00	2.00	6	0		
									174+65	194	11,870,659.0	6,945,973.5	125.00	8.00					

**INPUT: TERRAIN LINES**

**Route 1 / Fort Belvoir**

<b>Parsons</b>			<b>27 November 2012</b>	
<b>Greg J Berg</b>			<b>TNM 2.5</b>	
<b>INPUT: TERRAIN LINES</b>				
<b>PROJECT/CONTRACT:</b>	<b>Route 1 / Fort Belvoir</b>			
<b>RUN:</b>	<b>Future Build Alternative C</b>			
<b>Terrain Line</b>	<b>Points</b>			
<b>Name</b>	<b>No.</b>	<b>Coordinates (ground)</b>		
		<b>X</b>	<b>Y</b>	<b>Z</b>
		ft	ft	ft
Terrain Line1	1	11,854,750.0	6,944,345.5	160.00
	2	11,854,773.0	6,944,350.0	164.00
	3	11,854,796.0	6,944,350.5	165.30
	4	11,854,858.0	6,944,350.0	165.60
	5	11,854,902.0	6,944,346.5	165.50
	6	11,854,953.0	6,944,346.5	164.90
	7	11,854,983.0	6,944,341.0	164.40
	8	11,855,017.0	6,944,340.0	162.80
Terrain Line17	48	11,856,688.0	6,943,853.0	154.00
	49	11,856,738.0	6,943,836.5	154.60
	50	11,856,769.0	6,943,834.5	155.10
	51	11,856,812.0	6,943,819.0	154.00
	52	11,856,866.0	6,943,800.0	152.00
	53	11,856,921.0	6,943,788.0	148.00
	54	11,856,993.0	6,943,783.5	140.00
	55	11,857,046.0	6,943,779.0	128.00
	56	11,857,114.0	6,943,780.0	128.00
	57	11,857,155.0	6,943,780.5	128.00
	58	11,857,188.0	6,943,747.5	130.00
	59	11,857,230.0	6,943,693.5	136.00
	60	11,857,268.0	6,943,676.0	138.00
	61	11,857,304.0	6,943,662.0	140.00
Terrain Line20	85	11,858,137.0	6,943,439.0	138.00
	86	11,858,246.0	6,943,466.5	138.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	87	11,858,300.0	6,943,487.0	134.00
Terrain Line22	102	11,857,498.0	6,943,629.5	146.00
	103	11,857,525.0	6,943,621.5	146.00
	104	11,857,550.0	6,943,608.5	144.00
	105	11,857,595.0	6,943,598.5	142.00
	106	11,857,629.0	6,943,589.5	138.00
	107	11,857,651.0	6,943,595.5	135.30
	108	11,857,665.0	6,943,584.0	138.00
	109	11,857,708.0	6,943,567.0	142.00
	110	11,857,744.0	6,943,570.5	144.00
	111	11,857,818.0	6,943,549.0	146.00
	112	11,857,856.0	6,943,537.0	146.00
	113	11,857,894.0	6,943,525.0	144.00
	114	11,857,920.0	6,943,516.5	140.00
	115	11,857,947.0	6,943,503.0	138.00
	116	11,857,963.0	6,943,495.5	136.00
	117	11,857,959.0	6,943,498.0	134.00
	118	11,857,937.0	6,943,513.0	132.00
	119	11,857,916.0	6,943,519.0	134.00
	120	11,857,879.0	6,943,531.5	136.00
	121	11,857,855.0	6,943,539.0	138.00
	122	11,857,790.0	6,943,560.5	140.00
	123	11,857,749.0	6,943,574.0	142.00
Terrain Line23	124	11,857,963.0	6,943,495.5	136.00
	125	11,857,999.0	6,943,492.0	134.00
	126	11,858,010.0	6,943,490.0	136.00
	127	11,858,036.0	6,943,483.0	136.00
	128	11,858,051.0	6,943,479.0	134.00
	129	11,858,058.0	6,943,477.5	132.00
Terrain Line24-2-2	150	11,858,058.0	6,943,477.0	132.00
	151	11,858,067.0	6,943,481.0	128.00
	152	11,858,095.0	6,943,482.0	128.00
	153	11,858,124.0	6,943,489.0	128.00
	154	11,858,154.0	6,943,484.5	130.00
	155	11,858,172.0	6,943,479.0	132.00
	156	11,858,213.0	6,943,480.5	134.00

**INPUT: TERRAIN LINES****Route 1 / Fort Belvoir**

	157	11,858,299.0	6,943,488.5	134.00
Terrain Line28	158	11,858,816.0	6,943,467.0	102.00
	159	11,858,837.0	6,943,468.0	98.00
	160	11,858,917.0	6,943,485.5	96.00
	161	11,858,974.0	6,943,492.5	94.00
	162	11,858,995.0	6,943,501.0	92.00
	163	11,859,026.0	6,943,508.0	86.00
	164	11,859,094.0	6,943,534.0	84.00
	165	11,859,164.0	6,943,586.5	83.10
Terrain Line33	202	11,870,814.0	6,945,837.0	122.00
	203	11,870,960.0	6,945,964.5	122.00
	204	11,871,049.0	6,946,036.5	110.00
	205	11,871,090.0	6,945,944.0	118.00
	206	11,871,117.0	6,945,958.5	118.10
	207	11,871,094.0	6,946,036.5	113.00
	208	11,871,132.0	6,946,048.0	118.00
	209	11,871,189.0	6,946,066.0	122.00
	210	11,871,230.0	6,946,071.0	124.00
	211	11,871,293.0	6,946,054.5	124.00
	212	11,871,328.0	6,946,027.5	124.00
	213	11,871,350.0	6,945,975.0	124.00
Terrain Line35	222	11,871,601.0	6,945,843.0	120.00
	223	11,871,721.0	6,945,893.0	88.00
	224	11,871,818.0	6,945,939.5	70.00
	225	11,871,961.0	6,946,019.0	54.00
	226	11,872,034.0	6,946,108.0	44.00
Terrain Line36	227	11,859,164.0	6,943,586.0	83.10
	228	11,859,201.0	6,943,620.0	84.00
	229	11,859,236.0	6,943,656.5	84.00
	230	11,859,256.0	6,943,666.5	90.00
	231	11,859,291.0	6,943,695.5	90.00
	232	11,859,312.0	6,943,703.0	82.00
Terrain Line3-2	233	11,855,623.0	6,944,227.5	150.00
	32	11,855,622.0	6,944,248.0	148.00
	33	11,855,599.0	6,944,298.5	147.80
	34	11,855,569.0	6,944,315.5	148.00



**INPUT: TERRAIN LINES**

	35	11,855,516.0	6,944,294.0	144.00
	36	11,855,478.0	6,944,288.0	142.00
	37	11,855,466.0	6,944,284.0	142.00
	38	11,855,378.0	6,944,309.0	142.00
	39	11,855,300.0	6,944,324.5	146.00
	40	11,855,261.0	6,944,337.0	146.00
	41	11,855,178.0	6,944,350.5	152.10
	42	11,855,122.0	6,944,348.0	157.50
	43	11,855,001.0	6,944,363.0	156.10
	44	11,854,941.0	6,944,381.5	156.00
	45	11,854,841.0	6,944,372.0	158.00
	46	11,854,831.0	6,944,394.5	158.00
	47	11,854,756.0	6,944,356.5	159.40

**Route 1 / Fort Belvoir**

**INPUT: GROUND ZONES**

**Route 1 / Fort Belvoir**

Parsons				27 November 2012	
Greg J Berg				TNM 2.5	
INPUT: GROUND ZONES					
PROJECT/CONTRACT:		Route 1 / Fort Belvoir			
RUN:		Future Build Alternative C			
<b>Ground Zone</b>				<b>Points</b>	
<b>Name</b>	<b>Type</b>	<b>Flow Resistivity</b>	<b>No.</b>	<b>Coordinates</b>	
		cgs rayls		<b>X</b>	<b>Y</b>
				ft	ft
Ground Zone6	Pavement	20000	237	11,854,583.0	6,944,230.5
			238	11,854,388.0	6,944,167.0
			244	11,854,208.0	6,944,081.5
			239	11,854,014.0	6,943,975.0
			242	11,853,530.0	6,943,703.5
			241	11,853,176.0	6,943,511.5
			243	11,853,528.0	6,943,672.5
			240	11,854,031.0	6,943,948.5
			245	11,854,215.0	6,944,048.5
			231	11,854,403.0	6,944,138.5
			232	11,854,590.0	6,944,200.0
			235	11,854,785.0	6,944,233.0
			233	11,854,983.0	6,944,236.0
			234	11,855,179.0	6,944,208.5
			87	11,855,368.0	6,944,156.0
			88	11,855,750.0	6,944,041.0
			89	11,855,826.0	6,944,018.0
			90	11,855,940.0	6,943,981.0
			91	11,856,325.0	6,943,870.0
			92	11,856,517.0	6,943,814.0
			93	11,856,708.0	6,943,755.0
			94	11,857,853.0	6,943,397.0
			95	11,858,049.0	6,943,344.0

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			96	11,858,250.0	6,943,317.5
			97	11,858,452.0	6,943,316.0
			98	11,858,652.0	6,943,327.5
			99	11,858,734.0	6,943,332.0
			100	11,858,851.0	6,943,339.0
			101	11,859,050.0	6,943,350.5
			102	11,859,650.0	6,943,385.0
			103	11,859,850.0	6,943,398.5
			104	11,861,046.0	6,943,491.0
			105	11,861,245.0	6,943,504.5
			106	11,863,841.0	6,943,653.5
			107	11,864,041.0	6,943,670.5
			108	11,864,239.0	6,943,705.0
			109	11,865,417.0	6,943,934.5
			110	11,865,614.0	6,943,972.0
			111	11,865,811.0	6,943,999.0
			112	11,866,009.0	6,944,006.0
			113	11,866,408.0	6,944,003.5
			114	11,866,608.0	6,944,002.5
			115	11,866,810.0	6,944,011.5
			116	11,867,010.0	6,944,032.5
			117	11,867,208.0	6,944,067.0
			118	11,867,403.0	6,944,115.0
			119	11,867,595.0	6,944,175.5
			120	11,867,782.0	6,944,248.5
			121	11,867,968.0	6,944,323.5
			122	11,868,154.0	6,944,390.0
			123	11,868,345.0	6,944,448.5
			124	11,868,537.0	6,944,507.5
			125	11,868,729.0	6,944,564.0
			126	11,868,921.0	6,944,619.0
			127	11,869,113.0	6,944,674.0
			128	11,869,307.0	6,944,730.0
			129	11,869,497.0	6,944,798.0
			130	11,869,681.0	6,944,883.0
			131	11,869,856.0	6,944,984.0

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			132	11,869,924.0	6,945,024.5
			133	11,870,019.0	6,945,101.0
			134	11,870,172.0	6,945,234.5
			135	11,870,445.0	6,945,527.5
			136	11,870,574.0	6,945,692.0
			137	11,870,743.0	6,945,896.0
			138	11,870,850.0	6,945,984.5
			139	11,871,014.0	6,946,089.5
			140	11,871,186.0	6,946,179.0
			141	11,871,362.0	6,946,252.5
			142	11,871,745.0	6,946,376.5
			143	11,871,942.0	6,946,433.0
			144	11,872,134.0	6,946,493.0
			145	11,872,315.0	6,946,569.5
			146	11,872,483.0	6,946,675.5
			147	11,872,588.0	6,946,743.0
			148	11,872,737.0	6,946,844.0
			149	11,872,911.0	6,946,955.5
			150	11,873,009.0	6,947,013.0
			246	11,873,477.0	6,947,344.0
			151	11,873,065.0	6,947,084.5
			152	11,872,897.0	6,946,976.0
			153	11,872,729.0	6,946,868.5
			154	11,872,469.0	6,946,699.0
			155	11,872,303.0	6,946,601.0
			236	11,872,123.0	6,946,528.0
			156	11,871,928.0	6,946,470.5
			157	11,871,737.0	6,946,418.5
			158	11,871,546.0	6,946,362.0
			159	11,871,349.0	6,946,298.0
			160	11,871,161.0	6,946,214.5
			161	11,870,990.0	6,946,132.5
			162	11,870,806.0	6,946,026.0
			163	11,870,657.0	6,945,886.0
			164	11,870,531.0	6,945,731.0
			165	11,870,397.0	6,945,573.0

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			166	11,870,277.0	6,945,424.0
			167	11,870,144.0	6,945,283.0
			168	11,870,028.0	6,945,182.0
			169	11,869,992.0	6,945,154.0
			170	11,869,932.0	6,945,110.0
			171	11,869,827.0	6,945,033.5
			172	11,869,654.0	6,944,935.0
			173	11,869,474.0	6,944,851.5
			174	11,869,287.0	6,944,785.0
			175	11,869,098.0	6,944,725.0
			176	11,868,718.0	6,944,600.0
			177	11,868,527.0	6,944,540.0
			178	11,868,335.0	6,944,481.0
			179	11,868,144.0	6,944,422.5
			180	11,867,954.0	6,944,354.5
			181	11,867,769.0	6,944,279.5
			182	11,867,583.0	6,944,207.5
			183	11,867,394.0	6,944,147.5
			184	11,867,201.0	6,944,100.5
			185	11,867,005.0	6,944,066.0
			186	11,866,807.0	6,944,044.5
			187	11,866,608.0	6,944,036.5
			188	11,866,408.0	6,944,041.0
			189	11,866,008.0	6,944,051.0
			190	11,865,805.0	6,944,045.5
			191	11,865,603.0	6,944,018.0
			192	11,865,408.0	6,943,978.5
			193	11,864,817.0	6,943,875.0
			194	11,864,620.0	6,943,838.5
			195	11,864,277.0	6,943,771.5
			196	11,864,228.0	6,943,760.5
			197	11,864,036.0	6,943,728.5
			198	11,863,838.0	6,943,711.5
			199	11,863,638.0	6,943,700.0
			200	11,863,439.0	6,943,686.0
			201	11,862,442.0	6,943,608.5

**INPUT: GROUND ZONES****Route 1 / Fort Belvoir**

			202	11,862,242.0	6,943,596.0
			203	11,861,243.0	6,943,538.5
			204	11,861,043.0	6,943,525.0
			205	11,859,847.0	6,943,432.5
			206	11,859,648.0	6,943,419.0
			207	11,859,448.0	6,943,409.0
			208	11,859,049.0	6,943,393.5
			209	11,858,874.0	6,943,386.5
			210	11,858,848.0	6,943,385.0
			211	11,858,649.0	6,943,373.5
			212	11,858,449.0	6,943,361.5
			213	11,858,251.0	6,943,355.5
			214	11,858,055.0	6,943,377.5
			215	11,857,864.0	6,943,429.0
			247	11,857,005.0	6,943,698.0
			216	11,856,146.0	6,943,966.5
			217	11,856,002.0	6,944,011.5
			218	11,855,955.0	6,944,026.0
			219	11,855,573.0	6,944,145.5
			220	11,855,382.0	6,944,205.0
			221	11,855,185.0	6,944,249.5
			230	11,854,984.0	6,944,269.0
			222	11,854,781.0	6,944,263.5



**RESULTS: BARRIER DESIGN**

**Route 1 / Fort Belvoir**

R87	22	64.6	0.0	5	-5.0	SW195	190	125	0.0	59.6
R88	23	64.5	-0.0	5	-5.0	SW195	192	120	0.0	59.5
R89	24	64.5	-0.0	5	-5.0	SW195	194	121	0.0	59.8
R90	25	64.6	0.0	5	-5.0	SW195	194	121	0.0	59.8
R91	26	64.9	-0.0	5	-5.0	SW195	198+00	116	0.0	59.6
R92	27	64.6	0.0	5	-5.0	SW195	198+00	116	0.0	60.5
R93	28	59.6	0.0	5	-5.0	Barrier42	186	140	0.0	52.2
R94	29	62.2	0.0	5	-5.0	Barrier42	188	141	0.0	58.5
R114	30	69.3	0.0	5	-5.0	Barrier41	172	147	0.0	67.7
R115	31	65.8	-0.0	5	-5.0	Barrier41	170	148	0.0	62.9
R116	32	65.5	-0.0	5	-5.0	Barrier41	172	147	0.0	62.4
R117	33	65.5	-0.0	5	-5.0	Barrier41	172	147	0.0	62.1
R118	34	65.9	-0.0	5	-5.0	Barrier41	172	147	0.0	60.7
R119	35	66.1	0.0	5	-5.0	Barrier41	172	147	0.0	57.8
R120	36	62.4	0.0	5	-5.0	Barrier41	172	147	0.0	57.7
R121	37	62.9	0.0	5	-5.0	Barrier41	172	147	0.0	58.0
R122	38	62.9	0.0	5	-5.0	Barrier41	172	147	0.0	57.2
R123	39	66.4	-0.0	5	-5.0	Barrier42	188	141	0.0	64.6
R124	40	67.8	0.0	5	-5.0	Barrier42	190	142	0.0	65.4
R125	41	67.2	0.0	5	-5.0	Barrier42	190	142	0.0	65.6
R126	42	68.1	-0.0	5	-5.0	Barrier42	190	142	0.0	65.0
R127	43	67.8	0.0	5	-5.0	Barrier42	192	143	0.0	66.6
R128	44	63.3	0.0	5	-5.0	Barrier42	190	142	0.0	59.6
R129	45	63.9	-0.0	5	-5.0	Barrier42	192	143	0.0	59.9
R130	96	63.8	-0.0	5	-5.0	Barrier42	192	143	0.0	60.1
R131	98	60.1	-0.0	5	-5.0	Barrier42	190	142	0.0	55.0
R132	99	60.6	-0.0	5	-5.0	Barrier42	190	142	0.0	55.0
R133	100	61.0	-0.0	5	-5.0	Barrier42	192	143	0.0	56.1
Total Cost, All Barriers (including additional cost(s))						\$0				



**RESULTS: BARRIER DESIGN**

**Route 1 / Fort Belvoir**

Parsons						28 November 2012					
Greg J Berg						TNM 2.5					
						Calculated with TNM 2.5					
<b>RESULTS: BARRIER DESIGN</b>											
<b>PROJECT/CONTRACT:</b>		Route 1 / Fort Belvoir									
<b>RUN:</b>		Future Build Alternative C									
<b>BARRIER DESIGN:</b>		Design									
<b>ATMOSPHERICS:</b>											
		68 deg F, 50% RH									
<b>Selected Receivers</b>											
<b>Name</b>		<b>No.</b>	<b>Calc</b>	<b>Noise Reduction</b>			<b>Barrier Reviewed</b>	<b>Important Segments</b>			<b>Partial</b>
			<b>LAeq1h</b>	<b>Calc</b>	<b>Goal</b>	<b>Calc-Goal</b>		<b>Name</b>	<b>No.</b>	<b>Height</b>	<b>LAeq1h</b>
			dBA	dB	dB	dB				ft	dBA
R56		1	64.9	-0.0	5	-5.0	Barrier44	172+00	192	0.0	60.4
R68A		2	53.2	1.9	5	-3.1	Barrier42	188	141	10.0	47.1
R68		3	56.5	1.7	5	-3.3	Barrier42	184	139	0.0	46.9
R69		4	59.3	6.6	5	1.6	Barrier41-2	14	136	16.0	51.2
R70-Alt C		5	60.3	12.9	5	7.9	SW195	190	125	20.0	56.7
R71		6	60.9	12.3	5	7.3	SW195	190	125	20.0	59.5
R72		7	61.3	10.7	5	5.7	SW195	192	120	20.0	57.9
R73		8	61.6	10.3	5	5.3	SW195	192	120	20.0	59.2
R74		9	61.9	10.2	5	5.2	SW195	194	121	20.0	59.4
R75		10	62.9	9.5	5	4.5	SW195	194	121	12.0	59.9
R76		11	63.1	9.2	5	4.2	SW195	196	122	12.0	59.1
R77		12	60.4	8.8	5	3.8	SW195	188	119	12.0	55.2
R78		13	59.8	8.7	5	3.7	SW195	190	125	12.0	54.8
R79		14	59.4	8.7	5	3.7	SW195	190	125	12.0	53.4
R80		15	59.3	8.6	5	3.6	SW195	192	120	12.0	53.5
R81		16	59.8	8.3	5	3.3	SW195	194	121	12.0	54.3
R82		17	60.2	8.0	5	3.0	SW195	194	121	12.0	54.4
R83		18	60.8	7.6	5	2.6	SW195	198+00	116	12.0	54.7
R84		19	61.6	6.9	5	1.9	SW195	198+00	116	12.0	56.4
R85		20	60.1	5.9	5	0.9	SW195	188	119	12.0	52.4
R86		21	58.8	6.3	5	1.3	SW195	190	125	12.0	51.3

**RESULTS: BARRIER DESIGN**

**Route 1 / Fort Belvoir**

R87	22	58.0	6.6	5	1.6	SW195	190	125	12.0	50.4
R88	23	57.8	6.7	5	1.7	SW195	192	120	12.0	50.1
R89	24	58.3	6.2	5	1.2	SW195	194	121	12.0	50.9
R90	25	58.6	6.0	5	1.0	SW195	194	121	12.0	51.1
R91	26	59.1	5.8	5	0.8	SW195	198+00	116	12.0	52.1
R92	27	59.3	5.3	5	0.3	SW195	198+00	116	12.0	52.8
R93	28	58.0	1.6	5	-3.4	Barrier42	186	140	0.0	52.2
R94	29	57.5	4.7	5	-0.3	Barrier42	188	141	10.0	51.4
R114	30	60.9	8.4	5	3.4	Barrier41	172	147	14.0	54.3
R115	31	58.9	6.9	5	1.9	Barrier41	170	148	14.0	50.6
R116	32	57.9	7.6	5	2.6	Barrier41	172	147	14.0	50.8
R117	33	59.7	5.8	5	0.8	Barrier41	172	147	14.0	50.8
R118	34	61.3	4.6	5	-0.4	Barrier41	172	147	14.0	50.0
R119	35	61.0	5.1	5	0.1	Barrier41	172	147	14.0	48.2
R120	36	57.5	4.9	5	-0.1	Barrier41	172	147	14.0	47.7
R121	37	58.2	4.7	5	-0.3	Barrier41	172	147	14.0	48.1
R122	38	58.3	4.6	5	-0.4	Barrier41	172	147	14.0	47.5
R123	39	59.2	7.2	5	2.2	Barrier42	188	141	10.0	55.6
R124	40	59.6	8.2	5	3.2	Barrier42	188	141	10.0	55.0
R125	41	59.6	7.6	5	2.6	Barrier42	190	142	10.0	55.8
R126	42	60.0	8.1	5	3.1	Barrier42	190	142	10.0	55.9
R127	43	60.4	7.4	5	2.4	Barrier42	192	143	10.0	56.4
R128	44	58.3	5.0	5	0.0	Barrier42	190	142	10.0	52.7
R129	45	58.7	5.2	5	0.2	Barrier42	190	142	10.0	52.9
R130	96	59.2	4.6	5	-0.4	Barrier42	192	143	10.0	53.0
R131	98	56.4	3.7	5	-1.3	Barrier42	190	142	10.0	49.5
R132	99	56.9	3.7	5	-1.3	Barrier42	190	142	10.0	49.8
R133	100	57.8	3.2	5	-1.8	Barrier42	192	143	10.0	49.7
Total Cost, All Barriers (including additional cost(s))						\$0				