

FINAL DESIGN NOISE ANALYSIS ADDENDUM REPORT

BARRIER SURVEY SUMMARY

**I-66 Eastbound Widening inside the Beltway
Fairfax and Arlington Counties, VA**

**PROJECT: 0066-96A-417, P101, R201, C501
and 0066-96A-493, P101, C501**

UPC# 108424

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FINAL DESIGN NOISE ANALYSIS TECHNICAL REPORT

This addendum report documents

8. PUBLIC INVOLVEMENT PROCESS

8.1 NOISE-COMPATIBLE LAND USE PLANNING

FHWA and VDOT policies require that VDOT provide 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 details on noise-compatible land-use planning and noise impact zones for undeveloped lands within the project corridor. The aforementioned details are provided below and shown on the graphics in Appendix A, Fig. 2. Additional information about VDOT's noise abatement program has also been included in this section.

Sections 12.1 and 12.2 of VDOT's 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 undeveloped land adjacent to highways to minimize potential impacts of highway traffic noise.

"*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. There is a link to this brochure provided on FHWA's website. It is located here: 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 well-written and comprehensive guide addressing these noise-compatible land-use planning strategies, with significant detailed information. There is a link to this document available through the FHWA's Website, at http://www.fhwa.dot.gov/environment/noise/noise_compatible_planning/federal_approach/audible_landscape/al00.cfm.

Noise Impact Zones in Undeveloped Land along the Study Corridor

Also required under the revised 2011 FHWA and VDOT noise policies is information on the noise impact zones adjacent to project roadways in undeveloped lands. To determine these zones, noise levels are

computed at various distances from the edge of the project roadways in each of the undeveloped areas of the project study area. Then, the distances from the edge of the roadway to the Noise Abatement Criteria sound levels are determined through interpolation. Distances vary in the project corridor due to changes in traffic volumes, or terrain features. Any noise modeling sites within these zones should be considered noise impacted if no barrier is present to reduce sound levels. The graphics in Appendix A show the predicted 66 dB contours for the project.

VDOT's Noise Abatement Program

Information on VDOT's noise abatement program is available on VDOT's Website, at: <http://www.virginiadot.org/projects/pr-noise-walls-about.asp>. The site provides information on VDOT's noise program and policies, noise walls, and a downloadable noise wall brochure.

8.2 VOTING PROCEDURES

For noise barriers determined to be feasible and reasonable, the affected public that will be benefited by the proposed mitigation will be given an opportunity to decide whether they are in favor of construction of the noise barrier. As part of the final design noise analysis, for barriers that are determined to be feasible and reasonable, input from the owners and/or residents of those receptor units that will be benefited by the proposed mitigation may vote by completing and returning the citizen survey that they receive in the mail. The initial citizen survey is sent out as certified mail so the disposition of the letter can be tracked. 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. A technical memorandum (noise barrier survey addendum report) will be prepared after the voting has finished, which documents the voting results and summary of public comments of the noise barrier public survey process. This report is submitted to the FHWA.

8.2 VOTING RESULTS

This section documents the administration and results of the public preference surveys conducted for the recommended noise barriers. **Table 2** shows the summary of the barrier voting owners and residents, including tenants that would be benefited by the recommended noise barrier.

For the 1st survey mailing survey letters were sent out by standard mail. Twenty-one (21) calendar days from the anticipated delivery date is required to provide the recipients ample time to review and respond to the survey. Based upon the 1st mailing survey response a 2nd mailing was required. For the 2nd mailing survey letters were sent by certified mail. Fourteen (14) calendar days from the anticipated delivery date is required to provide the recipients ample time to review and respond to the survey.

The letters and surveys asked the respondents to indicate whether they wished to have the proposed noise barriers constructed or not. In these mailings, barrier details, contact information, a survey form and return envelope were provided to owners and residents. The mailings gave the affected property owners/residents an understanding of the proposed barrier and its implications, an opportunity to ask questions, and a formal survey form for expressing their views. Only the owners and residents of those receptor units that will be

benefited by the proposed mitigation may vote on whether the proposed noise barrier should be constructed. The owner/resident of each benefited receptor unit shall be entitled to one weighted vote, regardless of the number of owners of that receptor unit unless they are the owners of a rental facility or the developer of lands. Survey recipients were informed that to register a vote in favor of the barrier, a “YES” survey form would have to be returned. In addition, a non-response does not assume that the survey recipient is in favor of the barrier’s construction.

The 1st survey letters and surveys were sent out February 8, 2019 and the 2nd survey letters were sent out March 20, 2019. For this project, 257 survey letters were mailed with 153 survey responses returned. The disposition of all letters was tracked and retained in the Appendix B Technical Files.

Votes will be tallied on a noise barrier by noise barrier basis, so it is recommended that the project team tally the votes and summarize the results on a project map showing votes by location. Final interpretation of the voting results will be made by VDOT, considering all feedback gained during the public involvement process.

The weighting system is provided in tabular format below (Table 1).

TABLE 1: PUBLIC OPINION SURVEY WEIGHTING SYSTEM

Impact and benefit category	Activity Category	Owner and Resident	Non-Resident	Renter
Impacted & Benefited	B	5	3	2
Not impacted & benefited	B	3	2	1
** For or activity Category B Receptors only one vote per single family unit will be counted. However the owner of a multiple-family dwelling unit will be granted one vote per benefited unit. Additionally the developer of permitted lands will be granted one vote per benefited lot of the permitted phase where construction has not occurred				

8.2 SURVEY RESPONSES

The table below provides a summary of the project survey responses. The table indicates the number of letters sent and the number of survey forms sent back with responses in Favor (“YES”).

TABLE 2: SUMMARY OF BARRIER SURVEY LETTER AND RESPONSES

Barrier Number	Total Letters Mailed	Response: In Favor of barrier?		Received Survey Not returned	Unclaimed unknown/ Return to Sender	Percentage of “YES” Respondent Votes	Percentage of “NO” Respondent Votes	Recommended for Constr. Yes / No
		Yes	No					
B1	7	4	2	1	0	67%	33%	Yes
C1	Barrier was an in-kind replacement; no Voting was required							
D1, D2	32	6	14	11	1	25%	75%	No
E1, E1A, E2	31	16	3	11	1	80%	20%	Yes
H1 Ext. E.	14	9	0	5	0	100%	0%	Yes
N1	135	67	10	53	6	90%	10%	Yes
O Ext. W., O Ext. C., O Ext. E.	10	5	0	5	0	100%	0%	Yes
P Central	28	14	3	11	0	88%	13%	Yes

BARRIER B1 VOTING SUMMARY

Barrier B1 is located along I-66 eastbound between Haycock and Great Falls. The CNE consists of noise sensitive land uses on Highland Avenue, Highland Terra, Woodland Drive, Marbo Court, Greenwich Street and North Oak Street. A total number of seven (7) letters were sent for Barrier B. A total of six (6) responses were received, with four (4) votes “YES” and two (2) response that was not in favor “NO” of the barrier. A total of one (1) letter was received but survey responses were not returned, and no letters were unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier B1 are NAC Category B. Six (6) sites were Impacted and Benefited and one (1) site was Not Impacted and Benefited. There were four (4) “YES” votes and two (2) “NO” votes from Owner and Residents. Of the potential 33 maximum number of weighted votes 66.7% of the respondents voted “YES” and 30.3% voted “NO”.

As a result of the mailing, Barrier B1 is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
0	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
4	No Comment.
1	Concerned about the appearance of the barrier.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER C1

Barrier C1 is an in-kind barrier replacement. The barrier was identified as being in a state of ‘disrepair’ and would be replaced as part of this project. As such, no barrier voting was required for this barrier.

BARRIER D1, D2 VOTING SUMMARY

Barrier D1, D2 is located along I-66 eastbound between Fairfax Drive and N. Washington Street. The CNE consists of noise sensitive land uses on Fairfax Drive, Little Falls Road and North Four Mile Run Drive. A total of thirty-two (32) letters were sent for Barrier D1, D2. A total of twenty (20) responses were received, with six (6) votes “YES” and fourteen (14) responses that were not in favor “NO” of the barrier. A total of eleven (11) letters were received but survey responses were not returned, and one (1) letter was unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier D1,D2 are NAC Category B. Thirty-two (32) sites were Impacted and Benefited and no sites were Not Impacted and Benefited. There were one (1) “YES” votes and nine (9) “NO” votes from Owner and Residents. Four (4) “YES” votes and one (1) “NO” vote from Non-

Resident Owners. One (1) “YES” and four (4) “NO” votes from Apartment Complexes/Rental Properties/Residents. Of the potential 115 maximum number of weighted votes 25.3% of the respondents voted “YES” and 74.7% voted “NO”.

As a result of the mailing, Barrier D1, D2 is not recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
1	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
7	No Comment.
1	Generally, doesn't feel the wall will benefit the community.
1	Noise from I66 doesn't bother them believes the wall would make the noise even louder.
2	Concerned about the appearance of the noise barrier.
2	Concerned about the removal of the existing trees and shrubs to built the wall.
1	Concern about who gets to vote.
2	Does not find the noise from I-66 to be a burden.
1	Doesn't want the noise barrier.
1	Would prefer an additional natural barrier than the noise barrier.
2	Concern over the property value if the barrier is constructed.
1	Thankful for helping mitigate noise concerns.
2	Wants upgrades to windows and doors instead of the noise barrier.
1	This would be a great additional to the community.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER E1, E1A, E2 VOTING SUMMARY

Barrier E1, E1A, E2 is located along I-66 eastbound between N. Washington Street and N. Sycamore Street. The CNE consists of noise sensitive land uses on North Washington Street, 19th Road North, Westmoreland Street and North Sycamore Street. A total of thirty-one (31) letters were sent for Barrier E1, E1A, E2. A total of nineteen (19) responses were received, with sixteen (16) votes “YES” and three (3) responses that were not in favor “NO” of the barrier. A total of eleven (11) letters were received but survey responses were not returned, and one (1) letter was unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier E1,E1A,E2 are NAC Category B. Forty-three (43) sites were Impacted and Benefited and two (2) sites were Not Impacted and Benefited. There were ten (10) “YES” votes and three (3) “NO” votes from Owner and Residents. One (1) “YES” votes and no “NO” vote from Non-Resident Owners. Six (6) “YES” and no “NO” votes from Apartment Complexes/Rental Properties/Residents. Of the potential 146 maximum number of weighted votes 80.3% of the respondents voted “YES” and 19.7% voted “NO”.

As a result of the mailing, Barrier E1, E1A, E2 is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
1	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
16	No Comment.
1	Concerned about the construction noise.
1	Doesn't want to look at a giant wall in my back yard.
1	Thank you.
1	In favor of the noise barrier.
1	Concerned about property value if barrier is not constructed.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER H1 EXT. EAST VOTING SUMMARY

Barrier H1 Ext. is located along I-66 eastbound between Patrick Henry Drive and N. Harrison Street. The CNE consists of noise sensitive land uses on Patrick Henry Drive, 10th Road North, North Arlington Mill Road, North Lexington Street, 9th Street North, North Kensington Street, 9th North Road, North Jefferson Street, North Montana Street, North Manchester Street, North Madison Street and North Harrison Street. A total of fourteen (14) letters were sent for Barrier H1 Ex. East. A total of nine (9) responses were received, with nine (9) votes “YES” and no responses that were not in favor “NO” of the barrier. A total of five (5) letters were received but survey responses were not returned, and no letters were unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier H1 Ext. East are NAC Category B. Fourteen (14) sites were Impacted and Benefited and no sites were Not Impacted and Benefited. There were six (6) “YES” votes and no “NO” votes from Owner and Residents. One (1) “YES” votes and no “NO” vote from Non-Resident Owners. Of the potential 55 maximum number of weighted votes 100% of the respondents voted “YES” and 0% voted “NO”.

As a result of the mailing, Barrier H1 Ext. East is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
0	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
7	No Comment.
1	Support the noise barrier installation.
1	Would like for the barrier to be extended toward Jacksonville and 9th.
1	Would like for the existing noise barrier near Jacksonville and 9 th be raised.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER N1 VOTING SUMMARY

Barrier N1 is located along I-66 westbound between N. Harrison Street and Patrick Henry Drive. The CNE consists of noise sensitive land uses along North Harrison Street, 10th Street North, 11th Street North, North Kennebee Street, North Kentucky Street, North Kennesaw Street and Patrick Henry Drive. A total of one-hundred-thirty-five (135) letters were sent for Barrier N1. A total of seventy-seven (77) responses were received, with sixty-seven (67) votes “YES” and ten (10) responses that were not in favor “NO” of the barrier. A total of fifty-three (53) letters were received but survey responses were not returned, and six (6) letters was unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier N1 are NAC Category B. Twenty-two (22) sites were Impacted and Benefited and one hundred and forty-eight (148) sites were Not Impacted and Benefited. There were fifty (50) “YES” votes and one (1) “NO” votes from Owner and Residents. One (1) “YES” votes and two (2) “NO” vote from Non-Resident Owners. One (1) “YES” and one (1) “NO” votes from Apartment Complexes/Rental Properties/Residents. Of the potential 411 maximum number of weighted votes 89.7% of the respondents voted “YES” and 10.3% voted “NO”.

As a result of the mailing, Barrier N1 is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
6	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
56	No Comment.
6	Concerned about the removal of trees.
7	In favor of the noise barrier.
2	Thank you.
1	Currently feel as if they need ear protection along Curtis trail.
1	Concerned about how loud it is inside their hours due to the roadway noise.
1	It is needed.
1	Noise from 66 keeps getting louder.
1	Has regular complains about the Metro and believes that the construction of the wall would help.
1	Concerned about property value and loss of screening.

1	Please plant as many native hardwood trees in areas where trees will have to be removed.
1	Request to construct speed bumps on N. Fairfax Drive to reduce travel speeds.
2	Plan new trees.
1	Concerned about metro noise.
3	Concerned about construction noise.
1	Doesn't plan on staying in the neighborhood.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER O EXT. WEST, O EXT. CENTER, O EXT. EAST VOTING SUMMARY

Barrier O Ext. West, O Ext. Center, and O Ext. East are located along I-66 westbound between Patrick Henry Drive and N. Ohio Street. The CNE consists of noise sensitive land uses along Patrick Henry Drive, 11th Street North, 14th Street North, North Longfellow Street, 15th Street North, North Nicholas Street and North Ohio Street. A total of ten (10) letters were sent for Barrier O Ext. West, O Ext. Center, O Ext. East. A total of five (5) responses were received, with five (5) votes “YES” and no responses that were not in favor “NO” of the barrier. A total of five (5) letters were received but survey responses were not returned, and no letters were unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier O1 Ext. West, O Ext. Center, O Ext. East are NAC Category B. Seven (7) sites were Impacted and Benefited and three (3) sites were Not Impacted and Benefited. There were five (5) “YES” votes and no “NO” votes from Owner and Residents. One (1) “YES” votes and no “NO” vote from Non-Resident Owners. Of the potential 39 maximum number of weighted votes 100% of the respondents voted “YES” and 0% voted “NO”.

As a result of the mailing, Barrier O Ext. West, O Ext. Center, O Ext. East is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
0	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
3	No Comment.
1	Support the noise barrier and concerned about noise echoes from under the bridge.
1	Request the noise barrier to be taller around the bridge.
2	Concerned about the metro noise.
1	Concerned about the construction noise.
1	Supportive of the wall.
1	Believe this would be a great improvement.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.

BARRIER P CENTRAL VOTING SUMMARY

Barrier P Central is located along I-66 westbound between N. Sycamore Street and N. Ohio Street. The CNE consists of noise sensitive land uses along North Ohio Street, 14th Street North, North Powhatan Street, North Potomac Street, 18th Street North, 18th Road North, 19th Street North, North Quesada Street, North Quintana Street, North Roosevelt Street and North Sycamore Street. A total of twenty-eight (28) letters were sent for Barrier P Central. A total of seventeen (17) responses were received, with fourteen (14) votes “YES” and three (3) responses that were not in favor “NO” of the barrier. A total of eleven (11) letters were received but survey responses were not returned, and no letters were unclaimed/unknown/returned to sender.

All the receptors benefited by Barrier P Central are NAC Category B. Four (4) sites were Impacted and Benefited and twenty-four (24) sites were Not Impacted and Benefited. There were thirteen (13) “YES” votes and two (2) “NO” votes from Owner and Residents. One (1) “YES” votes and no “NO” vote from Non-Resident Owners. Of the potential 77 maximum number of weighted votes 87.5% of the respondents voted “YES” and 12.5% voted “NO”.

As a result of the mailing, Barrier P Central is recommended for construction. A breakdown of the disposition of letters is listed below:

Quantity	Comment
0	Letters returned to sender
0	Unclaimed
0	Unknown

The survey questionnaire comments have been included in Appendix B in their entirety and a summary of the comments is included in the table below.

Quantity	Comment
13	No Comment.
1	Request to replace as many trees as possible that you remove to construct the noise wall.
1	Could we get Mexico to pay for the wall.
1	Fully support construction of the noise barrier.
1	Concerned about the subway tract at EFC.
1	Concerned about property value.
1	Not concerned about the noise form I-66
1	Concern about the view of the wall from their property.

The Barrier voting results are summarized in Appendix A Mailing Summary Worksheets.