TRAFFIC NOISE REPORT

Cape Fear Crossing
Brunswick and New Hanover Counties

TIP Project No. U-4738
State Project No. 40114.1.2
Federal Aid Project No. STP-0017(53)

Prepared for:

North Carolina Department of Transportation
Environmental Analysis Unit
Traffic Noise & Air Quality Group

Prepared by:

AECOM

April 2019

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EXECUTIVE SUMMARY

This Preliminary Traffic Noise Report (TNR) report summarizes the traffic noise analysis findings for North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP) Project U-4738. This project extends approximately 9.5 miles from the vicinity of US 17 and I-140 in Brunswick County to US 421 in southern New Hanover County. The proposed project would involve either improving existing roads or constructing a new facility on new location or a combination of the two. The project is needed to improve traffic flow and enhance freight movements beginning near US 17 and I-140 in Brunswick County, across the Cape Fear River to US 421 near the Port of Wilmington in southern New Hanover County. Additionally, the project would help expedite an evacuation of residents and visitors in the event of a hurricane or other emergency.

An Environmental Impact Statement (EIS) followed by a Record of Decision (ROD) is being prepared for this project and both are scheduled to be completed in 2020. Federal funding is anticipated and Federal Highway Administration (FHWA) approval will be required. Per FHWA Procedures for Abatement of Highway Noise (23 CFR 772.5(2)) and the 2016 NCDOT Traffic Noise Policy (NCDOT Policy), the proposed project is a "Type I" project.

The Date of Public Knowledge will be the approval date of the ROD. After this date, federal and state governments are no longer responsible for providing noise abatement measures for new development within the noise impact area of the proposed project. NCDOT advocates the use of local government authority to regulate land development, planning, design and construction in such a way that noise impacts are minimized.

Traffic noise impacts and temporary construction noise impacts can be a consequence of transportation projects, especially for noise-sensitive land uses near high-volume and/or high-speed existing steady-state traffic noise sources. This Traffic Noise Report presents an analysis of predicted traffic noise impacts and noise abatement for six detailed study alternatives currently being considered. The noise analysis was performed utilizing validated computer models created with the Federal Highway Administration Traffic Noise Model® (FHWA TNM v. 2.5) to predict future noise levels and define noise-sensitive receptors impacted by traffic noise along the proposed project alternatives. Based on current 2040 Build condition preliminary design, there are 621 predicted impacted receptors on Alternative B, 462 predicted impacted receptors on Alternative MA, 483 predicted impacted receptors on Alternative NA, 432 predicted impacted receptors on Alternative Q, 467 predicted impacted receptors on Alternative T, and 277 predicted impacted receptors on Alternative VA-W. These impact numbers may change if noise-sensitive receptors ultimately lie within proposed limits of new right of way needed for construction of the roadway.

Consideration for noise abatement measures was given to all impacted receptors. Following the criteria for feasibility and reasonableness, as prescribed in the 2016 NCDOT Traffic Noise Policy, noise abatement for this project, in the form of noise walls, would be likely at thirty discrete noise wall locations within the six detailed study alternatives. These include eight locations within Alternative B, three locations within Alternative MA, six locations within Alternative NA, three locations within Alternative Q, six locations within Alternative T and four locations within Alternative VA-W. "Likely" does not mean a firm commitment. Noise abatement measures were found preliminarily not feasible and/or not reasonable due to noise level reduction goals, constructability concerns, and/or cost effectiveness at 29 discrete noise wall locations within the six detailed study alternatives. These include

two locations within Alternative B, eight locations within Alternative MA, five locations within Alternative NA, four locations within Alternative Q, one location within Alternative T and nine locations within Alternative VA-W. Additional detailed study of potential abatement measures will be necessary after completion of the final design of this project.

Furthermore, temporary construction noise impacts may occur due to the proximity of the noise-sensitive receptors to project construction activities. It is the recommendation of this traffic noise analysis that all reasonable efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts.

This TNR documents the preliminary analyses, findings and recommendations regarding traffic noise impacts and considerations of noise abatement measures for feasibility and reasonableness in accordance with FHWA Procedures for Abatement of Highway Noise (23 CFR 772), the 2016 NCDOT Traffic Noise Policy and the accompanying 2016 NCDOT Traffic Noise Manual. A final determination of noise abatement measures will be made upon completion of the project design, the public involvement process, and concurrence with the NCDOT policy.

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1.0 PROJECT LOCATION, DESCRIPTION, & BACKGROUND

The North Carolina Department of Transportation (NCDOT) proposes to construct a route with some alternatives on new location, known as the Cape Fear Crossing, which would be a limited access road extending from the vicinity of US 17 Bypass and I-140 in Brunswick County to US 421 in New Hanover County, approximately 9.5 miles in length, NCDOT State Transportation Improvement Program (STIP) Project U-4738. The proposed project location is shown in **Figure 1**. The primary purpose of the proposed project is to improve traffic flow and enhance freight movements beginning near US 17 and I-140 in Brunswick County, across the Cape Fear River to US 421 near the Port of Wilmington in southern New Hanover County. The needs to be addressed by the proposed project are traffic capacity deficiencies and access to the North Carolina Port. An Environmental Impact Statement (EIS) / Record of Decision (ROD) is being prepared for this project in compliance with National Environmental Policy Act (NEPA).

Preliminary project designs were utilized in the development of this preliminary design traffic noise analysis. The main alignment for each alternative consists of a four-lane, divided typical section. Other typical sections are described in the alternative descriptions below. The existing speed limits throughout the project range from 70 miles per hour (mph) along I-140 and 45 to 55 mph along US 17-74-76-421. Existing speed limits on secondary roads and urban arterials are typically 45 mph and 35 mph along residential streets. The proposed Design Year 2040 design speeds along the Cape Fear Crossing project main alignment alternatives are 70 to 45 mph. Proposed Design Year 2040 design speeds on associated secondary roads, urban arterials and interchange loops and ramps are 35 to 45 mph and 35 mph along residential streets.

Current land use includes residential and commercial development along US 17-74-76 in Brunswick County. Additional residential areas exist in the form of numerous subdivisions both east and west of US 17 and between US 17 and the Cape Fear River. Otherwise, the project area in Brunswick County is largely undeveloped and consists of forests and riverine/tidal drainage areas. East of the Cape Fear River in the City of Wilmington, the project area has been almost completely developed with a mixture of residential, recreational, commercial and industrial land uses, including the Port of Wilmington.

This report summarizes the preliminary traffic noise analysis findings for North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP) Project U-4738. Six Design Year 2040 Build-condition alternatives are being considered in detail for the U-4738 project. Each alternative includes the construction of a fixed-span bridge across the Cape Fear River. Descriptions of each alternative follow:

Alternative B

This alternative begins at I-140 and, after a proposed interchange with US 17, travels between the Brunswick Forest and Mallory Creek developments, then crosses the Cape Fear River to Shipyard Boulevard. Upgrades along NC 133 near of the proposed interchange with Alternative B would include a four-lane divided facility. Alternative B is proposed as a four-lane divided freeway for its entirety and is 11.1 miles in length.

Alternative M Avoidance (MA)

This alternative begins at the I-140/US 17 interchange, avoids the Snee Farm and Stoney Creek subdivisions, travels south of Brunswick Forest, and crosses the Cape Fear River to Independence Boulevard. Alternative MA is proposed as a four-lane divided freeway for its entirety. Upgrades to US 421 from Independence Boulevard to Shipyard Boulevard as a part of Alternative MA are proposed as a six-lane arterial widening typical section. Upgrades along NC 133 near the proposed interchange with Alternative MA would include a four-lane divided facility. Alternative MA is 12.3 miles in length.

Alternative N Avoidance (NA)

This alternative begins at the I-140/US 17 interchange, avoids the Snee Farm and Stoney Creek subdivisions, and travels south of Brunswick Forest, and crosses the Cape Fear River to connect with Shipyard Boulevard. Alternative NA is proposed as a four-lane divided freeway for its entirety. Upgrades along NC 133 near the proposed interchange with Alternative NA would include a four-lane divided facility. Alternative NA is 12.2 miles in length.

Alternative Q

This alternative begins at the I-140/US 17 interchange, upgrades existing US 17 for approximately two miles northward, then continues on new location between the Brunswick Forest and Mallory Creek developments, largely avoiding impacts to Brunswick Forest, and crosses the Cape Fear River to Independence Boulevard. Alternative Q is proposed as a six-lane arterial widening to the outside typical section on US 17 from I-140 to West Gate Drive/Grandiflora Drive, where the alternative begins on new location to the south and east, where a four-lane divided freeway will carry it across the Cape Fear River to Independence Boulevard. Upgrades to US 421 from Independence Boulevard to Shipyard Boulevard are proposed as a six-lane arterial widening typical section. Upgrades along NC 133 near the proposed interchange with Alternative Q would include a four-lane divided facility. Alternative Q is 11.5 miles in length.

Alternative T

This alternative begins at the I-140/US 17 interchange, upgrades existing US 17 for approximately two miles northward, then continues on new location parallel to Wire Road through the Brunswick Forest development and crosses the Cape Fear River to Shipyard Boulevard. Alternative T is proposed as a six-lane arterial widening to the outside typical section on US 17 from I-140 to West Gate Drive/Grandiflora Drive, where the alternative begins on new location to the south and east, a four-lane divided freeway will carry it across the Cape Fear River to Shipyard Boulevard. Upgrades to US 421 are proposed as a four-lane arterial widening typical section, with some additional improvements to accommodate the additional traffic volumes. Upgrades along NC 133 near the proposed interchange with Alternative T would include a four-lane divided facility. Alternative T is 11.4 miles in length.

Alternative V-Arterial Widening (V-AW)

This alternative begins at the I-140/US 17 interchange and will include upgrading US 17 to the US 17/US 421 interchange west of Wilmington, where it then travels south along Eagle Island on new location and crosses the Cape Fear River to terminate at US 421 and Shipyard Boulevard just east of the Port of Wilmington. Alternative V-AW is proposed to be a six-lane arterial widening to the outside on US 17 from I-140 (western terminus) to SR 1438 (Lanvale Road). From SR 1438 (Lanvale Road) to US 74/76, an

eight-lane arterial widening to the outside typical section is proposed. The roadway would be widened to an eight-lane freeway from US 74/76 to US 421. Alternative V-AW is 11.8 miles in length.

Forty-eight Noise Study Areas (NSAs) are delineated within the project study area to identify similar land uses that are exposed to common noise sources. The locations of each NSA, the alternative(s) in which they occur, their respective land use(s) and identified receptors by NAC categories are described in **Table 1**. The NSA limits are shown in **Figure 3**.

Table 1: Noise Study Area (NSA) Locations

NSA	Description	Alternatives	Land Use	Receptor NAC Category - Number
NSA 1	Between US 17 Southbound and Zion Church Road	MA, NA	Undeveloped, Residential, Commercial	B - 5
NSA 2	East of US 17 to West of Sunnybrook Way and Northeast of Snowfield Road	MA, NA	Residential, Park, Worship	B - 27 C - 9 D - 1
NSA 3	East of US 17 along Hazels Branch Road, Sloan Road and White Bridge Lane SE	MA, NA	Residential	B - 25
NSA 4	East of US 17 along NC 87 (Maco Road), from South of Old Town Creek Rd to Wilbur McKeithan Way	MA, NA	Undeveloped, Residential, Worship	B - 11 D - 1
NSA 5	East of US 17, from South of Stony Brook Lane to North of Bridle Way	MA, NA	Residential	B - 187
NSA 6	West of US 17 both North and South of Goodman Road NE	MA, NA, Q, T, V-AW	Residential, Undeveloped	B - 8
NSA 7	East of US 17 between Stone Furrow Trace and Hewett Burton Road and West of Morgan Creek Road	MA, NA, Q, T, V-AW	Residential, Undeveloped	B - 20
NSA 8	West of US 17 between Goodman Road NE and CSX/US Government Railway	Q, T, V-AW	Residential, Undeveloped	B - 15
NSA 9	East of US 17 from South of Burton Trail to South of Katy Todd Road	Q, T, V-AW	Residential	B - 5
NSA 10	West of US 17 from North of CSX/US Government Railway to North of Lanvale Road NE	B, Q, T, V-AW	Undeveloped, Residential, Commercial	B - 20

NSA	Description	Alternatives	Land Use	Receptor NAC Category - Number
NSA 11	East of US 17 from North of Lanvale Road SE to Brunswick Forest Parkway	B, Q, T, V-AW	Commercial	E - 4
NSA 12	West of Evangeline Drive to Brunswick Forest Parkway	B, Q, T, V-AW	Residential, Park	B - 14 C - 1
NSA 13	West of Lanvale Road to East end of Savannah Branch Road and South of Lansan Lane	B	Residential, Undeveloped	B - 44
NSA 14	Northwest of Springstone Drive to East of Tara Forest Drive in Hearthstone Subdivision	B	Residential	B - 40
NSA 15	South of Orchard Loop Road to Pine Brush Drive in Lanvale Trace Subdivision	B	Residential, Undeveloped	B - 90
NSA 16	South of Watersfield Road from Lanvale Road to East of Slater Way in Wedgewood at Lanvale Subdivision	B	Residential	B - 82
NSA 17	West of US 17 and North of Collins Way	B, Q, T, V-AW	Residential, Commercial	B - 2 E - 1
NSA 18	West of US 17 along Grandiflora Drive from South of Cumbertree Court to Cherrywood Court	B, Q, T, V-AW	Residential	B - 20
NSA 19	West of US 17 from Grandiflora Drive to Benton Brown Way	B, Q, T, V-AW	Residential, Cultural Center, Commercial	B - 1 D - 1 E - 1
NSA 20	East of US 17 and South of West Gate Drive	B, Q, T, V-AW	Residential	B - 66
NSA 21	Southeast of US 17 and Ploof Road along Sand Pebble Drive and Birch Creek Road	B, Q, T, V-AW	Residential	B - 27
NSA 22	Southeast of US 17 and Northwest of Ploof Road, encompassing all of Hawthorne Loop Road	B, V-AW	Residential, Commercial	B - 223

NSA	Description	Alternatives	Land Use	Receptor NAC Category - Number
NSA 23	South of US 74-76 and West of US 17 along Wind Lake Way, Sun Skipper Lane, Natural Springs Way and Regalia Lane in Waterford Subdivision	B, V-AW	Residential	B - 81
NSA 24	North of US 17/US 74-76 interchange from Southeast of Cottagefield Lane to East of Macklin Street	B, V-AW	Residential	B - 115
NSA 25	Southeast of US 17-74-76 along Blackwell Road from Southwest of Chappell Loop Road to Southwest of NC 133 (River Road)	B, V-AW	Residential, Commercial, Worship, Undeveloped	B - 12 D - 2
NSA 26	North of US 17-74-76 and South of Dixie Drive from Northeast of Village Road to Brunswick River	B, V-AW	Residential, Commercial, School, Undeveloped	B - 10 C - 8
NSA 27	S of US 17-74-76 to S of Belville Road between Main Street and Brunswick River	B, V-AW	Residential, Commercial, Worship, School	B - 5 D - 1
NSA 28	West of Wire Road and East of Lillibridge Drive from North of East Gantry Court to South of Shelmore Way	T	Residential	B - 70
NSA 29	West of Simmerman Way & Stoney Point Drive to South of Still Bluff Lane from North of Simmerman Way to South of Shelmore Way	T	Residential	B - 150
NSA 30	East of Star Grass Way and Shelmore Way to East of Smeades Drive from North of Star Grass Way to South of Staffordale Drive	Q, B	Residential	B - 117
NSA 31	East of Smeades Drive to East of S Brook Road from North of Cove Landing to South of Staffordale Drive	Q, B	Residential, Undeveloped	B - 89
NSA 32	West of NC 133 (River Road) from South of Rabon Way to North of Mallory Creek	B, MA, NA, Q, T	Residential, Undeveloped	B - 3
NSA 33	West of River Road from South of Sunnyvale Drive to South of Bryan Road; Wilmington Marine Center	MA, Q	Marina, Commercial	C - 2
NSA 34	East of River Road to West of Rosa Drive and South of Sunnyvale Drive to South of Cape Fear Road	MA, Q	Residential, Commercial, Undeveloped	B - 16

NSA	Description	Alternatives	Land Use	Receptor NAC Category - Number
NSA 35	West of US 421 (Carolina Beach Road) and Southeast of Independence Boulevard from Southwest of Portofino Court to North of Newcastleton Drive	MA, Q	Residential, Undeveloped, Golf Course	B - 398 C - 2
NSA 36	East of US 421 (Carolina Beach Road) from 550 feet South of Independence Boulevard to 400 feet South of George Anderson Drive	MA, Q	Residential, School, Commercial	B - 167 C - 8
NSA 37	West of US 421 (Carolina Beach Road) from South of Southgate Road to South of Raleigh Road	MA, Q	Residential, Worship, Commercial	B - 54 D - 5
NSA 38	East of US 421 (Carolina Beach Road) from 1400 feet South of Parkway Drive to 700 feet South of Parkway Drive	MA, Q	Residential, Commercial	B - 3
NSA 39	East of US 421 (Carolina Beach Road) Parkway Drive to N of Holbrook Avenue	B, MA, NA, Q, T, V-AW	Residential, Worship, Commercial	B - 14 D - 1
NSA 40	South of Shipyard Boulevard from West of Constitution Boulevard to South 17th Street	B, NA, T	Residential, Commercial, Worship, Preschool	B - 150 C - 1 D - 4
NSA 41	North of US 117 (Shipyard Boulevard) and South of Wellington Avenue from 800 feet East of US 421 (Carolina Beach Road) to East of Troy Drive	B, NA, T	Commercial, Worship, Medical	B - 7 C - 1 D - 4
NSA 42	South of US 117 (Shipyard Boulevard) from West of Worth Drive to West of US 421	B, NA, T	Residential, Commercial, Worship, School	B - 297 D - 1
NSA 43	North of US 117 (Shipyard Boulevard) and North of Bell Street from Louisiana Street to US 421 (Carolina Beach Road)	B, NA, T, V-AW	Residential, Commercial, Park	B - 109 C - 5
NSA 44	North of US 117 (Shipyard Boulevard) to South of Bell Street between Adams Street and US 421	B, NA, T, V-AW	Residential, Commercial, Worship	B - 42 C - 1 D - 1
NSA 45	East of US 421 (Carolina Beach Road) from W Lakeshore Drive to 550 feet North of Medical Center Drive	V-AW	Residential, Recreational, Commercial, Theater, School	B - 68 C - 6 D - 2
NSA 46	West of US 421 to West of Washington Street from South Carolina Avenue to Bordeaux Avenue	V-AW	Residential, Commercial	B - 168

NSA	Description	Alternatives	Land Use	Receptor NAC Category - Number
NSA 47	West of US 421 (Carolina Beach Road) and East of the Wilmington Terminal Railroad from Greenfield Street to the Burnett Boulevard - Front Street intersection	V-AW	Residential, Commercial, Park	B - 252 C - 39
NSA 48	East of US 421 (Carolina Beach Road) to Pinecrest Parkway between Marstellar Street and Greenfield Lake	V-AW	Residential, Commercial, Worship, Park	B - 96 C - 27 D - 2 E – 1

Detailed figures that illustrate existing and proposed conditions within the project study area, proposed alternatives, noise study areas, modeled noise receptor locations, predicted impacts, and abatement considerations may be found in the figures and appendices at the end of this report.

2.0 PROCEDURE

This Traffic Noise Report (TNR) was prepared based on preliminary designs for the six current detailed study alternatives and presents the predicted traffic noise impacts and preliminary abatement recommendations for the STIP # U-4738 Cape Fear Crossing project.

The noise analyses reported herein used noise measurement procedures that considered the methodologies contained in the FHWA publication titled *Noise Measurement Handbook* (June 2018). These measurements assisted in validating the project's traffic noise prediction model. This TNR utilized validated computer models created with the Federal Highway Administration Traffic Noise Model® version 2.5 (FHWA TNM v.2.5) to predict Existing 2017 and future Design Year 2040 hourly equivalent traffic noise levels (Leq (h)), and application of NCDOT Noise Abatement Criteria (NAC) and substantial noise level increase (change in predicted over existing noise levels) criteria to identify all impacted noise-sensitive receptors along the proposed project. Evaluation of the feasibility and reasonableness of potential noise abatement measures was completed through the application of additional criteria found in the NCDOT Traffic Noise Policy. All analytical procedures are in accordance with the 2016 NCDOT Traffic Noise Policy, the 2016 NCDOT Traffic Noise Manual and Title 23 Code of Federal Regulations, Part 772 – Procedures for Abatement of Highway Traffic Noise and Construction Noise, (23 CFR 772).

Considerations for construction noise associated with the project and potential means to address construction noise are discussed in **Section 11.0** of this report.

The 2016 NCDOT Traffic Noise Policy specifies that the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the project's Record of Decision (ROD). For development occurring after this

date, local governing bodies are responsible to ensure that noise compatible designs are utilized along the proposed facility.

3.0 CHARACTERISTICS OF NOISE

Noise is basically defined as unwanted sound. It is emitted from many natural and man-made sources. Highway traffic noise is usually a composite of noises from engine exhaust, drive train, and tire-roadway interaction.

The magnitude of noise is usually described by a ratio of its sound pressure to a reference sound pressure, which is usually twenty micro-Pascals (20μPa). Since the range of sound pressure ratios varies greatly, over many orders of magnitude, a base-10 logarithmic scale is used to express sound levels in dimensionless units of decibels (dB). The commonly accepted limits of detectable human hearing sound magnitudes are between the threshold of hearing at 0 dB and the threshold of pain at 140 dB.

Sound frequencies are represented in units of Hertz (Hz), which correspond to the number of vibrations per second of a given tone. A cumulative "sound level" is equivalent to ten times the base-10 logarithm of the ratio of the sum of the sound pressures of all frequencies to the reference sound pressure. To simplify the mathematical process of determining sound levels, sound frequencies are grouped into ranges, or "bands." Sound levels are then calculated by adding the cumulative sound pressure levels within each band – which are typically defined as one "octave" or "1/3-octave" of the sound frequency spectrum.

The commonly accepted limitation of human hearing to detect sound frequencies is between 20 Hz and 20,000 Hz, and human hearing is most sensitive to the frequencies between 1,000 Hz and 6,000 Hz. Although people are generally not as sensitive to lower-frequency sounds as they are to higher frequencies, most people lose the ability to hear high-frequency sounds as they age. To accommodate varying receptor sensitivities, frequency sound levels are commonly adjusted, or "filtered", before being logarithmically added and reported as a single "sound level" magnitude of that filtering scale. The "A-weighted" decibel filtering scale applies numerical adjustments to sound levels at different frequencies to emphasize the levels in frequency ranges at which human hearing is sensitive, and to minimize the levels in frequency ranges at which human hearing is not as sensitive (refer to **Table 2**).

Table 2: Comparison: Unweighted vs. A-Weighted Frequency Scaling

Octave-Band Center Frequency (Hz)	A-Weighted Adjustment[1]	Sample Frequency Sound Levels (Unweighted)	Sample Frequency Sound Levels (A-Weighted)
31	-39.53	90.00	50.47
63	-26.22	80.00	53.78
125	-16.19	70.00	53.81
250	-8.68	65.00	56.32
500	-3.25	60.00	56.75
1000	0.00	60.00	60.00
2000	+1.20	60.00	61.20
4000	+0.96	55.00	55.96
8000	-1.14	50.00	48.86
16000	-6.7	45.00	38.30
	Overall Sound Levels	**90.48 dB[2]**	**66.32 dB(A)[2]**

[1] Based on ANSI S1.42-2001(R2016)

[2] Although the energy in the unweighted sound source would create an *actual* sound level = 90.48 dB, it would be *perceived* as a sound level of 66.32 dB (A) by human hearing due to the decreased sensitivity of human hearing to sound at lower sound frequencies.

Examples of noise levels expressed in dB(A) are listed in **Table 3**, which demonstrates that most people are exposed to high noise levels from many sources on a regular basis. To perceive sounds of greatly varying pressure levels, human hearing has a non-linear sensitivity to sound pressure exposure. For example, doubling the sound power (or number of identical sources) results in a three decibel (3 dB(A)) change in the noise level; however, variations of three decibels or less are commonly considered "barely perceptible" to normal human hearing. A five decibel (5 dB(A)) change is more readily noticeable. A ten-fold increase in the sound power correlates to a 10 decibel (10 dB(A)) noise level increase; however, it is judged by most people as only a doubling of the loudness – sounding "twice as loud".

Table 3: Common Indoor and Outdoor Noise Levels

Common Outdoor Noise Levels	Noise Level (dB(A))	Common Indoor Noise Levels
	110	Rock Band
Jet Flyover at 1,000 feet	100	Inside Subway Train (NY)
Gas Lawn Mower at 3 feet		
Diesel Truck at 50 feet	90	Food Blender at 3 feet
Noisy Urban Daytime	80	Garbage Disposal at 3 feet
Gas Lawn Mower at 100 feet	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Small Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
	30	
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (Background)
	20	
		Broadcast and Recording Studio
	10	
	0	Threshold of Hearing

Adapted from Guide on Evaluation and Attenuation of Traffic Noise, American Association of State Highway and Transportation Officials (AASHTO). 1974 (revised 1993).

The degree of disturbance or annoyance from exposure to unwanted sound – noise – depends upon three factors:

1. The magnitude, nature, and duration of the intruding noise
2. The relationship between the intruding noise and the existing (ambient) sound environment; and
3. The situation in which the disturbing noise is heard

In considering the first of these factors, it is important to note that individuals have varying sensitivity to noise. Loud noises bother some people more than other people. The time patterns and durations of noise(s) also affect perception as to whether it is offensive. For example, noises that occur during

nighttime (sleeping) hours are typically considered to be more offensive than the same noises in the daytime.

Regarding the second factor, individuals tend to judge the annoyance of an unwanted noise in terms of its relationship to noise from other sources (background noise). A car horn blowing at night when background noise levels are low would generally be more objectionable than one blowing in the afternoon when background noises are typically higher. The response to noise stimulus is analogous to the response to turning on an interior light. During the daytime an illuminated bulb simply adds to the ambient light, but when eyes are conditioned to the dark of night, a suddenly illuminated bulb can be temporarily blinding.

The third factor – situational noise – is related to the interference of noise with activities of individuals. In a 60 dB(A) environment such as is commonly found in a large business office, normal conversation would be possible, while sleep might be difficult. Loud noises may easily interrupt activities that require a quiet setting for greater mental concentration or rest; however, the same loud noises may not interrupt activities requiring less mental focus or tranquility.

Over time, particularly if the noises occur at predicted intervals and are expected, individuals tend to accept the noises that intrude into their lives on a regular basis. However, exposure to prolonged and/or extremely loud noise(s) can prevent use of exterior and interior spaces and has been theorized to pose health risks. Appropriately, regulations exist for noise control or mitigation from many particularly offensive sources, including airplanes, factories, railroads, and highways. For all "Type I" federal, state, or federal-aid highway projects in the State of North Carolina, traffic and construction noise impact analysis and abatement assessment is dictated by the applicable NCDOT Traffic Noise Policy.

4.0 NOISE ABATEMENT CRITERIA

4.1 TITLE 23 CODE OF FEDERAL REGULATIONS, PART 772 (23 CFR 772)

The Federal Highway Administration (FHWA) has developed Noise Abatement Criteria (NAC) and procedures to be used in the planning and design of highways. The purpose of 23 CFR, Part 772 is:

> "To provide procedures for noise studies and noise abatement measures to help protect the public's health, welfare and livability, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to title 23 U.S.C."

The abatement criteria and procedures are set forth in Title 23 CFR, Part 772, which also states:

> "In abating traffic noise impacts, a highway agency shall give primary consideration to exterior areas where frequent human use occurs."

A summary of the NAC for various land uses is presented in **Table 4**. The L_{eq}, or equivalent sound level, is the equivalent steady-state sound pressure level which in a stated period contains the same acoustic energy as a time-varying sound level during the same period. Regarding traffic noise, fluctuating sound levels of traffic noise are represented in terms of L_{eq}, the steady, or "equivalent", noise level with the

same energy.

4.2 NCDOT Traffic Noise Policy

The NCDOT Traffic Noise Policy (effective October 6, 2016) establishes official policy on highway noise. This policy describes the NCDOT process that is used in determining traffic noise impacts and abatement measures and the equitable and cost-effective expenditure of public funds for traffic noise abatement. Where the FHWA has given highway agencies flexibility in implementing the 23 CFR 772 standards, this policy describes the NCDOT approach to implementation. This policy is included as **Appendix F** of this report.

4.3 Noise Abatement Criteria

The two categories of traffic noise impacts are defined as 1) those that "approach" or exceed the FHWA NAC, as shown in **Table 4**, and 2) those that represent a "substantial increase" over existing noise levels as defined by NCDOT. An impact that represents a "substantial increase" is based on a comparison of the existing hourly noise level [Leq(h)] with the predicted increase with respect to a change to noise levels in the design year of 10 dB(A) or more.

5.0 EXISTING NOISE ENVIRONMENT

5.1 Existing Environment

Existing traffic noise exposure varies near the proposed Cape Fear Crossing project. Dominant roadway noise sources in the project area include I-140, US 17-74-76, NC 133 (River Road), US 17 Business, US 421 (3rd Street/Burnett Boulevard/Carolina Beach Road), US 117 (Shipyard Boulevard) and Independence Boulevard. Various secondary roads and residential streets may be the dominant noise source for receptors in very rural areas of Brunswick County and in the City of Wilmington that are relatively distant from the major highways listed above.

Non-traffic noise sources in the project area include the CSX/US Government railway between the Town of Leland and Sunny Point Military Terminal through Brunswick County, the CSX/Port of Wilmington railway from Leland to the Port of Wilmington near the western terminus of Shipyard Boulevard and air traffic related to Wilmington International Airport north of downtown Wilmington. Each of these sources of non-traffic noise may cause receptors to experience significant, temporary spikes in noise levels.

5.2 Ambient Noise Monitoring

Ambient noise is that noise which is all around us caused by natural and manmade events. It includes the wind, rain, thunder, birds chirping, insects, household appliances, commercial operations, lawn mowers, airplanes, automobiles, etc. It is all noise that is present in an area.

Short-term noise monitoring was conducted to evaluate existing ambient noise conditions within the project study area. Data collected through noise monitoring in one-minute increments for 15 to 30 minutes is used to develop a comparison between the monitored results and the output obtained from

the TNM® noise prediction model. This comparison is performed to validate the model to actual local conditions so that the model can be used with confidence to predict the existing and future worst-hour noise levels at desired locations throughout the project area.

Table 4: Noise Abatement Criteria

Hourly Equivalent A-Weighted Sound Level (decibels (dB(A))			
Activity Category	**Activity Criteria[1] $L_{eq(h)}$[2]**	**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 [3]	67	Exterior	Residential
C [3]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare 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, Section4(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 [3]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	--	--	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

[1] *The $L_{eq(h)}$ Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.*

[2] *The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with $L_{eq(h)}$ being the hourly value of L_{eq}.*

[3] *Includes undeveloped lands permitted for this activity category.*

Existing noise measurements were collected under meteorologically acceptable conditions when the pavement was dry, and winds were calm or light. Additional data collected at each monitoring location included atmospheric conditions such as general wind speed, humidity, pressure, and ambient temperature. Measurements were conducted in general conformance with the FHWA *Noise Measurement Handbook* (June 2018).

Noise level data collection was performed on May 6 and August 17-18, 2015, before the noise analysis was temporarily halted due to design modifications, and again on October 30-31, 2018 after the analysis was restarted. Larson-Davis Type 1 precision integrating sound level meters and statistical data loggers were used during each data collection event. Short-term noise monitoring data (15-20 minutes) was collected at 19 locations and long-term noise monitoring data (24-hours) was collected at three locations in 2015. Short-term noise monitoring data (15-30 minutes) was collected at 13 locations and long-term noise monitoring data (6-24 hours) was collected at six locations in 2018. Five short-term locations where 2015 data was collected were replaced with 2018 locations in the western portion of the project area to account for changes in traffic volumes near I-140, which fully opened in December 2017.

Short-term noise levels collected within the project area range from 39 to 71 dB(A) and long-term noise levels range from 50 to 59 dB(A). The long-term measurement data was used to establish existing noise levels in locations where traffic noise is not dominant. One long-term measurement of 77 dB(A) Leq was collected for 16 hours (hourly equivalent, not a 16-hour value) in the parking lot of the USS North Carolina Battleship Memorial. Intermittent construction and maintenance activities that were ongoing at the ship during the time fieldwork was performed are believed likely to have caused this aberrant noise level, which is considerably elevated above all other long-term measurements.

Twenty-minute traffic data (vehicle volume, type and speed) were recorded at all measurement locations on all roadways visible from the monitoring site that significantly contributed to the overall noise level. Traffic was grouped into one of five categories: automobiles, medium trucks, heavy trucks, buses, and motorcycles, as depicted in **Table 5**. The 20-minute traffic data was converted to one-hour traffic for validation of the noise model. Traffic was highly variable among the monitoring locations.

The ambient noise monitoring locations are shown in **Figure 3**. The noise monitoring results, concurrent traffic counts, estimated vehicle speeds, and weather information for the monitoring sites are included in **Appendix A**.

For this traffic noise analysis, loudest-hour existing noise levels were assessed as the TNM-predicted noise levels based on existing loudest-hour traffic estimates or the ambient noise levels obtained at representative locations in the field. Per 23 CFR 772.5, existing noise levels are defined as “the worst noise hour resulting from the combination of natural and mechanical sources and human activity usually present in a particular area.” If the TNM-predicted existing loudest-hour traffic noise levels are lower than the hourly-equivalent noise levels obtained in the field, then existing noise levels are assessed as the latter. To validate the accuracy of the model, FHWA TNM v2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations.

5.3 NOISE MODEL VALIDATION

TNM model validation is the process by which the precision of the modeled relationship between traffic (classified volumes and speeds) and predicted hourly-equivalent traffic noise levels is refined and confirmed. Since TNM can only predict traffic noise levels, TNM models can only be validated for locations for which traffic was the dominant noise source.

For the short-term monitoring locations for which traffic was the dominant noise source, traffic volumes counted during the noise monitoring periods were normalized to 1-hour volumes. These normalized volumes were assigned to the corresponding project area roadways to simulate the noise source strength at the roadways during the actual measurement period.

TNM model validation is performed by comparing monitored ambient equivalent sound levels to TNM-predicted traffic noise levels generated by the classified traffic volumes. A TNM model is considered validated if it is a reasonable representation of the existing project area, and the TNM-predicted traffic noise levels are within ±3.0 dB(A) of the monitored equivalent sound levels obtained at locations for which traffic was the dominant noise source. TNM validation was achieved for all monitoring locations during the 2018 data collection event. TNM validation was achieved for all but 4 monitoring locations during the 2015 data collection events. The non-validated data was the result of a single noise level meter not achieving post-monitoring calibration at each of the four locations. In each case, the malfunctioning meter was part of an array with two other sound level meters that did validate to within ±2.7 dB(A); therefore, all four locations were eligible for use in validating the TNM model. The validated results for FHWA TNM v2.5 models are included in **Appendix A**.

6.0 PROCEDURE FOR PREDICTING FUTURE NOISE LEVELS

Traffic noise emission is composed of several variables, including the number, types, and travel speeds of the vehicles, as well as the geometry of the roadway(s) on which the vehicles travel. Additionally, variables such as weather and intervening topography affect the transmission of traffic noise from the vehicle(s) to noise-sensitive receptors.

In accordance with industry standards and accepted best-practices, detailed computer models were created using the FHWA TNM v.2.5. The computer models were validated to within acceptable tolerances of field-monitored traffic noise data and were used to predict traffic noise levels for receptor locations located near the project. Traffic noise consists of three primary parts: tire/pavement noise, engine noise, and exhaust noise. Of these sources, tire/pavement noise is typically the most offensive at unimpeded travel speeds. Sporadic traffic noises such as horns, squealing brakes, screeching tires, etc. are considered aberrant and are not included within the predictive model algorithm.

Traffic noise is not constant; it varies in time depending upon the number, speed, type, and frequency of vehicles that pass by a given receptor. Furthermore, since traffic noise emissions are different for various types of vehicles, the TNM algorithm distinguishes between the source emissions from the following vehicle types: automobiles, medium trucks, heavy trucks, buses, and motorcycles, as shown in **Table 5**.

The computer traffic noise prediction model uses the number and type of vehicles on the planned roadway, their speeds, the physical characteristics of the road (curves, hills, depressions, elevations,

etc.), receptor location and height, and, if applicable, barrier type, barrier ground elevation, and barrier segment top elevations.

Table 5: Traffic Noise Model (TNM) Vehicle Classification Types

TNM Vehicle Type	Description
Autos	All vehicles with two axles and four tires, including passenger cars and light trucks, weighing 9,900 pounds or less
Medium Trucks	All vehicles having two axles and six tires, weighing between 9,900 and 26,400 pounds
Heavy Trucks	All vehicles having three or more axles, weighing more than 26,400 pounds
Buses	All vehicles designed to carry more than nine passengers
Motorcycles	All vehicles with two or three tires and an open-air driver / passenger compartment

Sources: FHWA Measurement of Highway-Related Noise, § 5.1.3 Vehicle Types
FHWA Traffic Monitoring Guide, § 4.1 Classification Schemes

Functional designs for the six detailed study alternatives were used in this Traffic Noise Report. Per 23 CFR 772 requirement, , the predictions documented in this report are based upon the proposed roadway alignment design and Design Year 2040 build-condition traffic conditions resulting in the loudest predicted hourly-equivalent traffic noise levels for each receptor. Due to the large number of roadway segments being analyzed within the six detailed study alternatives and to streamline the overall preliminary noise analysis process, NCDOT allowed the worst traffic noise conditions to be evaluated solely as the roadway vehicle capacity Level of Service "C" (LOS C) operating at the design speeds in the 2040 Build and No-Build alternatives. It was agreed that, although peak hour traffic volumes obtained from the capacity analysis completed for this project were lower than the LOS C capacity volumes in some more rural areas, the use of LOS C values would not result in significant over-estimations of loudest hour traffic noise levels and is a valid comparison of noise impacts between the six project alternatives currently under consideration. Peak hour traffic volumes obtained from the project capacity analysis were used in determining noise levels for Existing condition detailed study alternatives. Once the Preferred Alternative/LEDPA is selected, this TNR will be updated to evaluate traffic noise for that one alternative, utilizing the traffic calculation procedures that are in place at that time. Refer to **Appendix B** for a comprehensive list of traffic noise level receptor locations with existing and predicted Design Year 2040 hourly equivalent traffic noise levels. **Appendix C** details the traffic noise model inputs for this analysis. **Appendix B** contains a comprehensive list of traffic noise level receptors and existing and predicted Design Year 2040 hourly equivalent traffic noise levels.

7.0 TRAFFIC NOISE IMPACTS

Traffic noise impacts occur when the predicted traffic noise levels either: 1) approach or exceed the FHWA NAC (with "approach" meaning within 1 dB(A) of the NAC values listed in **Table 4** on page 13, or 2) substantially exceed the existing noise levels by 10 dB(A) or more. FHWA and NCDOT require that noise abatement measures be considered and evaluated for feasibility and reasonableness to abate traffic noise at all predicted traffic noise impacts. Measures that may be considered include highway alignment selection, traffic systems management, buffer zones, noise walls, and earth berms.

Table 6: Traffic Noise Impact Summary

Alternative	Approximate # of Impacted Receptors Approaching or Exceeding FHWA NAC[2]							Substantial Noise Level Increase[3]	Impacts Due to Both Criteria[4]	Total Impacts[5] Per 23 CFR 772
	A	B	C	D	E	F	G			
B	0	233	1	0	1	0	0	551	165	621
MA	0	190	1	2	0	0	0	328	59	462
NA	0	187	1	0	0	0	0	424	129	483
Q	0	234	1	2	1	0	0	270	76	432
T	0	232	1	0	1	0	0	381	148	467
V-AW	0	245	4	2	3	0	0	37	14	277

[1]*This table presents the number of build-condition traffic noise impacts as predicted for the build-condition alternatives.*
[2]*Predicted traffic noise level impact due to approaching or exceeding NAC (refer to Table 2). The total number of predicted impacts is not duplicated if receptors are predicted to be impacted by more than one criterion.*
[3]*Predicted "substantial increase" traffic noise level impact.*
[4]*Predicted traffic noise level impact due to approaching or exceeding NAC and "substantial increase" in build-condition noise levels.*
[5]*The total number of predicted impacts is not duplicated if receptors are predicted to be impacted by more than one criterion.*

The number and types of predicted traffic noise impacts for each of the six project alternatives are shown in **Table 6**, with impacts designated as either approaching or exceeding the FHWA NAC, by a substantial increase in Design Year 2040 Build-condition traffic noise levels over existing ambient noise levels, or by meeting both criteria.

Alternative B includes 14 Noise Study Areas (NSAs) within which 235 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. 551 receptors are predicted to experience a substantial noise increase. 165 receptors are impacted by both NAC and substantial increase criteria, resulting in 621 total impacts for Alternative B. Eight noise abatement measures are preliminarily feasible and reasonable for Alternative B.

Alternative MA includes 13 NSAs within which 193 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. A substantial noise level increase is predicted for 328 receptors. 59 receptors are impacted by both NAC and substantial increase criteria, resulting in 462 total impacts for Alternative MA. Three noise abatement measures are preliminarily feasible and reasonable for Alternative MA.

Alternative NA includes 13 NSAs within which 188 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. 424 receptors are predicted to experience a substantial noise level increase. 129 receptors are impacted by both NAC and substantial increase criteria, resulting in 483 total impacts for Alternative NA. Six noise abatement measures are preliminarily feasible and reasonable for Alternative NA.

Alternative Q includes 21 NSAs within which 238 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. 270 of these receptors are predicted to experience a substantial noise increase. 76 receptors are impacted by both NAC and substantial increase criteria, resulting in 432 total impacts for Alternative Q. Three noise abatement measures are preliminarily feasible and reasonable for Alternative Q.

Alternative T includes 20 NSAs within which 234 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. 381 receptors are predicted to experience a substantial noise increase and 148 receptors are impacted by both NAC and substantial increase criteria, resulting in 467 total noise level impacts for Alternative T. Six noise abatement measures are preliminarily feasible and reasonable for Alternative T.

Alternative V-AW includes 25 NSAs within which 254 receptors are predicted to experience traffic noise levels that approach or exceed the NAC. 37 receptors are predicted to experience a substantial noise increase. 14 receptors are impacted by both NAC and substantial increase criteria, resulting in 277 total impacts for Alternative V-AW. Four noise abatement measures are preliminarily feasible and reasonable for Alternative V-AW.

Noise impacts and abatement measures are discussed in greater detail in **Section 9.0** of this TNR. Existing and predicted Design Year noise levels for all noise-sensitive receptors included in this analysis are included in **Appendix B**.

8.0 POTENTIAL TRAFFIC NOISE ABATEMENT MEASURES

FHWA and NCDOT require that noise abatement measures be considered and evaluated for feasibility and reasonableness for the benefit of all predicted Build-condition traffic noise impacts. Feasibility and reasonableness are distinct and separate considerations. Feasibility is the consideration as to whether noise abatement measures *can* be implemented. Reasonableness is the consideration as to whether noise abatement measures *should* be implemented. Per NCDOT Policy, the following traffic noise abatement measures may be considered: highway alignment selection, traffic systems management, buffer zones, noise barriers (earth berms and noise walls), and noise insulation of Activity Category D land use facilities.

8.1 HIGHWAY ALIGNMENT SELECTION

Highway alignment selection for traffic noise abatement measures involves modifying the horizontal and vertical geometry of the proposed facility to minimize traffic noise to noise-sensitive receptors. The selection of alternative alignments for noise abatement purposes must consider the balance between noise impacts and other engineering and environmental parameters. For noise abatement, horizontal alignment selection is primarily a matter of locating the roadway at enough distance from noise sensitive receptors. Appreciable reductions in traffic noise transmissions to sensitive receptors can be made by adjusting the vertical highway alignment and/or section geometry. For example, lowering a roadway below existing grade creates a cut section which could act similarly as an earth berm, depending upon the relative location(s) of noise-sensitive receptor(s). For this project, altering the horizontal or vertical alignment of the proposed roadway would create more human and environmental impacts than the current designs, and could increase the cost of the project. Because of this, shifting the horizontal or vertical alignment of the roadway was determined not feasible. Alignment selection as an avoidance or abatement measure will be further considered when a detailed traffic noise analysis is performed on the selected alternative.

8.2 TRAFFIC SYSTEM MANAGEMENT MEASURES

Traffic management measures such as prohibition of truck traffic, lowering speed limits, limiting of traffic volumes, and/or limiting time of operation were considered as possible traffic noise impact abatement measures. The purposes of the proposed project are to improve traffic flow and enhance freight movements between US 17 and I-140 in Brunswick County to US 421 near the Port of Wilmington, and to help expedite an evacuation of residents and visitors in the event of a hurricane or other emergency. Traffic management measures would diminish these improvements and are not considered practicable.

8.3 BUFFER ZONES

Buffer zones are typically not practical and/or cost effective for noise abatement due to the substantial amount of right-of-way required and would not be a feasible noise abatement measure for this project in areas along existing highway alignments. In areas where the proposed project follows new highway alignments and the acquisition of a suitable buffer zone is feasible, the associated costs would almost certainly exceed the NCDOT Policy reasonable abatement cost threshold per benefited receptor. The use of buffer zones as a noise abatement measure will be further considered when a detailed traffic noise analysis is performed on the selected alternative.

8.4 NOISE BARRIERS

Passive noise abatement measures are effective because they absorb and reflect sound energy, extend the source-to-receptor sound transmission path, or both. Sound absorption is a function of abatement medium (e.g. earth berms reduce more sound energy than noise walls of the same height because earth berms are more massive). The source-to-receptor path is extended by placement of an obstacle, such as a wall, that sufficiently blocks the transmission of sound waves that travel from the source to the receptor.

Highway noise barriers are primarily constructed as earth berms or solid-mass walls adjacent to limited-access freeways that are near noise-sensitive land use(s). To be effective, a noise barrier must be long

enough and tall enough to shield the impacted receptor(s). Generally, the noise wall length must be eight times the distance from the barrier to the receptor. For example, if a receptor is 200 feet from the roadway, an effective barrier would be approximately 1,600 feet long – with the receptor in the horizontal center. On roadway facilities with direct access for driveways, noise barriers are typically not feasible because the openings may render the barrier ineffective in impeding the transmission of traffic noise. Due to the requisite lengths for effectiveness, noise barriers are typically not economical for isolated or most low-density areas. However, noise barriers may be economical for the benefit of as few as two predicted traffic noise impacts if the barrier can benefit enough total receptors – impacted and non-impacted combined – to meet applicable reasonableness criteria.

The 2016 NCDOT Traffic Noise Policy includes provisions

NCDOT Policy requires identification whether it is "likely" or "unlikely" that noise barriers will be installed for each NSA identified. "Likely" does not mean a firm commitment. Traffic noise impacts are predicted to occur in 43 NSAs. Consideration for noise abatement measures was given to all impacted receptors in the 2040 Build condition for each project alternative. For each noise abatement measure, feasibility is considered first, then reasonableness. If noise abatement is not feasible, then consideration of reasonableness is not warranted. Following the criteria for feasibility and reasonableness as prescribed in the 2016 NCDOT Traffic Noise Policy, noise abatement for this project was found to be preliminarily feasible and reasonable, in the form of noise barriers, for 18 NSAs, with each NSA applicable to one to four different project alternatives. The locations of these potential noise barriers can be seen in Figure 3.

For some of the remaining impacted receptors, abatement was preliminarily found to not be feasible due to site access constraints where the driveways of each property and other side streets were located such that a noise wall would not be able to be constructed to adequately provide the required abatement. For other impacted receptors, abatement was preliminarily found to be not feasible because at least two impacted equivalent residences would not receive a 5 dB(A) reduction by any noise abatement measures. For abatement to be feasible, at least two impacted receptors must receive a 5 dB(A) noise level reduction. Other impacted receptors were considered isolated impacts (only one impacted equivalent residence). Therefore, abatement at these locations cannot provide the necessary noise reduction.

Following are descriptions of the feasibility and reasonableness evaluations of potential noise abatement within each of the forty-eight NSAs delineated along the six project alternatives. These analyses are preliminary in nature and meant solely to describe noise study areas where potential noise barriers may be successfully employed in accordance with NCDOT feasibility and reasonableness criteria. While these recommendations do affirm proposed abatement locations, they do not offer definitive or final barrier design descriptions. An eventual Design Noise Report for this project will determine these specifics. It is expected the length and height of each barrier may vary to optimize both cost and acoustic effectiveness within acceptable limits.

8.4.1 Feasible and Reasonable Noise Barriers (Preliminary)

Alternative B

Barrier 14

Barrier 14 is located along proposed Cape Fear Crossing eastbound between the I-140 and US 17 interchanges, to benefit NSA 14. Barrier 14 is approximately 3,350 feet long, a fixed 24 feet in height, and has a total area of 80,400 square feet. The barrier is predicted to benefit 36 receptors, including 31 predicted impacts. The 1,489 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 16 receptors. As a result, Barrier 14 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 15/16

Barrier 15/16 is located along proposed Cape Fear Crossing westbound between the I-140 and US 17 interchanges, to benefit NSA 15 and 16. Barrier 15/16 is approximately 6,300 feet long, a fixed 24 feet in height, and has a total area of 151,200 square feet. The barrier is predicted to benefit 147 receptors, including 111 predicted impacts. The 1029 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 84 receptors. As a result, Barrier 15/16 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 29/30

Barrier 29/30 is located along proposed Cape Fear Crossing eastbound between the US 17 and NC 133 interchanges, to benefit NSA 29 and 30. Barrier 29/30 is approximately 7,883 feet long, a fixed 14 feet in height, and has a total area of 110,362 square feet. The barrier is predicted to benefit 103 receptors, including 66 predicted impacts. The 1,071 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 53 receptors. As a result, Barrier 29/30 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 31

Barrier 31 is located along proposed Cape Fear Crossing westbound between the NC 133 and US 17 interchanges, to benefit NSA 31. Barrier 31 is approximately 4,100 feet long, a fixed 16 feet in height, and has a total area of 65,600 square feet. The barrier is predicted to benefit 60 receptors, including 52 predicted impacts. The 1093 square feet per benefit is less than the maximum allowable 2,500 square

feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 34 receptors. As a result, Barrier 31 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 40

Barrier 40 is located along Shipyard Boulevard (US 117) eastbound between US 421 (Carolina Beach Road) and Newkirk Avenue, to benefit NSA 40. Barrier 40 is approximately 1,853 feet long, a fixed 18 feet in height, and has a total area of 32,963 square feet. The barrier is predicted to benefit 54 receptors, including 42 predicted impacts. The 610 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 30 receptors. As a result, Barrier 40 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 42

Barrier 42 is located along proposed Cape Fear Crossing eastbound between the Cape Fear River and US 421 (Carolina Beach Road), to benefit NSA 42. Barrier 42 is approximately 4,949 feet long, an average 23 feet in height, and has a total area of 115,311 square feet. The barrier is predicted to benefit 247 receptors, including 108 predicted impacts. The 466 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 151 receptors. As a result, Barrier 42 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 43

Barrier 43 is located along the proposed new alignment of Shipyard Boulevard (US 117) westbound between US 421 (Carolina Beach Road) and Burnett Boulevard, to benefit NSA 43. Barrier 43 is approximately 2,890 feet long, a fixed 24 feet in height, and has a total area of 69,360 square feet. The barrier is predicted to benefit 60 receptors, including 54 predicted impacts. The 1,155 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 27 receptors. As a result, Barrier 43 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 44

Barrier 44 consists of three individual segments, the southern segment is located along the proposed ramp from US 421 (Carolina Beach Road) southbound to proposed Cape Fear Crossing westbound, the

eastern segment is located along US 421 (Carolina Beach Road) southbound between the proposed new alignment of Shipyard Boulevard (US 117) and the proposed ramp to Cape Fear Crossing westbound, and the northern segment is located along the proposed new alignment of Shipyard Boulevard (US 117) between US 421 (Carolina Beach Road) and Worth Drive, to benefit NSA 44. Barrier 44 is approximately 4,135 feet long, a fixed 22 feet in height, and has a total area of 91,802 square feet. The barrier is predicted to benefit 40 receptors, including 39 predicted impacts. The 2,295 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 23 receptors. As a result, Barrier 44 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Alternative MA

Barrier 3 West

Barrier 3 West is located along US 17 northbound between Hazels Branch Road and the I-140 interchange, to benefit NSA 3. Barrier 3 West is approximately 450 feet long, a fixed ten feet in height, and has a total area of 4,500 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 2,250 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for one receptor. As a result, Barrier 3 West does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 5

Barrier 5 is located along proposed Cape Fear Crossing westbound between the US 17 and NC 133 interchanges, to benefit NSA 5. Barrier 5 is approximately 6,000 feet long, a fixed 24 feet in height, and has a total area of 144,000 square feet. The barrier is predicted to benefit 137 receptors, including 128 predicted impacts. The 1,051 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 108 receptors. As a result, Barrier 5 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 35

Barrier 35 is located along proposed Cape Fear Crossing eastbound between River Road and US 421 (Carolina Beach Road), to benefit NSA 35. Barrier 35 is approximately 3,050 feet long, a fixed 24 feet in height, and has a total area of 73,200 square feet. The barrier is predicted to benefit 112 receptors, including 100 predicted impacts. The 654 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build

noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 42 receptors. As a result, Barrier 35 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Alternative NA

Barrier 3 West

Barrier 3 West is located along US 17 northbound between Hazels Branch Road and the I-140 interchange, to benefit NSA 3. Barrier 3 West is approximately 450 feet long, a fixed ten feet in height, and has a total area of 4,500 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 2,250 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for one receptor. As a result, Barrier 3 West does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 5

Barrier 5 is located along proposed Cape Fear Crossing westbound between the US 17 and NC 133 interchanges, to benefit NSA 5. Barrier 5 is approximately 6,000 feet long, a fixed 24 feet in height, and has a total area of 144,000 square feet. The barrier is predicted to benefit 137 receptors, including 128 predicted impacts. The 1,051 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 108 receptors. As a result, Barrier 5 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 40

Barrier 40 is located along Shipyard Boulevard (US 117) eastbound between US 421 (Carolina Beach Road) and Newkirk Avenue, to benefit NSA 40. Barrier 40 is approximately 1,853 feet long, a fixed 18 feet in height, and has a total area of 32,963 square feet. The barrier is predicted to benefit 54 receptors, including 42 predicted impacts. The 610 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 30 receptors. As a result, Barrier does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 42

Barrier 42 is located along proposed Cape Fear Crossing eastbound between the Cape Fear River and US 421 (Carolina Beach Road), to benefit NSA 42. Barrier 42 is approximately 4,949 feet long, an average 23 feet in height, and has a total area of 115,311 square feet. The barrier is predicted to benefit 247

receptors, including 108 predicted impacts. The 466 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 151 receptors. As a result, Barrier 42 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 43

Barrier 43 is located along the proposed new alignment of Shipyard Boulevard (US 117) westbound between US 421 (Carolina Beach Road) and Burnett Boulevard, to benefit NSA 43. Barrier 43 is approximately 2,890 feet long, a fixed 24 feet in height, and has a total area of 69,360 square feet. The barrier is predicted to benefit 60 receptors, including 54 predicted impacts. The 1,155 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 27 receptors. As a result, Barrier 43 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 44

Barrier 44 consists of three individual segments, the southern segment is located along the proposed ramp from US 421 (Carolina Beach Road) southbound to proposed Cape Fear Crossing westbound, the eastern segment is located along US 421 (Carolina Beach Road) southbound between the proposed new alignment of Shipyard Boulevard (US 117) and the proposed ramp to Cape Fear Crossing westbound, and the northern segment is located along the proposed new alignment of Shipyard Boulevard (US 117) between US 421 (Carolina Beach Road) and Worth Drive, to benefit NSA 44. Barrier 44 is approximately 4,135 feet long, a fixed 22 feet in height, and has a total area of 91,802 square feet. The barrier is predicted to benefit 40 receptors, including 39 predicted impacts. The 2,295 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 23 receptors. As a result, Barrier 44 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Alternative Q

Barrier 29/30

Barrier 29/30 is located along proposed Cape Fear Crossing eastbound between the US 17 and NC 133 interchanges, to benefit NSA 29 and 30. Barrier 29/30 is approximately 7,883 feet long, a fixed 14 feet in height, and has a total area of 110,362 square feet. The barrier is predicted to benefit 103 receptors, including 66 predicted impacts. The 1,071 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build

noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 53 receptors. As a result, Barrier 29/30 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 31

Barrier 31 is located along proposed Cape Fear Crossing westbound between the NC 133 and US 17 interchanges, to benefit NSA 31. Barrier 31 is approximately 4,100 feet long, a fixed 16 feet in height, and has a total area of 65,600 square feet. The barrier is predicted to benefit 60 receptors, including 52 predicted impacts. The 1,093 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 34 receptors. As a result, Barrier 31 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 35

Barrier 35 is located along proposed Cape Fear Crossing eastbound between River Road and US 421 (Carolina Beach Road), to benefit NSA 35. Barrier 35 is approximately 3,050 feet long, a fixed 24 feet in height, and has a total area of 73,200 square feet. The barrier is predicted to benefit 112 receptors, including 100 predicted impacts. The 654 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 42 receptors. As a result, Barrier 35 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Alternative T

Barrier 28

Barrier 28 is located along proposed Cape Fear Crossing eastbound between the US 17 and NC 133 interchanges, to benefit NSA 28. Barrier 28 is approximately 5,659 feet long, a fixed 12 feet in height, and has a total area of 67,908 square feet. The barrier is predicted to benefit 62 receptors, including 38 predicted impacts. The 1,095 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 12 receptors. As a result, Barrier 28 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 29

Barrier 29 is located along proposed Cape Fear Crossing westbound between the NC 133 and US 17 interchanges, to benefit NSA 29. Barrier 29 is approximately 6,800 feet long, a fixed 14 feet in height, and has a total area of 95,200 square feet. The barrier is predicted to benefit 132 receptors, including

99 predicted impacts. The 721 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 91 receptors. As a result, Barrier 29 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 40

Barrier 40 is located along Shipyard Boulevard (US 117) eastbound between US 421 (Carolina Beach Road) and Newkirk Avenue, to benefit NSA 40. Barrier 40 is approximately 1,853 feet long, a fixed 18 feet in height, and has a total area of 32,963 square feet. The barrier is predicted to benefit 54 receptors, including 42 predicted impacts. The 610 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 30 receptors. As a result, Barrier does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 42

Barrier 42 is located along proposed Cape Fear Crossing eastbound between the Cape Fear River and US 421 (Carolina Beach Road), to benefit NSA 42. Barrier 42 is approximately 4,949 feet long, an average 23 feet in height, and has a total area of 115,311 square feet. The barrier is predicted to benefit 247 receptors, including 108 predicted impacts. The 466 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 151 receptors. As a result, Barrier 42 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 43

Barrier 43 is located along the proposed new alignment of Shipyard Boulevard (US 117) westbound between US 421 (Carolina Beach Road) and Burnett Boulevard, to benefit NSA 43. Barrier 43 is approximately 2,890 feet long, a fixed 24 feet in height, and has a total area of 69,360 square feet. The barrier is predicted to benefit 60 receptors, including 54 predicted impacts. The 1,155 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 27 receptors. As a result, Barrier 43 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 44

Barrier 44 consists of three individual segments, the southern segment is located along the proposed ramp from US 421 (Carolina Beach Road) southbound to proposed Cape Fear Crossing westbound, the eastern segment is located along US 421 (Carolina Beach Road) southbound between the proposed new alignment of Shipyard Boulevard (US 117) and the proposed ramp to Cape Fear Crossing westbound, and the northern segment is located along the proposed new alignment of Shipyard Boulevard (US 117) between US 421 (Carolina Beach Road) and Worth Drive, to benefit NSA 44. Barrier 44 is approximately 4,135 feet long, a fixed 22 feet in height, and has a total area of 91,802 square feet. The barrier is predicted to benefit 40 receptors, including 39 predicted impacts. The 2,295 square feet per benefit is less than the maximum allowable 2,500 square feet per benefit. The maximum allowable 2,500 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is greater than 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 23 receptors. As a result, Barrier 44 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Alternative V-AW

Barrier 22

Barrier 22 is located along US 17 northbound between Ploof Road and the US 74/76 interchange, to benefit NSA 22. Barrier 22 is approximately 2,181 feet long, a fixed 24 feet in height, and has a total area of 52,344 square feet. The barrier is predicted to benefit 138 receptors, including 55 predicted impacts. The 379 square feet per benefit is less than the maximum allowable 1,500 square feet per benefit. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 97 receptors. As a result, Barrier 22 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 45 South

Barrier 45 South is located along US 421 (Carolina Beach Road) northbound between Ivey Circle and Alabama Avenue, to benefit NSA 45. Barrier 45 South is approximately 319 feet long, a fixed 14 feet in height, and has a total area of 4,466 square feet. The barrier is predicted to benefit five receptors, including three predicted impacts. The 893 square feet per benefit is less than the maximum allowable 2,000 square feet per benefit. The maximum allowable 2,000 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is between 5dB and 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for one receptor. As a result, Barrier 45 South does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 46

Barrier 46 is located along eastbound Burnett Road/Carolina Beach Road connector between Burnett Road and US 421 (Carolina Beach Road), to benefit NSA 46. Barrier 46 is approximately 1,823 feet long, averages 21 feet in height, and has a total area of 39,144 square feet. The barrier is predicted to benefit 21 receptors, including 20 predicted impacts. The 1,864 square feet per benefit is less than the

maximum allowable 2,000 square feet per benefit. The maximum allowable 2,000 square feet per benefit is increased from the base quantity of 1,500 square feet because the average increase between existing and future build noise levels of the impacted receptors is between 5dB and 10dB. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 14 receptors. As a result, Barrier 46 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

Barrier 47

Barrier 47 is located along South 3rd Street (US 421) between Kidder Street and Greenfield Street, to benefit NSA 47. Barrier 47 is approximately 837 feet long, a fixed 14 feet in height, and has a total area of 11,718 square feet. The barrier is predicted to benefit 59 receptors, including 22 predicted impacts. The 199 square feet per benefit is less than the maximum allowable 1,500 square feet per benefit. This noise barrier is predicted to provide at least a 7 dB(A) noise level reduction for 28 receptors. As a result, Barrier 47 does preliminarily meet feasibility and reasonableness criteria and is, therefore, considered likely.

8.4.2 Non-Feasible and/or Unreasonable Noise Barriers (Preliminary)

Alternative B

Barrier 13 Shoulder

Barrier 13 Shoulder was considered along proposed Cape Fear Crossing eastbound between the I-140 and US 17 interchanges to benefit NSA 13. The barrier modeled is approximately 4,300 feet long, a fixed 22 feet in height, and a total area of 94,600 square feet. The barrier is predicted to benefit 29 receptors, including 29 predicted impacts. The 3,262 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 13 Shoulder preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 13 ROW

Barrier 13 ROW was considered along proposed Cape Fear Crossing eastbound between the I-140 and US 17 interchanges to benefit NSA 13. The barrier modeled is approximately 2,600 feet long, an average 23 feet in height, and has a total area of 59,800 square feet. The barrier is predicted to benefit seven receptors, including seven predicted impacts. The 8,543 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 13 ROW preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

NSA 32

Driveway access to impacted receptor locations in NSA 32 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement was determined not feasible.

NSA 39

One traffic noise impact is predicted within NSA 39 for Alternative B. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement was determined not feasible for the lone impacted receptor.

Alternative MA

Barrier 2

Barrier 2 was considered along US 17 northbound between the proposed alignment of Hazels Branch Road and the I-140/proposed Cape Fear Crossing interchange to benefit NSA 2. The barrier modeled is approximately 600 feet long, a fixed ten feet in height, and has a total area of 6,000 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 3,000 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 2 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 3 East

Barrier 3 East was considered along the proposed ramp from US 17 northbound to proposed Cape Fear Crossing eastbound to benefit NSA 3. The barrier modeled is approximately 2,180 feet long, a fixed 22 feet in height, and has a total area of 47,960 square feet. The barrier is predicted to benefit eight receptors, including eight predicted impacts. The 5,995 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 3 East preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 4 South

Barrier 4 South was considered along US 17 southbound between the I-140/proposed Cape Fear Crossing interchange and the proposed alignment of Maco Road to benefit NSA 4. The barrier modeled is approximately 550 feet long, a fixed 14 feet in height, and has a total area of 7,700 square feet. The barrier is predicted to benefit three receptors, including three predicted impacts. The 2,567 square feet per benefit is more than the maximum allowable 2,000 square feet per benefit. As a result, Barrier 4 South preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 4 North

Barrier 4 North was considered along US 17 southbound between the I-140/proposed Cape Fear Crossing interchange and the proposed alignment of Maco Road to benefit NSA 4. The barrier modeled is approximately 1,589 feet long, a fixed 22 feet in height, and has a total area of 34,958 square feet. The barrier is predicted to benefit three receptors, including three predicted impacts. The 11,653 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 4 North preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 6

Barrier 6 was considered along US 17 southbound between Goodman Road and the I-140/proposed Cape Fear Crossing interchange to benefit NSA 6. The barrier modeled is approximately 1,225 feet long, a fixed 14 feet in height, and has a total area of 17,150 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 8,575 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 6 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 33/34

Barrier 33/34 was considered along proposed Cape Fear Crossing eastbound between the River Road and US 421 (Carolina Beach Road) interchanges to benefit NSA 33 and 34. The barrier modeled is approximately 4,300 feet long, a fixed 24 feet in height, and has a total area of 103,200 square feet. The barrier is predicted to benefit ten receptors, including nine predicted impacts. The 10,320 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 33/34 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 36

Barrier 36 was considered along Independence Boulevard eastbound between the exit ramp to US 421 (Carolina Beach Road) southbound and the entrance ramp from US 421 (Carolina Beach Road) to benefit NSA 36. The barrier modeled is approximately 2,850 feet long, a fixed 24 feet in height, and has a total area of 68,400 square feet. The barrier is not predicted to benefit any receptors. As a result, Barrier 36 preliminarily does not meet feasibility and reasonableness criteria and is, therefore, considered NOT likely.

Barrier 37

Barrier 37 was considered along proposed Cape Fear Crossing/Independence Boulevard between River Road and South 17th Street to benefit NSA 37. The barrier modeled is approximately 4,550 feet long, a fixed 22 feet in height, and has a total area of 100,100 square feet. The barrier is predicted to benefit 12 receptors, including 12 predicted impacts. The 8,342 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 37 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Alternative NA

Barrier 2

Barrier 2 was considered along US 17 northbound between the proposed alignment of Hazels Branch Road and the I-140/proposed Cape Fear Crossing interchange to benefit NSA 2. The barrier modeled is approximately 600 feet long, a fixed ten feet in height, and has a total area of 6,000 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 3,000 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 2 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 3 East

Barrier 3 East was considered along the proposed ramp from US 17 northbound to proposed Cape Fear Crossing eastbound to benefit NSA 3. The barrier modeled is approximately 2,180 feet long, a fixed 22 feet in height, and has a total area of 47,960 square feet. The barrier is predicted to benefit eight receptors, including eight predicted impacts. The 5,995 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 3 East preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 4 South

Barrier 4 South was considered along US 17 southbound between the I-140/proposed Cape Fear Crossing interchange and the proposed alignment of Maco Road to benefit NSA 4. The barrier modeled is approximately 550 feet long, a fixed 14 feet in height, and has a total area of 7,700 square feet. The barrier is predicted to benefit three receptors, including three predicted impacts. The 2,567 square feet per benefit is more than the maximum allowable 2,000 square feet per benefit. As a result, Barrier 4 South preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 4 North

Barrier 4 North was considered along US 17 southbound between the I-140/proposed Cape Fear Crossing interchange and the proposed alignment of Maco Road to benefit NSA 4. The barrier modeled is approximately 1,589 feet long, a fixed 22 feet in height, and has a total area of 34,958 square feet. The barrier is predicted to benefit three receptors, including three predicted impacts. The 11,653 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 4 North preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 6

Barrier 6 was considered along US 17 southbound between Goodman Road and the I-140/proposed Cape Fear Crossing interchange to benefit NSA 6. The barrier modeled is approximately 1,225 feet long, a fixed 14 feet in height, and has a total area of 17,150 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 8,575 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 6 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

NSA 8

Driveway access to impacted receptor locations in NSA 8 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement is not feasible in this location.

NSA 39

One traffic noise impact is predicted within NSA 39 for Alternative NA. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for

noise abatement to be feasible; consequently, noise abatement is not feasible for the lone impacted receptor.

Alternative Q

Barrier 6

Barrier 6 was considered along US 17 southbound between Goodman Road and the I-140 interchange to benefit NSA 6. The barrier modeled is approximately 1,200 feet long, a fixed 18 feet in height, and has a total area of 21,600 square feet. The barrier is predicted to benefit four receptors, including three predicted impacts. The 5,400 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 6 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 33/34

Barrier 33/34 was considered along proposed Cape Fear Crossing eastbound between the River Road and US 421 (Carolina Beach Road) interchanges to benefit NSA 33 and 34. The barrier modeled is approximately 4,300 feet long, a fixed 24 feet in height, and has a total area of 103,200 square feet. The barrier is predicted to benefit ten receptors, including nine predicted impacts. The 10,320 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 33/34 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 36

Barrier 36 was considered along Independence Boulevard eastbound between the exit ramp to US 421 (Carolina Beach Road) southbound and the entrance ramp from US 421 (Carolina Beach Road) to benefit NSA 36. The barrier modeled is approximately 2,850 feet long, a fixed 24 feet in height, and has a total area of 68,400 square feet. The barrier is not predicted to benefit any receptors. As a result, Barrier 36 preliminarily does not meet feasibility and reasonableness criteria and is, therefore, considered NOT likely.

Barrier 37

Barrier 37 was considered along proposed Cape Fear Crossing/Independence Boulevard between River Road and South 17th Street to benefit NSA 37. The barrier modeled is approximately 4,550 feet long, a fixed 22 feet in height, and has a total area of 100,100 square feet. The barrier is predicted to benefit 12 receptors, including 12 predicted impacts. The 8,342 square feet per benefit is more than the maximum allowable 2,500 square feet per benefit. As a result, Barrier 37 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

NSA 8

Driveway access to impacted receptor locations in NSA 8 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible in this location.

NSA 9

Driveway access to impacted receptor locations in NSA 9 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible in this location.

NSA 10

One traffic noise impact is predicted within NSA 10 for Alternative Q. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

NSA 17

One traffic noise impact is predicted within NSA 17 for Alternative Q. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

NSA 18

One traffic noise impact is predicted within NSA 18 for Alternative Q. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

NSA 32

Driveway access to impacted receptor locations in NSA 32 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible in this location.

Alternative T

Barrier 6

Barrier 6 was considered along US 17 southbound between Goodman Road and the I-140 interchange to benefit NSA 6. The barrier modeled is approximately 1,650 feet long, a fixed 16 feet in height, and has a total area of 26,400 square feet. The barrier is predicted to benefit three receptors, including two predicted impacts. The 8,800 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 6 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

NSA 8

Driveway access to impacted receptor locations in NSA 8 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible.

NSA 9

Driveway access to impacted receptor locations in NSA 9 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible.

NSA 10

One traffic noise impact is predicted within NSA 10 for Alternative T. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

NSA 18

One traffic noise impact is predicted within NSA 18 for Alternative T. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

Alternative V-AW

Barrier 6

Barrier 6 was considered along US 17 southbound between Goodman Road and the I-140 interchange to benefit NSA 6. The barrier modeled is approximately 1,700 feet long, a fixed 18 feet in height, and has a total area of 30,600 square feet. The barrier is predicted to benefit four receptors, including three predicted impacts. The 7,650 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 6 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 20

Barrier 20 was considered along US 17 northbound, between approximately 600 feet south of West Gate Road and Ocean Gate Road to benefit NSA 20. The barrier modeled is approximately 2,000 feet long, a fixed 24 feet in height, and has a total area of 48,000 square feet. The barrier is not feasible due to not having at least a 5 dB(A) reduction for at least two impacted receptors. As a result, Barrier 20 preliminarily does not meet feasibility criteria and is, therefore, considered NOT likely.

Barrier 21

Barrier 21 was considered along US 17 northbound, from Ocean Gate Road to approximately 900 feet north along US 17 to benefit NSA 21. The barrier modeled is approximately 2,184 feet long, a fixed 24 feet in height, and has a total area of 52,416 square feet. The barrier is not feasible due to not having at least a 5 dB(A) reduction for at least two impacted receptors. As a result, Barrier 21 preliminarily does not meet feasibility criteria and is, therefore, considered NOT likely.

Barrier 23

Barrier 23 was considered along US 74/76 eastbound and the US 74/76 eastbound to US 17 southbound ramp between the project's western terminus on US 74/76 and Olde Waterford Way to benefit NSA 23. The barrier modeled is approximately 1,950 feet long, a fixed 20 feet in height, and has a total area of 39,000 square feet. The barrier is predicted to benefit 17 receptors, including eight predicted impacts. The 2,294 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 23 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 24

Barrier 24 was considered along US 74/76 westbound between US 17 and River Road to benefit NSA 24. The barrier modeled is approximately 4,669 feet long, a fixed 16 feet in height, and has a total area of 74,704 square feet. The barrier is predicted to benefit 39 receptors, including 12 predicted impacts. The 1,915 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 24 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 25

Barrier 25 was considered along US 74/76 eastbound between the US 17 and River Road to benefit NSA 25. The barrier modeled is approximately 2,000 feet long, a fixed 12 feet in height, and has a total area of 24,000 square feet. The barrier is only predicted to benefit one receptor. As a result, Barrier 25 preliminarily does not meet feasibility and reasonableness criteria and is, therefore, considered NOT likely.

Barrier 26

Barrier 26 was considered along US 74/76 westbound between the Brunswick River and River Road to benefit NSA 26. The barrier modeled is approximately 2,130 feet long, a fixed 12 feet in height, and has a total area of 25,560 square feet. The barrier is predicted to benefit ten receptors, including six predicted impacts. The 2,613 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 26 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 27

Barrier 27 was considered along US 74/76 eastbound between River Road and the Brunswick River to benefit NSA 27. The barrier modeled is approximately 2,037 feet long, a fixed 14 feet in height, and has a total area of 28,518 square feet. The barrier is predicted to benefit five receptors, including four

predicted impacts. The 5,704 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 27 preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

Barrier 45 North

Barrier 45 North was considered along US 421 (Carolina Beach Road) northbound between North Carolina Avenue and Greenfield Street to benefit NSA 45. The barrier modeled is approximately 850 feet long, a fixed 20 feet in height, and has a total area of 17,000 square feet. The barrier is predicted to benefit two receptors, including two predicted impacts. The 8,500 square feet per benefit is more than the maximum allowable 1,500 square feet per benefit. As a result, Barrier 45 North preliminarily does not meet reasonableness criteria and is, therefore, considered NOT likely.

NSA 8

Driveway access to impacted receptor locations in NSA 8 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible in this location.

NSA 9

Driveway access to impacted receptor locations in NSA 9 would necessitate breaks in constructed noise walls. Openings in noise barriers for driveway connections reduce the effectiveness of barriers; consequently, noise abatement would not be feasible in this location.

NSA 10

One traffic noise impact is predicted within NSA 10 for Alternative V-AW. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement was not be feasible for the lone impacted receptor.

NSA 17

One traffic noise impact is predicted within NSA 17 for Alternative V-AW. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

NSA 18

One traffic noise impact is predicted within NSA 18 for Alternative V-AW. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement was not be feasible for the lone impacted receptor.

NSA 39

One traffic noise impact is predicted within NSA 39 for Alternative V-AW. The 2016 NCDOT Traffic Noise Policy states that noise reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to be feasible; consequently, noise abatement would not be feasible for the lone impacted receptor.

A noise barrier evaluation was conducted for this project utilizing the Traffic Noise Model (TNM 2.5) software developed by the FHWA. **Table 7** summarizes the results of the evaluation.

Table 7: Noise Barrier Evaluation Results

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
Alternative B							
NSA 13	Barrier 13 (Shoulder) along Cape Fear Crossing EB between I-140 and US 17	4,300/ 22	94,600	29	29	3,262/ 2,500	No[3]
NSA 13	Barrier 13 (ROW) along Cape Fear Crossing EB between I-140 and US 17	2,600/ 23	59,800	7	7	8,543/ 2,500	No[3]
NSA 14	Barrier 14 along Cape Fear Crossing EB between I-140 and US 17	3,350/ 24	80,400	31	36	2,233/ 2,500	Yes
NSA 15 & 16	Barrier 15/16 along Cape Fear Crossing WB between I-140 and US 17	6,300/ 24	151,200	111	147	1,029/ 2,500	Yes

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 29 & 30	Barrier 29/30 along Cape Fear Crossing EB between US 17 and NC 133	7,883/ 14	110,362	66	103	1,071/ 2,500	Yes
NSA 31	Barrier 31 along Cape Fear Crossing WB between NC 133 and US 17	4,100/ 16	65,600	52	60	1,093/ 2,500	Yes
NSA 40	Barrier 40 along Shipyard Blvd between US 421 and Newkirk Ave	1,853/ 18	32,963	42	54	610/ 2,500	Yes
NSA 42	Barrier 14 along Cape Fear Crossing EB between the Cape Fear River and US 421	4,949/ 23	115,311	108	247	466/ 2,500	Yes
NSA 43	Barrier 43 along proposed Shipyard Boulevard WB between US 421 and Burnett Blvd	2,890/ 24	69,360	54	60	1,155/ 2,500	Yes
NSA 44	Barrier 44 along Cape Fear Crossing WB, US 421 SB, and proposed Shipyard Blvd	4,135/ 22	91,802	39	40	2,295/ 2,500	Yes
Alternative MA							

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 2	Barrier 2 along US 17 NB between Hazels Branch Road and I-140	600/ 10	6,000	2	2	3,000/ 1,500	No[3]
NSA 3 (West)	Barrier 3 West along US 17 NB between Hazels Branch Road and I-140	450/ 10	4,500	2	2	2,250/ 2,500	Yes
NSA 3 (East)	Barrier 3 East along ramp from US 17 NB to Cape Fear Crossing EB	2,180/ 22	47,960	8	8	5,995/ 2,500	No[3]
NSA 4 (South)	Barrier 4 South along US 17 SB between I-140 and Maco Road	550/ 14	7,700	3	3	2,567/ 2,000	No[3]
NSA 4 (North)	Barrier 4 South along US 17 SB between I-140 and Maco Road	1,589/ 22	34,958	3	3	11,653/ 1,500	No[3]
NSA 5	Barrier 5 along Cape Fear Crossing WB between US 17 and NC 133	6,000/ 24	144,000	128	137	1,051/ 2,500	Yes
NSA 6	Barrier 6 along US 17 SB between Goodman Road and I-140	1,225/ 14	17,150	2	2	8,575/ 1,500	No[3]
NSA 33 & 34	Barrier 33/34 along Cape Fear Crossing EB between River Road and US 421	4,300/ 24	103,200	9	10	10,320/ 2,500	No[3]

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 35	Barrier 35 along Cape Fear Crossing EB between River Road and US 421	3,050/ 24	73,200	100	112	654/ 2,500	Yes
NSA 36	Barrier 36 along Independence Blvd EB between ramp to US 421 SB and US 421 entrance ramp	2,850/ 24	68,400	0	0	N/A / 1,500	No[2]
NSA 37	Barrier 37 along Cape Fear Crossing/ Independence Blvd between River Road and South 17th Street	4,450/ 22	100,100	12	12	8,342/ 2,500	No[3]
Alternative NA							
NSA 2	Barrier 2 along US 17 NB between Hazels Branch Road and I-140	600/ 10	6,000	2	2	3,000/ 1,500	No[3]
NSA 3 (West)	Barrier 3 West along US 17 NB between Hazels Branch Road and I-140	450/ 10	4,500	2	2	2,250/ 2,500	Yes
NSA 3 (East)	Barrier 3 East along ramp from US 17 NB to Cape Fear Crossing EB	2,180/ 22	47,960	8	8	5,995/ 2,500	No[3]

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 4 (South)	Barrier 4 South along US 17 SB between I-140 and Maco Road	550/ 14	7,700	3	3	2,567/ 2,000	No[3]
NSA 4 (North)	Barrier 4 South along US 17 SB between I-140 and Maco Road	1,589/ 22	34,958	3	3	11,653/ 1,500	No[3]
NSA 5	Barrier 5 along Cape Fear Crossing WB between US 17 and NC 133	6,000/ 24	144,000	128	137	1,051/ 2,500	Yes
NSA 6	Barrier 6 along US 17 SB between Goodman Road and I-140	1,225/ 14	17,150	2	2	8,575/ 1,500	No[3]
NSA 40	Barrier 40 along Shipyard Blvd between US 421 and Newkirk Ave	1,853/ 18	32,963	42	54	610/ 2,500	Yes
NSA 42	Barrier 14 along Cape Fear Crossing EB between the Cape Fear River and US 421	4,949/ 23	115,311	108	247	466/ 2,500	Yes
NSA 43	Barrier 43 along proposed Shipyard Boulevard WB between US 421 and Burnett Blvd	2,890/ 24	69,360	54	60	1,155/ 2,500	Yes

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 44	Barrier 44 along Cape Fear Crossing WB, US 421 SB, and proposed Shipyard Blvd	4,135/ 22	91,802	39	40	2,295/ 2,500	Yes
Alternative Q							
NSA 6	Barrier 6 along US 17 SB between Goodman Road and I-140	1,200/ 18	21,800	3	4	5,400/ 1,500	No[3]
NSA 29 & 30	Barrier 29/30 along Cape Fear Crossing EB between US 17 and NC 133	7,883/ 14	110,362	66	103	1,071/ 2,500	Yes
NSA 31	Barrier 31 along Cape Fear Crossing WB between NC 133 and US 17	4,100/ 16	65,600	52	60	1,093/ 2,500	Yes
NSA 33 & 34	Barrier 33/34 along Cape Fear Crossing EB between River Road and US 421	4,300/ 24	103,200	9	10	10,320/ 2,500	No[3]
NSA 35	Barrier 35 along Cape Fear Crossing EB between River Road and US 421	3,050/ 24	73,200	100	112	654/ 2,500	Yes

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 36	Barrier 36 along Independence Blvd EB between ramp to US 421 SB and US 421 entrance ramp	2,850/ 24	68,400	0	0	N/A / 1,500	No[2]
NSA 37	Barrier 37 along Cape Fear Crossing/ Independence Blvd between River Road and South 17th Street	4,450/ 22	100,100	12	12	8,342/ 2,500	No[3]
Alternative T							
NSA 6	Barrier 6 along US 17 SB between Goodman Road and I-140	1,650/ 16	26,400	2	3	8,800/ 1,500	No[3]
NSA 28	Barrier 28 along Cape Fear Crossing EB between US 17 and NC 133	5,659/ 12	67,908	38	62	1,095/ 2,500	Yes
NSA 29	Barrier 29 along Cape Fear Crossing WB between NC 133 and US 17	6,800/ 14	95,200	99	132	721/ 2,500	Yes

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 40	Barrier 40 along Shipyard Blvd between US 421 and Newkirk Avenue	1,853/ 18	32,963	42	54	610/ 2,500	Yes
NSA 42	Barrier 14 along Cape Fear Crossing EB between the Cape Fear River and US 421	4,949/ 23	115,311	108	247	466/ 2,500	Yes
NSA 43	Barrier 43 along proposed Shipyard Boulevard WB between US 421 and Burnett Blvd	2,890/ 24	69,360	54	60	1,155/ 2,500	Yes
NSA 44	Barrier 44 along Cape Fear Crossing WB, US 421 SB, and proposed Shipyard Blvd	4,135/ 22	91,802	39	40	2,295/ 2,500	Yes
Alternative V-AW							
NSA 6	Barrier 6 along US 17 SB between Goodman Road and I-140	1,700/ 18	30,600	3	4	7,650/ 1,500	No[3]
NSA 20	Barrier 20 along US 17 NB between south of West Gate Road and Ocean Gate Road	2,000/ 24	48,000	0	0	N/A / 1,500	No[3]

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 21	Barrier 21 along US 17 NB between Ocean Gate Road and US 74/76	2,184/ 24	52,416	0	0	N/A / 1,500	No[2]
NSA 22	Barrier 22 along US 17 NB between Ploof Road and US 74/76	2,181/ 24	52,344	55	138	379/ 1,500	Yes
NSA 23	Barrier 23 along US 74/76 EB between the project's western terminus and Olde Waterford Way	1,950/ 20	39,000	8	17	2,294/ 1,500	No[3]
NSA 24	Barrier 24 along US 74/76 WB between US 17 and River Road	4,669/ 16	74,704	12	39	1,915/ 1,500	No[3]
NSA 25	Barrier 25 along US 74/76 EB between US 17 and River Road	2,000/ 12	24,000	1	1	24,000/ 1,500	No[3]
NSA 26	Barrier 26 along US 74/76 WB between the Brunswick River and River Road	2,130/ 12	25,560	6	10	2,613/ 1,500	No[3]

Alternative / Noise Study Area	Noise Barrier Name & Location	Approx. Length / Height[4] (feet)	Approx. Area (sq ft)	Number of Impacted & Benefited Receptors	Total Number of Benefited Receptors	Square Feet per Benefited Receptor / Allowable Square Feet per Benefited Receptor	Preliminarily Feasible and Reasonable ("Likely" for Construction)[1]
NSA 27	Barrier 27 along US 74/76 EB between River Road and the Brunswick River	2,037/ 14	28,518	4	5	5,704/ 1,500	No[3]
NSA 45 (North)	Barrier 45 North along US 421 NB between North Carolina Avenue and Greenfield Street	850/ 20	17,000	2	2	8,500/ 1,500	No[3]
NSA 45 (South)	Barrier 45 South along US 421 NB between Ivey Circle and Alabama Avenue	319/ 14	4,446	3	5	893/ 2,000	Yes
NSA 46	Barrier 46 along EB Burnett Road / Carolina Beach Road connector between Burnett Road and US 421	1,823/ 21	39,144	20	21	1,864/ 2,500	Yes
NSA 47	Barrier 47 along South 3rd Street between Kidder Street and Greenfield Street	837/ 14	11,718	22	59	199/ 1,500	Yes

[1]The likelihood for barrier construction is preliminary and subject to change, pending completion of final design and the public involvement process.

[2] Barrier is not feasible due to an inability to achieve a minimum of 5 dB(A) of noise reduction for at least two impacted receptors.

[3] Barrier is not reasonable due to the quantity per benefited receptor exceeding the allowable quantity per benefited receptor OR Barrier is not reasonable due to an inability to achieve at least 7-dBA noise reduction for at least one benefited receptor.
[4] Average wall height. Actual wall height at any given location may be higher or lower.

8.5 NOISE INSULATION

Interior noise insulation was considered as a potential traffic noise impact mitigation measure as part of this Traffic Noise Analysis. Four traffic noise impacts for the Cape Fear Crossing project are predicted to occur for interior noise-sensitive areas (NAC "D"), as shown in **Table 8**. Two of the impacts occur in both Alternatives MA and Q. Two additional NAC "D" impacts occur in Alternative V-AW. Insufficient information regarding actual costs for insulating these impacted receptors is available at this time; however, traffic noise abatement in the form of building noise insulation is possible. For the purposes of this preliminary Traffic Noise Report, such noise abatement is considered preliminarily feasible and reasonable at this time.

Table 8: Noise Insulation Evaluation Results

Alternative / NSA	Receptor / Location	Feasible	Reasonable	Likely
Alternatives MA and Q				
NSA 37	2979 / 3504 Carolina Beach Road	Yes	Yes	Yes
NSA 37	3037 / 3736 Carolina Beach Road	Yes	Yes	Yes
Alternative V-AW				
NSA 45	1420.1 / 2011 Carolina Beach Road	Yes	Yes	Yes
NSA 46	1505 / 314 South Carolina Avenue	Yes	Yes	Yes

Interior noise levels were predicted by subtracting noise reduction factors from the predicted exterior levels for the building in question, using the information presented in **Table 9**. For the purposes of determining preliminary interior noise reduction due to a structure's exterior for this report, the presence of an air conditioning system in a building is considered sufficient evidence that the structure's windows are kept closed almost every day of the year. Interior noise measurements should be collected

as part of the Design Noise Report for the final noise analysis and abatement design for locations where highway agencies consider noise insulation as an abatement measure.

Receptor 2979 is a place of worship located in NSA 37 within Alternatives MA and Q, and consists of a metal-framed building with air conditioning. Because the FHWA provides building noise reduction factors only for light frame and masonry buildings, light frame with closed ordinary sash windows was selected to represent the metal structure and a noise reduction of 20 dB was applied.

Receptor 3037 is a place of worship, also located in NSA 37 within both Alternatives MA and Q. It includes a wood-framed building with air conditioning and storm windows. A noise reduction of 25 dB was applied.

Receptor 1420.1 is a public theater run by a non-profit institution located in NSA 45 within Alternative V-AW. It includes a masonry building with air conditioning and single glazed windows. A noise reduction of 25 dB was applied.

Receptor 1505 is a place of worship located in NSA 46 within Alternative V-AW. The structure consists of a masonry building with air conditioning and double glazed windows. A noise reduction of 35 dB was applied.

Table 9: Building Noise Reduction Factors

Building Type	Window Condition	Noise Reduction Due to Exterior of the Structure
All	Open*	10 dB
Light Frame	Ordinary Sash (closed)	20 dB
	Storm Windows	25 dB
Masonry	Single Glazed	25 dB
	Double Glazed	35 dB

* The windows shall be considered open unless there is firm knowledge that the windows are in fact kept closed almost every day of the year.

FHWA-PD-96-046, *Measurement of Highway-Related Noise*, *Final Report*, May 1996, provides procedures to measure building noise reductions.

9.0 TRAFFIC NOISE LEVELS FOR UNDEVELOPED LANDS WHERE NO BUILDING PERMITS HAVE BEEN ISSUED

9.1 NOISE LEVEL CONTOURS

Predicted Build-condition traffic noise level contours are not a definitive means by which to assess traffic noise level impacts; however, they can aid in future land use planning efforts in presently undeveloped areas. Correlating to the traffic noise impact "approach" thresholds for FHWA NAC "E" and NAC "B" and "C" land uses, the 71 dB(A) noise level contour and the 66 dB(A) contour are shown for several locations in **Table 10**.

Per 23 CFR 772.9(c) and NCDOT Policy, noise contour lines shall not be used for determining highway traffic noise impacts. However, the 71 dB(A) and 66 dB(A) noise level contour information should assist local authorities in exercising land use control over the remaining undeveloped lands, to avoid development of incompatible activities adjacent to the roadways within local jurisdiction. It should be noted that, due to variations in terrain, vehicle mix, and traffic volumes, traffic noise levels may vary throughout the study area. For future planning purposes, it is preliminarily recommended that detailed traffic noise studies be performed for specific project locations to determine more finite results.

Table 10: Noise Level Contours

Alternative	Location	71 dB(A) (Ft from EOT[1])	66 dB(A) (Ft from EOT[1])
B	South of Cape Fear Crossing, west of Lanvale Road	Within ROW	395
B	North of Cape Fear Crossing, west of Lanvale Road	200	415
B	East of US 17, just south of West Gate Drive	180	305
B	East of US 17, just south of Provision Parkway	Within ROW	205
B	East of US 17, just south of West Gate Drive	145	270
B	West of Cape Fear Crossing, near Saw Grass Way	155	370
B	East of Cape Fear Crossing, near Emberwood Drive	105	465
B	East of NC 133, south of Rabon Way	Within ROW	100
MA	East of US 17, between Hazels Branch Road and Snowfield Road	185	360
MA	East of NC 133, south of Rabon Way	Within ROW	110
MA	South of Cape Fear Crossing, east of Bryan	Within	Within

Alternative	Location	71 dB(A) (Ft from EOT[1])	66 dB(A) (Ft from EOT[1])
	Road	ROW	ROW
MA	East of Independence Blvd, just north of US 421	Within ROW	125
MA	North of Cape Fear Crossing, just east of US 421	155	620
MA	South of Cape Fear Crossing, north of the Antiqua neighborhood	110	400
NA	East of US 17, between Hazels Branch Road and Snowfield Road	185	360
NA	East of NC 133, south of Rabon Way	Within ROW	110
Q	East of US 17, just north of Hewett Burton Road	135	255
Q	East of US 17, just south of Provision Parkway	Within ROW	180
Q	West of Cape Fear Crossing, near Saw Grass Way	155	370
Q	East of Cape Fear Crossing, near Emberwood Drive	105	465
Q	East of NC 133, south of Rabon Way	Within ROW	100
Q	South of Cape Fear Crossing, east of Bryan Road	Within ROW	Within ROW
Q	East of Independence Blvd, just north of US 421	Within ROW	125
Q	North of Cape Fear Crossing, just east of US 421	155	620
Q	South of Cape Fear Crossing, north of the Antiqua neighborhood	110	400
T	East of US 17, just north of Hewett Burton Road	135	255
T	East of US 17, just south of Provision Parkway	Within ROW	Within ROW
T	East of US 17, just south of West Gate Drive	170	290
T	East of Cape Fear Crossing, just north of Shelmore Way	120	310
T	West of Cape Fear Crossing, just south of Shelmore Way	130	245
T	East of NC 133, south of Rabon Way	Within ROW	100

Alternative	Location	71 dB(A) (Ft from EOT[1])	66 dB(A) (Ft from EOT[1])
VA	East of US 17, just north of Hewett Burton Road	135	255
VA	East of US 17, just south of Provision Parkway	Within ROW	Within ROW
VA	East of US 17, just south of West Gate Drive	135	270
VA	East of US 17, just south of Ploof Road	170	355
VA	West of US 17, just south of US 74	50	120
VA	East of US 17, just south of US 74	50	240
VA	South of US 74/76, just north of US 17	Within ROW	120

[1] *Feet from the edge of the travel way*

9.2 NOISE-COMPATIBLE LAND USE

One of the most effective means to prevent future traffic noise impacts is noise-sensitive land-use development. The compatibility of highways and neighboring local areas is essential for continued growth and can be achieved if local governments and developers require and practice noise-sensitive land-use planning. Although regulation of land use is not within the purview of FHWA or NCDOT, some widely accepted techniques for noise-sensitive land use planning near existing and proposed highway facilities include:

- Locating retail, industrial, manufacturing, and other noise-compatible land-uses adjacent to highways
- Incorporating effective traffic noise mitigating features, such as earth berms and solid-mass noise walls, as part of residential developments
- Utilization of noise-sensitive architectural design and site planning, such as the orientation of quiet spaces away from roadways
- Required use of sound insulating building materials and construction methods

As indicated in the October 2016 NCDOT Traffic Noise Policy, local jurisdictions with zoning control should use the information contained in this report to develop policies and/or ordinances to limit the growth of noise-sensitive land uses located adjacent to roadways. Furthermore, NCDOT encourages the dissemination of this information to all people who may be affected by, or who might influence others affected by, traffic noise.

10.0 CONSTRUCTION NOISE

The predominant construction activities associated with this project are expected to be earth removal, hauling, grading, bridge/grade separation construction, and paving. Temporary and localized construction noise impacts will likely occur because of these activities (refer to **Table 11**). During daytime hours, the predicted effects of these impacts will be temporary speech interference for passers-by and those individuals living or working near the project. During evening and nighttime hours, steady-state construction noise emissions such as from paving operations will be audible and may cause impacts to activities such as sleep. Sporadic evening and nighttime construction equipment noise emissions such as from backup alarms, lift gate closures ("slamming" of dump truck gates), etc., will be perceived as distinctly louder than the steady-state acoustic environment, and will likely cause impacts to the general peace and usage of noise-sensitive areas.

Extremely loud construction noise activities such as use of pile-drivers and impact-hammers (jack hammer, hoe-ram) may provide sporadic, temporary, and significant construction noise impacts in the vicinity of those activities (refer to **Table 11**). Construction activities that will produce extremely loud noises should be scheduled during times of the day when such noises will create as minimal disturbance as possible.

Generally, low-cost and easily implemented construction noise control measures should be incorporated into the project plans and specifications to the extent possible. These measures include, but are not limited to, work-hour limits, equipment exhaust muffler requirements, haul-road locations, elimination of "tail gate banging", ambient-sensitive backup alarms, construction noise complaint mechanisms, and consistent and transparent community communication.

While discrete construction noise level prediction is difficult for a receiver or group of receivers, it can be assessed in a general capacity with respect to distance from known or likely project activities. For this project, earth removal, grading, hauling, paving, and pile-driving are anticipated to occur near noise study areas. Although construction noise impact mitigation should not place an undue burden upon the financial cost of the project or the project construction schedule, pursuant to the requirements of 23 CFR 772.19, it is the recommendation of this traffic noise analysis that:

- Earth removal, grading, hauling, and paving activities near residences should be limited to weekday daytime hours.
- If meeting the project schedule requires that earth removal, grading, hauling and / or paving must occur during evening, nighttime and / or weekend hours near residential neighborhoods, the Contractor shall notify NCDOT as soon as possible. In such instance(s), all reasonable attempts shall be made to notify and to make appropriate arrangements for the mitigation of the predicted construction noise impacts upon the affected property owners and / or residents.
- If construction noise activities must occur during context-sensitive hours near noise-sensitive areas, discrete construction noise abatement measures including, but not limited to, portable noise barriers and / or other equipment-quieting devices shall be considered.
- Some construction activities will create extreme noise impacts for nearby noise-sensitive land uses. For example, pile driving activities can create noise impacts for distances of up to one-quarter mile. It is the recommendation of this traffic noise analysis that considerations be made for any nearby residences for all evening and/or nighttime periods (7:00 p.m. – 7:00 a.m.), and for all weekend hours throughout which extremely loud construction activities might occur.

Table 11: Construction Equipment Typical Noise Level Emissions[1]

Equipment	Noise Level Emissions (dB(A)) at 50 Feet from Equipment[2]
	70 80 90 100
Pile Driver[3]	
Jack Hammer	
Tractor	
Road Grader	
Backhoe	
Truck	
Paver	
Pneumatic Wrench	
Crane	
Concrete Mixer	
Compressor	
Front-End Loader	
Generator	

Equipment	Noise Level Emissions (dB(A)) at 50 Feet from Equipment[2]											
			70		80		90		100			
Saws												
Roller (Compactor)												

[1]*Adapted from Noise Construction Equipment and Operations, Building Equipment, and Home Appliances. U.S. Environmental Protection Agency. Washington D.C. 1971.*

[2]*Cited noise level ranges are typical for the equipment cited. Noise energy dissipates as a function of distance between the source and the receptor. For example, if the noise level from a pile driver at a distance of 50 feet = 100 decibels (dB(A)), then at 400 feet, it might be 82 decibels (dB(A)) or less.*

[3]*Due to project safety and potential construction noise concerns, pile driving activities are typically limited to daytime hours.*

For additional information on construction noise, please refer to the FHWA Construction Noise Handbook (FHWA-HEP-06-015) and the Roadway Construction Noise Model (RCNM), available online at: https://www.fhwa.dot.gov/environment/noise/construction_noise/index.cfm.

11.0 CONCLUSION

This report summarizes the traffic noise analysis findings for NCDOT STIP Project U-4738. The proposed project extends approximately 9.5 miles from the vicinity of US 17 and I-140 in Brunswick County to US 421 in southern New Hanover County.

Traffic noise and temporary construction noise can be a consequence of transportation projects, especially in areas near high-volume and high-speed existing steady-state traffic noise sources. This traffic noise analysis used computer models created with FHWA TNM 2.5, validated to field-collected traffic noise monitoring data, to predict future noise levels and define impacted receptors along the proposed new highway project.

Six alternative project highway alignments are under current consideration. For Design Year 2040 traffic volumes, the Build condition is predicted to create 621 traffic noise impacts for Alternative B, 462 impacts for Alternative MA, 483 impacts Alternative NA, 432 impacts for Alternative Q, 467 impacts for Alternative T and 277 impacts for Alternative V-AW.

Furthermore, temporary construction noise impacts – some of them potentially substantial – may occur due to the proximity of numerous noise-sensitive receptors to project construction activities. It is the recommendation of this traffic noise analysis that all reasonable efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts.

Consideration for noise abatement measures was given to all impacted receptors located along the six alternative alignments. Following the criteria for feasibility and reasonableness as prescribed in the 2016 NCDOT Traffic Noise Policy, noise abatement for this project was found to be preliminarily feasible

and reasonable at 17 locations. Noise abatement measures are likely to be installed at 8 locations along Alternative B, at 3 locations along Alternative MA, at 6 locations along Alternative NA, at 3 locations along Alternative Q, at 6 locations along Alternative T and at 4 locations along Alternative V-AW. 'Likely' does not mean a firm commitment. Noise insulation for buildings is considered preliminarily feasible and reasonable, given very limited information of actual costs involved, at 2 locations along Alternative MA, 2 locations along Alternative Q and 2 locations along Alternative V-AW. Additional detailed study of potential abatement measures at all barrier locations will be necessary during final design of this project. The final decision on the installation of abatement measures shall be made upon completion of the project design, the public involvement process, and concurrence with the NCDOT Policy.

12.0 REFERENCES

Federal Highway Administration. *Analysis of Highway Construction Noise*. 1984.

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Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance*. December 2011.

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Figures

CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 1 - Overview Map

Legend

- Receptors
- Alternative B
- Alternative MA
- Alternative NA
- Alternative Q
- Alternative T
- Alternative V-AW
- US
- NC
- Local
- Railroad
- Rivers and Streams
- Project Study Area
- Noise Study Area
- County Boundary

0 0.5 1 1.5 Miles
0 1 2 Kilometers

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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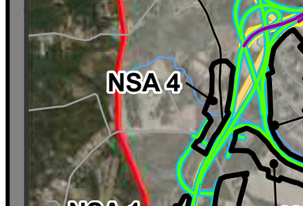
AECOM



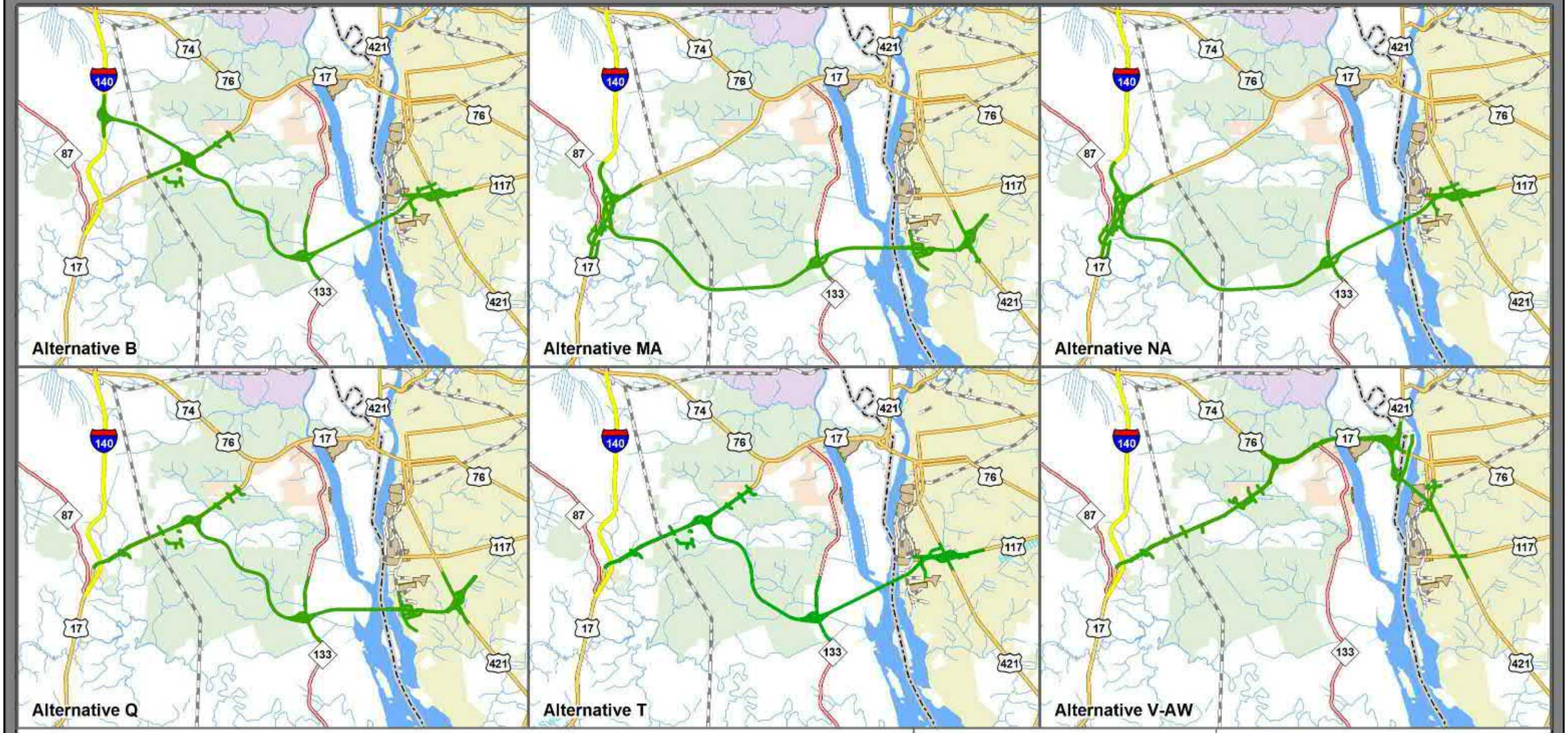


FIGURE 2
CURRENT DETAILED STUDY ALTERNATIVES

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED CAPE FEAR CROSSING
BRUNSWICK AND NEW HANOVER COUNTIES
STIP PROJECT U-4738

Alternative B

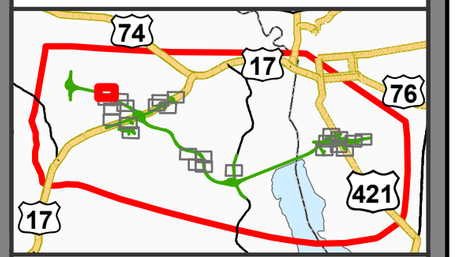
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Ashcroft Dr
Heathwood Dr
Thistlewood Dr
Pinebrush Dr
Orchard Loop Rd
Long Term 2-2018
NSA 15
NSA 14
Barrier 15/16
Barrier 14
Barrier 13 Shoulder
Matchline Sheet 2
Matchline Sheet 3

CAPE FEAR CROSSING

State Transportation
Improvement Program
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Figure 3
Alternative B - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline

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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

NSA 15
NSA 14
NSA 13
Barrier 15/16
Barrier 14
Barrier 13 Shoulder
Barrier 13 ROW
Short Term 8-2018 (Amb)
Matchline Sheet 1
Matchline Sheet 3
Matchline Sheet 5
118
115
3779
3780
3778
3782
3783
3785
3786
3784
3769
3770
3776
3781
3777
3774
3775
3763
3760
3761
3759
3758
3757
3762
3756
3836
3767
3766
3765
111
112
100
99
98
97
3764
3754
3755
3753
3752
71
73
Levale Rd NE

CAPE FEAR CROSSING

State Transportation
Improvement Program
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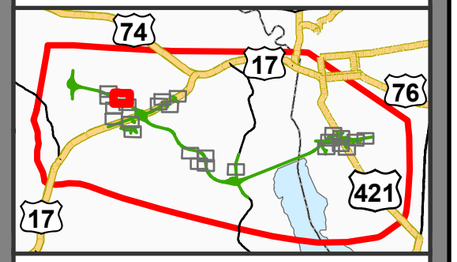
Figure 3
Alternative B - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

NSA 15
NSA 16
NSA 13
Short Term 7-2018
Barrier 14
Barrier 15/16
Barrier 13 Shoulder
Barrier 13 ROW
Watersfield Rd
Whitehill
Lapham Dr
Slater Way
Lanvale Rd
Lanvale Rd NE
Lansan Ln NE
Matchline Sheet 1
Matchline Sheet 2
Matchline Sheet 4
Matchline Sheet 5

CAPE FEAR CROSSING

State Transportation
Improvement Program
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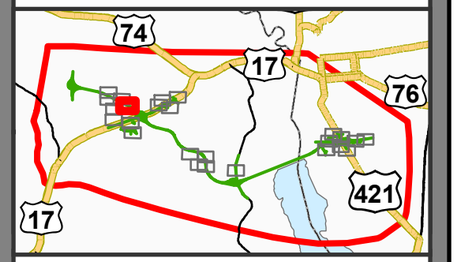
Figure 3
Alternative B - Sheet 4

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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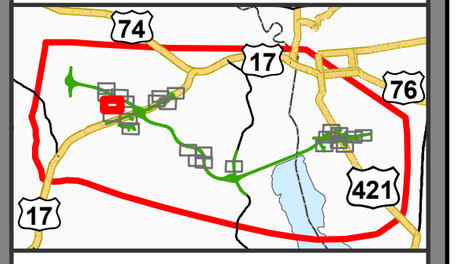
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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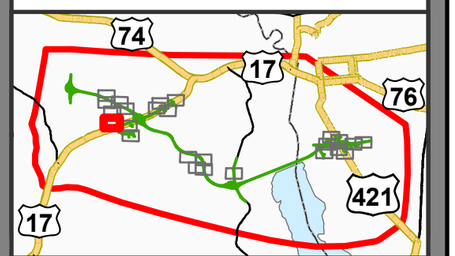
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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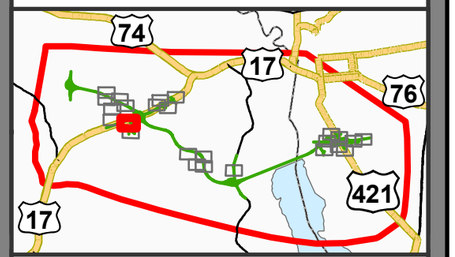
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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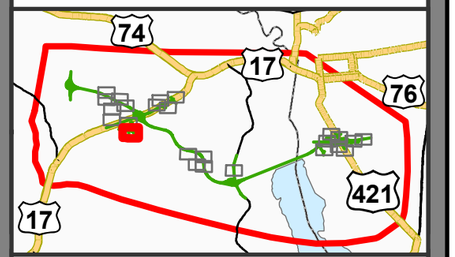
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 8

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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CAPE FEAR CROSSING

State Transportation
Improvement Program
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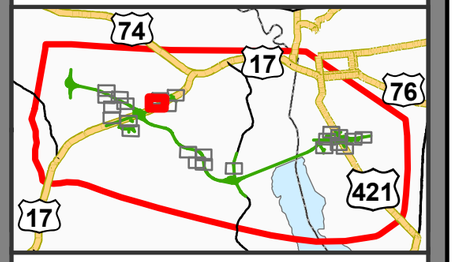
Figure 3
Alternative B - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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CAPE FEAR CROSSING

State Transportation
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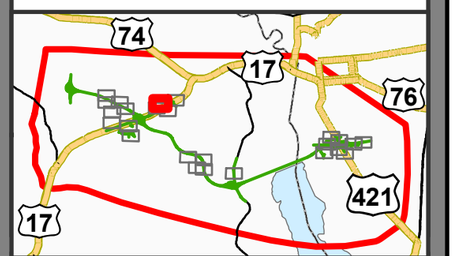
Figure 3
Alternative B - Sheet 10

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Maplechase Dr
nterberry Cir
ndiflora Dr
Backhoe Rd
Gregory Rd
Matchline Sheet 12
Matchline Sheet 9
Matchline Sheet 11
Kobus Ct
NSA 18
NSA 19
Cumbertree Ct
Magnolia Village Way
Eastowne Ct
Benton Brown Way NE
Ocean Hwy E
New Pointe Blvd
Jackeys Creek
17
464
463
462
461
460
459
458
455
456
454
457
453
450
451
449
452
448
447
446
445
9026
9027
9028
467
468
466
9016
9015
9014
9013
465

CAPE FEAR CROSSING

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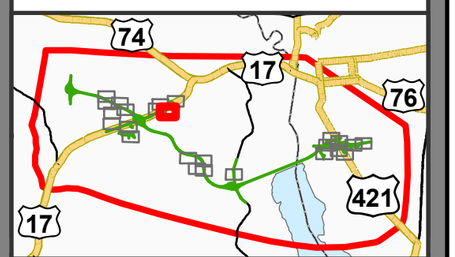
Figure 3
Alternative B - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 12
Matchline Sheet 10
Matchline Sheet 9
See Sheet 11A
NSA 19
NSA 20
Ocean Hwy E
17
New Pointe Blvd
Ocean Gate Plaza
Andiflora Dr
Town Lake Dr
West Gate Dr
Old Woods Dr
Hunterstone Dr
Maple Tree Dr
Hickory Hill Dr
Jackeys Creek
466
465
465.1
9013
9016
9017
9018
9019
9023
9024
9025

CAPE FEAR CROSSING

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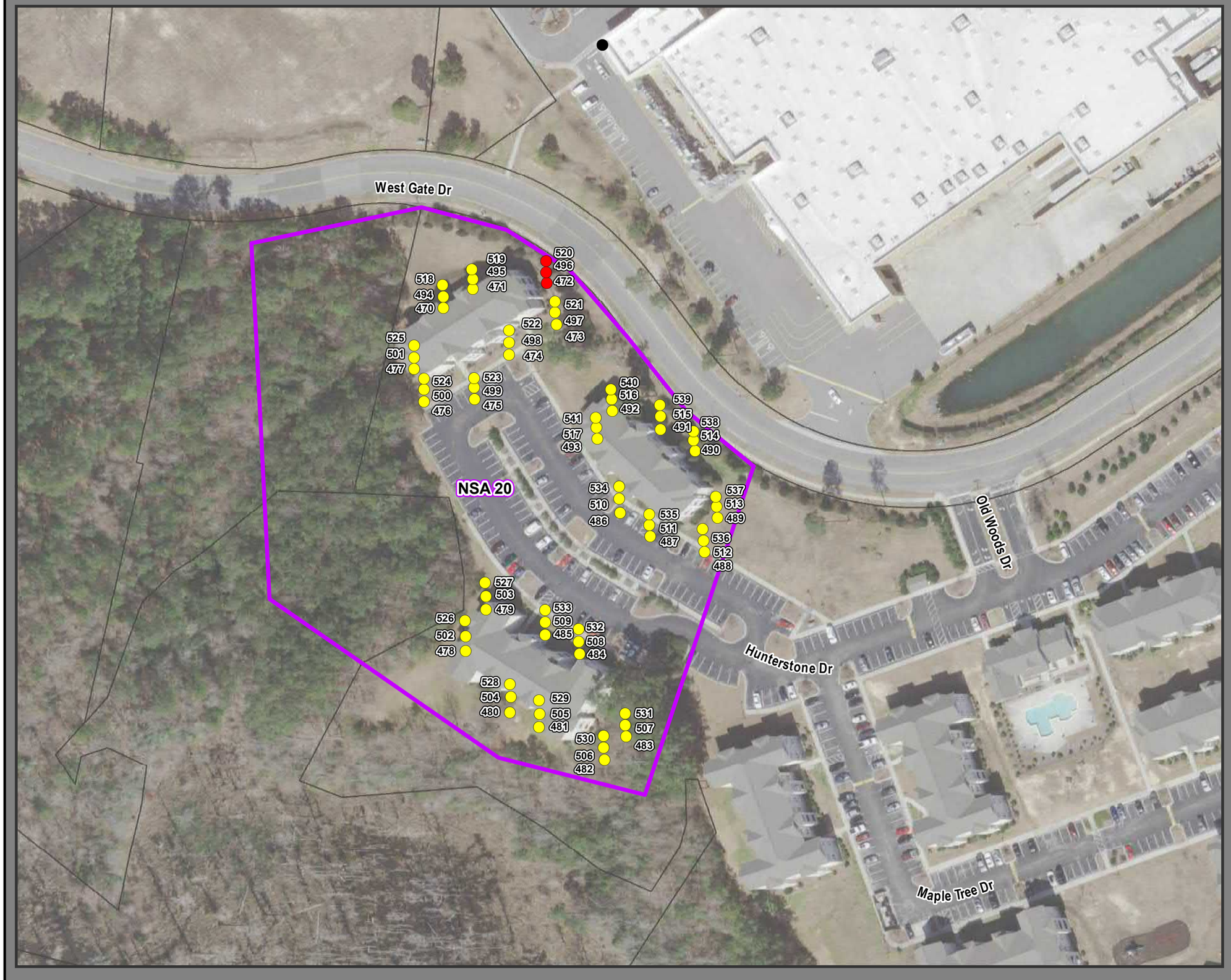
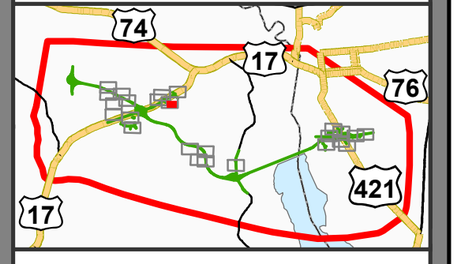
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 11A



Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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CAPE FEAR CROSSING

State Transportation
Improvement Program
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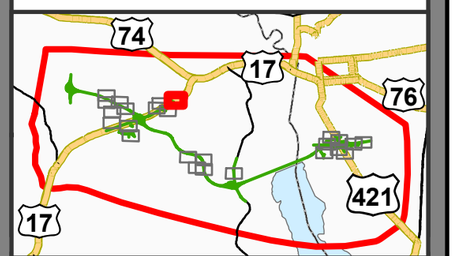
Figure 3
Alternative B - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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CAPE FEAR CROSSING

State Transportation
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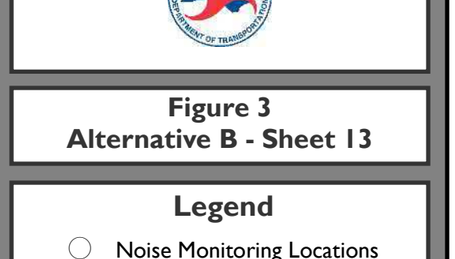
Figure 3
Alternative B - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Barrier 29/30

NSA 29

NSA 30

2172
2171
2165
2166
2167

3916
3918
3917
2358
2359
2360
2361

3920
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3923
3924
3925

4020
4021

Matchline Sheet 14

Matchline Sheet 15

CAPE FEAR CROSSING

State Transportation
Improvement Program
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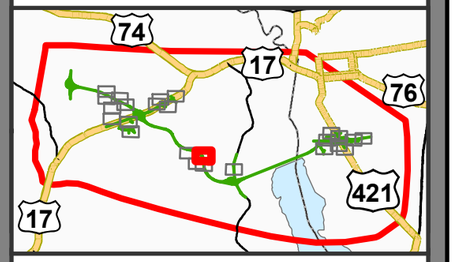
Figure 3
Alternative B - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 13
Matchline Sheet 15
Matchline Sheet 16
NSA 30
NSA 31
Barrier 29/30
Barrier 31
Cove Landing
St. Kitts Way
Hillshire Dr
Harvest Creek Ct
South Brook Rd
Waters End Ct
Aruba Ct
Short Term 13-2015 (Amb)
Long Term 4-2018

CAPE FEAR CROSSING

State Transportation
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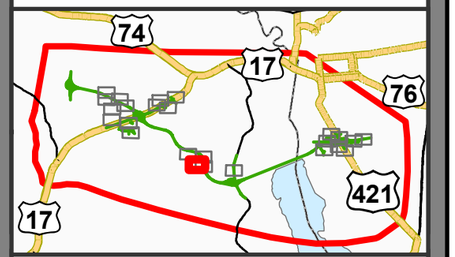
Figure 3
Alternative B - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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CAPE FEAR CROSSING

State Transportation
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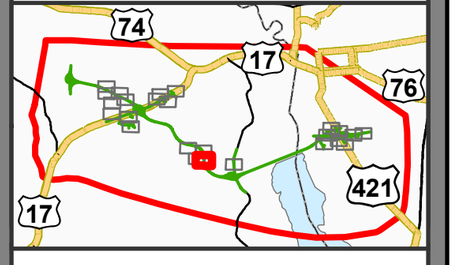
Figure 3
Alternative B - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Sheet 14
Matchline Sheet 15
NSA 29
NSA 30
NSA 31
Barrier 29/30
Barrier 31
Short Term
10-2018 (Amb)
Shelmore Way
Stoney Point Dr
Bimini Dr
Aruba

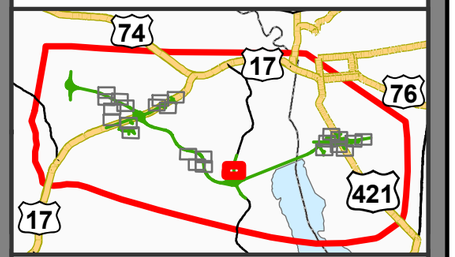
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 17

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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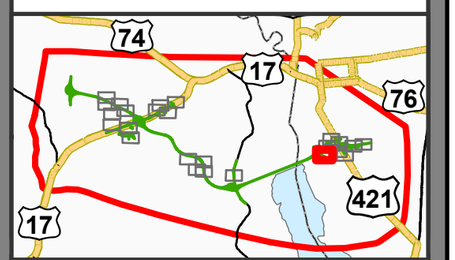
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 18

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Barrier 42
Dare St
Davie Dr
Calhoun Dr
See Sheet 19A
Matchline Sheet 19
See Sheet 19B
Matchline Sheet 22
See Sheet 18A
Rutledge Dr
Chappell Ave
Vance St
Graham St
Ward St
Sumter Dr
Dobbs St
Net Ln
Virgil Ln
Worth Dr
NSA 42
Private
2626 2625 2623 2624 2622 2621 2620 2619 2865 2774 2773 2734 2733 2772 2771 2770 2769 2768 2767 2766 2730 2729 2763 2762 2761 2760 2758 2757 2728 2727 2726 2725 2746 2745 2747 2759 2748 2764 2724 2723 2722 2737 2718 2719 2717 2716 2736 2714 2721 2715 2720 2735 2739 2738 2740 2927 2741 2742 2743 2744 2756 2755 2765 2926 2754 2750 2751 2749 2752 2753 2631 2632 2633 2709 2710 2711 2712 2713 9046 9047 2868 2869

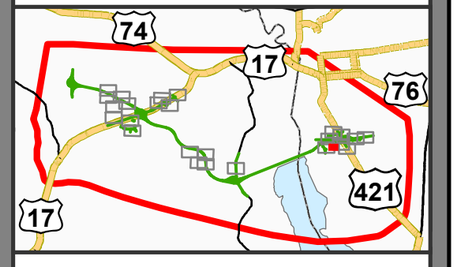
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 18A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Sheet 19A
Matchline Sheet 19B
Matchline Sheet 22A
Rutledge Dr
Vance St
Graham St
Ward St
Penn St
Morgan St
Marion Dr
Dobbs St
NSA 42
NSA 42
2871
1152
2872
2873
2874
2924
2923
2922
2921
2920
2919
2876
2875
2880
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2896
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2892
2890
2889
2888
2887
2886
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2883
2882
2881
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2906
2907
2910
2911
2912

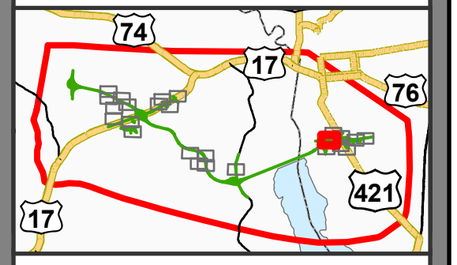
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 19

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

See Sheet 20A
See Sheet 19A
See Sheet 19B
See Sheet 22A
Matchline Sheet 18
Matchline Sheet 21
Matchline Sheet 22
NSA 43
NSA 44
NSA 42
Barrier 44
Barrier 42
Long Term 6-2018
Short Term 18-2015 (Amb)
Bell St
Crossover St
Monroe St
Louisiana Ave
Delaware Ave
Jefferson St
Adams St
Shipyard Blvd
Private
Dare St
Worth Dr
Vance St
Davie Dr
Calhoun
Williamson
Cape Fear B
117

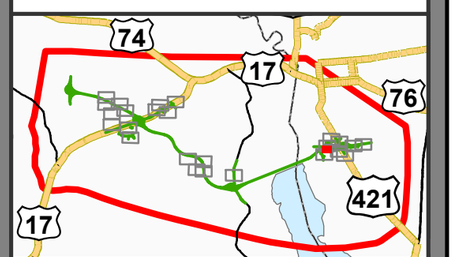
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 19A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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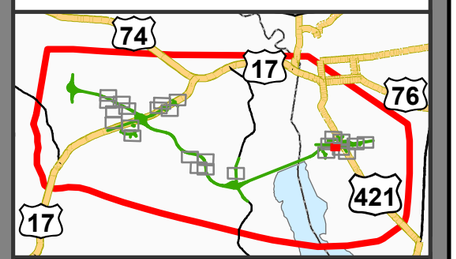
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 19B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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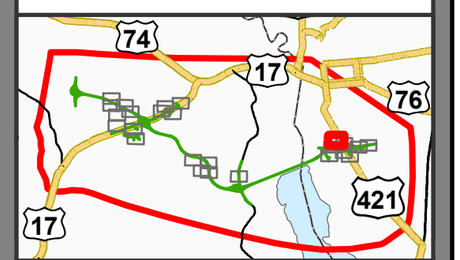
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 20

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Michigan Ave
Bordeaux Ave
Washington St
Botanical
NSA 45
Nevada Ave
Virginia Ave
Adams St
Matchline Sheet 21
Carolina Beach Rd
1302
1301
9086
9091
421
9087
9085
9084
9083
Medical Center Dr
9077
2700
1241
2701
1242
2696
2697
2698
1240
2699
Maryland Ave
Private
2702
2703
2704
2693
1837
1835
1833
1836
1834
1832
9090
Barrier 43
Matchline Sheet 19
Bell St
Barrier 44
2692
2705
1844
2691
1838
1845
1243
2690
1839
NSA 43
2689
1840
1846
2706
1245
1847
2686
1841
2695
1848
2685
1842
1190
2694
1849
2684
1843
1189
1188
Jefferson St
Crossover St
See Sheet 20A
9076
9078
Wellington Ave
9075
9080
NSA 44
9074
Short Term 13-2018
Buckingham
Cape Fear Blvd

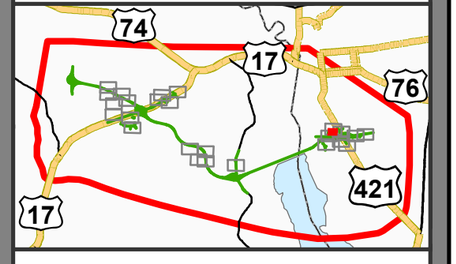
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 20A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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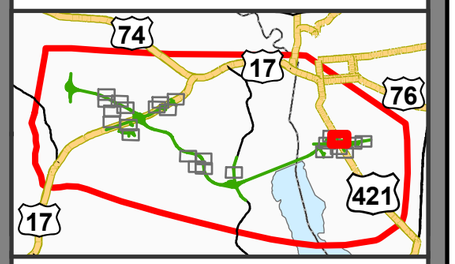
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 21

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

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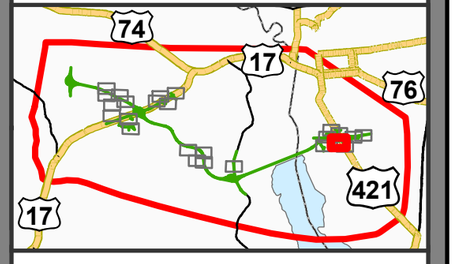
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 22

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Shipyard Blvd
117
Matchline Sheet 21
Matchline Sheet 19
See Sheet 19B
Williamson Dr
Barrier 42
Davie Dr
Matchline Sheet 23
Matchline Sheet 24
NSA 42
See Sheet 22A
Rutledge Dr
Marion Dr
Holbrooke Ave
421
NSA 39
Carolina Beach Rd
See Sheet 18A
Matchline Sheet 18
Ward St
Penn St
Morgan St
Private
1110
1307
1308
1309
9096
9100
9108
9110
9111
9107
9109
9048
9053
9049
9051
9054
9050
1067
1068
1065
1066
9052
9055
9064
9056
1050

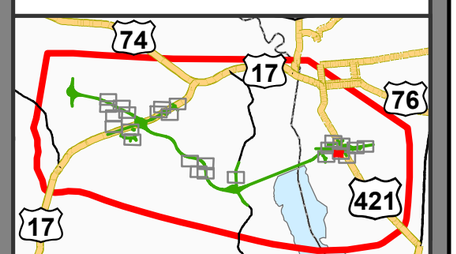
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 22A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

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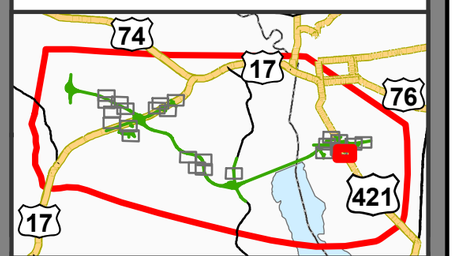
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 23

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

19B
See Sheet 22A
Matchline Sheet 24
Matchline Sheet 22
NSA 40
NSA 42
NSA 39
Davie Dr
Marion Dr
Carolina Beach Rd
421
Holbrooke Ave
Constitution Blvd
Nautilus Dr
Francis Marion Dr
Nina Pl
Landmark Dr
Parkway Blvd
Linda Vista Rd
Raleigh St
Private
9048
9049
9050
9051
9052
9053
9054
9055
9056
9057
9058
9059
9060
9061
9062
9063
9064
1050
1051
1052
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1066
1067
1068
1069
1076
1714

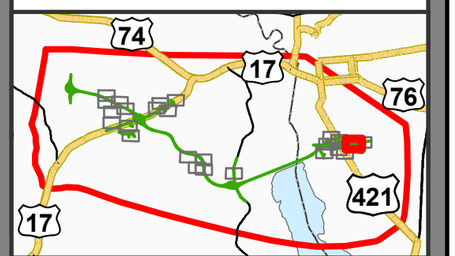
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 24

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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NSA 41
NSA 40
Barrier 40
Short Term 12-2018
See Sheet 24A
Matchline Sheet 21
Matchline Sheet 22
Matchline Sheet 23
Matchline Sheet 25
Troy Dr
Private
Shipyard Blvd
117
N Southwood Rd
Southwood Rd
Mayflower Dr
Constitution Blvd
Francis Marion Dr
Midland Dr
Monitor Dr
Unnamed
1096 1109 1098 1097 1095 1094 1091 1092 1093 1103 9066 9065 9067 9122 9121 9120 9119 9118 9123 9124 9125 1105 1106 1107 1108 2528 2526 2565 2564 1085 1086 1087 9126 9117 1070 1084 1083 1082 1081 1071 1073 1072 1080 1078 1074 1075 1077 1076 9111 2563 2561 2562 2560 2557 2556 2555 2559 1089 2554 2558

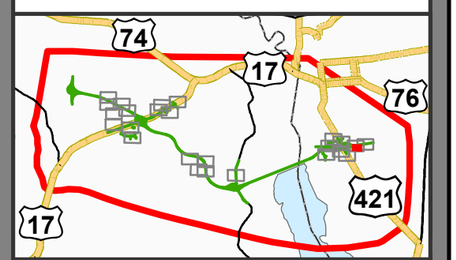
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 24A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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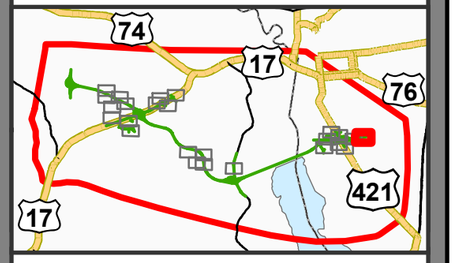
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative B - Sheet 25

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative B
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 24

See Sheet 24A

Barrier 40

NSA 40

117

Shipyard Blvd

Newkirk Ave

N Southwood Rd

Southwood Rd

Midland Dr

Francis Marion Dr

S 17th St

Cadfel Ct

Private

2775
9072
9070
9069
9068
9071
2525
2526
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2529
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2934
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2563
2561
2932
2562
2560
2557
1089
2933
2556
2559
2555
2558
2554

Alternative MA

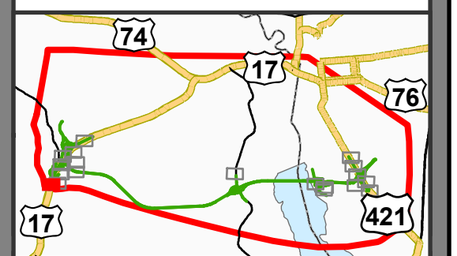
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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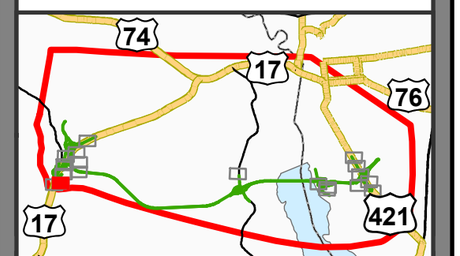
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

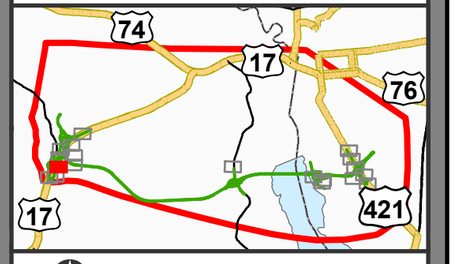
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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NSA 4
87
Barrier 3 West
195
Matchline Page 4
NSA 3
Bishop Branch Ln SE
Ocean Hwy E
White Bridge Ln SE
Matchline Page 6
17
194
193
192
NSA 2
Snowfield Rd SE
191
190
Hazels Branch Rd SE
Annie M Bryant Dr SE
Harrison Estate Ln SE
Barrier 2
189
188
187
Matchline Page 2
186
185
181
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177
184
183
Sunnybrook Way SE

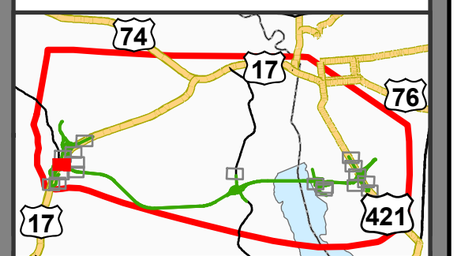
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 4

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Matchline Page 5
Matchline Page 7
Matchline Page 6
Matchline Page 3
NSA 4
NSA 3
NSA
Barrier 5
Barrier 3 West
Barrier 3 East
Barrier 4 North
Barrier 4 South
Short Term 1-2018
RMP 6560
Bishop Branch
Ocean Hwy E
Maco Rd NE
Old Town Creek Rd NE
Dave Way SE
Sloan Rd SE
L.d. Smith Ln SE
Hazels Branch Rd SE
Bishop Branch Ln SE
87
17
293
148
149
147
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144
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204
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195

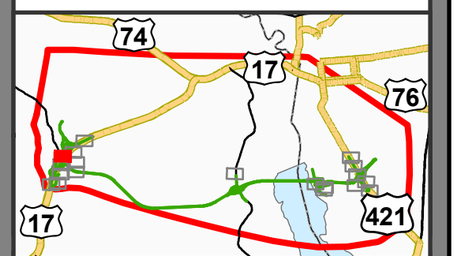
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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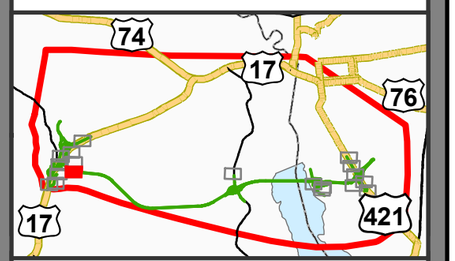
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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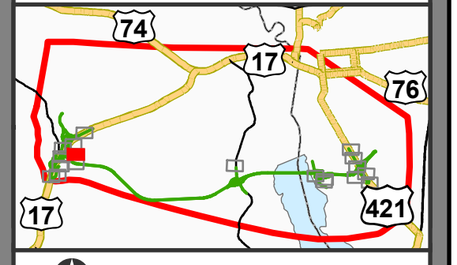
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Matchline Page 8
Matchline Page 5
Matchline Page 4
Matchline Page 6
Diamond Ct
Stoney Creek Ln
Red Stone Ct
Creek Stone Ct
Opal Stone Ct
Rhinestone Ct SE
Stoney Creek Ln SE
Brickstone Ct SE
Hazelstone Ln
Ruby Stone Ct
Crystal Stone Ct
Bluestone Ct
Anvil Ct
Planters Ct
Rye Field Ct
Dove Field Ct
Combine Ln
Morgan Branch
Bishop Branch
Barrier 5
Barrier 3
NSA 5
NSA 3
Long Term
1-2018

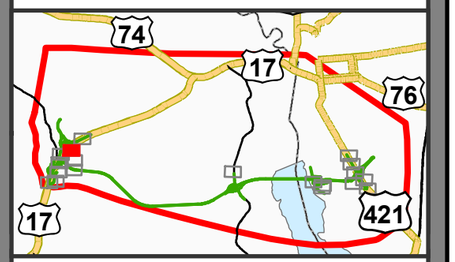
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 8

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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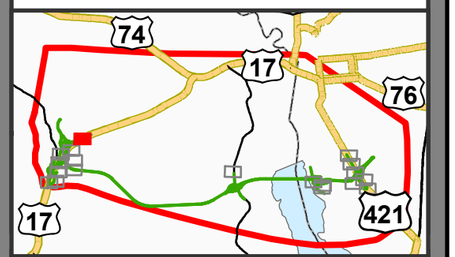
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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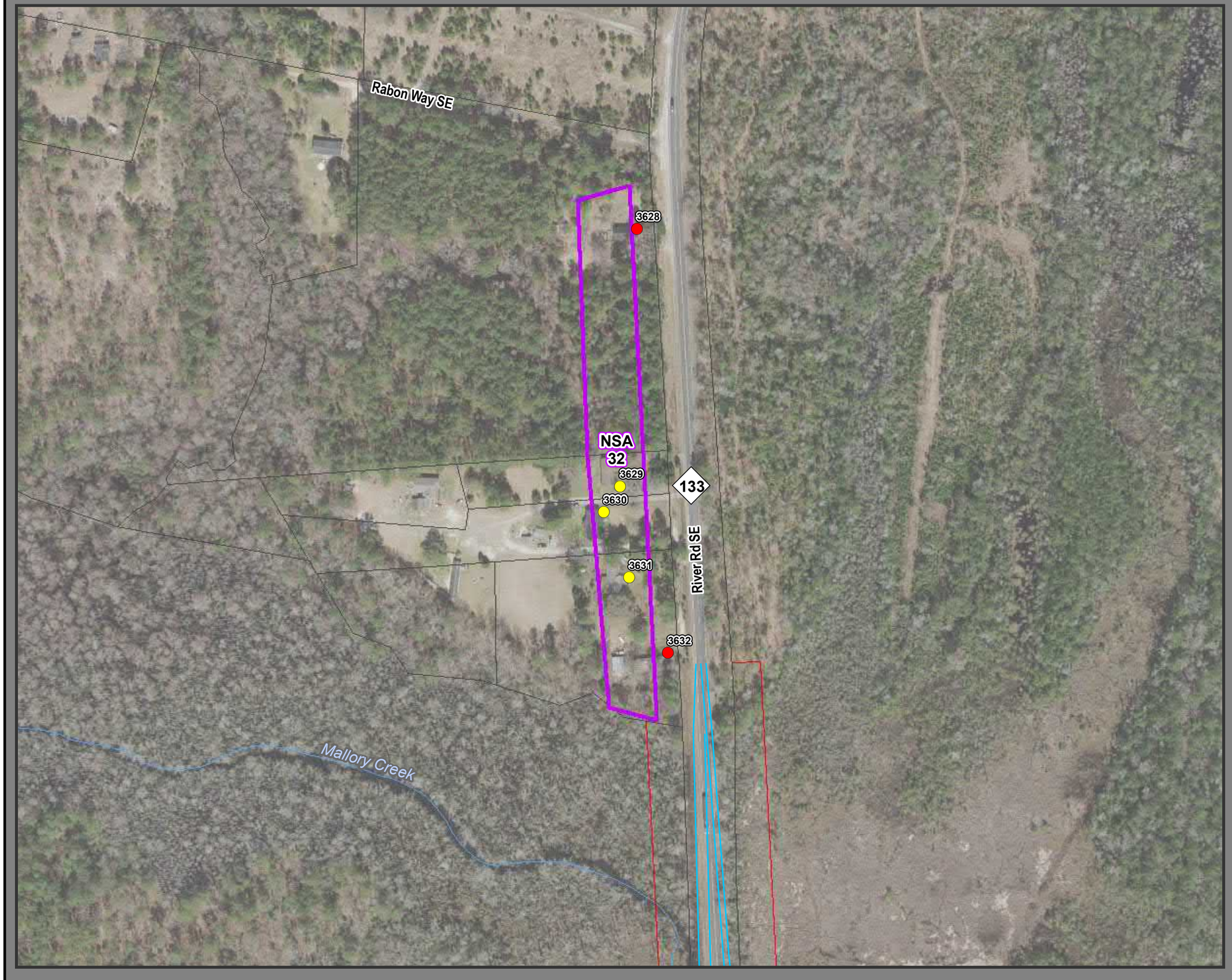
CAPE FEAR CROSSING

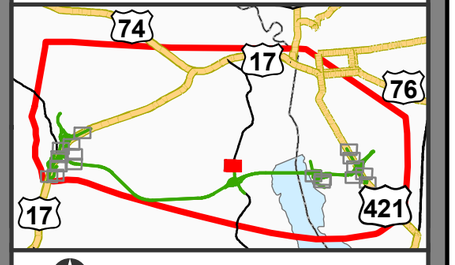
State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 10



Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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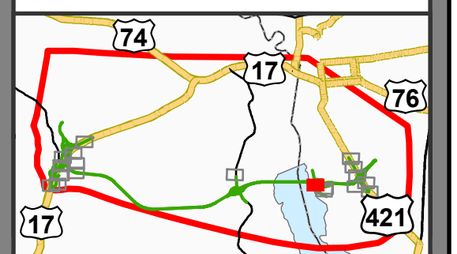
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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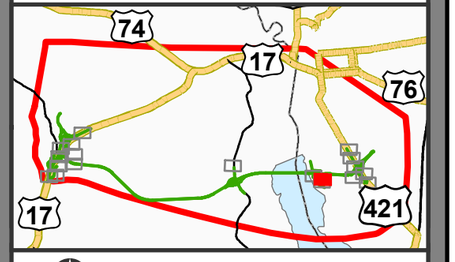
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Barrier 33/34
Sunnyvale Dr
Bryan Rd
Matchline Page 13
Matchline Page 11
Knight Rd
Rosa Dr
Portwatch Way
Floyd Dr
Hazel Smith Dr
Beattrice St
Melton Rd
River Rd
Operations Center Dr
Private
NSA 34
9127
9137
9145
2952
2951
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2948
2947
2946
2945
2944
9129
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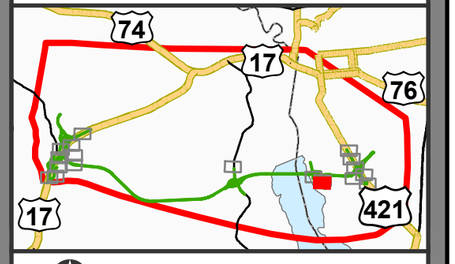
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Bryan Rd
Portwatch Way
Knight Rd
Rosa Dr
Floyd Dr
Hazel Smith Dr
Melton Rd
Beatrice St
River Rd
Private
Operations Center Dr
NSA 34
Matchline Page 11
Matchline Page 12
9130
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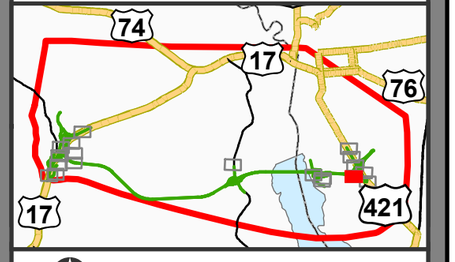
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Barrier 37
Barrier 35
Barrier 36
Independence Blvd
Crab Apple Ln
Private
421
Carolina Beach Rd
Ridge Rd
Captiva Ct
Portofino Ct
Sand Trap Ct
Echo Farms Blvd
Matchline Page 16
Matchline Page 15
NSA 35
NSA 36
3041
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See Sheet 16A
See Sheet 14A
See Sheet 14B

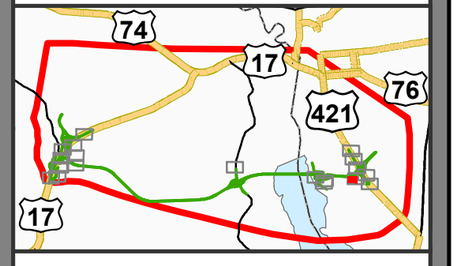
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 14A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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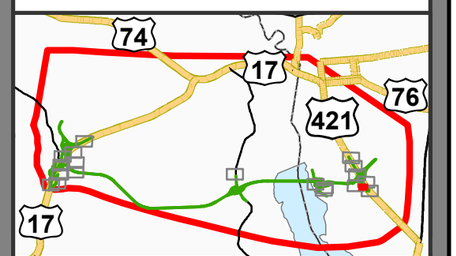
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 14B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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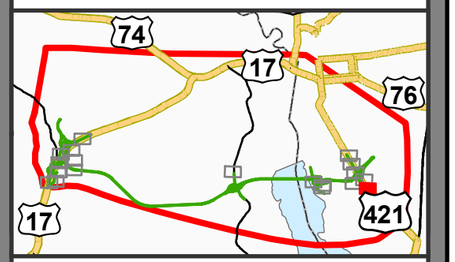
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

See Sheet 14B

See Sheet 15A

Matchline Page 16

Matchline Page 14

Short Term 20-2015

NSA 36

NSA 35

Carolina Beach Rd

Breezewood Dr

George Anderson Dr

Taliga Ln

Ryans Ct

Fairview Dr

Jonathan Ct

Echo Farms Blvd

3281

421

Terrington Dr

Belfairs Dr

Peeble Dr

Private

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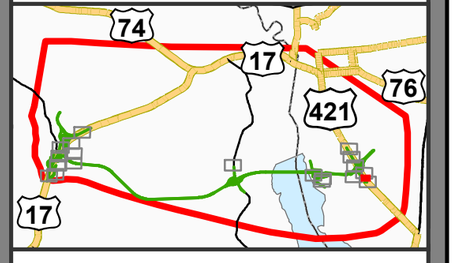
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 15A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 14B

Matchline Sheet 16A

Carolina Beach Rd

Breezewood Dr

Private

NSA 36

NSA 35

Short Term
20-2015

George Anderson Dr

Echo Farms Bl

421

CAPE FEAR CROSSING

State Transportation
Improvement Program
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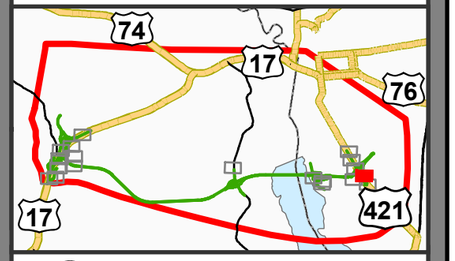
Figure 3
Alternative MA - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Barrier 35
Barrier 36
Carolina Beach Rd
Crab Apple Ln
Private
Ridge Rd
Echo Farms Blvd
Summerlin Falls Ct
Breezewood Dr
George Anderson D
421
NSA 35
NSA 36
Matchline Page 14
Matchline Page 15
Matchline Page 17
See Sheet 14B
See Sheet 15A
See Sheet 16A
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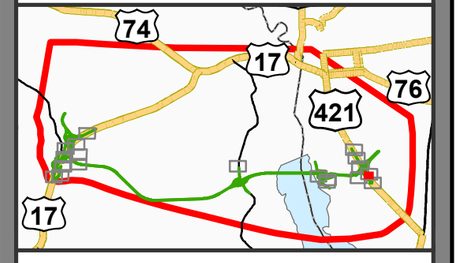
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 16A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Carolina Beach Rd
421
Breezewood Dr
Private
NSA 35
NSA 36
Matchline Sheet 14B
Matchline Sheet 15A
3109
3206
3104
3207
3105
3208
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3210
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3123
3453
3393
3333
3457
3397
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3450
3390
3449
3389

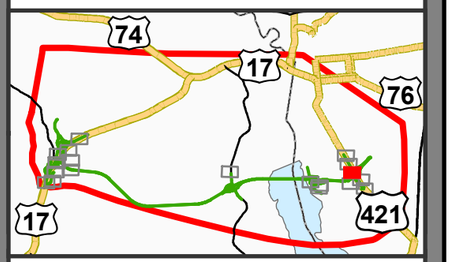
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 17

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Sunnyvale Dr
Palm St
Chula Vista Dr
Solid Hollow Ln
Private
Rebecca Ln
Independence Blvd
Southgate Rd
Short Term 19-2015
NSA 37
Pershing Ct
Long Term 5-2018
Hollins Rd
Barrier 37
Barrier 36
Barrier 35
Carolina Beach Rd
421
NSA 36
Matchline Page 18
Matchline Page 16
2994 2995 2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3009 3010 3011 3012 3013 3014 3015 3016 3017 3018 3019 3020 3021 3022 3023 3024 3025 3026 3027 3028 3029 3030 3031 3032 3033 3034 3035 3036 3037 3038 3039 3040
9151 9152 9153 9154 9155
2971 2972 2973 2974 2975 2976 2977
9150
3058 3083 3084 3085 3086 3087 3088 3089

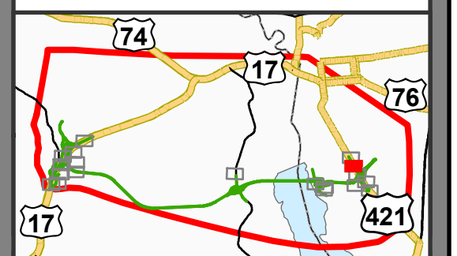
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 18

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Raleigh St
Carolina Beach Rd
Matchline Page 19
NSA 38
NSA 37
Matchline Page 17
Sunnyvale Dr
Palm St
Solid Hollow Ln
Rebecca Ln
421
2979
2978
2982
2981
2980
2984
2983
2985
9167
9165
2968
2986
9164
2987
9166
2988
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2990
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9156
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2997
2998
2999
3001
3000
3003
3002
3008
3006
3007
3005
9153
9152
3009
9154
9151
2971
2973
2972

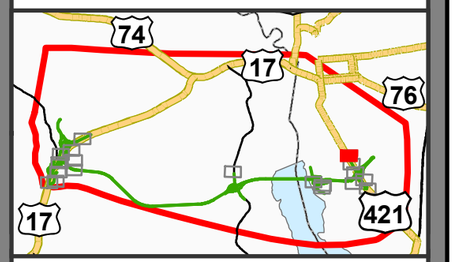
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative MA - Sheet 19

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative MA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

NSA 39
NSA 37
NSA 38
Nina Pl
Francis Marion Dr
Unnamed
Midland Dr
Linda Vista Rd
Parkway Blvd
Carolina Beach Rd
Landmark Dr
Raleigh St
Private
421
Matchline Page 18
2967
9168
9169
2979
2978
2982
2981
2980
2984
2983
2985
2986
9167
2968
9165
9164

Alternative NA

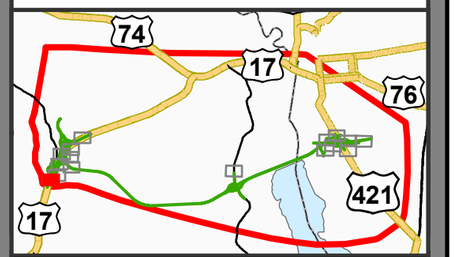
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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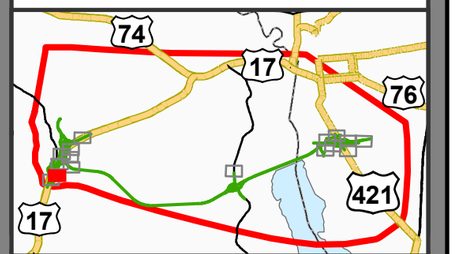
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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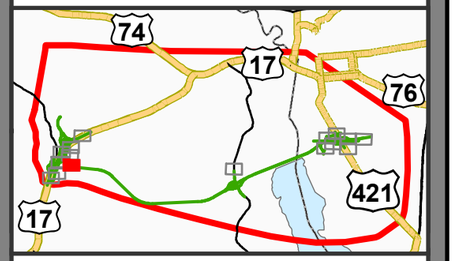
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Page 5
Matchline Page 4
Matchline Page 2
Bishop Branch
Morgan Branch
Hazelstone
Bluestone
Crystal Stone Ct
Stoney Creek Ln
Ruby Stone Ct
Bishop Branch Ln SE
White Bridge Ln SE
Barrier 5
Barrier 3 East
Long Term 1-2018
NSA 5
NSA 3

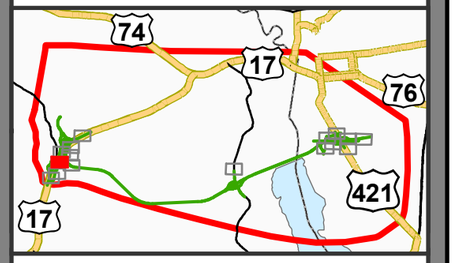
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 4

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Page 6
Matchline Page 3
Matchline Page 5
Bishop Branch
Barrier 5
NSA
NSA 4
NSA 3
Maco Rd NE
Old Town Creek Rd NE
Barrier 4 South
Barrier 4 North
RMP 6560
Ocean Hwy E
Dave Way SE
Sloan Rd SE
Hazels Branch Rd SE
Barrier 3 West
Barrier 3 East
Bishop Branch Ln SE
17
87
Short Term
1-2018
144
145
146
147
195
196
197
198
199
200
201
202
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218
221

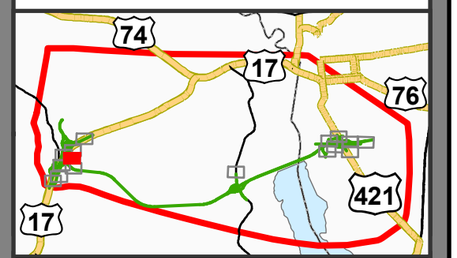
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Long Term 1-2015

NSA 5

Barrier 5

Matchline Page 7

Matchline Page 4

Matchline Page 6

Matchline Page 3

RMP 6560

Hazels Branch Rd SE

L.d. Smith Ln SE

Bishop Branch

Diamond Ct

Stoney Creek Ln

Red Stone Ct

Creek Stone Ct

Opal Stone Ct

Brickstone Ct SE

Stoney Creek Ln SE

Rhinestone Ct SE

Hazelstone Ln

Bluestone Ct

Anvil Ct

Planters Ct

Rye Field Ct

Covefield Ln

Combine Ln

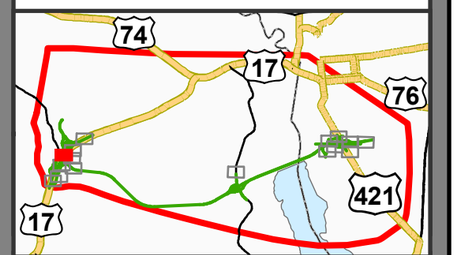
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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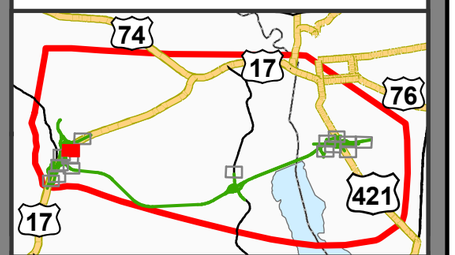
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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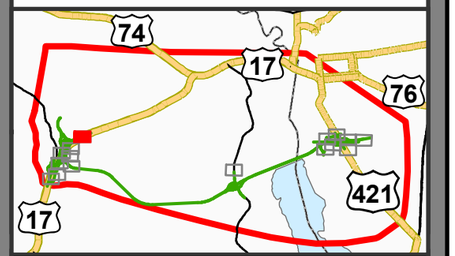
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 8

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

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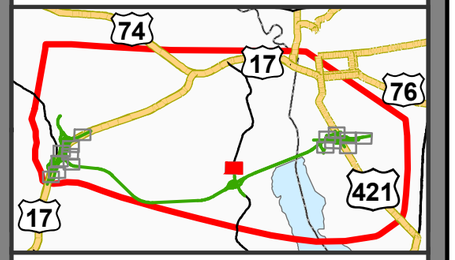
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

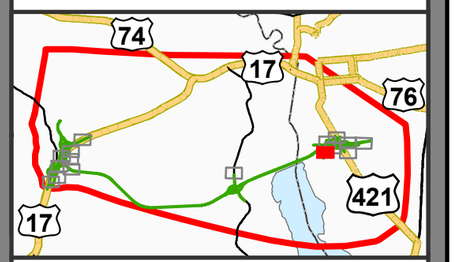
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 10

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Page 11
Matchline Page 12
Barrier 42
NSA 42
Davie Dr
Calhoun Dr
Dare St
Rutledge Dr
Chappell Ave
Worth Dr
Dobbs St
Net Ln
Virgil Ln
Vance St
Graham St
Penn St
Ward St
Sumter Dr
See Sheet 10A
See Sheet 10B
See Sheet 12A
See She 12B

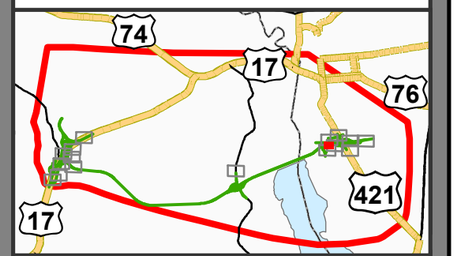
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 10A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

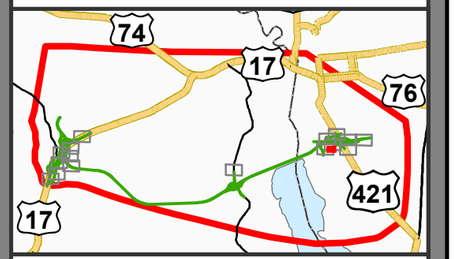
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 10B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Matchline Sheet 10A
Matchline Sheet 12A
Matchline Sheet 12B
Rutledge Dr
Vance St
Graham St
Ward St
Penn St
Morgan St
Dobbs St
Marion Dr
Privat
1151
2871
1152
2872
2873
2874
2924
2923
2922
2921
2920
2919
2876
2875
2880
2878
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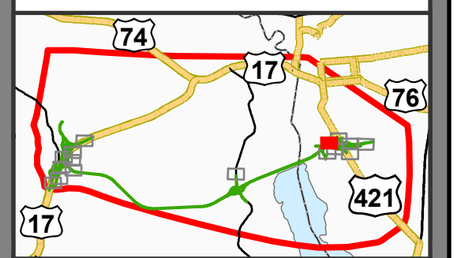
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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AECOM

Matchline Page 12

Matchline Page 10

See Sheet 11A

See Sheet 11B

See Sheet 10A

See Sheet 12A

Barrier 43

Barrier 44

Barrier 42

NSA 43

NSA 44

NSA 42

Long Term 6-2018

Short Term 18-2015 (Amb)

Maryland Ave

Delaware Ave

Shipyard Blvd

Williamson Dr

Bell St

Crossover St

Monroe St

Louisiana Ave

Jefferson St

Adams St

Dare St

Worth Dr

Private

Cape Fear B

2700 2696 2697 2698 1240 2699 1241 2701 1242 9085 2702 2703 2704 2705 1243 1245 2706 2695 2694 1190 1189 1188 1187 1186 1185 1111.1 1111 1114 9090 9099 1317 1110 1307 1308 1309 2693 1837 1836 1835 1834 1833 1832 2692 2691 2690 2689 2686 2685 2684 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 2683 2682 2681 2680 2679 2678 2677 2688 2687 2674 2675 2676 2618 1113 1112 9098 2617 2616 9097 9094 9095 9096 9093 9092 2630 2629 2628 2627 1317

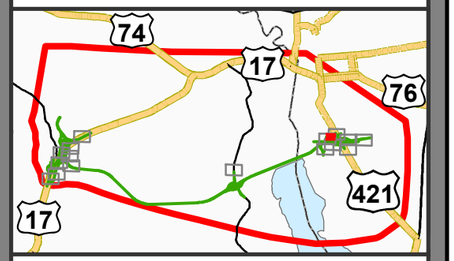
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 11A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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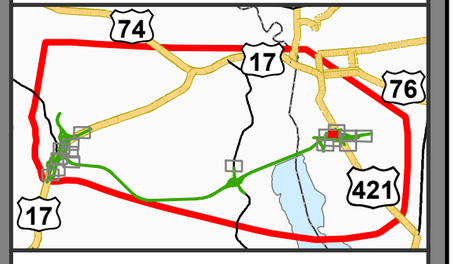
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 11B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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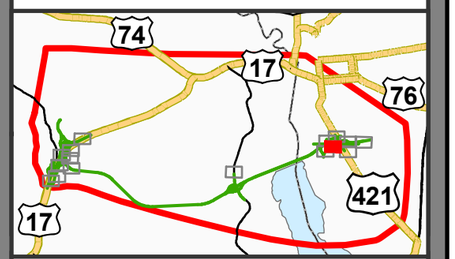
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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11A
See Sheet 11B
See Sheet 12A
See Sheet 10A
See Sheet 10B
See Sheet 12B
Matchline Page 13
Matchline Page 11
Matchline Page 15
Matchline Page 10
Matchline Page 14
NSA 43
NSA 44
NSA 42
Barrier 43
Barrier 44
Barrier 42
Cape Fear Blvd
Adams St
Shipyard Blvd
Private
Long Term 6-2018
Short Term 18-2015 (Amb)
Williamson Dr
Davie Dr
Calhoun Dr
Marion Dr
Carolina Beach Rd
Chappell Ave
Vance St
Rutledge Dr
Graham St
Ward St
Penn St
Morgan St
421
117
1187
1186
1185
1111.1
1111
1114
1317
1110
1307
1308
1309
9104
9105
9106
9101
9102
9103
9099
9097
9094
9095
9093
9096
9100
9107
2710
2711
2712
2713
9046
2868
2869
9047
2756
2755
2765
2926
2754
9049
9050

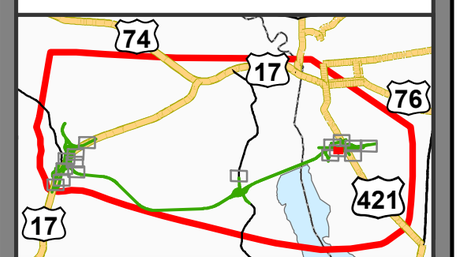
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 12A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Private
Long Term 6-2018
Short Term 18-2015 (Amb)
Matchline Sheet 10A
Barrier 42
Williamson Dr
Davie Dr
Calhoun Dr
Rutledge Dr
NSA 42
Matchline Sheet 12B
Matchline Sheet 10B

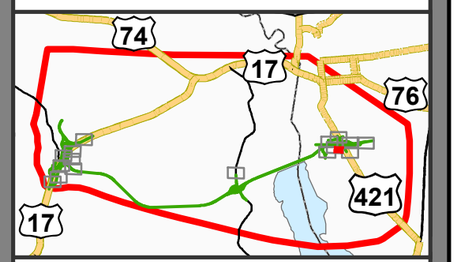
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 12B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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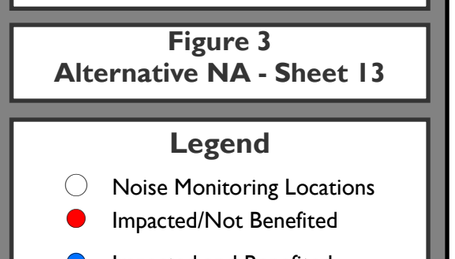
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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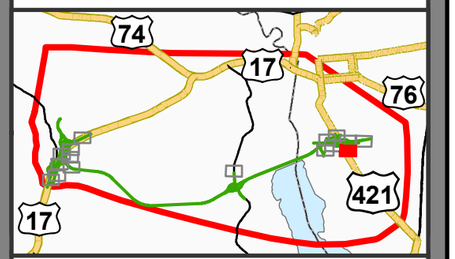
CAPE FEAR CROSSING

State Transportation Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Matchline Page 42
Matchline Page 15
Matchline Page 43
See Sheet 12B
See Sheet 15A
NSA 40
NSA 39
Monitor Dr
Holbrooke Ave
Constitution Blvd
Nautilus Dr
Marion Dr
Private
Carolina Beach Rd
421
Unnamed
Francis Marion Dr
Midland Dr
Nina Pl
Landmark Dr
Parkway Blvd
Linda Vista Rd
Leigh St
9048
9049
9050
9051
9052
9053
9054
9055
9056
9057
9058
9059
9060
9061
9062
9063
9064
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1069
1074
1075
1076
1077
1714

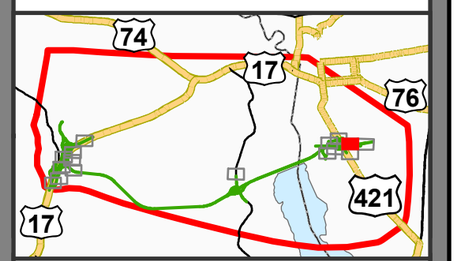
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Wellington Ave
Wonder Way
Buckingham Ave
Troy Dr
Short Term 17-2015
NSA 41
Matchline Page 13
Private
Matchline Page 16
See Sheet 15A
Shipyard Blvd
Constitution Blvd
Barrier 40
Short Term 12-2018
Mayflower Dr
N Southwood
NSA 40
Carolina Beach Rd
Matchline Page 12
117
421
Matchline Page 14
Sheet 12B
Brooke Ave
9088 9089 9082 9106 9108 9107 9110 9111 9112 9113 9114 9115 9116 9117 9118 9119 9120 9121 9122 9123 9124 9125 9126
1099 1100 1101 1096 1109 1097 1098 1095 1094 1091 1092 1093 1103 1102 1104 1105 1106 1108 1086 1085 1087 1084 1083 1082 1081 1080 1078 1077 1070 1071 1073 1072 1074 1075
9066 9065 9067

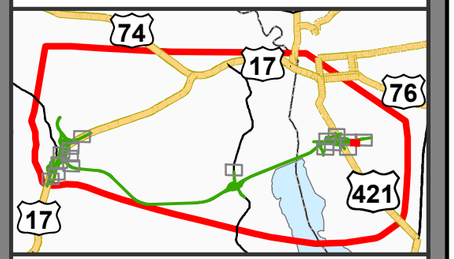
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 15A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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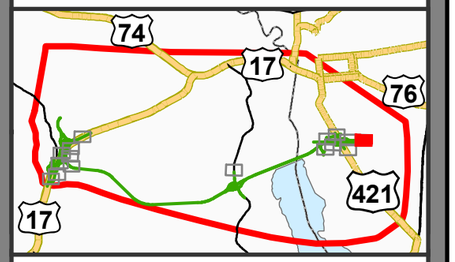
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative NA - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative NA
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Alternative Q

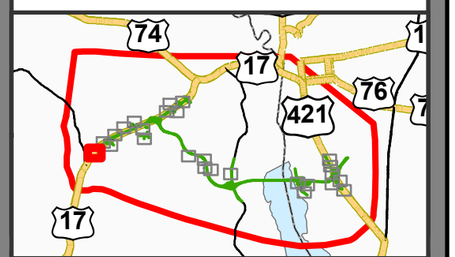
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Matchline Page 2

Ocean Hwy E
17
RMP 6562
RMP 6561
RMP 6560
Hazels Branch Rd SE
Stoney Creek Ln
Yellow Stone Ct
Combine Ln SE
Bridle Way SE
Rye Ln
Combine Ln
Rye Field Ct
NSA 5
Short Term
4-2018
Short Term
3-2018
Long Term
1-2015
339
340
341
342
346
347
348
349
350
351
352
314
315
316
317

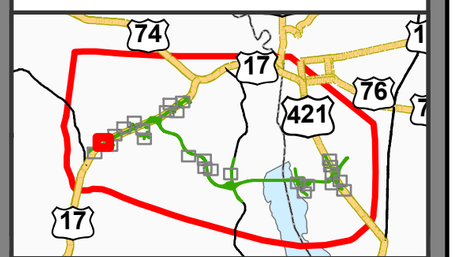
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline

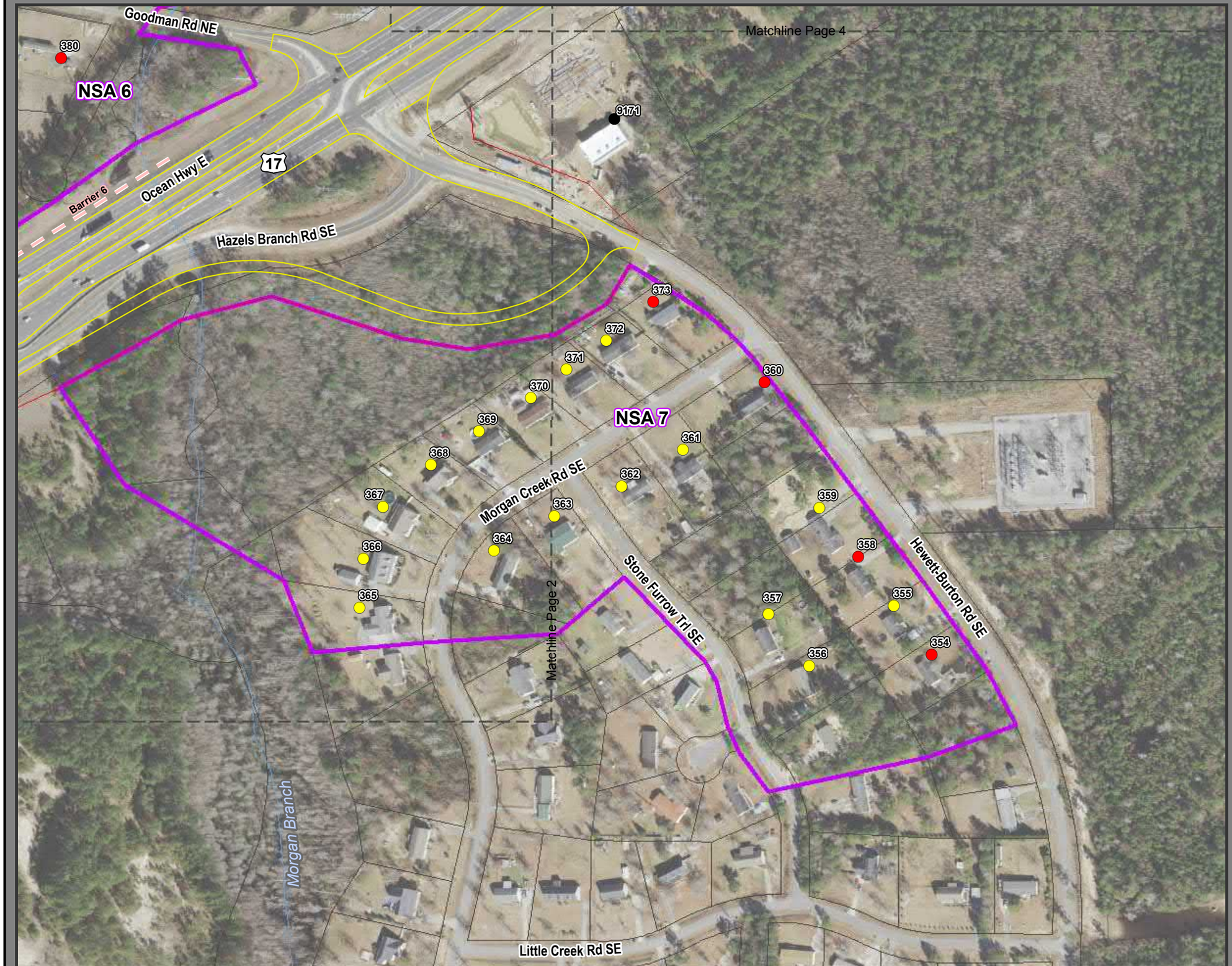


0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Goodman Rd NE
Wolfridge Rd NE
Morgan Branch
Matchline Page 4
9170
381
379
380
378
Short Term
5-2018
NSA 6
377
375
374
376
Mimosa Trl NE
Matchline Page 3
Hewett-Burton Rd S
Hazels Branch Rd SE
Barrier 6
17
370
369
368
NSA 7
367
366
365
364
Morgan Creek Rd S
RMP6563
Ocean Hwy E
Matchline Page 1



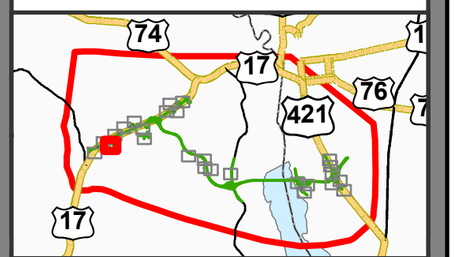
CAPE FEAR CROSSING

State Transportation Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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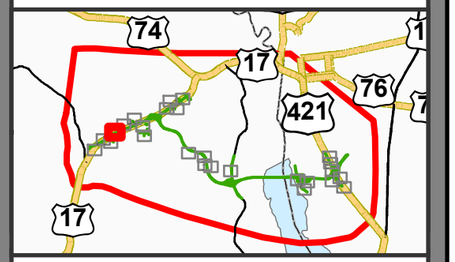
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 4

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

rystal Lake Dr NE
Morgan Branch
Carol-Lynn Dr NE
Ocean Hwy E
17
NSA 8
NSA 9
Short Term
5-2015
Matchline Page 5
Matchline Page 2
Matchline Page 3
9170
382
383
384
385
386
387
388
389
390
398
399
400
401
402

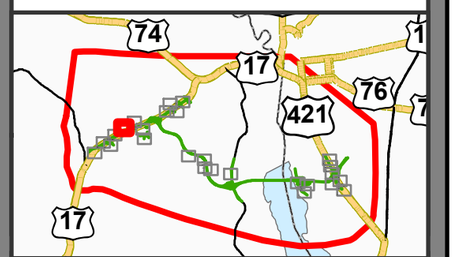
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Buckeye Rd NE
Webster Ct NE
Rachel Wynd NE
Carol-Lynn Dr NE
Old Lanvale Rd NE
Ocean Hwy E
17
NSA 8
NSA 10
Matchline Page 4
Matchline Page 6
426
425
423
422
421
420
419
418
417
397
396
395
394
393
392
391
390
389

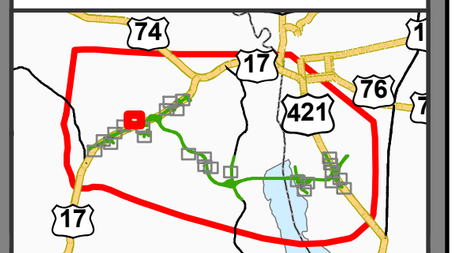
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Old Lanvale Rd
Lanvale Rd NE
Dove Way NE
Clay Rd NE
Old Lanvale Rd NE
Ocean Hwy E
17
NSA 10
NSA 11
Matchline Page 5
Matchline Page 7
438
432
433
437
431
429
436
434
427
435
426
425
424
428
430
9001
9002
9000
423
422
421

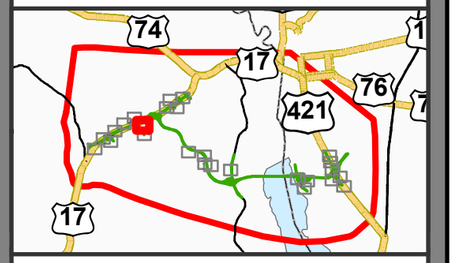
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

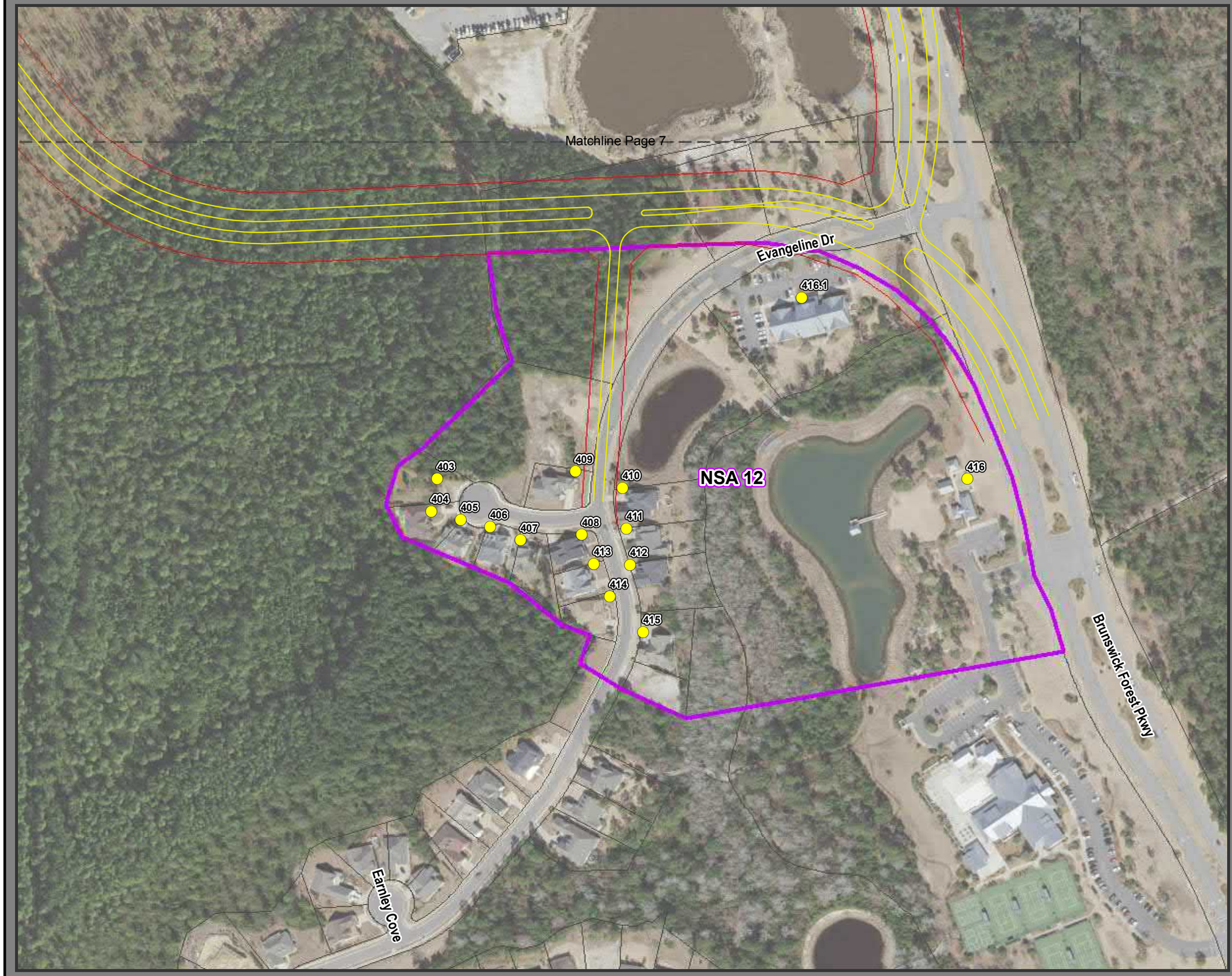
AECOM

NSA 10
NSA 11
Ocean Hwy E
17
Matchline Page 6
East Cutlar Crossing
Dickinson Dr
Brunswick Village Blvd
Provision Pkwy
S Baxter Dr
South Dickinson Dr
Brunswick Forest Pkwy
Matchline Page 8
9005
9006
438.2
438.1
9011
438.4
438.3
9003
9004
9010
9008
9007
9009

CAPE FEAR CROSSING

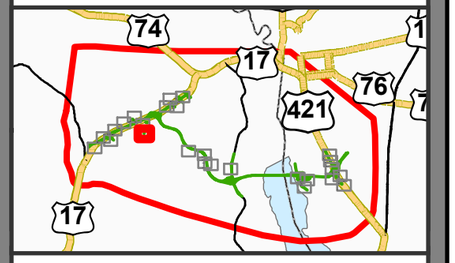
State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 8



Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

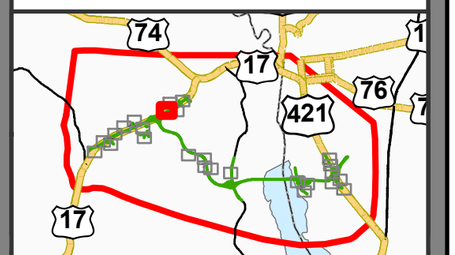
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

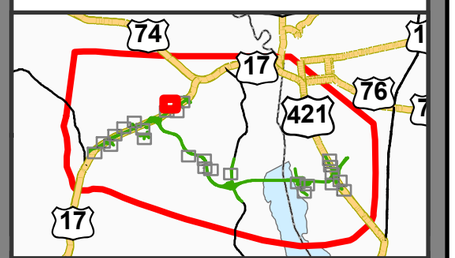
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 10

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Maplechase Dr
Backhoe Rd
Gregory Rd
Matchline Page 12
Interberry Cir
Kobus Ct
NSA 18
NSA 19
Matchline Page 9
Matchline Page 11
Magnolia Village Way
Eastowne Ct
Benton Brown Way NE
Cumbertree Ct
Jackeys Creek
Ocean Hwy E
New Pointe Blvd
17
464
463
462
461
460
459
458
455
456
454
457
453
450
451
452
449
448
447
446
445
9026
9027
9028
9015
9014
9016
466
467
468
465

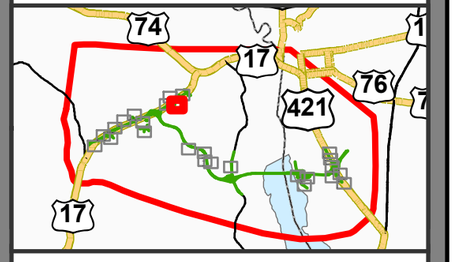
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

NSA 19
NSA 20
See Sheet 11A
Matchline Page 10
Matchline Page 12
Matchline Page 9
Ocean Hwy E
17
New Pointe Blvd
Ocean Gate Plaza
West Gate Dr
Old Woods Dr
Hunterstone Dr
Maple Tree Dr
Hickory Hill Dr
Town Lake Dr
Jackeys Creek
466
465
465.1
9016
9017
9018
9019
9020
9023
9024
9025

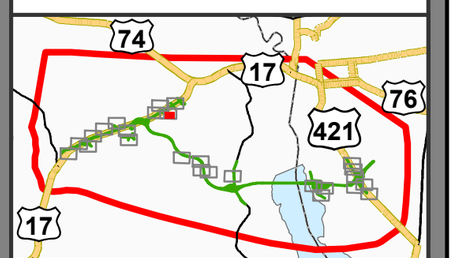
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 11A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

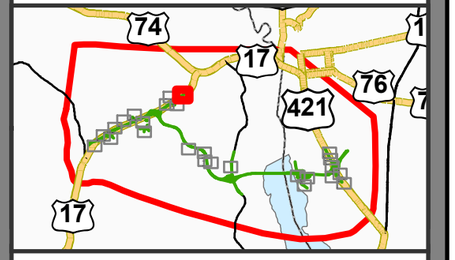
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Waterford Business Center Way
Drager Rd
Leana Dr
Olde Waterford Way
Ploof Rd
Gregory Rd
Ocean Hwy E
New Pointe Blvd
Ocean Gate Plaza
NSA 22
Matchline Page 10
Matchline Page 11
9019
9020
9021
9022
9023
9028
9029
9030
9031
9032
9033
9034
9035
9036
9037
9038
9039
9040
9041
9042
9043
9044
9045
469
17

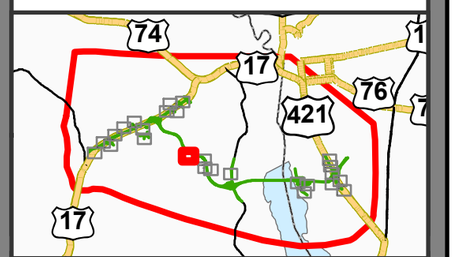
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Barrier 29/30

2172
2171
2165
2166
2167
2168
2163
2162
2161
2156

Rice Gate Way
Lillibridge Dr

NSA 28
NSA 29

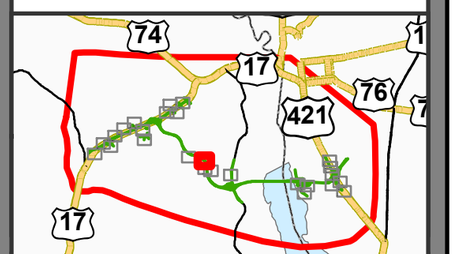
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Barrier 29/30
Barrier 31
NSA 30
NSA 31
Matchline Page 15
Matchline Page 16
Cove Landing
Hillshire Dr
South Brook Rd
Waters End Ct
S. Sleepy Oak Ln
Short Term
Long Term 4-2018

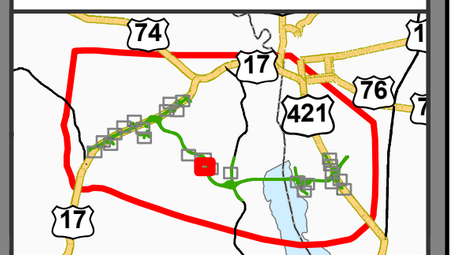
CAPE FEAR CROSSING

State Transportation Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Short Term 13-2015
Long Term 4-2018
Short Term 10-2018 (Amb)
NSA 29
NSA 30
NSA 31
Barrier 31
Barrier 29/30
Matchline Page 14
Matchline Page 16
Shore Park Dr
Stoney Point Dr
Shelmore Way
South Brook Rd

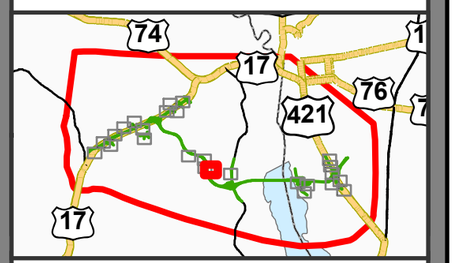
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Matchline Page 14

Matchline Page 15

Aruba Ct

Bimini Dr

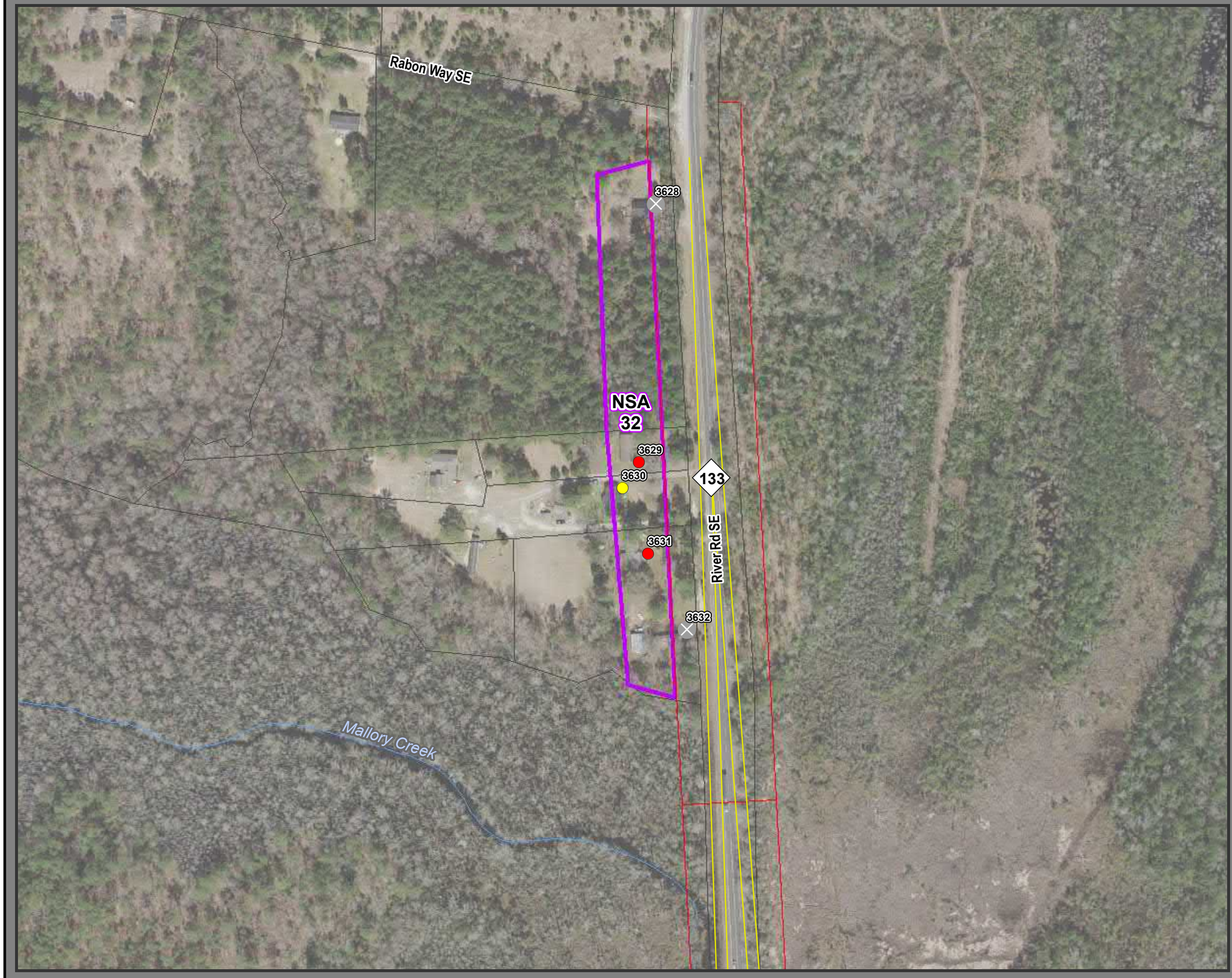
Barrier 29/30

Barrier 31

NSA 30

NSA 31

Short Term
10-2018 (Amb)



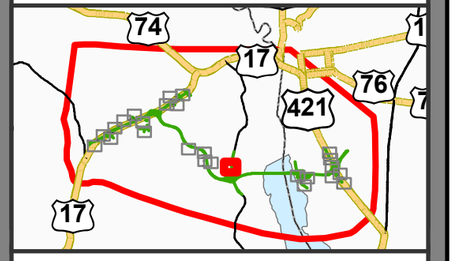
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 17

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

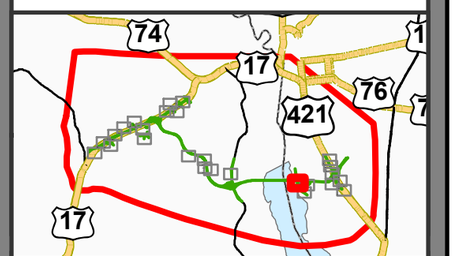
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 18

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

CAPE FEAR RIVER
River Rd
Barrier 33/34
Sunnyvale Dr
Matchline Page 19
Private
2938
2953
NSA 33
CAPE FEAR RIVER
9144
9137
9127
9145
2952
2951
2950
2949
9128
9129
Bryan Rd
9146
9147
2939
9148
9136
9130
9132
9133
Knight Rd
9131
9149
Portwatch Way
9135
9134
Matchline Page 20
2957
2955
2956
NSA 34
Floyd Dr
2954

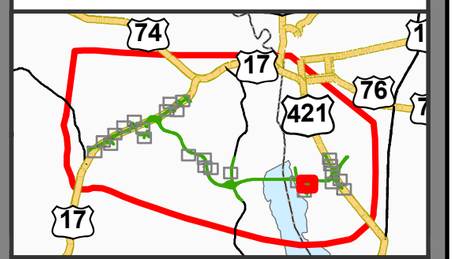
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 19

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Private
Barrier 33/34
Sunnyvale Dr
Bryan Rd
Rosa Dr
Knight Rd
Matchline Page 18
Portwatch Way
Matchline Page 20
Floyd Dr
Hazel Smith Dr
Beattrice St
Melton Rd
River Rd
NSA 34
9144
9137
9146
9147
9148
9136
9132
9133
9149
9135
9134
9138
2952
2951
2950
2949
2948
2947
2946
2945
2944
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2964
2962
2963
2965

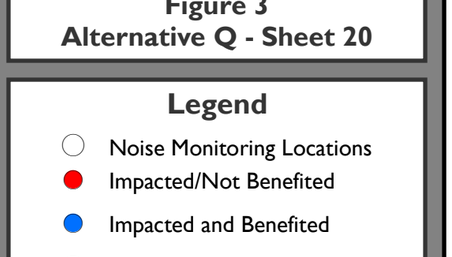
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 20

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Floyd Dr
2954
2955
2958
2960
2966
2961
2962
2963
2964
2965
Matchline Page 18
NSA 34
Beattrice St
Hazel Smith Dr
Melton Rd
9143
River Rd
Matchline Page 19
9142
9138
Operations Center Dr
9140
9139
Private
2937
9141
CAPE FEAR RIVER

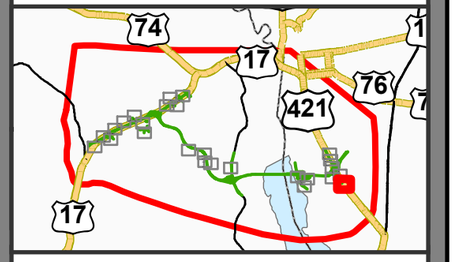
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 21

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

See Sheet 23B

See Sheet 23C

Matchline Page 23

Matchline Page 22

Short Term 20-2015

NSA 36

NSA 35

Breezewood Dr

George Anderson Dr

Habberline St

Taliga Ln

Ryans Ct

Jonathan Ct

Fairview Dr

Carolina Beach Rd

Echo Farms Blvd

421

Terrington Dr

Belfairs Dr

Peeble Dr

Newcastleton Dr

Orchid Dr

Private

3071 3072 3073 3074 3188 3075 3189 3076 3190 3077 3199 3198 3197 3078 3196 3195 3194 3080 3193 3192 3191 3082 3079 3200 3201 3202 3081 3203 3204 3205 3165 3166 3167 3168 3170 3169 3172 3171

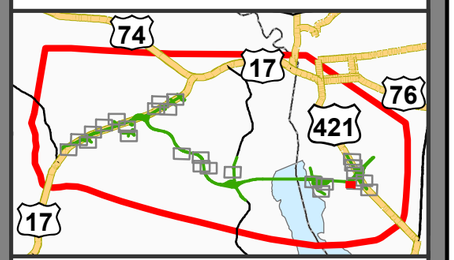
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 21A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

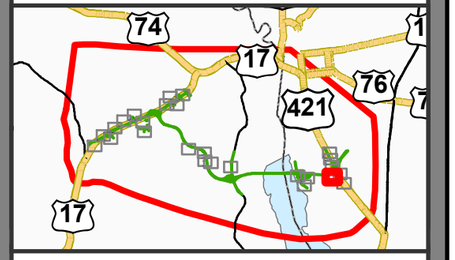
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 22

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

3109
Barrier 37
Barrier 36
Barrier 35
Independence Blvd
3060
3061
Crab Apple Ln
3062
3091
3092
3093
3097
3099
3063
Private
Carolina Beach Rd
NSA 36
3096
3095
3094
3064
3065
3067
3066
3068
3069
3070
See Sheet 23A
3109
3049
3048
3050
3047
3051
3046
3052
3045
3044
3057
3053
3043
3054
3042
3055
3041
3056
Ridge Rd
NSA 35
Captiva Ct
See Sheet 21A
Portofino Ct
Matchline Page 23
See Sheet 23B
Matchline Page 21
See Sheet 23C
Echo Farms Blvd
Sand Trap Ct
42

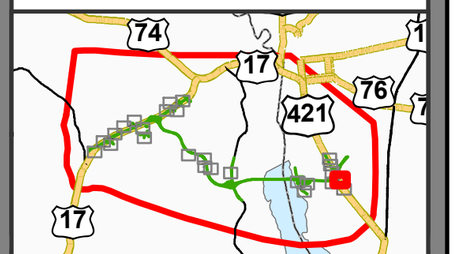
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 23

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Matchline Page 24
Matchline Page 22
Matchline Page 21
See Sheet 23A
See Sheet 23B
See Sheet 23C
NSA 35
NSA 36
Crab Apple Ln
Private
Ridge Rd
Carolina Beach Rd
Breezewood Dr
Summerlin Falls Ct
George Anderson Dr
Echo Farms Blvd
421
3109

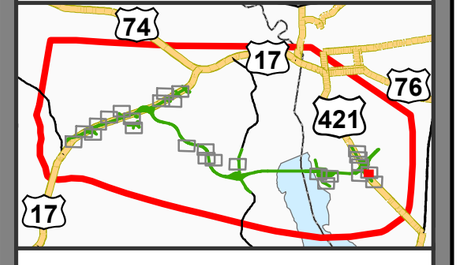
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 23A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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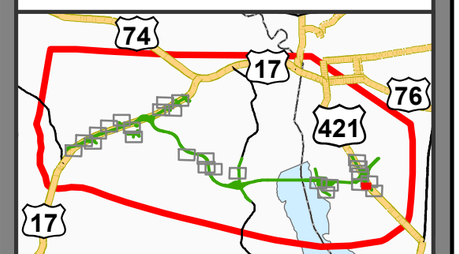
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 23B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 23A

Matchline Sheet 23C

Carolina Beach Rd

421

NSA 36

Echo Farms Blvd

Sand Trap Ct

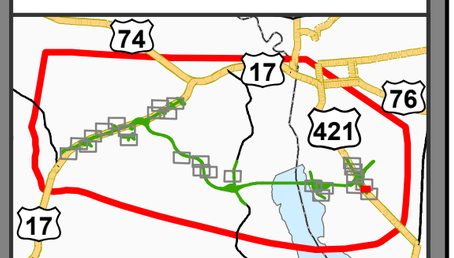
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 23C

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Sheet 23B

Matchline Sheet 23A

Carolina Beach Rd

421

Private

Breezewood Dr

George Anderson Dr

Echo Farms Rd

Short Term
20-2015

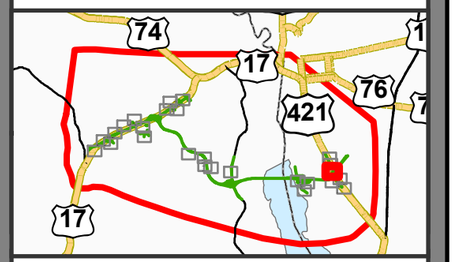
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 24

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

Sunnyvale Dr
Palm St
Chula Vista Dr
Solid Hollow Ln
Rebecca Ln
Independence Blvd
Southgate Rd
Private
Pershing Ct
Hollins Rd
Carolina Beach Rd
Barrier 37
Barrier 36
Barrier 35
421
Matchline Page 25
Matchline Page 23
Short Term 19-2015
Long Term 5-2018
NSA 37
NSA 36
2994 2995 2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3009 3010 3011 3012 3013 3014 3015 3016 3017 3018 3019 3020 3021 3022 3023 3024 3025 3026 3027 3028 3029 3030 3031 3032 3033 3034 3035 3036 3037 3038 3039 3040
9151 9152 9153 9154 9155 9150
2971 2972 2973 2974 2975 2976 2977
3058 3083 3084 3085 3086 3087 3088 3089

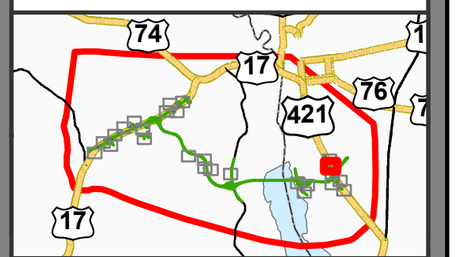
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 25

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

AECOM

NSA 38
NSA 37
Carolina Beach Rd
Sunnyvale Dr
Palm St
Chula Vista Dr
Private
Solid Hollow Ln
Rebecca Ln
Southgate Rd
Independence Blvd
Barrier 37
Barrier 36
421
Matchline Page 24
Matchline Page 26
2983 2984 2985 2986 2987 2988 2989 2990 2991 2992 2993 2994 2995 2996 2997 2998 2999 3000 3001 3002 3003 3004 3005 3006 3007 3008 3010 3011 3012 3016
2969 2970 2971 2972 2973 2974 2975 2976 2977
9151 9152 9153 9154 9155 9156 9157 9158 9159 9160 9161 9162 9163 9164 9165 9166 9167

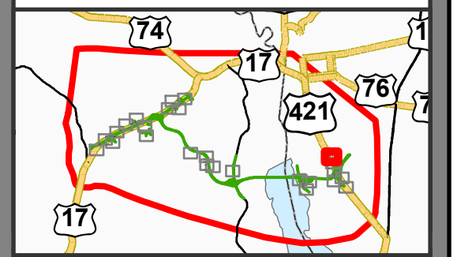
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative Q - Sheet 26

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative Q
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Nina Pl
NSA 39
Francis Marion Dr
Linda Vista Rd
Parkway Blvd
Landmark Dr
Raleigh St
421
Carolina Beach Rd
NSA 38
NSA 37
Private
Matchline Page 25
2967
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9169

Alternative T

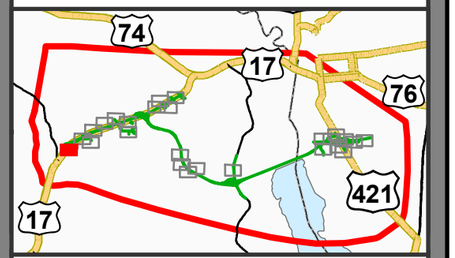
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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RMP 6562
Ocean Hwy E
RMP 6561
17
349
348
Short Term
4-2018
Combine Ln SE
350
351
352
347
346
341
Bridle Way SE
340
342
339
Rye Ln
317
315
316
314
Short Term
3-2018
NSA 5
RMP 6560
Hazels Branch Rd SE
Yellow Stone Ct
Stoney Creek Ln
Combine Ln
Cole Ct
Long Term
1-2015
Rye Field Ct
Diamond Ct
Anvil Ct
Planters Ct

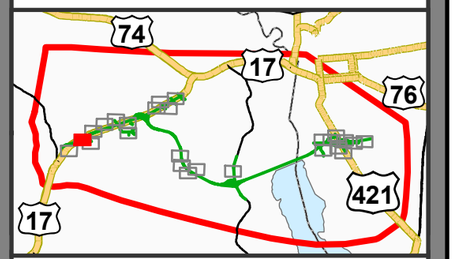
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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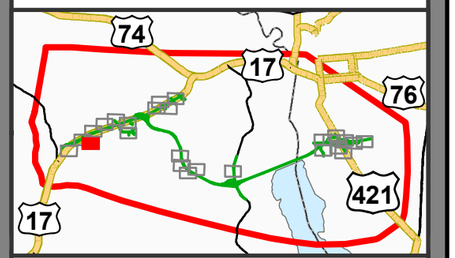
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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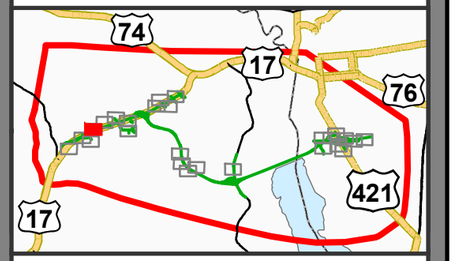
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 4

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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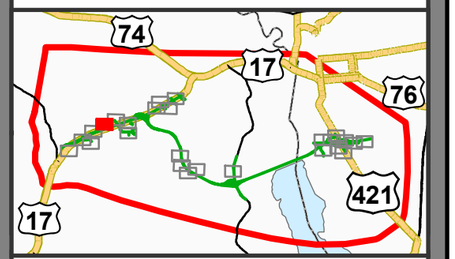
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Buckeye Rd NE
Webster Ct NE
Rachel Wynd NE
Carol-Lynn Dr NE
Old Lanvale Rd NE
Ocean Hwy E
17
Matchline Page 4
Matchline Page 6
NSA 8
NSA 10
389
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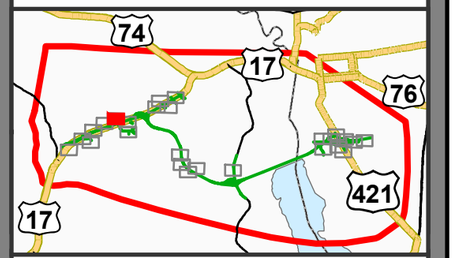
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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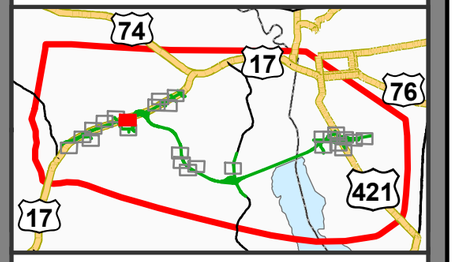
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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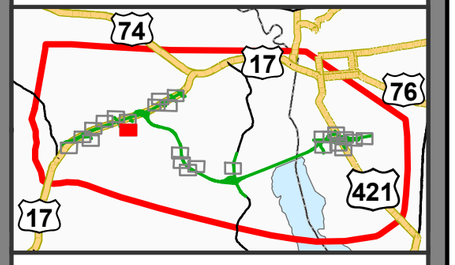
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 8

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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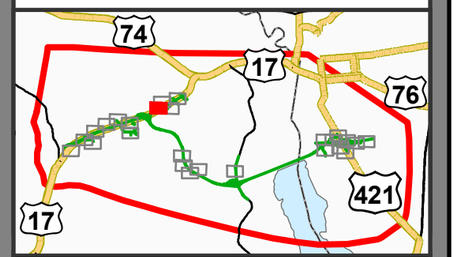
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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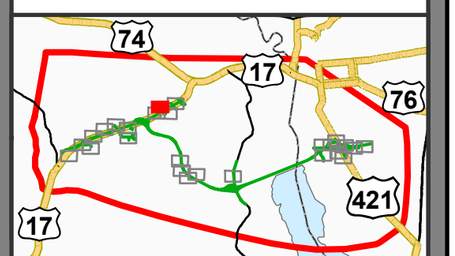
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 10

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Maplechase Dr
Winterberry Cir
Backhoe Rd
Gregory Rd
Matchline Page 12
Benton Brown Way NE
Matchline Page 9
Matchline Page 11
NSA 18
NSA 19
Kobus Ct
Cumbertree Ct
Magnolia Village Way
Eastowne Ct
Jackeys Creek
West Gate Dr
New Pointe Blvd
Ocean Hwy E
17
9012
9013
9014
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9018
9026
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9028
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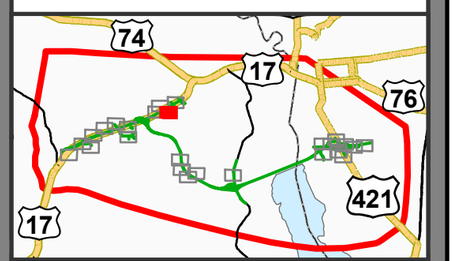
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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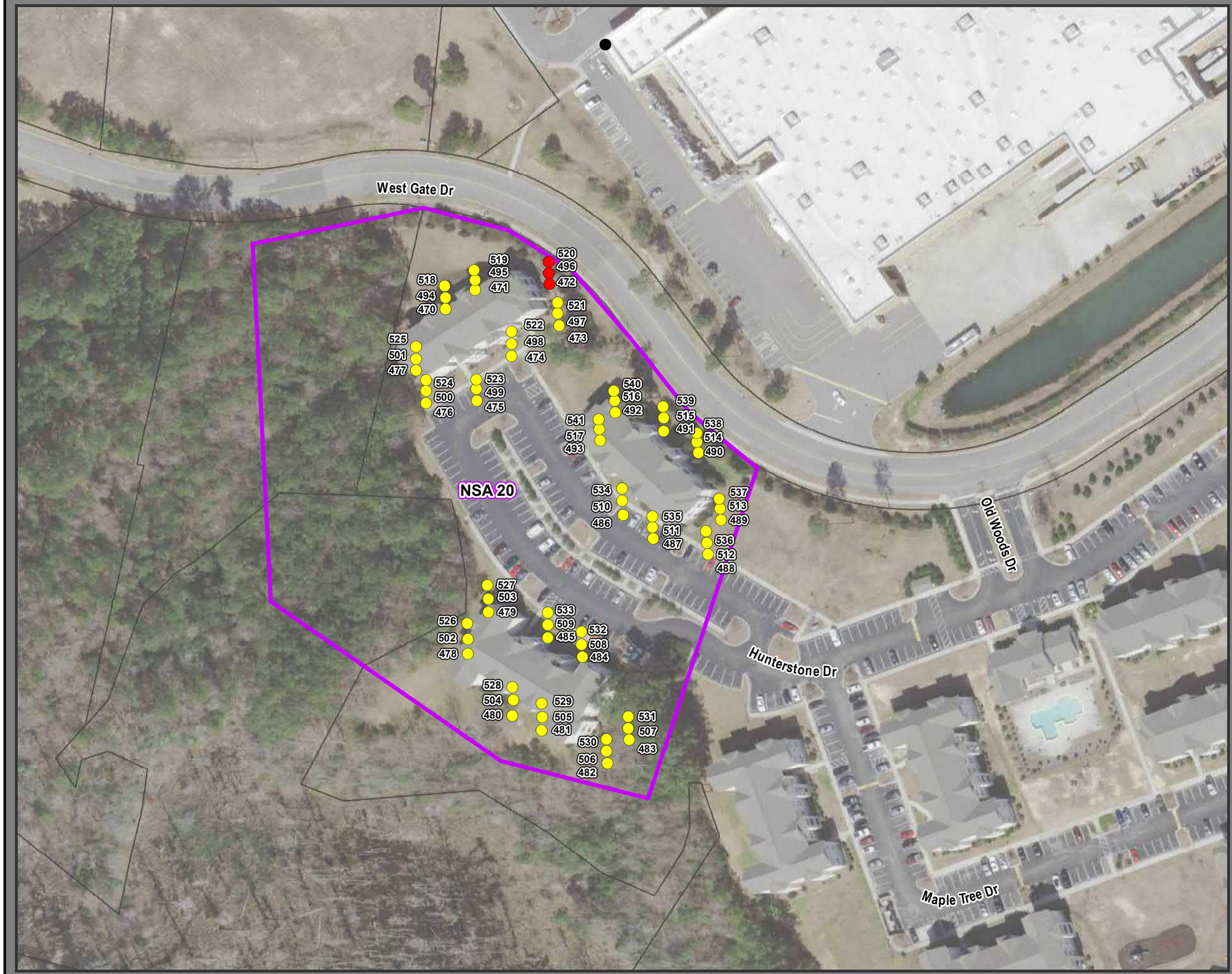
CAPE FEAR CROSSING

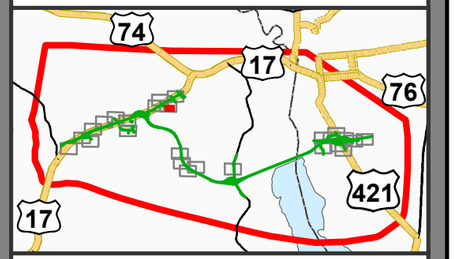
State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 11A



Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

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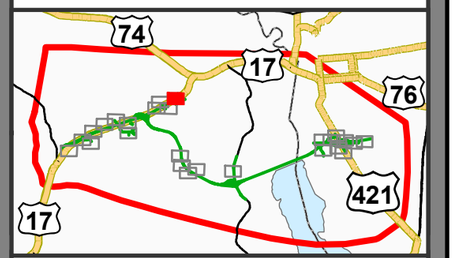
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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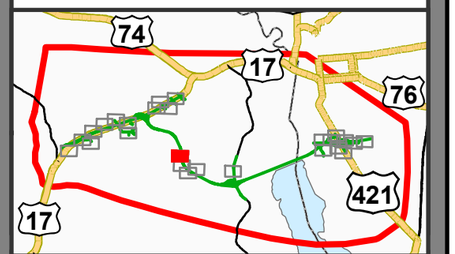
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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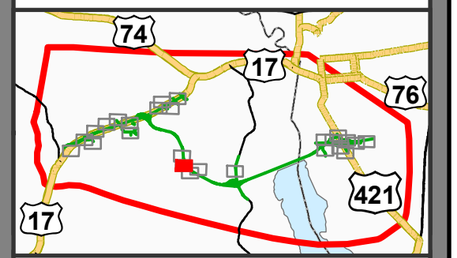
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Page 13
Matchline Page 15
Matchline Page 16
NSA 28
NSA 29
Barrier 28
Barrier 29
Short Term 12-2015 (Amb)
West Gantry Ct
East Gantry Ct
North Stillwood Dr
South Stillwood Dr
Lillibridge Dr
Dudley Ct
Shelmore Way
Simmerman Way
Sandy Grove Pl
Shore Park Dr
Stoney Point Dr

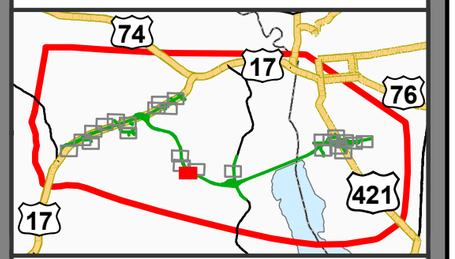
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Shore Park Dr
Stoney Point Dr
Spalding Dr
Barrier 28
Barrier 29
NSA 28
NSA 29
Matchline Page 14
Matchline Page 16
helmore Way

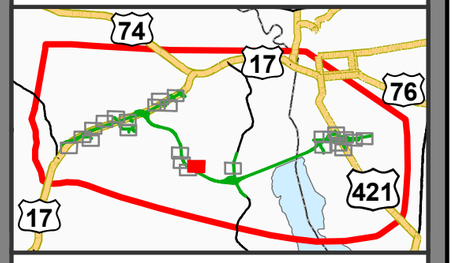
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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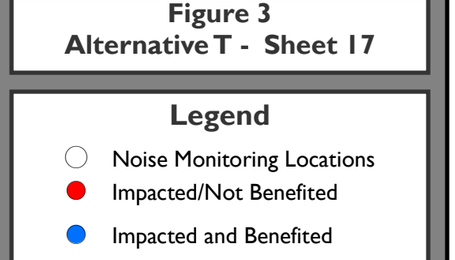
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 17

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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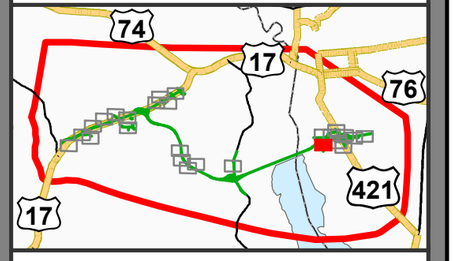
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 18

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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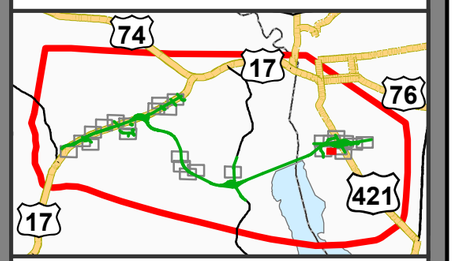
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 18A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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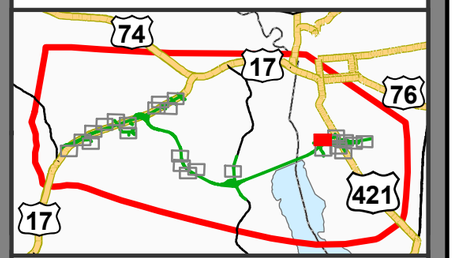
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 19

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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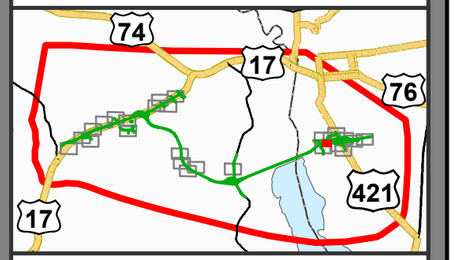
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 19A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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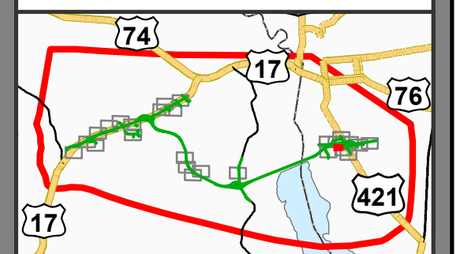
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 19B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Private
Long Term 6-2018
Short Term 18-2015 (Amb)
Matchline Sheet 19A
Matchline Sheet 18A
Barrier 42
NSA 42
Williamson Dr
Davie Dr
Calhoun Dr
Rutledge Dr

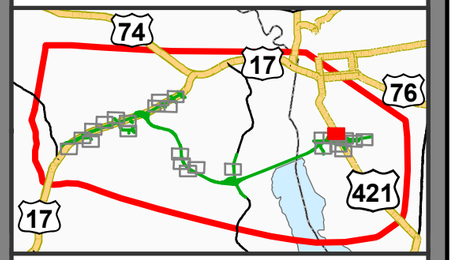
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 20

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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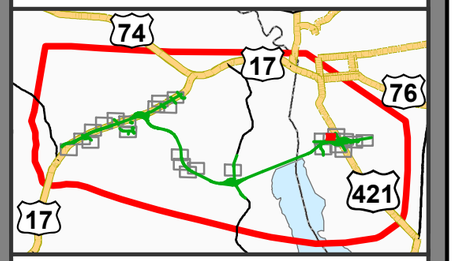
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 20A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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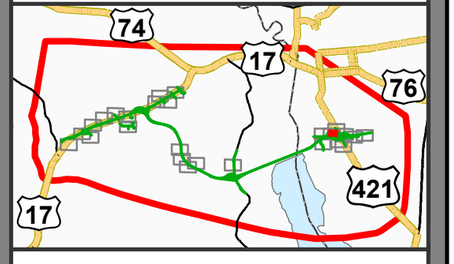
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 20B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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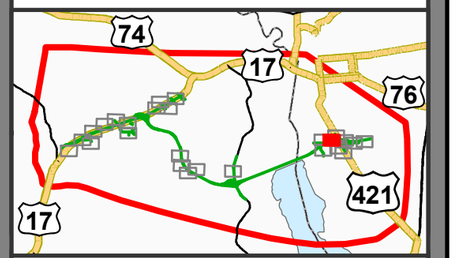
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 21

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Maryland Ave
Jefferson St
Adams St
Vance St
Rutledge Dr
Carolina Beach Rd
Medical Center Dr
Wellington Ave
Buckingham A
Bell St
Crossover St
Cape Fear Blvd
Shipyard Blvd
Williamson Dr
Private
Matchline Page 24
Matchline Page 20
Matchline Page 22
Matchline Page 19
Matchline Page 18
NSA 43
NSA 44
NSA 42
Barrier 43
Barrier 44
Barrier 42
See Sheet 20A
See Sheet 20B
See Sheet 19A
See Sheet 19B
Short Term 13-2018
Long Term 6-2018
Short Term 18-2015 (Amb)
421
117

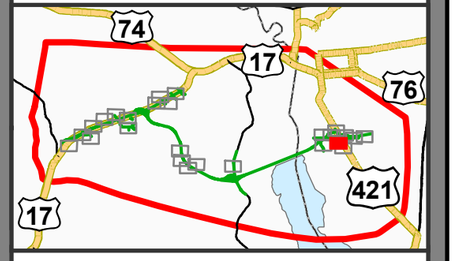
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 22

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Shipyard Blvd
117
Matchline Page 19
9096
Barrier 42
Williamson Dr
9100
9108
9110
9111
9107
9109
Matchline Page 21
Matchline Page 24
Matchline Page 25
See Sheet 19B
Davie Dr
heet 19A
NSA 42
Calhoun Dr
Matchline Page 23
Rutledge Dr
9048
9053
9051
9049
9054
9050
Holbrooke Ave
NSA 39
421
Marion Dr
9052
Carolina Beach Rd
9055
Matchline Page 18
See Sheet 18A
Private
Ward St
Penn St
Morgan St
1050
9064
9056
9060

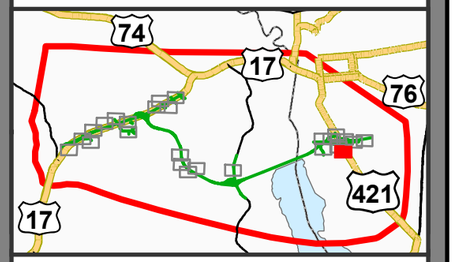
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 23

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

See Sheet 19B
NSA 42
Rutledge Dr
Calhoun Dr
Davie Dr
Marion Dr
Sheet 18A
Private
umter Dr
Landmark Dr
Matchline Page 22
Matchline Page 25
Holbrooke Ave
Constitution Blvd
Nautilus D
421
Carolina Beach Rd
NSA 39
Francis Marion Dr
Nina Pl
Parkway Blvd
Linda Vista Rd
Raleigh St
NSA 37
9048
9053
9049
9051
9054
9050
9052
9055
9064
9056
9061
1050
1057
1055
1056
1053
9062
1052
9063
1051
1054
9060
9057
9058
9059

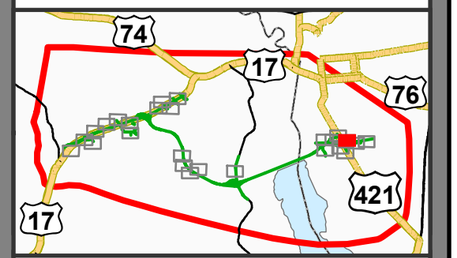
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 24

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Medical Center Dr
Wellington Ave
Buckingham Ave
Wonder Way
Harbour Dr
Troy Dr
Holbrooke Ave
Rutledge Dr
Carolina Beach Rd
Shipyard Blvd
Matchline Page 20
Matchline Page 21
Matchline Page 22
Matchline Page 25
Barrier 44
Barrier 40
Barrier 42
NSA 44
NSA 41
NSA 40
Short Term 17-2015
Short Term 12-2018
Private
See Sheet 25A
Sheet 19B
eet 20B
117
421
9065 9066 9067 9070 9071 9072 9073 9074 9075 9077 9078 9079 9080 9081 9082 9087 9088 9089 9091 9092 9093 9095 9097 9098 9099 9100 9101 9102 9103 9104 9105 9106 9107 9108 9109 9110 9111 9112 9113 9114 9115 9116 9117 9118 9119 9120 9121 9122 9123 9124 9125 1070 1071 1072 1073 1074 1078 1080 1081 1082 1083 1084 1085 1086 1087 1091 1092 1093 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109

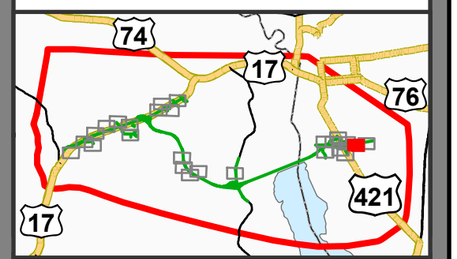
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 25

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

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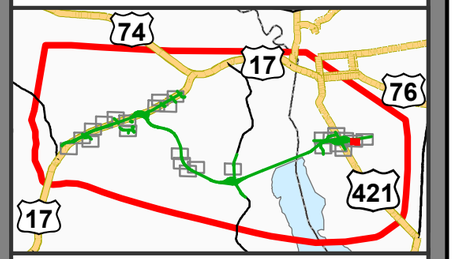
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 25A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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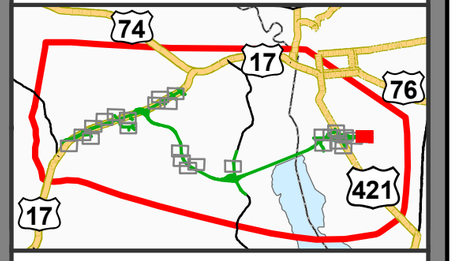
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative T - Sheet 26

Legend

- Noise Monitoring Locations
- Impacted/Not Benefited
- Impacted and Benefited
- Benifited/Not Impacted
- Not Impacted/Not Benefited
- Not Noise Sensitive
- Right of Way Take
- Alternative T
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Alternative V-AW

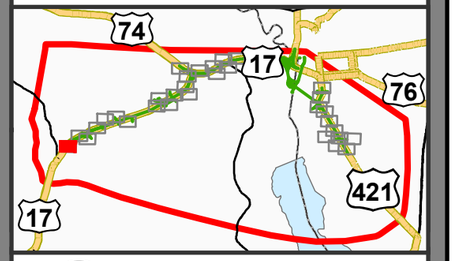
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 1

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

RMP 6562
RMP 6561
RMP 6560
17
Ocean Hwy E
Combine Ln SE
Combine Ln
Rye Ln
Bridle Way
Yellow Stone Ct
Cole Ct
Stoney Creek
els Branch Rd SE
NSA 5
Short Term 4-2018
Short Term 3-2018
Long Term 1-2015
339
340
341
342
346
347
348
349
350
351
352
314
315
316
317

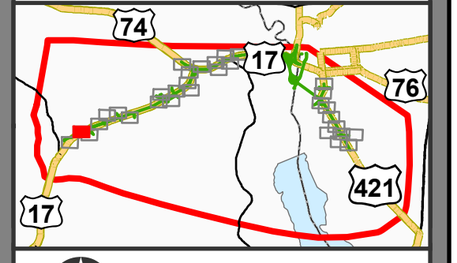
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 2

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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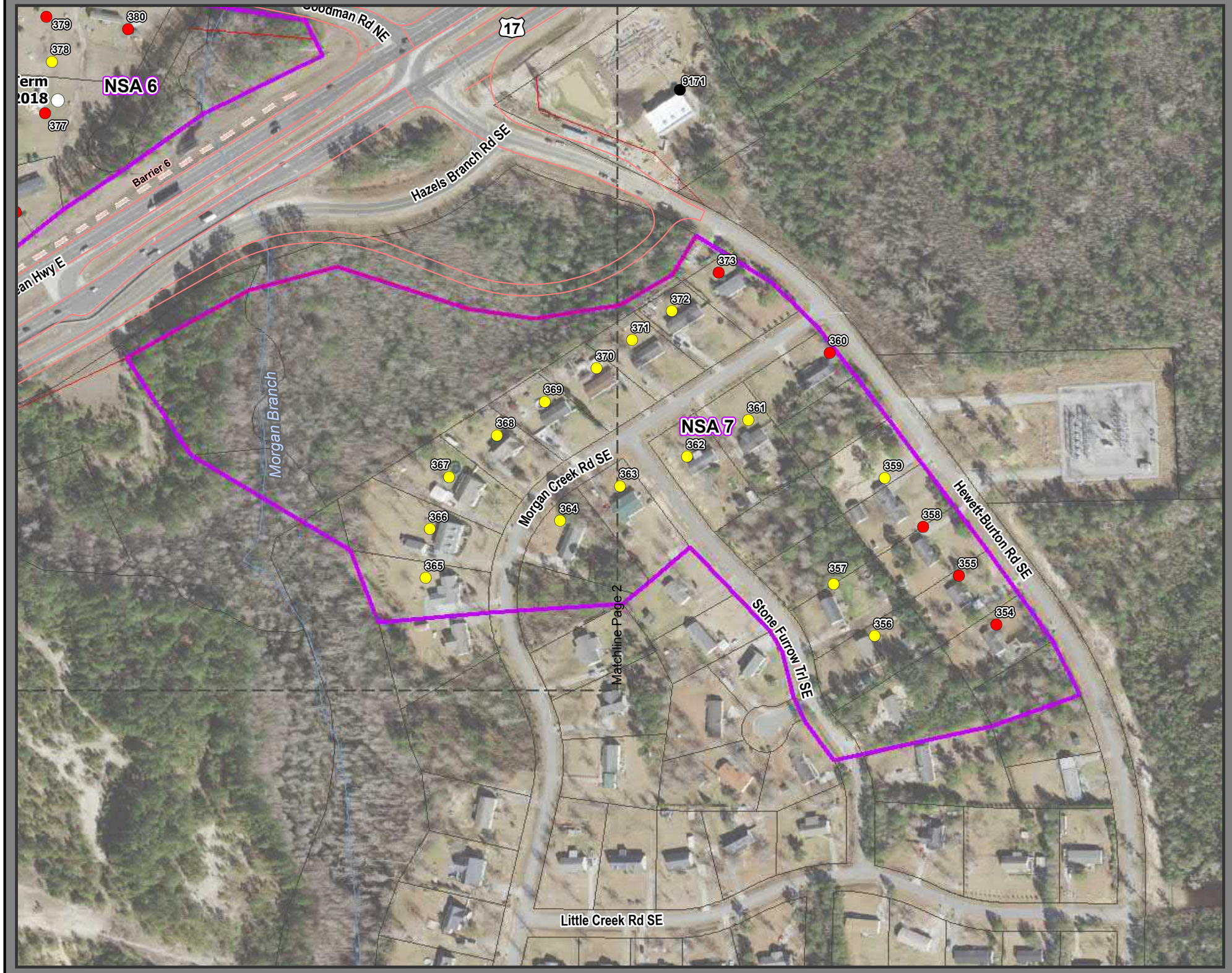
This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM



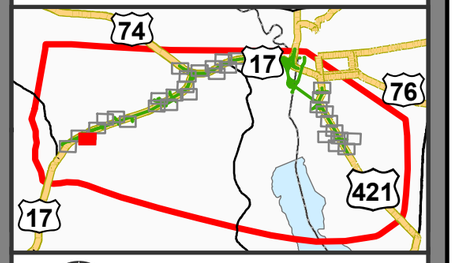
CAPE FEAR CROSSING

State Transportation Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 3

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

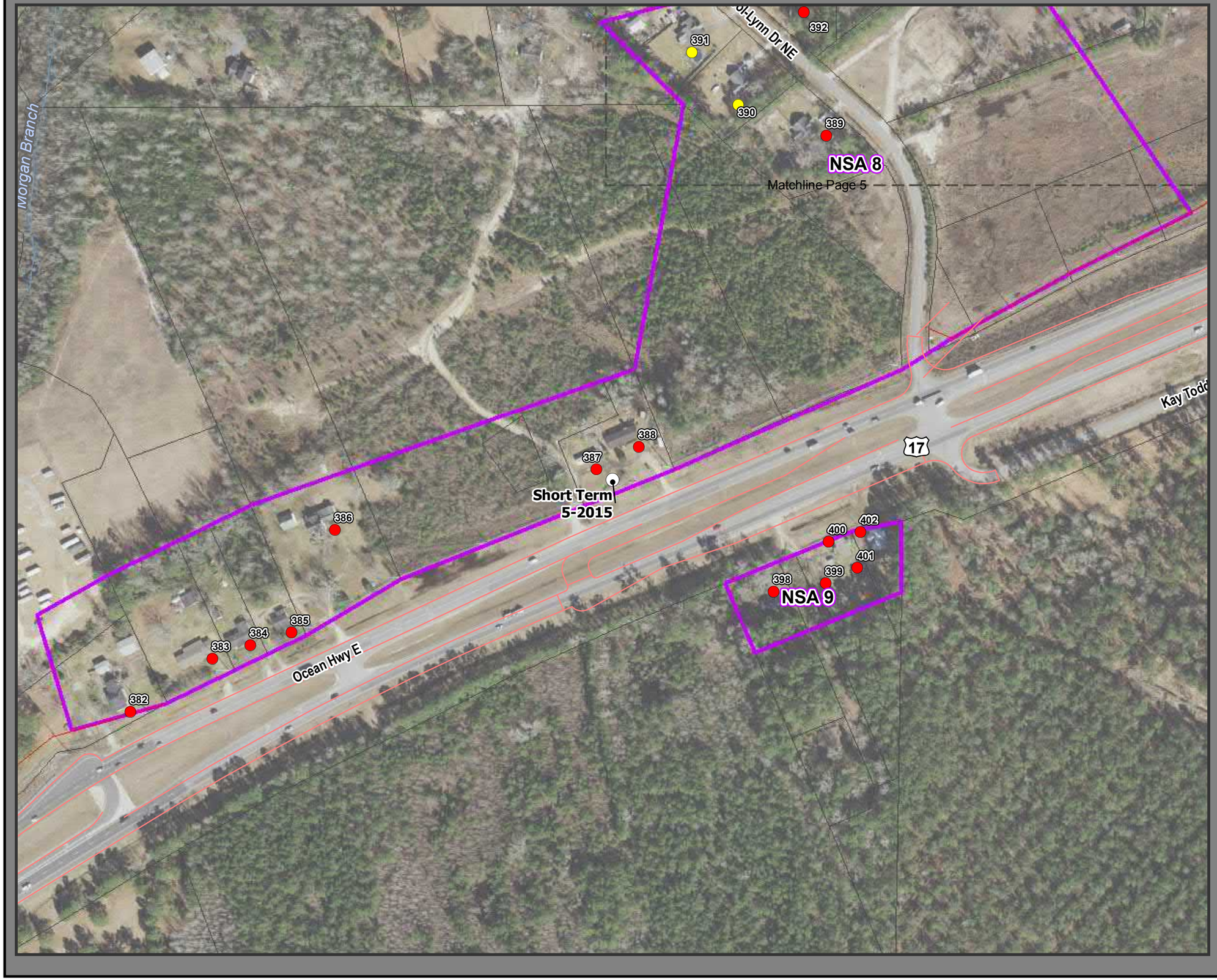
April 2019

AECOM

CAPE FEAR CROSSING

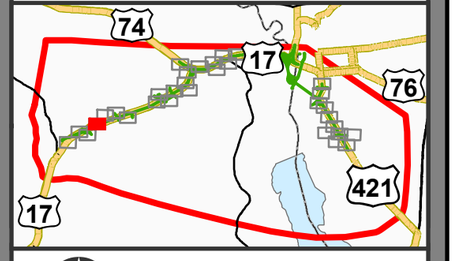
State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 4



Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

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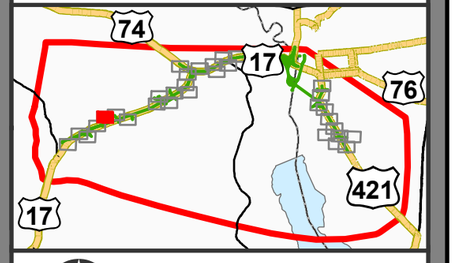
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 5

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Buckeye Rd NE
Dove Way
Old Lanvale Rd NE
Rachel Wynd NE
Carol-Lynn Dr
Ocean Hwy
Matchline Page 4
Matchline Page 6
NSA 8
NSA 10
17
9002
426
425
424
423
422
421
420
419
418
417
397
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391
390
389

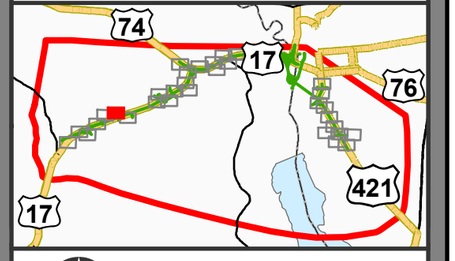
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 6

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Old Lanvale
Old Lanvale Rd NE
Dove Way NE
Clay Rd NE
Matchline Page 7
Matchline Page 5
NSA 10
Lanvale Rd NE
Ocean Hwy
17
ckeye Rd NE
438
432
433
437
431
429
436
434
427
435
426
425
424
428
430
9001
9002
9000
423
422
421
420
418
417

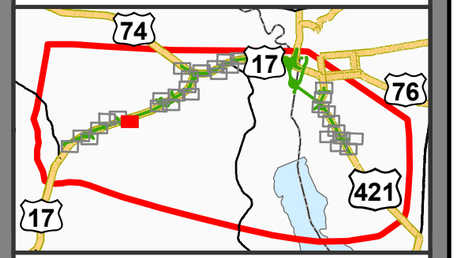
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 7

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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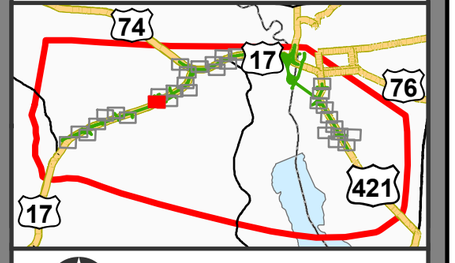
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 8

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

NSA 18
NSA 19
NSA 17
Matchline Page 9
Matchline Page 10
Jackeys Creek
Cumbertree Ct
Grandiflora Dr
Eastowne
West Gate Dr
New Pointe P
Town Lake Dr
Barrier 20
Collins Way NE
Ocean Hwy E
17
443
444
445
446
447
448
466
9012
9013
9014
9015
9016
9017
9018
444.1
465.1

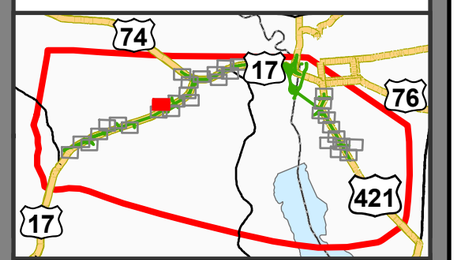
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 9

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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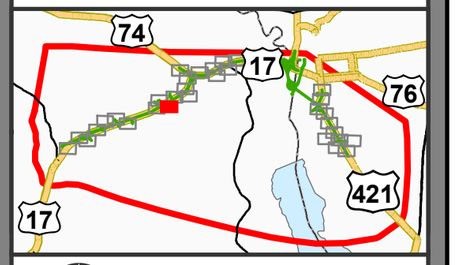
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 10

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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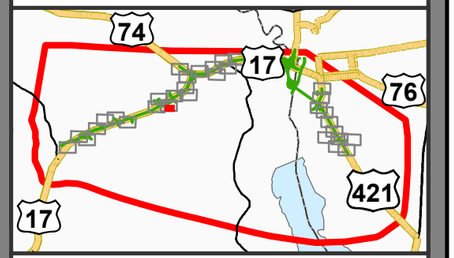
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 10A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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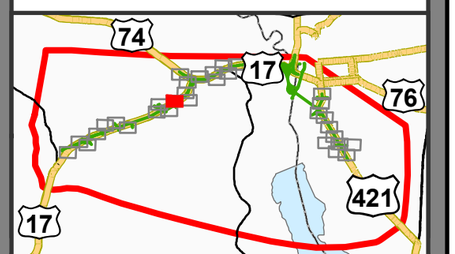
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 11

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

Poole Rd
Leana
Olde Waterford Way
Matchline Page 13
Drager Rd
Waterford Business Center Way
Barrier 22
NSA 22
See She
Ploof Rd
Ploof Rd SE
Matchline Page 12
Barrier 21
Ocean Hwy E
Gregory Rd
Matchline Page 9
17
Ocean Gate Plaza
Matchline Page 10
Barrier 20
Pointe Blvd
9020
9021
9022
9028
9029
9030
9031
9032
9033
9034
9035
9036
9037
9038
9039
9040
9041
9042
9043
9044
469

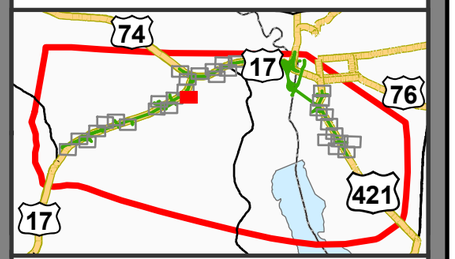
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 12

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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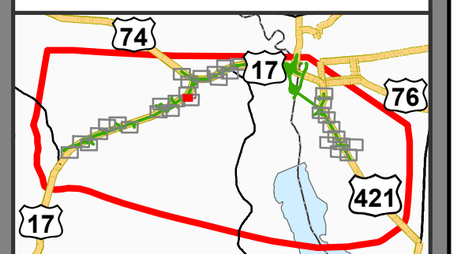
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 12A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



0 50 100 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

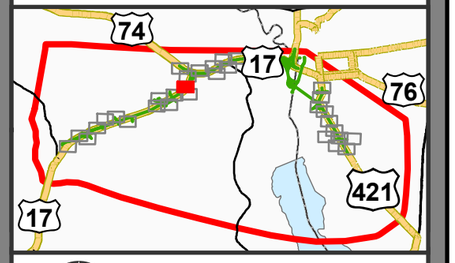
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 13

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

ning Ct
m Ridge Dr
e Waterford Way
Olde Regent Way
Leana Dr
Ocean Hwy E
Blackwell Rd
Ploof Rd
Barrier 22
Barrier 21
17
NSA 22
Short Term
9-2015
See Sheet 12A
Matchline Page 12
Matchline Page 11
9175
9174
9173
9043
9042
469.1
763
762
761
760
759
758

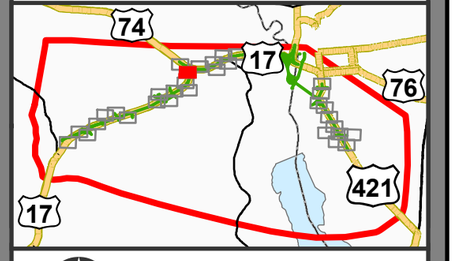
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 14

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Andrew Jackson Hwy
Barrier 24
NSA 24
NSA 23
Matchline Page 15
Matchline Page 16
Long Term 2-2015
Short Term 7-2015 (Amb)
Daybreak Ct
Cloudbreak Ct
Strider Ct
Swell Ct
Layne Ct
Braewood Ct
Wind Lake Way
Ocean Hwy E
74
17

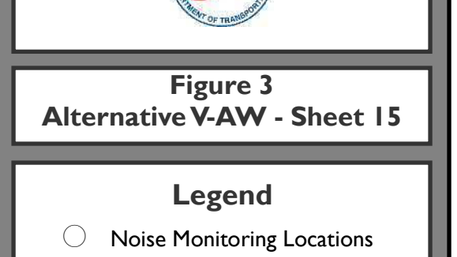
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 15

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

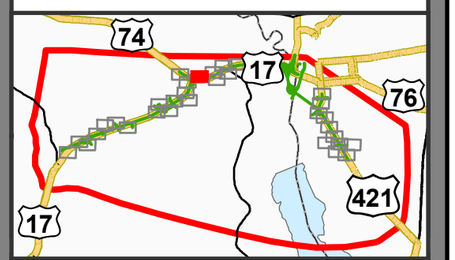
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 16

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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AECOM

NSA 24

Barrier 24

Short Term
10-2015

Cottagefield Ln

Willow Creek Ln

Curran Ct

Red Maple

Matchline Page 18

Matchline Page 14

Andrew Jackson Hwy

Ocean Hwy

74

17

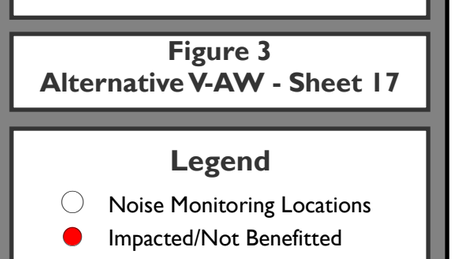
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 17

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

NSA 24
NSA 25
Barrier 24
Barrier 25
17
Ocean Hwy
Matchline Page 18
Matchline Page 20
Blackwell Rd
Chappell Loop Rd SE
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009

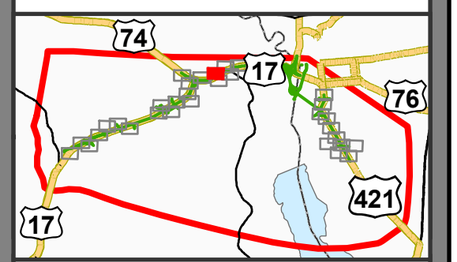
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 18

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Matchline Page 16
Matchline Page 17
Matchline Page 19
Matchline Page 20
NSA 24
NSA 25
Barrier 24
Barrier 25
Delivery Rd
Northgate Dr
Red Bay Pl
Sunset Ct
Darden Ct
Hampton Ct
Dandy Ct
Stony Woods Ln
Willow Creek Ln
Sweet Bay Cir
Macklin St
Red Maple Cir
Ocean Hwy E
Chappell Loop Rd
Bakewell Rd

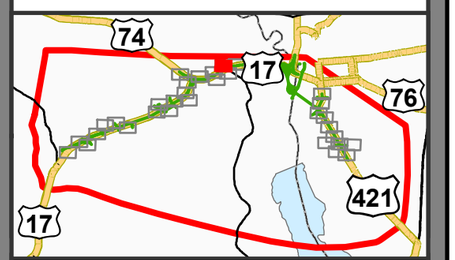
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 19

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Fairview
Dixie
Village Rd
Matchline Page 21
NSA 26
1032
1031
1030
1029
1028
1027
1026
1025
1024
1023
1022
1021
1020
1019
Thomas Garst Ln
Barrier 26
17
996
997
998
Matchline Page 18
992
991
995
999
Matchline Page 20
994
990
993
River Rd
133
1041
Barrier 25
NSA 25
Barrier 2
Main
ckwell Rd

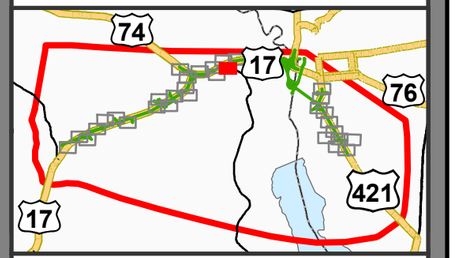
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 20

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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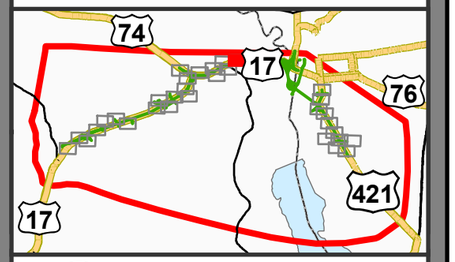
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 21

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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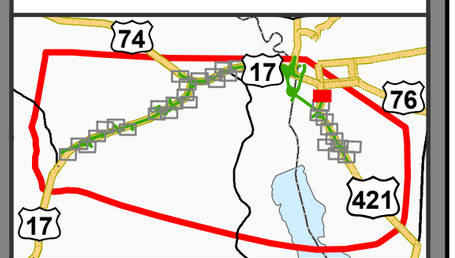
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 22

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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See Sheet 22A

Matchline Page 23

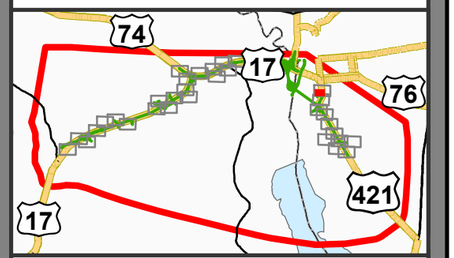
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 22A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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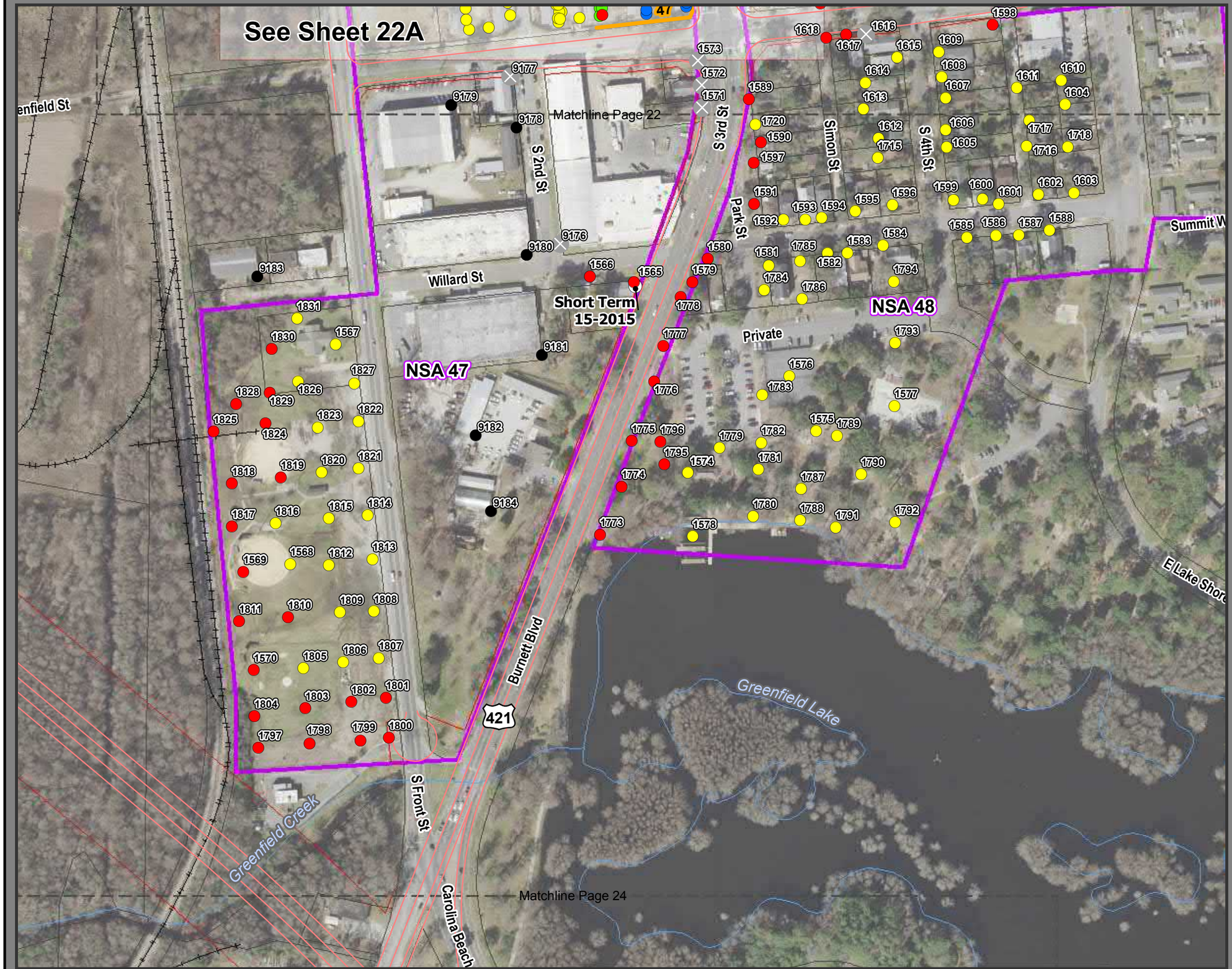


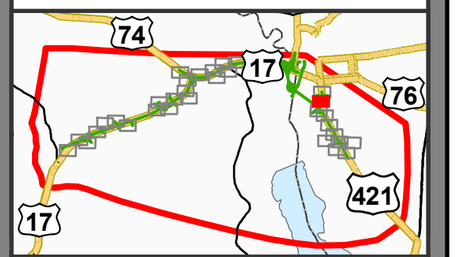
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 23

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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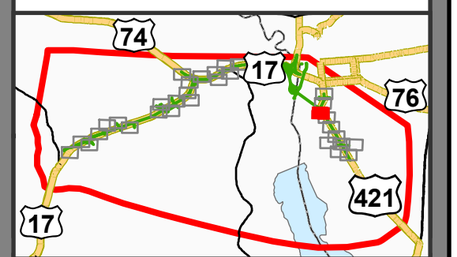
CAPE FEAR CROSSING

State Transportation Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 24

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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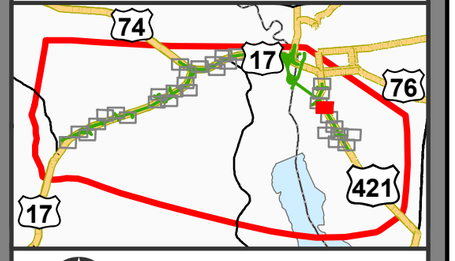
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 25

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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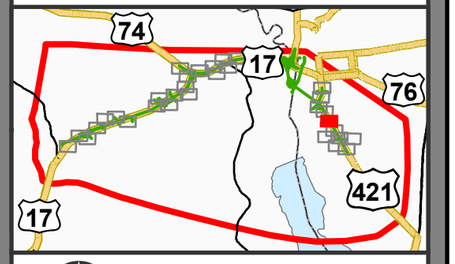
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 26

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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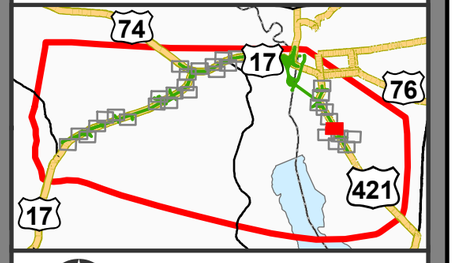
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 27

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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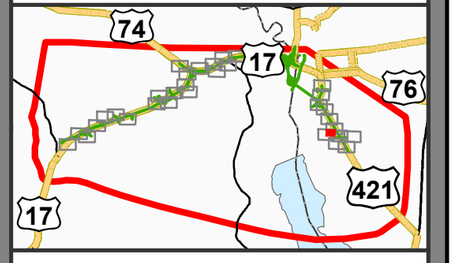
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 27A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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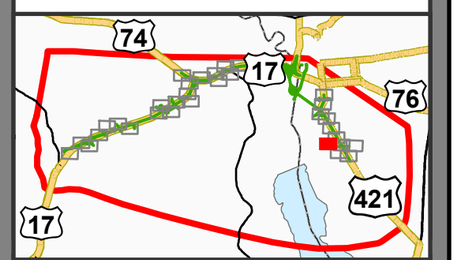
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 28

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Maryland Ave
Louisiana Ave
Jefferson St
Monroe St
Delaware Ave
Florida Ave
Adams St
Crossover St
Cape Fear B
Bell
Shipyard Blvd
Dare St
Vance St
Private
Williamson Dr
rth Dr

1241 1242 1240 1837 1836 1835 1834 1833 1832 1844 1838 1845 1839 1846 1840 1847 1841 1848 1842 1849 1843 1243 1245 1190 1189 1188 1187 1186 1185 1111.1 1111 1114 1113 1112 9098 9097 9090 9099 1317 1110 9094 9093 9092 9095 9096

NSA 43
NSA 44
NSA 42
Long Term 6-2018
Short Term 18-2015

See Sheet 27A
See Sheet 28A
See Sheet 31A
Matchline Page 27
Matchline Page 29
Matchline Page 31

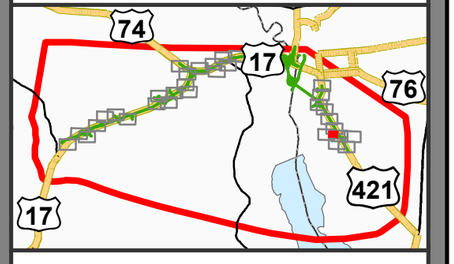
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 28A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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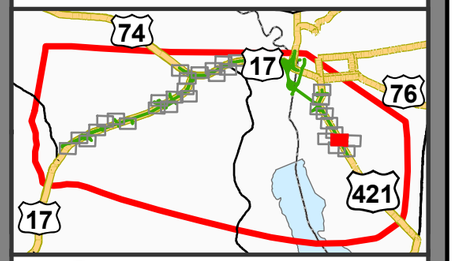
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 29

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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NSA 43
NSA 41
NSA 44
NSA 42
See Sheet 27A
See Sheet 28A
See Sheet 31A
See Sheet 31B
Matchline Page 27
Matchline Page 28
Matchline Page 30
Matchline Page 31
Short Term 17-2015
Short Term 13-2018
Medical Center
Wellington Ave
Buckingham Ave
Wonder Way
Private
Shipyard Blvd
Carolina Beach Rd
Rutledge Dr
421
117
9073
9074
9075
9076
9077
9078
9079
9080
9081
9082
9083
9084
9088
9089
9090
9099
9100
9101
9102
9103
9104
9105
9106
9107
9108
9109
9110
9111
9112
9113
9114
9115
9116
1102
1104
1105
1106
1107
1108
1110
1307
1308
1309
1317

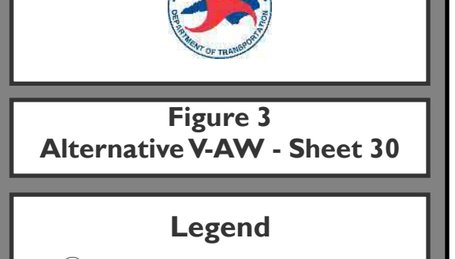
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 30

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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NSA 41
NSA 40
Short Term 12-2018
Private
Shipyard Blvd
Mayflower Dr
N Southwood Rd
Southwood Rd
Francis Marion Dr
Constitution Blvd
Monitor Dr
117
1102
1103
1104
1105
1106
1107
1108
9065
9066
9067
9117
9118
9119
9120
9121
9122
9123
9124
9125
9126
9111
Matchline Page 29
Matchline Page 31
Matchline Page 32

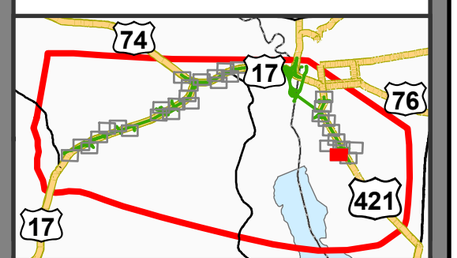
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 31

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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9096
Long Term
6-2018
Williamson Dr
Short Term
18-2015 (Amb)
Matchline Page 28
Davie Dr
See Sheet 31A
NSA 42
Calhoun Dr
See Sheet 31B
Rutledge Dr
Marion Dr
Matchline Page 29
9107
9109
Matchline Page 30
9048
9053
9051
9049
421
NSA 39
9054
9050
Holbrooke
9052
Carolina Beach
Private
Matchline Page 32
9064
9060
Penn St
Sumter Dr

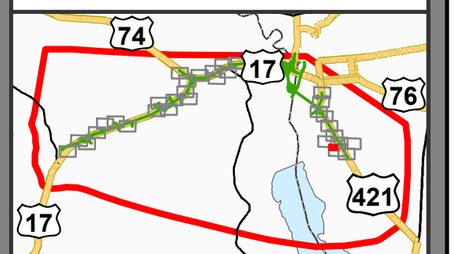
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 31A

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

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Long Term 6-2018

Short Term 18-2015 (Amb)

NSA 42

Private

Williamson Dr

Davie Dr

Calhoun Dr

Matchline Sheet 31B

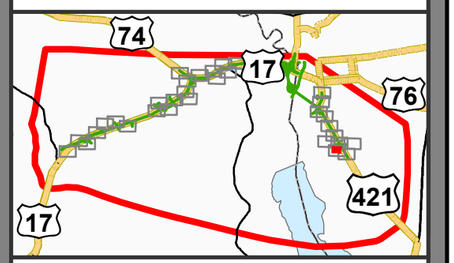
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 31B

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Proposed Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Inset Matchline



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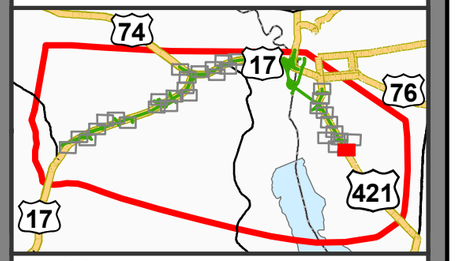
CAPE FEAR CROSSING

State Transportation
Improvement Program
Project No. U-4738

Figure 3
Alternative V-AW - Sheet 32

Legend

- Noise Monitoring Locations
- Impacted/Not Benefitted
- Impacted and Benefitted
- Benefitted/Not Impacted
- Not Impacted/Not Benefitted
- Not Noise Sensitive
- Right of Way Take
- Alternative V-AW
- Proposed Right of Way
- Likely Noise Barrier
- Unlikely Noise Barrier
- Project Study Area
- Noise Study Area
- Parcels
- Matchline
- Inset Matchline



0 100 200 Feet

This map is for reference only.
Sources: NCDOT, DWR, NCOneMap, ESRI and AECOM.

April 2019

AECOM

Matchline Page 30

Matchline Page 31

See Sheet 31B

NSA 42

NSA 40

NSA 39

Holbrooke Ave

Marion Dr

Private

Carolina Beach Rd

Constitution Blvd

Nautilus Dr

Francis Marion Dr

Nina Pl

Linda Vista Rd

Landmark Dr

Raleigh St

Parkway Blvd

421

9048 9053 9051 9049 9054 9050 9052 9055 9064 9056 9061 9060 9057 9058 9062 9063 9059

1067 1068 1069 1065 1066 1064 1050 1057 1055 1056 1053 1714 1052 1051 1054

Appendix A

Ambient Noise Level Monitoring

~Calibration Certificate~

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	59726
Model:	CAL200	Calibration Date:	Apr 26, 2018 10:03:46
Serial Number:	11336	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	

Calibration Results:

Temperature:	22 °C (72 °F)
Humidity:	34.90%
Pressure:	992.5 mbar

Measured SPL : 94.10 dB re. 20µPa

Measured Frequency : 1,000.00 Hz

Upon receipt for calibration, the instrument was found to be:

WITHIN the stated tolerance of the manufacturer's specification.

Note: **As-Found As-Left in tolerance**

Measurement uncertainty at 95% confidence level: 0.30 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the customer.

This calibration is traceable through : A1633

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

~Calibration Certificate~

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A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	59726
Model:	CAL200	Calibration Date:	Apr 26, 2018 10:09:22
Serial Number:	11336	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	

Calibration Results:

Temperature:	22 °C (72 °F)
Humidity:	34.90%
Pressure:	992.5 mbar

Measured SPL : 114.06 dB re. 20µPa

Measured Frequency : 1,000.00 Hz

Upon receipt for calibration, the instrument was found to be:

WITHIN the stated tolerance of the manufacturer's specification.

Note: **As-Found As-Left in tolerance**

Measurement uncertainty at 95% confidence level: 0.30 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the customer.

This calibration is traceable through : A1633

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	78.9	°F
Model Number:	831		26.06	°C
Serial Number:	3004	Rel. Humidity:	43.6	%
Customer:	TMS Rental	Pressure:	995.4	mbars
Description:	Sound Level Meter		995.4	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 5/21/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	5/7/2019

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Adam Magee Signature:

THE MODAL SHOP
A PCB GROUP CO.

3149 East Kemper Road
Cincinnati, OH. 45241
Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

Certificate of Calibration and Conformance

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Manufacturer:	Larson Davis	Temperature:	79.1	°F
Model Number:	831		26.17	°C
Serial Number:	3173	Rel. Humidity:	43.7	%
Customer:	TMS Rental	Pressure:	997.1	mbars
Description:	Sound Level Meter		997.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 6/8/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	5/7/2019

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Manufacturer:	Larson Davis	Temperature:	79.6	°F
Model Number:	831		26.44	°C
Serial Number:	3174	Rel. Humidity:	44.1	%
Customer:	TMS Rental	Pressure:	997.8	mbars
Description:	Sound Level Meter		997.8	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 6/8/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	5/7/2019

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Technician: Adam Magee Signature:

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Manufacturer:	Larson Davis	Temperature:	74.9	°F
Model Number:	831		23.83	°C
Serial Number:	3213	Rel. Humidity:	31.2	%
Customer:	TMS Rental	Pressure:	1012.1	mbars
Description:	Sound Level Meter		1012.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 17-Oct-18 Calibration Due:

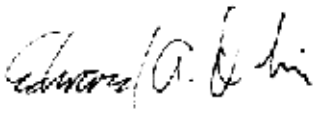
Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	5/7/2019

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Ed Devlin Signature:



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3149 East Kemper Road
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Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	73.4	°F
Model Number:	831		23.00	°C
Serial Number:	3308	Rel. Humidity:	25.6	%
Customer:	TMS Rental	Pressure:	990.1	mbars
Description:	Sound Level Meter		990.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 4/12/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Technician: Adam Magee Signature:

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Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	74.9	°F
Model Number:	831		23.83	°C
Serial Number:	3382	Rel. Humidity:	31.2	%
Customer:	TMS Rental	Pressure:	1012.1	mbars
Description:	Sound Level Meter		1012.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 10/17/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	5/7/2019

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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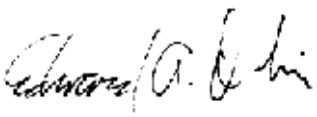
Technician: Ed Devlin Signature:



THE MODAL SHOP
A PCB GROUP CO.

3149 East Kemper Road
Cincinnati, OH. 45241
Phone: (513) 351-9919
(800) 860-4867
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Manufacturer:	Larson Davis	Temperature:	79	°F
Model Number:	831		26.11	°C
Serial Number:	3547	Rel. Humidity:	15.8	%
Customer:	TMS Rental	Pressure:	1003.1	mbars
Description:	Sound Level Meter		1003.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 3/23/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Technician: Adam Magee Signature:

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Manufacturer:	Larson Davis	Temperature:	77.2	°F
Model Number:	831		25.11	°C
Serial Number:	3548	Rel. Humidity:	18.1	%
Customer:	TMS Rental	Pressure:	1008.3	mbars
Description:	Sound Level Meter		1008.3	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 2/8/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Manufacturer:	Larson Davis	Temperature:	77.2	°F
Model Number:	831		25.11	°C
Serial Number:	3556	Rel. Humidity:	18.2	%
Customer:	TMS Rental	Pressure:	1011.6	mbars
Description:	Sound Level Meter		1011.6	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 2/8/2018 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Technician: Adam Magee Signature:

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Cincinnati, OH. 45241
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Manufacturer:	Larson Davis	Temperature:	75.9	°F
Model Number:	LxT1-SE		24.39	°C
Serial Number:	4882	Rel. Humidity:	14.9	%
Customer:	TMS Rental	Pressure:	1012.5	mbars
Description:	Sound Level Meter		1012.5	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 12/28/2017 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

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Technician: Adam Magee Signature:

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A PCB GROUP CO.

3149 East Kemper Road
Cincinnati, OH. 45241
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(800) 860-4867
www.modalshop.com

Calibration Certificate

Certificate Number 2018002393
Customer:
The Modal Shop
3149 East Kemper Road
Cincinnati, OH 45241, United States

Model Number	LxT1	***Procedure Number***	D0001.8384		
Serial Number	0005554	***Technician***	Ron Harris		
Test Results	**Pass**	***Calibration Date***	6 Mar 2018		
Initial Condition	As Manufactured	***Calibration Due***			
		Temperature	23.4	°C	± 0.25 °C
Description	SoundTrack LxT Class 1 Class 1 Sound Level Meter Firmware Revision: 2.302	***Humidity***	49.9	%RH	± 2.0 %RH
		Static Pressure	87.27	kPa	± 0.13 kPa

Evaluation Method ***Tested with:*** ***Data reported in dB re 20 µPa.***

Larson Davis PRMLxT1. S/N 046820
PCB 377B02. S/N 301705
Larson Davis CAL200. S/N 9079
Larson Davis CAL291. S/N 0203

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8378:

IEC 60651:2001 Type 1	ANSI S1.4-2014 Class 1
IEC 60804:2000 Type 1	ANSI S1.4 (R2006) Type 1
IEC 61252:2002	ANSI S1.11 (R2009) Class 1
IEC 61260:2001 Class 1	ANSI S1.25 (R2007)
IEC 61672:2013 Class 1	ANSI S1.43 (R2007) Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.
Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ilac-MRA ACCREDITED Cert. #3622.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

For 1/4" microphones, the Larson Davis ADP024 1/4" to 1/2" adaptor is used with the calibrators and the Larson Davis ADP043 1/4" to 1/2" adaptor is used with the preamplifier.

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 µPa

Periodic tests were performed in accordance with precedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 successfully completed by Physikalisch-Technische Bundesanstalt (PTB) on 2007-10-09 reference number PTB-1.72-4034218.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. As evidence was publicly available, from an independent testing organization responsible for approving the results of pattern-evaluation tests performed in accordance with IEC 61672-2:2013 / ANSI/ASA S1.4-2014/Part 2, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1; the sound level meter submitted for testing conforms to the class 1specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

Standards Used

Description	Cal Date	Cal Due	Cal Standard
SRS DS360 Ultra Low Distortion Generator	2017-06-23	2018-06-23	006311
Hart Scientific 2626-S Humidity/Temperature Sensor	2017-06-11	2018-06-11	006943
Larson Davis CAL200 Acoustic Calibrator	2017-07-25	2018-07-25	007027
Larson Davis Model 831	2018-02-28	2019-02-28	007182
PCB 377A13 1/2 inch Prepolarized Pressure Microphone	2017-03-08	2018-03-08	007185
Larson Davis CAL291 Residual Intensity Calibrator	2017-09-19	2018-09-19	007287

Acoustic Calibration

Measured according to IEC 61672-3:2013 10 and ANSI S1.4-2014 Part 3: 10

Measurement	Test Result [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
1000 Hz	114.00	113.80	114.20	0.14	Pass

Acoustic Signal Tests, C-weighting

Measured according to IEC 61672-3:2013 12 and ANSI S1.4-2014 Part 3: 12 using a comparison coupler with Unit Under Test (UUT) and reference SLM using slow time-weighted sound level for compliance to IEC 61672-1:2013 5.5; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Expected [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
125	-0.23	-0.20	-1.20	0.80	0.23	Pass
1000	0.03	0.00	-0.70	0.70	0.23	Pass
8000	-2.52	-3.00	-5.50	-1.50	0.32	Pass

-- End of measurement results--

Self-generated Noise

Measured according to IEC 61672-3:2013 11.1 and ANSI S1.4-2014 Part 3: 11.1

Measurement	Test Result [dB]
A-weighted	40.64

-- End of measurement results--

-- End of Report--

Signatory: *Ron Harris*

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ilac-MRA ACCREDITED Cert. #3822.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Calibration Certificate

Certificate Number 2018002381

Customer:

The Modal Shop
3149 East Kemper Road
Cincinnati, OH 45241, United States

Model Number	LxT1	***Procedure Number***	D0001.8378		
Serial Number	0005554	***Technician***	Ron Harris		
Test Results	**Pass**	***Calibration Date***	6 Mar 2018		
Initial Condition	As Manufactured	***Calibration Due***			
		Temperature	23.33	°C	± 0.25 °C
Description	SoundTrack LxT Class 1 Class 1 Sound Level Meter Firmware Revision: 2.302	***Humidity***	50.3	%RH	± 2.0 %RH
		Static Pressure	87.34	kPa	± 0.13 kPa

Evaluation Method Tested electrically using Larson Davis PRMLxT1 S/N 046820 and a 12.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 µPa assuming a microphone sensitivity of 50.0 mV/Pa.

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8384:

IEC 60651:2001 Type 1	ANSI S1.4-2014 Class 1
IEC 60804:2000 Type 1	ANSI S1.4 (R2006) Type 1
IEC 61252:2002	ANSI S1.11 (R2009) Class 1
IEC 61260:2001 Class 1	ANSI S1.25 (R2007)
IEC 61672:2013 Class 1	ANSI S1.43 (R2007) Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. **Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.**

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 µPa

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ACCREDITED Cert. #3822.01

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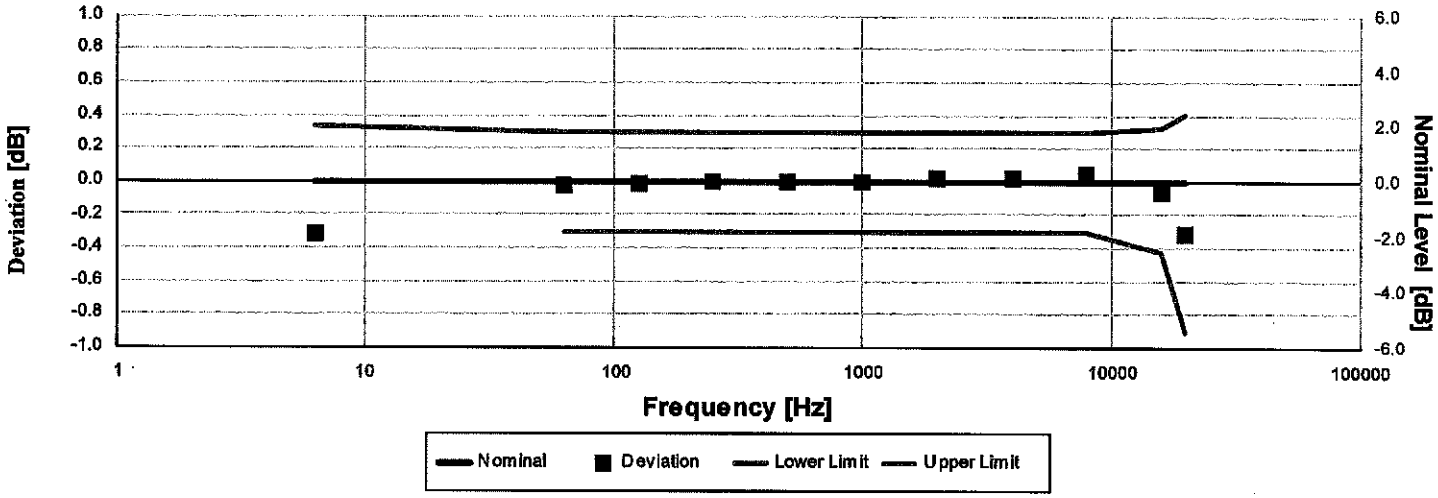
Standards Used

Description	Cal Date	Cal Due	Cal Standard
Hart Scientific 2626-S Humidity/Temperature Sensor	2017-06-11	2018-06-11	006943
SRS DS360 Ultra Low Distortion Generator	2017-06-09	2018-06-09	007117
SRS DS360 Ultra Low Distortion Generator	2017-06-29	2018-06-29	007118

Z-weight Filter Response

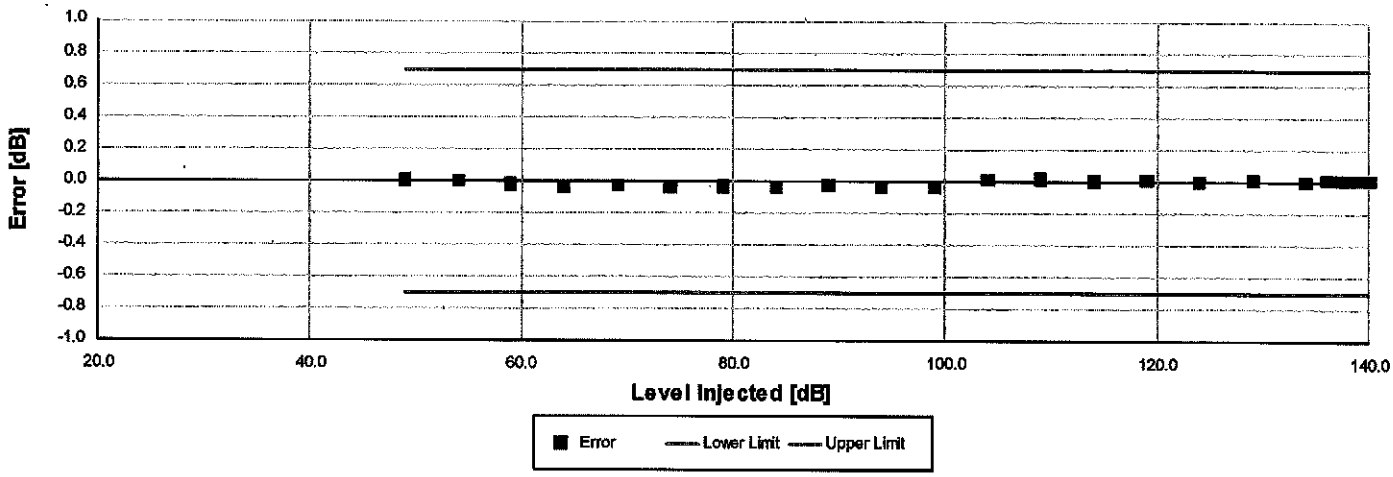


Electrical signal test of frequency weighting performed according to IEC 61672-3:2013 13 and ANSI S1.4-2014 Part 3: 13 for compliance to IEC 61672-1:2013 5.5; IEC 60651:2001 6.1 and 9.2.2; IEC 60804:2000 5; ANSI S1.4:1983 (R2006) 5.1 and 8.2.1; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Deviation [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
6.31	-0.31	-0.31	-1.11	0.33	0.10	Pass
63.10	-0.02	-0.02	-0.30	0.30	0.09	Pass
125.89	-0.01	-0.01	-0.30	0.30	0.09	Pass
251.19	-0.01	-0.01	-0.30	0.30	0.09	Pass
501.19	0.00	0.00	-0.30	0.30	0.09	Pass
1,000.00	0.00	0.00	-0.30	0.30	0.09	Pass
1,995.26	0.02	0.02	-0.30	0.30	0.09	Pass
3,981.07	0.03	0.03	-0.30	0.30	0.09	Pass
7,943.28	0.05	0.05	-0.30	0.30	0.09	Pass
15,848.93	-0.06	-0.06	-0.42	0.32	0.09	Pass
19,952.62	-0.31	-0.31	-0.91	0.41	0.09	Pass

-- End of measurement results--

A-weighted Broadband Log Linearity: 8,000.00 Hz



Broadband level linearity performed according to IEC 61672-3:2013 16 and ANSI S1.4-2014 Part 3: 16 for compliance to IEC 61672-1:2013 5.6, IEC 60804:2000 6.2, IEC 61252:2002 8, ANSI S1.4 (R2006) 6.9, ANSI S1.4-2014 Part 1: 5.6, ANSI S1.43 (R2007) 6.2

Level [dB]	Error [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
49.00	0.00	-0.70	0.70	0.09	Pass
54.00	-0.01	-0.70	0.70	0.09	Pass
59.00	-0.02	-0.70	0.70	0.09	Pass
64.00	-0.03	-0.70	0.70	0.09	Pass
69.00	-0.03	-0.70	0.70	0.09	Pass
74.00	-0.04	-0.70	0.70	0.09	Pass
79.00	-0.03	-0.70	0.70	0.09	Pass
84.00	-0.04	-0.70	0.70	0.09	Pass
89.00	-0.03	-0.70	0.70	0.09	Pass
94.00	-0.04	-0.70	0.70	0.09	Pass
99.00	-0.04	-0.70	0.70	0.09	Pass
104.00	0.01	-0.70	0.70	0.09	Pass
109.00	0.02	-0.70	0.70	0.09	Pass
114.00	0.01	-0.70	0.70	0.09	Pass
119.00	0.01	-0.70	0.70	0.09	Pass
124.00	0.00	-0.70	0.70	0.09	Pass
129.00	0.01	-0.70	0.70	0.09	Pass
134.00	0.00	-0.70	0.70	0.09	Pass
136.00	0.01	-0.70	0.70	0.09	Pass
137.00	0.01	-0.70	0.70	0.09	Pass
138.00	0.01	-0.70	0.70	0.09	Pass
139.00	0.01	-0.70	0.70	0.09	Pass
140.00	0.01	-0.70	0.70	0.09	Pass

-- End of measurement results--

Peak Rise Time

Peak rise time performed according to IEC 60651:2001 9.4.4 and ANSI S1.4:1983 (R2006) 8.4.4

Amplitude [dB]	Duration [us]		Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
137.85	40	Negative Pulse	138.46	137.01	139.01	0.09	Pass
		Positive Pulse	138.45	137.01	139.01	0.09	Pass
	30	Negative Pulse	137.52	137.01	139.01	0.09	Pass
		Positive Pulse	137.51	137.01	139.01	0.09	Pass

-- End of measurement results--

Positive Pulse Crest Factor

200 µs pulse tests at 2.0, 12.0, 22.0, 32.0 dB below Overload Limit

Crest Factor measured according to IEC 60651:2001 9.4.2 and ANSI S1.4:1983 (R2006) 8.4.2

Amplitude [dB]	Crest Factor	Test Result [dB]	Limits [dB]	Expanded Uncertainty [dB]	Result
136.85	3	OVLD	± 0.50	0.09	Pass
	5	OVLD	± 1.00	0.09	Pass
	10	OVLD	± 1.50	0.09	Pass
126.85	3	-0.16	± 0.50	0.09	Pass
	5	-0.15	± 1.00	0.11	Pass
	10	OVLD	± 1.50	0.09	Pass
116.85	3	-0.16	± 0.50	0.09	Pass
	5	-0.16	± 1.00	0.09	Pass
	10	-0.12	± 1.50	0.09	Pass
106.85	3	-0.18	± 0.50	0.09	Pass
	5	-0.16	± 1.00	0.09	Pass
	10	-0.21	± 1.50	0.09	Pass

-- End of measurement results--

Negative Pulse Crest Factor

200 µs pulse tests at 2.0, 12.0, 22.0, 32.0 dB below Overload Limit

Crest Factor measured according to IEC 60651:2001 9.4.2 and ANSI S1.4:1983 (R2006) 8.4.2

Amplitude [dB]	Crest Factor	Test Result [dB]	Limits [dB]	Expanded Uncertainty [dB]	Result
136.85	3	OVLD	± 0.50	0.09	Pass
	5	OVLD	± 1.00	0.09	Pass
	10	OVLD	± 1.50	0.09	Pass
126.85	3	-0.16	± 0.50	0.09	Pass
	5	-0.14	± 1.00	0.09	Pass
	10	OVLD	± 1.50	0.09	Pass
116.85	3	-0.16	± 0.50	0.09	Pass
	5	-0.16	± 1.00	0.09	Pass
	10	-0.11	± 1.50	0.09	Pass
106.85	3	-0.19	± 0.50	0.09	Pass
	5	-0.15	± 1.00	0.09	Pass
	10	-0.20	± 1.50	0.09	Pass

-- End of measurement results--

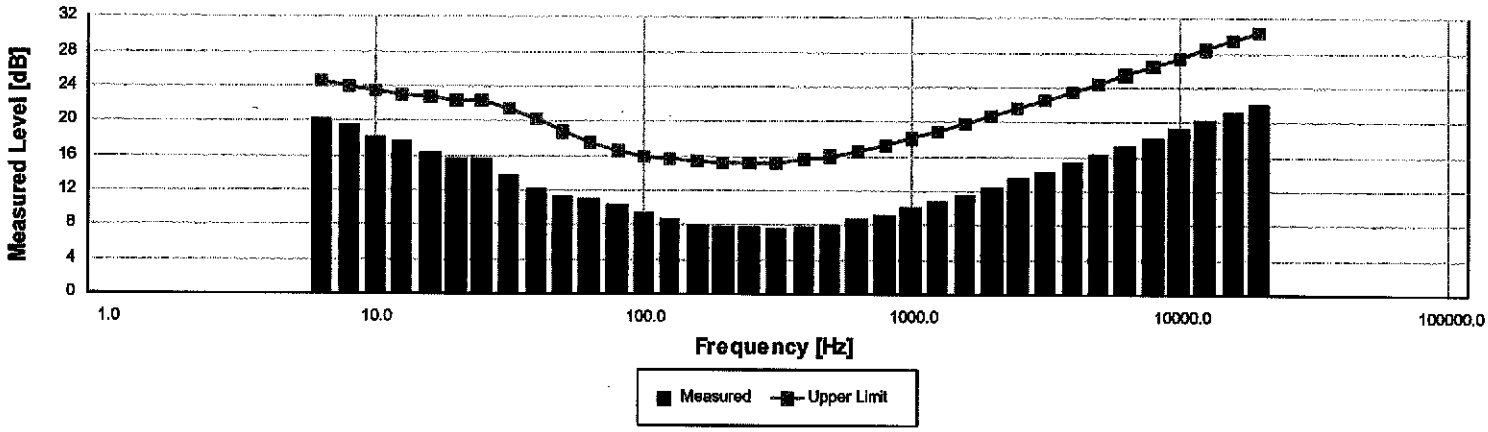
Gain

Gain measured according to IEC 61672-3:2013 17.3 and 17.4 and ANSI S1.4-2014 Part 3: 17.3 and 17.4

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
0 dB Gain	93.94	93.89	94.09	0.09	Pass
0 dB Gain, Linearity	41.06	40.29	41.69	0.09	Pass
OBA Low Range	93.99	93.89	94.09	0.09	Pass
OBA Normal Range	93.99	93.20	94.80	0.09	Pass

-- End of measurement results--

1/3-Octave Self-Generated Noise



The SLM is set to low range.

Frequency [Hz]	Test Result [dB]	Upper limit [dB]	Result
6.30	20.33	24.60	Pass
8.00	19.67	24.00	Pass
10.00	18.26	23.50	Pass
12.50	17.73	23.00	Pass
16.00	16.45	22.90	Pass
20.00	15.71	22.40	Pass
25.00	15.58	22.30	Pass
31.50	13.73	21.50	Pass
40.00	12.29	20.20	Pass
50.00	11.26	18.80	Pass
63.00	10.98	17.60	Pass
80.00	10.38	16.60	Pass
100.00	9.37	15.90	Pass
125.00	8.74	15.70	Pass
160.00	7.98	15.50	Pass
200.00	7.73	15.20	Pass
250.00	7.79	15.20	Pass
315.00	7.64	15.20	Pass
400.00	7.90	15.70	Pass
500.00	8.15	16.00	Pass
630.00	8.74	16.60	Pass
800.00	9.23	17.30	Pass
1,000.00	10.10	18.10	Pass
1,250.00	10.84	18.90	Pass
1,600.00	11.62	19.80	Pass
2,000.00	12.50	20.80	Pass
2,500.00	13.51	21.70	Pass
3,150.00	14.34	22.60	Pass
4,000.00	15.35	23.50	Pass
5,000.00	16.36	24.50	Pass
6,300.00	17.25	25.50	Pass
8,000.00	18.30	26.50	Pass
10,000.00	19.27	27.40	Pass
12,500.00	20.25	28.50	Pass
16,000.00	21.21	29.50	Pass
20,000.00	22.23	30.40	Pass

-- End of measurement results--

Broadband Noise Floor

Self-generated noise measured according to IEC 61672-3:2013 11.2 and ANSI S1.4-2014 Part 3: 11.2

Measurement	Test Result [dB]	Upper Limit [dB]	Result
A-weight Noise Floor	26.80	36.00	Pass
C-weight Noise Floor	26.74	35.00	Pass
Z-weight Noise Floor	34.03	39.00	Pass

-- End of measurement results--

Total Harmonic Distortion

Measured using 1/3-Octave filters

Measurement	Test Result [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
10 Hz Signal	135.08	135.05	136.65	0.09	Pass
THD	-66.54		-58.00	0.01	Pass
THD+N	-62.41		-58.00	0.01	Pass

-- End of measurement results--

-- End of Report--

Signatory: *Ron Harris*

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ACCREDITED Cert. #3622.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 153864
Asset ID:
Description: Free-Field Microphone

Customer: TMS Rental
Address:

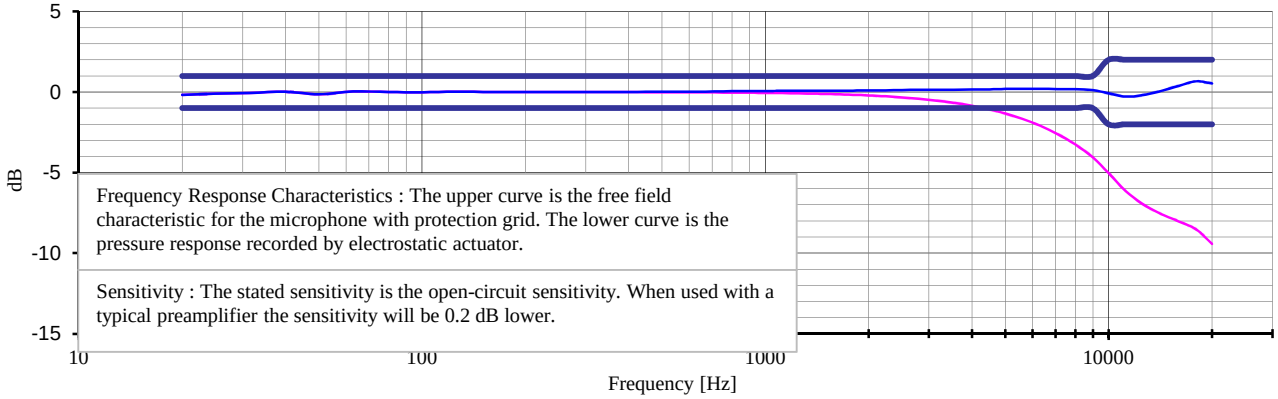
Calibration Date: Apr 23, 2018 12:01:08
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-25.81	-25.87	dB re. 1V/Pa
	51.24	50.90	mV/Pa

Temperature:	75 (24)	°F (°C)
Humidity:	35	%
Ambient Pressure:	999.5	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.17	**630**	0.02	**4500**	0.17		
25	-0.09	**800**	0.06	**5000**	0.19		
31.5	-0.06	**1000**	0.06	**5600**	0.21		
40	0.02	**1120**	0.08	**6300**	0.21		
50	-0.13	**1250**	0.08	**7100**	0.19		
63	0.04	**1400**	0.09	**8000**	0.17		
80	0.00	**1600**	0.08	**9000**	0.12		
100	-0.01	**1800**	0.09	**10000**	-0.08		
125	0.02	**2000**	0.10	**11200**	-0.28		
160	0.01	**2240**	0.11	**12500**	-0.21		
200	0.01	**2500**	0.13	**14000**	0.03		
250	0.00	**2800**	0.14	**16000**	0.39		
315	0.01	**3150**	0.15	**18000**	0.67		
400	0.01	**3550**	0.15	**20000**	0.53		
500	0.03	**4000**	0.15				

Technician: Ed Devlin

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

ACCREDITED
Calibration Lab
CALIBRATION CERT 2649.01

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 161429
Asset ID: 57518
Description: Free-Field Microphone

Customer: TMS Rental
Address:

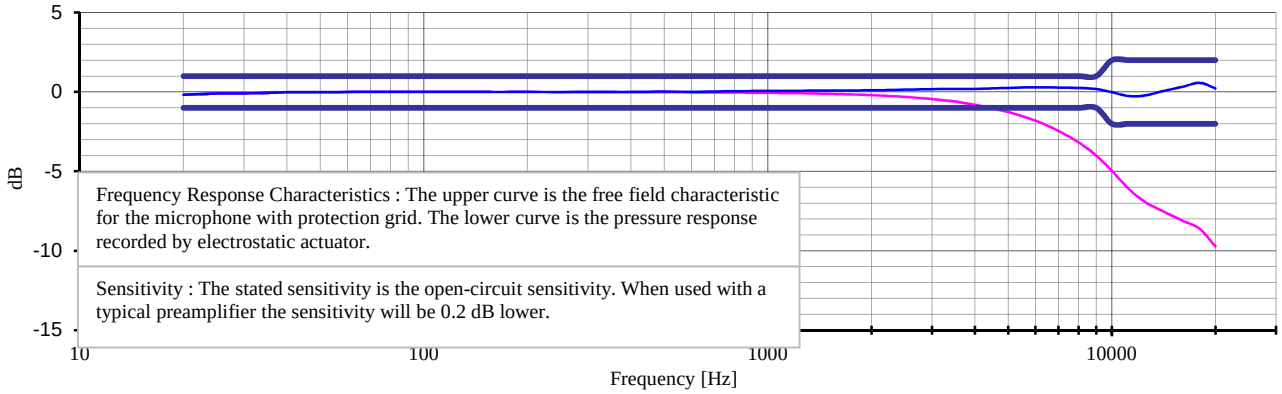
Calibration Date: Jul 31, 2018 13:13:08
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-26.43	-26.48	dB re. 1V/Pa
	47.70	47.40	mV/Pa

Temperature:	72 (22)	°F (°C)
Humidity:	49	%
Ambient Pressure:	992.6	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.16	**630**	0.02	**4500**	0.23		
25	-0.09	**800**	0.06	**5000**	0.26		
31.5	-0.08	**1000**	0.07	**5600**	0.29		
40	-0.01	**1120**	0.07	**6300**	0.29		
50	-0.01	**1250**	0.08	**7100**	0.27		
63	0.00	**1400**	0.09	**8000**	0.26		
80	0.00	**1600**	0.08	**9000**	0.19		
100	0.01	**1800**	0.09	**10000**	-0.02		
125	0.01	**2000**	0.11	**11200**	-0.26		
160	0.00	**2240**	0.12	**12500**	-0.22		
200	0.00	**2500**	0.15	**14000**	0.04		
250	0.00	**2800**	0.17	**16000**	0.32		
315	0.01	**3150**	0.19	**18000**	0.58		
400	0.00	**3550**	0.20	**20000**	0.23		
500	0.03	**4000**	0.20				

Technician: Bradly Haarmeyer

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

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Calibration Lab
CALIBRATION CERT 2649.01

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 157100
Asset ID: 58728
Description: Free-Field Microphone

Customer: TMS Rental
Address:

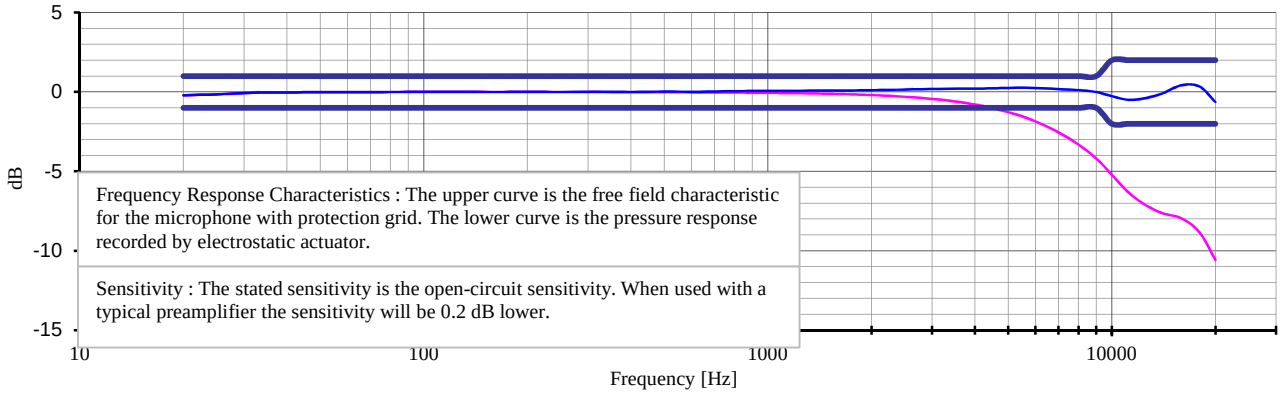
Calibration Date: Jul 31, 2018 13:04:32
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-26.58	-26.64	dB re. 1V/Pa
	46.89	46.59	mV/Pa

Temperature:	72 (22)	°F (°C)
Humidity:	49	%
Ambient Pressure:	992.6	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.21	**630**	0.02	**4500**	0.23		
25	-0.15	**800**	0.06	**5000**	0.26		
31.5	-0.04	**1000**	0.06	**5600**	0.27		
40	-0.03	**1120**	0.07	**6300**	0.23		
50	0.00	**1250**	0.08	**7100**	0.18		
63	-0.01	**1400**	0.09	**8000**	0.12		
80	0.00	**1600**	0.09	**9000**	0.00		
100	0.00	**1800**	0.10	**10000**	-0.26		
125	0.01	**2000**	0.12	**11200**	-0.50		
160	0.00	**2240**	0.13	**12500**	-0.39		
200	0.00	**2500**	0.15	**14000**	-0.10		
250	0.00	**2800**	0.17	**16000**	0.44		
315	0.01	**3150**	0.20	**18000**	0.34		
400	0.00	**3550**	0.21	**20000**	-0.63		
500	0.03	**4000**	0.21				

Technician: Bradly Haarmeyer

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

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Calibration Lab
CALIBRATION CERT 2649.01

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 154695
Asset ID:
Description: Free-Field Microphone

Customer: TMS Rental
Address:

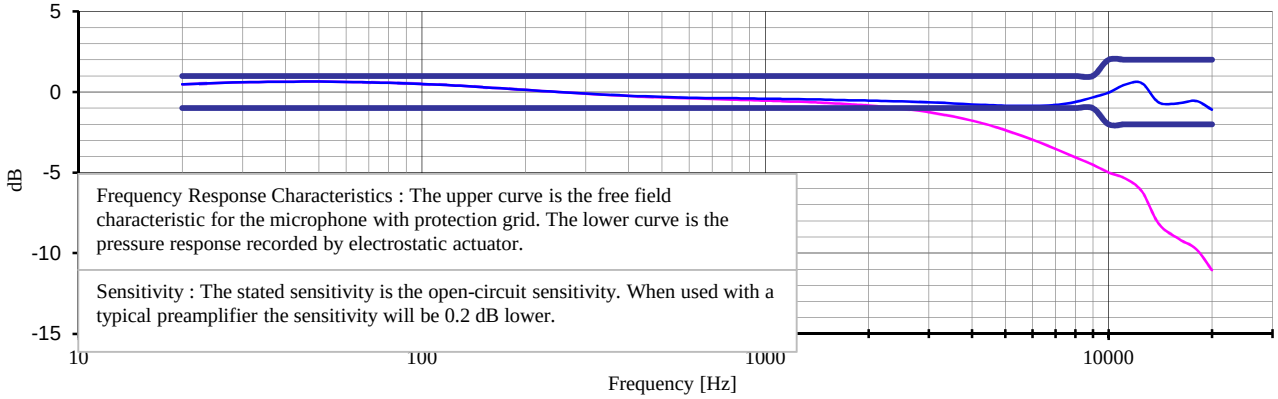
Calibration Date: May 21, 2018 10:13:22
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-27.90	-28.43	dB re. 1V/Pa
	40.26	37.87	mV/Pa

Temperature:	70 (21)	°F (°C)
Humidity:	53	%
Ambient Pressure:	999.5	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	0.48	**630**	-0.36	**4500**	-0.81		
25	0.56	**800**	-0.38	**5000**	-0.84		
31.5	0.62	**1000**	-0.41	**5600**	-0.85		
40	0.64	**1120**	-0.43	**6300**	-0.85		
50	0.65	**1250**	-0.44	**7100**	-0.79		
63	0.62	**1400**	-0.46	**8000**	-0.62		
80	0.57	**1600**	-0.49	**9000**	-0.33		
100	0.50	**1800**	-0.51	**10000**	-0.04		
125	0.41	**2000**	-0.53	**11200**	0.47		
160	0.27	**2240**	-0.56	**12500**	0.55		
200	0.14	**2500**	-0.57	**14000**	-0.65		
250	0.00	**2800**	-0.61	**16000**	-0.70		
315	-0.12	**3150**	-0.65	**18000**	-0.55		
400	-0.23	**3550**	-0.70	**20000**	-1.10		
500	-0.29	**4000**	-0.77				

Technician: Ed Devlin

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

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Calibration Lab
CALIBRATION CERT 2649.01

~ Certificate of Calibration and Compliance ~

Microphone Model: 377B02 Serial Number: 303542 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	10/20/17	10/19/18
Larson Davis	PRM915	146	CA2115	2/15/17	2/15/18
Larson Davis	PRM902	4943	CA1162	11/13/17	11/13/18
Larson Davis	PRM916	104	LD015	2/15/17	2/15/18
Larson Davis	CAL250	5109	CA1496	10/19/17	10/19/18
Larson Davis	2201	140	CA890	5/3/17	5/3/18
Bruel & Kjaer	4192	2954556	CA2323	9/15/17	9/14/18
Larson Davis	GPRM902	3999	CA1090	9/20/17	9/20/18
Newport	iTHX-SD/N	1080002	CA1511	2/14/17	2/14/18
Larson Davis	PRA951-4	241	CA1449	10/26/17	10/26/18
Larson Davis	PRM915	147	CA2179	6/6/17	6/6/18
PCB	68510-02	N/A	CA2672	12/27/17	12/27/18
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open Circuit Sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: January 30, 2018

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CALIBRATION CERT #1662.01

PCB PIEZOTRONICS VIBRATION DIVISION

3425 Walden Avenue, Depew, New York, 14043

TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL112-3600161866.453+0

~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 303542 Description: 1/2" Free-Field Microphone

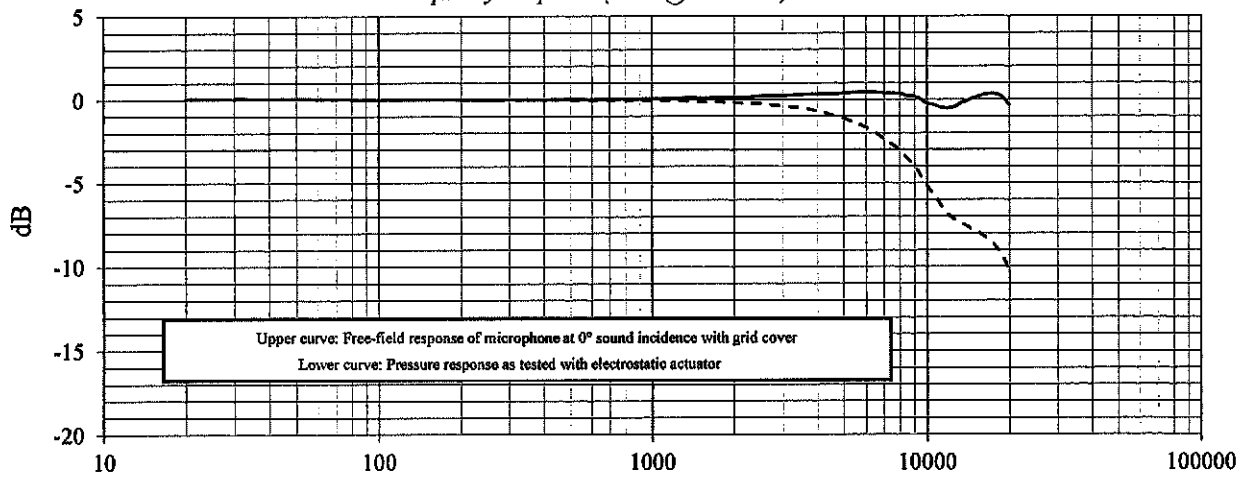
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 57.35 mV/Pa
-24.83 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 12.5 pF

Temperature: 68 °F (20°C) Ambient Pressure: 996 mbar Relative Humidity: 23 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.07	0.07	1679	-0.13	0.11	7499	-2.70	0.38	-	-	-
25.1	0.05	0.05	1778	-0.15	0.11	7943	-3.02	0.37	-	-	-
31.6	0.06	0.06	1884	-0.16	0.12	8414	-3.49	0.24	-	-	-
39.8	0.05	0.05	1995	-0.18	0.13	8913	-3.91	0.20	-	-	-
50.1	0.05	0.05	2114	-0.20	0.14	9441	-4.49	0.03	-	-	-
63.1	0.03	0.03	2239	-0.21	0.16	10000	-5.20	-0.25	-	-	-
79.4	0.02	0.02	2371	-0.24	0.18	10593	-5.73	-0.33	-	-	-
100.0	0.02	0.02	2512	-0.25	0.21	11220	-6.34	-0.48	-	-	-
125.9	0.01	0.01	2661	-0.30	0.21	11885	-6.85	-0.53	-	-	-
158.5	0.01	0.01	2818	-0.35	0.21	12589	-7.20	-0.43	-	-	-
199.5	0.00	0.00	2985	-0.38	0.24	13335	-7.40	-0.21	-	-	-
251.2	0.00	0.00	3162	-0.42	0.26	14125	-7.64	-0.05	-	-	-
316.2	0.00	0.01	3350	-0.47	0.27	14962	-7.85	0.12	-	-	-
398.1	-0.01	-0.01	3548	-0.53	0.29	15849	-8.09	0.26	-	-	-
501.2	-0.02	0.02	3758	-0.60	0.30	16788	-8.38	0.34	-	-	-
631.0	-0.02	0.02	3981	-0.68	0.32	17783	-8.78	0.33	-	-	-
794.3	-0.04	0.05	4217	-0.76	0.35	18837	-9.37	0.14	-	-	-
1000.0	-0.05	0.07	4467	-0.92	0.31	19953	-10.27	-0.34	-	-	-
1059.3	-0.06	0.07	4732	-1.02	0.35	-	-	-	-	-	-
1122.0	-0.06	0.08	5012	-1.14	0.39	-	-	-	-	-	-
1188.5	-0.07	0.08	5309	-1.30	0.40	-	-	-	-	-	-
1258.9	-0.07	0.09	5623	-1.46	0.42	-	-	-	-	-	-
1333.5	-0.08	0.10	5957	-1.64	0.43	-	-	-	-	-	-
1412.5	-0.09	0.10	6310	-1.85	0.44	-	-	-	-	-	-
1496.2	-0.11	0.09	6683	-2.12	0.40	-	-	-	-	-	-
1584.9	-0.12	0.09	7080	-2.40	0.38	-	-	-	-	-	-

Technician: Leonard Lukasik Date: January 30, 2018

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ID:CAL112-3600161866.453+0

~ *Certificate of Calibration and Compliance* ~

Microphone Model: 377B02 Serial Number: 303884 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	10/20/17	10/19/18
Larson Davis	PRM915	146	CA2115	2/15/17	2/15/18
Larson Davis	PRM902	4943	CA1162	11/13/17	11/13/18
Larson Davis	PRM916	104	LD015	2/15/17	2/15/18
Larson Davis	CAL250	5109	CA1496	10/19/17	10/19/18
Larson Davis	2201	140	CA890	5/3/17	5/3/18
Bruel & Kjaer	4192	2954556	CA2323	9/15/17	9/14/18
Larson Davis	GPRM902	3999	CA1090	9/20/17	9/20/18
Newport	iTHX-SD/N	1080002	CA1511	2/14/17	2/14/18
Larson Davis	PRA951-4	241	CA1449	10/26/17	10/26/18
Larson Davis	PRM915	147	CA2179	6/6/17	6/6/18
PCB	68510-02	N/A	CA2672	12/27/17	12/27/18
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open Circuit Sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: January 30, 2018

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ID:CAL112-3600161561.671+0

~ *Calibration Report* ~

Microphone Model: 377B02 Serial Number: 303884 Description: 1/2" Free-Field Microphone

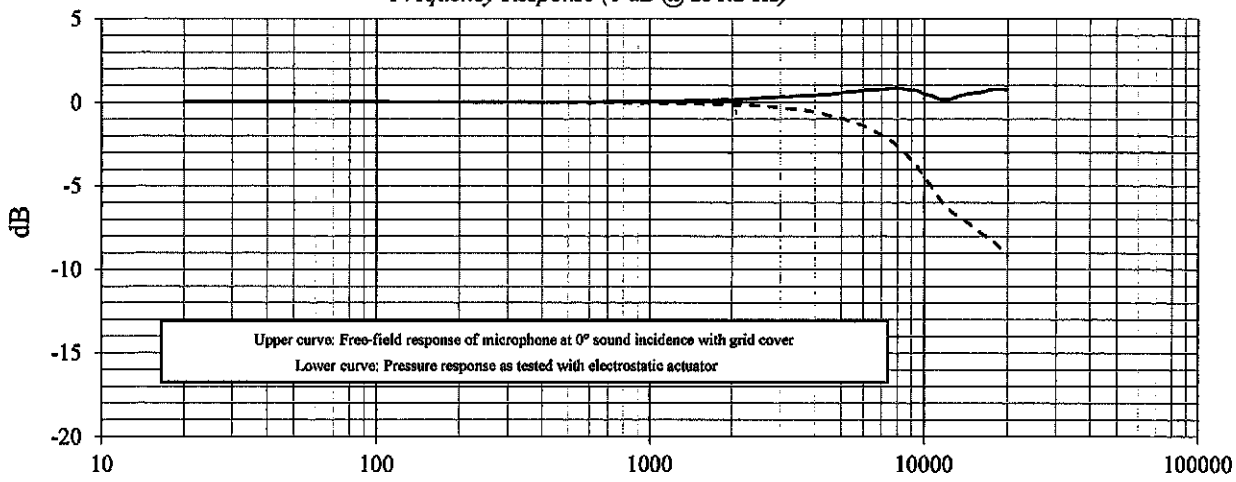
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 45.16 mV/Pa
-26.91 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 12.9 pF

Temperature: 68 °F (20°C) Ambient Pressure: 996 mbar Relative Humidity: 23 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.09	0.09	1679	-0.13	0.10	7499	-2.26	0.81	-	-	-
25.1	0.05	0.05	1778	-0.11	0.14	7943	-2.55	0.84	-	-	-
31.6	0.04	0.04	1884	-0.12	0.16	8414	-2.94	0.79	-	-	-
39.8	0.05	0.05	1995	-0.17	0.15	8913	-3.37	0.74	-	-	-
50.1	0.03	0.03	2114	-0.15	0.19	9441	-3.83	0.69	-	-	-
63.1	0.03	0.03	2239	-0.17	0.20	10000	-4.46	0.50	-	-	-
79.4	0.02	0.02	2371	-0.20	0.21	10593	-5.00	0.40	-	-	-
100.0	0.02	0.02	2512	-0.23	0.24	11220	-5.64	0.22	-	-	-
125.9	0.01	0.01	2661	-0.24	0.27	11885	-6.16	0.16	-	-	-
158.5	0.02	0.02	2818	-0.27	0.29	12589	-6.55	0.22	-	-	-
199.5	0.01	0.01	2985	-0.29	0.33	13335	-6.82	0.37	-	-	-
251.2	0.00	0.00	3162	-0.36	0.32	14125	-7.12	0.48	-	-	-
316.2	0.00	0.01	3350	-0.39	0.35	14962	-7.42	0.55	-	-	-
398.1	0.00	0.00	3548	-0.44	0.38	15849	-7.78	0.57	-	-	-
501.2	-0.03	0.01	3758	-0.51	0.39	16788	-8.03	0.69	-	-	-
631.0	-0.03	0.01	3981	-0.58	0.42	17783	-8.32	0.79	-	-	-
794.3	-0.04	0.05	4217	-0.65	0.46	18837	-8.72	0.79	-	-	-
1000.0	-0.05	0.07	4467	-0.79	0.45	19953	-9.17	0.77	-	-	-
1059.3	-0.05	0.08	4732	-0.86	0.51	-	-	-	-	-	-
1122.0	-0.05	0.09	5012	-0.96	0.57	-	-	-	-	-	-
1188.5	-0.06	0.09	5309	-1.09	0.61	-	-	-	-	-	-
1258.9	-0.08	0.08	5623	-1.23	0.65	-	-	-	-	-	-
1333.5	-0.09	0.09	5957	-1.38	0.69	-	-	-	-	-	-
1412.5	-0.09	0.10	6310	-1.55	0.74	-	-	-	-	-	-
1496.2	-0.10	0.10	6683	-1.77	0.75	-	-	-	-	-	-
1584.9	-0.10	0.11	7080	-2.01	0.77	-	-	-	-	-	-

Technician: Leonard Lukasik Date: January 30, 2018

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ID:CAL112-3609161561.871+0

~ Certificate of Calibration and Compliance ~

Microphone Model: 377B02 Serial Number: 304709 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	10/20/17	10/19/18
Larson Davis	PRM915	134	CA2114	11/30/17	11/30/18
Larson Davis	PRM902	4943	CA1162	11/13/17	11/13/18
Larson Davis	PRM916	130	CA1161	9/13/17	9/13/18
Larson Davis	CAL250	5109	CA1496	10/19/17	10/19/18
Larson Davis	2201	140	CA890	5/3/17	5/3/18
Bruel & Kjaer	4192	2954556	CA2323	9/15/17	9/14/18
Larson Davis	GPRM902	3999	CA1090	9/20/17	9/20/18
Newport	iTHX-SD/N	1080002	CA1511	2/9/18	2/8/19
Larson Davis	PRA951-4	241	CA1449	10/26/17	10/26/18
Larson Davis	PRM915	147	CA2179	6/6/17	6/6/18
PCB	68510-02	N/A	CA2672	12/27/17	12/27/18
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open Circuit Sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: February 19, 2018

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CALIBRATION CERT #1862.01

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ID:CAL112-360161358?,519+0

~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 304709 Description: 1/2" Free-Field Microphone

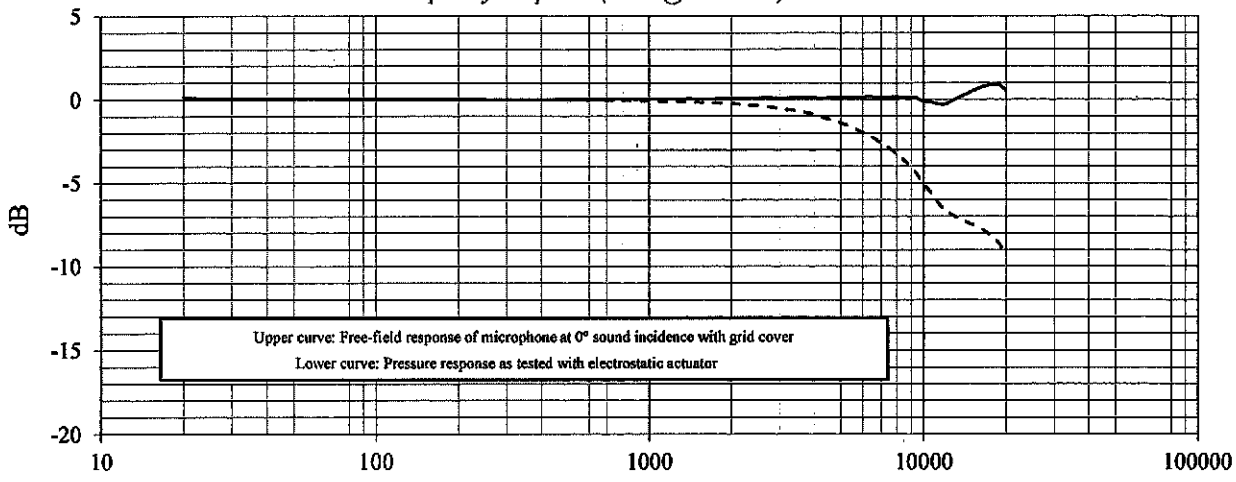
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 54.60 mV/Pa
-25.26 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 13 pF

Temperature: 71 °F (22°C) Ambient Pressure: 991 mbar Relative Humidity: 38 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.13	0.13	1679	-0.19	0.04	7499	-2.93	0.14	-	-	-
25.1	0.07	0.07	1778	-0.19	0.06	7943	-3.23	0.16	-	-	-
31.6	0.06	0.06	1884	-0.20	0.08	8414	-3.61	0.12	-	-	-
39.8	0.06	0.06	1995	-0.24	0.07	8913	-3.98	0.13	-	-	-
50.1	0.05	0.05	2114	-0.28	0.06	9441	-4.44	0.08	-	-	-
63.1	0.04	0.04	2239	-0.29	0.08	10000	-5.08	-0.13	-	-	-
79.4	0.03	0.03	2371	-0.35	0.07	10593	-5.54	-0.14	-	-	-
100.0	0.02	0.02	2512	-0.38	0.08	11220	-6.12	-0.26	-	-	-
125.9	0.02	0.02	2661	-0.40	0.11	11885	-6.61	-0.29	-	-	-
158.5	0.01	0.01	2818	-0.46	0.10	12589	-6.89	-0.12	-	-	-
199.5	0.00	0.00	2985	-0.54	0.08	13335	-7.09	0.10	-	-	-
251.2	0.00	0.00	3162	-0.60	0.08	14125	-7.30	0.29	-	-	-
316.2	-0.01	0.00	3350	-0.64	0.10	14962	-7.49	0.48	-	-	-
398.1	-0.01	-0.01	3548	-0.71	0.11	15849	-7.67	0.68	-	-	-
501.2	-0.02	0.02	3758	-0.79	0.11	16788	-7.91	0.81	-	-	-
631.0	-0.03	0.01	3981	-0.89	0.11	17783	-8.23	0.89	-	-	-
794.3	-0.05	0.04	4217	-1.05	0.06	18837	-8.65	0.86	-	-	-
1000.0	-0.09	0.03	4467	-1.15	0.08	19953	-9.39	0.54	-	-	-
1059.3	-0.10	0.03	4732	-1.27	0.10	-	-	-	-	-	-
1122.0	-0.11	0.03	5012	-1.40	0.14	-	-	-	-	-	-
1188.5	-0.09	0.06	5309	-1.56	0.14	-	-	-	-	-	-
1258.9	-0.12	0.05	5623	-1.73	0.15	-	-	-	-	-	-
1333.5	-0.13	0.05	5957	-1.94	0.13	-	-	-	-	-	-
1412.5	-0.13	0.06	6310	-2.12	0.17	-	-	-	-	-	-
1496.2	-0.16	0.04	6683	-2.37	0.15	-	-	-	-	-	-
1584.9	-0.18	0.03	7080	-2.63	0.15	-	-	-	-	-	-

Technician: Leonard Lukasik Date: February 19, 2018

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ID:CAL-112-360191567.519+0

THE MODAL SHOP INC
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph: 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 158857
Asset ID:
Description: Free-Field Microphone

Customer: TMS Rental
Address:

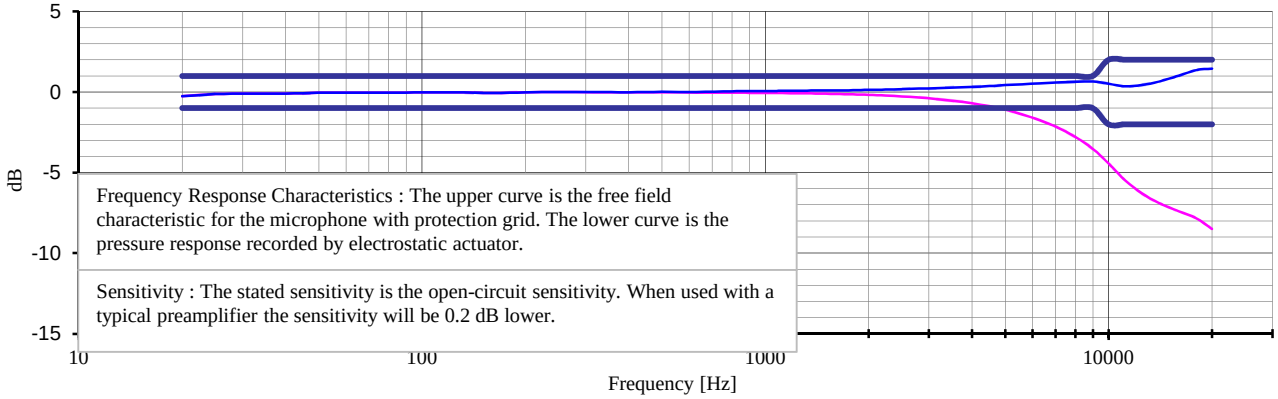
Calibration Date: Apr 23, 2018 12:23:11
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-26.75	-26.81	dB re. 1V/Pa
	45.97	45.67	mV/Pa

Temperature:	75 (24)	°F (°C)
Humidity:	37	%
Ambient Pressure:	999.6	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.26	**630**	0.01	**4500**	0.37		
25	-0.13	**800**	0.05	**5000**	0.44		
31.5	-0.09	**1000**	0.06	**5600**	0.48		
40	-0.10	**1120**	0.07	**6300**	0.54		
50	-0.04	**1250**	0.08	**7100**	0.59		
63	-0.04	**1400**	0.10	**8000**	0.64		
80	-0.04	**1600**	0.10	**9000**	0.65		
100	-0.01	**1800**	0.11	**10000**	0.51		
125	-0.02	**2000**	0.14	**11200**	0.35		
160	-0.06	**2240**	0.15	**12500**	0.44		
200	-0.02	**2500**	0.18	**14000**	0.65		
250	0.00	**2800**	0.21	**16000**	1.01		
315	0.00	**3150**	0.24	**18000**	1.36		
400	-0.01	**3550**	0.27	**20000**	1.46		
500	0.01	**4000**	0.31				

Technician: Ed Devlin

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

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Calibration Lab
CALIBRATION CERT 2649.01

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3149 East Kemper Rd.
Cincinnati, OH 45241
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www.modalshop.com

~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: 157437
Asset ID:
Description: Free-Field Microphone

Customer: TMS Rental
Address:

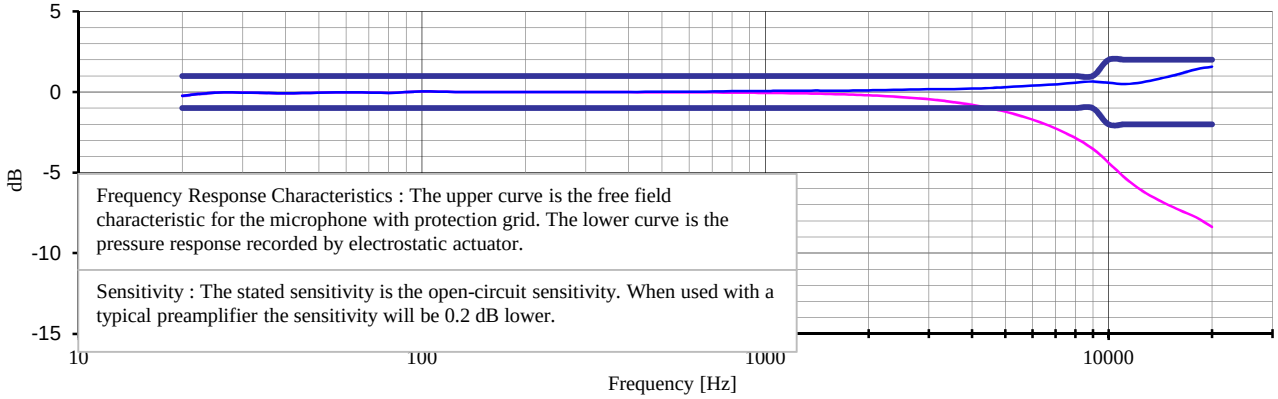
Calibration Date: Apr 23, 2018 13:21:50
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-27.23	-27.28	dB re. 1V/Pa
	43.48	43.23	mV/Pa

Temperature:	75 (24)	°F (°C)
Humidity:	40	%
Ambient Pressure:	999.1	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through NIST Project A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.23	**630**	0.02	**4500**	0.25		
25	-0.04	**800**	0.06	**5000**	0.30		
31.5	-0.04	**1000**	0.07	**5600**	0.36		
40	-0.08	**1120**	0.08	**6300**	0.42		
50	-0.05	**1250**	0.08	**7100**	0.48		
63	-0.01	**1400**	0.09	**8000**	0.58		
80	-0.05	**1600**	0.08	**9000**	0.65		
100	0.04	**1800**	0.09	**10000**	0.57		
125	0.01	**2000**	0.11	**11200**	0.50		
160	0.00	**2240**	0.12	**12500**	0.60		
200	0.00	**2500**	0.14	**14000**	0.82		
250	0.00	**2800**	0.16	**16000**	1.11		
315	0.01	**3150**	0.19	**18000**	1.42		
400	0.00	**3550**	0.19	**20000**	1.58		
500	0.02	**4000**	0.21				

Technician: Ed Devlin

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/22/2018	2/22/2019

ACCREDITED
Calibration Lab
CALIBRATION CERT 2649.01

~ Certificate of Calibration and Compliance ~

Microphone Model: 377B02 Serial Number: 305082 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	10/20/17	10/19/18
Larson Davis	PRM915	134	CA2114	11/30/17	11/30/18
Larson Davis	PRM902	5352	CA1247	4/12/18	4/12/19
Larson Davis	PRM916	130	CA1161	9/13/17	9/13/18
Larson Davis	CAL250	5109	CA1496	10/19/17	10/19/18
Larson Davis	2201	115	TA472	4/12/18	4/12/19
Bruel & Kjaer	4192	2954556	CA2323	9/15/17	9/14/18
Larson Davis	GPRM902	3999	CA1090	9/20/17	9/20/18
Newport	iTHX-SD/N	1080002	CA1511	2/9/18	2/8/19
Larson Davis	PRA951-4	222	LD026	12/19/17	12/19/18
Larson Davis	PRM915	147	CA2179	6/6/17	6/6/18
PCB	68510-02	N/A	CA2672	12/27/17	12/27/18
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open Circuit Sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: May 22, 2018

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CALIBRATION CERT #1852.01

PCB PIEZOTRONICS VIBRATION DIVISION

3425 Walden Avenue, Depew, New York, 14043

TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL112-360835245.100+0

~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 305082 Description: 1/2" Free-Field Microphone

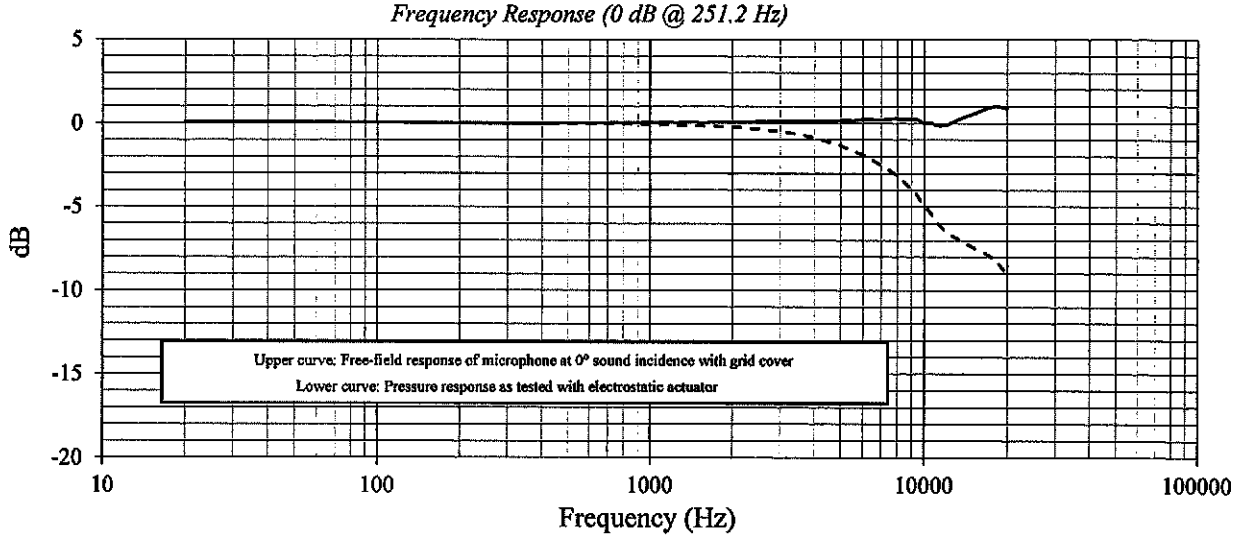
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 49.67 mV/Pa
-26.08 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 14.1 pF

Temperature: 71 °F (22°C) Ambient Pressure: 989 mbar Relative Humidity: 40 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.08	0.08	1679	-0.18	0.05	7499	-2.82	0.25	-	-	-
25.1	0.06	0.06	1778	-0.19	0.06	7943	-3.10	0.29	-	-	-
31.6	0.06	0.06	1884	-0.21	0.07	8414	-3.50	0.23	-	-	-
39.8	0.06	0.06	1995	-0.24	0.07	8913	-3.86	0.25	-	-	-
50.1	0.05	0.05	2114	-0.26	0.08	9441	-4.31	0.21	-	-	-
63.1	0.04	0.04	2239	-0.30	0.07	10000	-4.94	0.01	-	-	-
79.4	0.04	0.04	2371	-0.34	0.07	10593	-5.41	-0.01	-	-	-
100.0	0.03	0.03	2512	-0.37	0.09	11220	-6.00	-0.14	-	-	-
125.9	0.02	0.02	2661	-0.42	0.09	11885	-6.44	-0.12	-	-	-
158.5	0.02	0.02	2818	-0.46	0.10	12589	-6.73	0.04	-	-	-
199.5	0.01	0.01	2985	-0.50	0.13	13335	-6.95	0.24	-	-	-
251.2	0.00	0.00	3162	-0.57	0.11	14125	-7.19	0.40	-	-	-
316.2	-0.01	0.00	3350	-0.62	0.12	14962	-7.42	0.55	-	-	-
398.1	-0.01	-0.01	3548	-0.68	0.14	15849	-7.63	0.72	-	-	-
501.2	-0.02	0.02	3758	-0.77	0.13	16788	-7.83	0.89	-	-	-
631.0	-0.03	0.01	3981	-0.86	0.14	17783	-8.12	0.99	-	-	-
794.3	-0.06	0.03	4217	-0.99	0.12	18837	-8.53	0.99	-	-	-
1000.0	-0.08	0.04	4467	-1.11	0.12	19953	-9.06	0.87	-	-	-
1059.3	-0.10	0.03	4732	-1.23	0.14	-	-	-	-	-	-
1122.0	-0.09	0.05	5012	-1.36	0.17	-	-	-	-	-	-
1188.5	-0.10	0.05	5309	-1.53	0.17	-	-	-	-	-	-
1258.9	-0.13	0.03	5623	-1.71	0.17	-	-	-	-	-	-
1333.5	-0.12	0.06	5957	-1.86	0.21	-	-	-	-	-	-
1412.5	-0.14	0.05	6310	-2.07	0.22	-	-	-	-	-	-
1496.2	-0.17	0.04	6683	-2.32	0.20	-	-	-	-	-	-
1584.9	-0.19	0.03	7080	-2.58	0.20	-	-	-	-	-	-

Technician: Leonard Lukasik Date: May 22, 2018

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CALIBRATION CERT #1862.01

PCB PIEZOTRONICS VIBRATION DIVISION

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ID:CAL112-3600835245.1004D

~ Certificate of Calibration and Compliance ~

Microphone Model: 377B02 Serial Number: 305680 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	10/20/17	10/19/18
Larson Davis	PRM915	134	CA2114	11/30/17	11/30/18
Larson Davis	PRM902	5352	CA1247	4/12/18	4/12/19
Larson Davis	PRM916	130	CA1161	9/13/17	9/13/18
Larson Davis	CAL250	5109	CA1496	10/19/17	10/19/18
Larson Davis	2201	115	TA472	4/12/18	4/12/19
Bruel & Kjaer	4192	2764626	CA1636	8/7/17	8/7/18
Larson Davis	GPRM902	3999	CA1090	9/20/17	9/20/18
Newport	iTHX-SD/N	1080002	CA1511	2/9/18	2/8/19
Larson Davis	PRA951-4	222	LD026	12/19/17	12/19/18
Larson Davis	PRM915	135	CA1433	11/30/17	11/30/18
PCB	68510-02	N/A	CA2672	12/27/17	12/27/18
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open Circuit Sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: June 18, 2018

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CALIBRATION CERT #1862.01

PCB PIEZOTRONICS VIBRATION DIVISION

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~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 305680 Description: 1/2" Free-Field Microphone

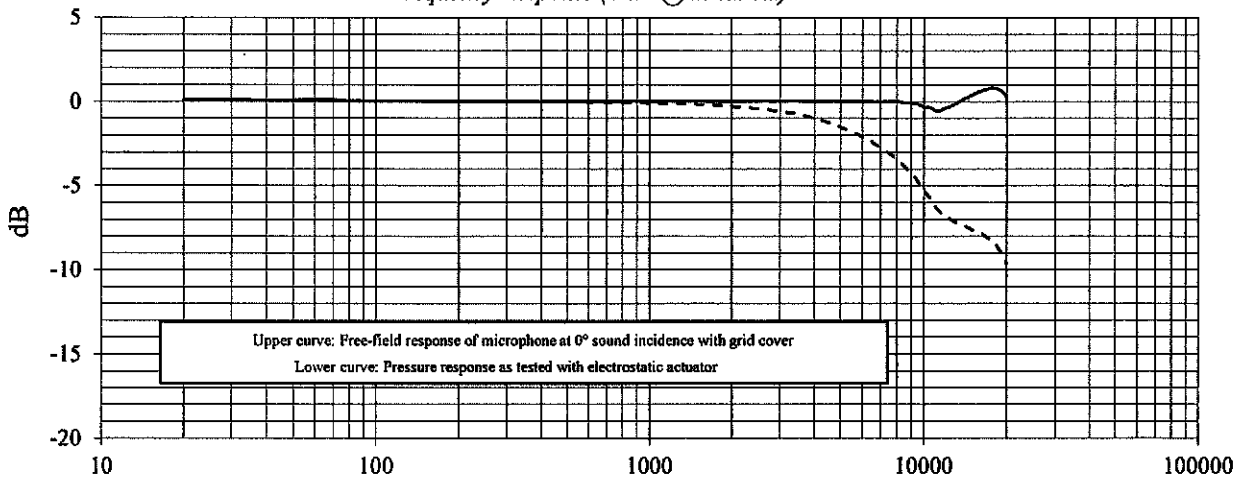
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 53.71 mV/Pa
-25.4 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 13.7 pF

Temperature: 73 °F (23°C) Ambient Pressure: 988 mbar Relative Humidity: 46 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.07	0.07	1679	-0.21	0.02	7499	-3.07	0.00	-	-	-
25.1	0.11	0.11	1778	-0.22	0.03	7943	-3.37	0.02	-	-	-
31.6	0.09	0.09	1884	-0.27	0.01	8414	-3.78	-0.05	-	-	-
39.8	0.06	0.06	1995	-0.30	0.02	8913	-4.19	-0.08	-	-	-
50.1	0.07	0.07	2114	-0.33	0.02	9441	-4.65	-0.13	-	-	-
63.1	0.12	0.12	2239	-0.34	0.03	10000	-5.28	-0.33	-	-	-
79.4	0.05	0.05	2371	-0.39	0.02	10593	-5.77	-0.37	-	-	-
100.0	0.04	0.04	2512	-0.42	0.04	11220	-6.43	-0.57	-	-	-
125.9	0.03	0.03	2661	-0.46	0.05	11885	-6.74	-0.42	-	-	-
158.5	0.02	0.02	2818	-0.53	0.03	12589	-7.03	-0.26	-	-	-
199.5	0.01	0.01	2985	-0.58	0.04	13335	-7.24	-0.05	-	-	-
251.2	0.00	0.00	3162	-0.64	0.04	14125	-7.42	0.17	-	-	-
316.2	-0.01	0.01	3350	-0.69	0.05	14962	-7.60	0.37	-	-	-
398.1	-0.02	-0.02	3548	-0.79	0.03	15849	-7.78	0.57	-	-	-
501.2	-0.03	0.01	3758	-0.89	0.01	16788	-8.01	0.71	-	-	-
631.0	-0.05	-0.01	3981	-0.99	0.01	17783	-8.32	0.79	-	-	-
794.3	-0.07	0.02	4217	-1.11	0.00	18837	-8.81	0.70	-	-	-
1000.0	-0.10	0.02	4467	-1.22	0.01	19953	-9.61	0.32	-	-	-
1059.3	-0.11	0.02	4732	-1.34	0.03	-	-	-	-	-	-
1122.0	-0.11	0.03	5012	-1.52	0.01	-	-	-	-	-	-
1188.5	-0.11	0.04	5309	-1.69	0.01	-	-	-	-	-	-
1258.9	-0.13	0.03	5623	-1.87	0.01	-	-	-	-	-	-
1333.5	-0.13	0.05	5957	-2.05	0.02	-	-	-	-	-	-
1412.5	-0.16	0.03	6310	-2.28	0.01	-	-	-	-	-	-
1496.2	-0.17	0.03	6683	-2.53	-0.01	-	-	-	-	-	-
1584.9	-0.18	0.03	7080	-2.79	-0.01	-	-	-	-	-	-

Technician: Leonard Lukasik Date: June 18, 2018

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ID:CAL112-361217073&877+0

PCB PIEZOTRONICS
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Certificate of Calibration and Conformance

Certificate Number 2015-200909

Instrument Model 820, Serial Number 1324, was calibrated on 31 Jul 2015. The instrument meets factory specifications per Procedure D0001.8160, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: YES
Date Calibrated: 31 Jul 2015
Calibration due: 31 Jul 2016

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2209	0445 / 0111	12 Months	14 Nov 2015	2014-196329

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 24 ° Centigrade

Relative Humidity: 29 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

"AS RECEIVED" data same as shipped data.

Signed:

Technician: Eric Olson

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-196102

Instrument Model 820, Serial Number 1651, was calibrated on 6 Nov 2014. The instrument meets factory specifications per Procedure D0001.8160, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: YES
Date Calibrated: 6 Nov 2014
Calibration due: 6 Nov 2015

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2209	0445 / 0111	12 Months	15 Nov 2014	2013-182314

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 32 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the Issuer.

"AS RECEIVED" data same as shipped data.
Tested with PRM828-2581

Signed: Eric Olson

Technician: Eric Olson

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-196103

Instrument Model 820, Serial Number 1652, was calibrated on 6 Nov 2014. The instrument meets factory specifications per Procedure D0001.8160, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: YES
Date Calibrated: 6 Nov 2014
Calibration due: 6 Nov 2015

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2239	0653 / 0101	12 Months	14 Apr 2015	2014-189483

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 32 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

"AS RECEIVED" data same as shipped data.
Tested with PRM828-2582

Signed: _____
Technician: Eric Olson

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	73.2	°F
Model Number:	831		22.89	°C
Serial Number:	2573	Rel. Humidity:	20.2	%
Customer:	TMS Rental	Pressure:	101.9	mbars
Description:	Sound Level Meter		101.9	hPa

Note: As Found / As Left: In Tolerance

Upon receipt for testing, this instrument was found to be:

Within the Stated tolerance of the manufacturer's specification

Calibration Date: 16-Jan-15 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0109	4/14/2015	2013-176324

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Tim Rarden Signature:

THE MODAL SHOP INC.
A PCB GROUP CO.

The Modal Shop, Inc.
3149 East Kemper Road
Cincinnati, OH 45241
Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	71	°F
Model Number:	831		21.67	°C
Serial Number:	3216	Rel. Humidity:	10.2	%
Customer:	TMS Rental	Pressure:	1002.4	mbars
Description:	Sound Level Meter		1002.4	hPa

Note: As Found / As Left: In Tolerance

Upon receipt for testing, this instrument was found to be:

Within the Stated tolerance of the manufacturer's specification

Calibration Date: 16-Feb-15 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0101	4/14/2015	2013-176324

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Wayne Underwood Signature:

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Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	75	°F
Model Number:	831		23.89	°C
Serial Number:	3141	Rel. Humidity:	24.9	%
Customer:	TMS Rental	Pressure:	994.4	mbars
Description:	Sound Level Meter		994.4	hPa

Note: As Found / As Left: In Tolerance

Upon receipt for testing, this instrument was found to be:

Within the Stated tolerance of the manufacturer's specification

Calibration Date: 21-Jan-15 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0109	4/14/2015	2013-176324

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Wayne Underwood Signature:

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Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	72.1	°F
Model Number:	831		22.28	°C
Serial Number:	2668	Rel. Humidity:	31.3	%
Customer:	TMS Rental	Pressure:	985.7	mbars
Description:	Sound Level Meter		985.7	hPa

Note: As Found / As Left: In Tolerance

Upon receipt for testing, this instrument was found to be:

Within the Stated tolerance of the manufacturer's specification

Calibration Date: 22-Apr-15 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0101	4/7/2016	2014-193220

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Wayne Underwood Signature:

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Phone: (513) 351-9919
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Calibration Certificate

Certificate Number 2015006878

Customer:
The Modal Shop
3149 East Kemper Road
Cincinnati, OH 45241, United States

Model Number	831	***Procedure Number***	D0001.8378		
Serial Number	0002661	***Technician***	Ron Harris		
Test Results	**Pass**	***Calibration Date***	22 Jul 2015		
Initial Condition	Inoperable	***Calibration Due***	22 Jul 2016		
Description	Larson Davis Model 831	***Temperature***	23.49	°C	± 0.01 °C
		Humidity	49.2	%RH	± 0.5 %RH
		Static Pressure	86.07	kPa	± 0.03 kPa

Evaluation Method Tested electrically using PRM831 S/N 029412 and a 12.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 µPa assuming a microphone sensitivity of 50.0 mV/Pa.

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8384:

IEC 60651:2001 Type 1	ANSI S1.4-2014 Class 1
IEC 60804:2000 Type 1	ANSI S1.4 (R2006) Type 1
IEC 61252:2002	ANSI S1.11 (R2009) Class 1
IEC 61260:2001 Class 1	ANSI S1.25 (R2007)
IEC 61672:2013 Class 1	ANSI S1.43 (R2007) Type 1

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. **Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.**

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Standards Used

Description	Cal Date	Cal Due	Cal Standard
Hart Scientific 2626-H Temperature Probe	06/17/2015	06/17/2016	006798
SRS DS360 Ultra Low Distortion Generator	06/18/2015	06/18/2016	007117

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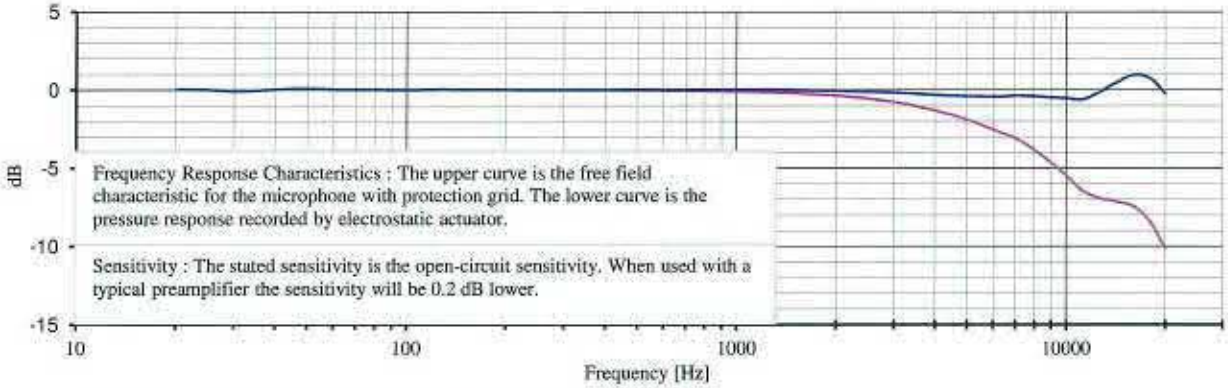
~Certificate of Calibration~

Manufacturer:	PCB	**Asset ID:**	47297
Model Number:	377B02	**Customer:**	TMS Rental
Serial Number:	LW132388	**Calibration Date:**	Jan 15, 2015 10:14:30
Description:	Free-Field Microphone	**Due Date:**	

Sensitivity:	**250 Hz**	**1 kHz**		**Temperature:**	73 (23)	°F (°C)
	-26.29	-26.39	dB re. 1V/Pa	**Humidity:**	16	%
	48.49	47.93	mV/Pa	**Ambient Pressure:**	1000.2	mbar
Cal. Results:	In Tolerance			**Polarization Voltage:**	0	VDC



Traceability: The calibration is traceable through 683/281764-12.

Notes: Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note : As Found/As Left; In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	0.04	**630**	0.01	**4500**	-0.35		
25	0.01	**800**	0.02	**5000**	-0.38		
31.5	-0.08	**1000**	0.02	**5600**	-0.41		
40	0.03	**1120**	0.02	**6300**	-0.43		
50	0.10	**1250**	0.01	**7100**	-0.35		
63	0.03	**1400**	0.01	**8000**	-0.40		
80	0.03	**1600**	-0.02	**9000**	-0.46		
100	0.00	**1800**	-0.03	**10000**	-0.52		
125	0.04	**2000**	-0.05	**11200**	-0.59		
160	0.02	**2240**	-0.08	**12500**	-0.18		
200	0.02	**2500**	-0.10	**14000**	0.41		
250	0.00	**2800**	-0.13	**16000**	0.97		
315	0.00	**3150**	-0.17	**18000**	0.75		
400	0.01	**3550**	-0.24	**20000**	-0.21		
500	0.02	**4000**	-0.31				

Technician: Wayne Underwood

Approval: _____

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/15/2014	9/15/2015

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~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: LW132432
Asset ID: 48621
Description: Free-Field Microphone

Customer: TMS Rental
Address:

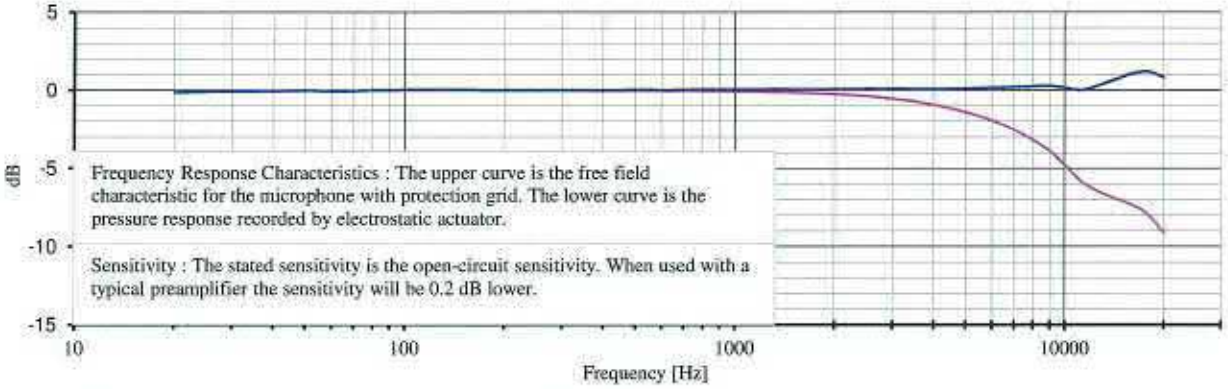
Calibration Date: Mar 30, 2015 13:58:06
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-25.55	-25.62	dB re. 1V/Pa
	52.76	52.35	mV/Pa

Temperature:	73 (23)	°F (°C)
Humidity:	23	%
Ambient Pressure:	997.2	mbar

Cal. Results: In Tolerance

Polarization Voltage: 0 VDC



Traceability: The calibration is traceable through 683/281764-12.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note: As Found: In Tolerance As Left: In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.16	630	0.01	4500	0.08		
25	-0.09	800	0.04	5000	0.10		
31.5	-0.08	1000	0.05	5600	0.14		
40	-0.06	1120	0.05	6300	0.17		
50	-0.03	1250	0.05	7100	0.20		
63	-0.09	1400	0.06	8000	0.25		
80	0.00	1600	0.04	9000	0.28		
100	0.01	1800	0.05	10000	0.16		
125	0.02	2000	0.06	11200	0.01		
160	0.01	2240	0.06	12500	0.27		
200	0.00	2500	0.07	14000	0.64		
250	0.00	2800	0.07	16000	1.06		
315	0.01	3150	0.07	18000	1.18		
400	0.00	3550	0.07	20000	0.81		
500	0.02	4000	0.06				

Technician: Michael Malec

Approval: _____

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	77606	9/15/2014	9/15/2015

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~Certificate of Calibration~

Manufacturer: PCB
Model Number: 377B02
Serial Number: LW138483
Asset ID: 49585
Description: Free-Field Microphone

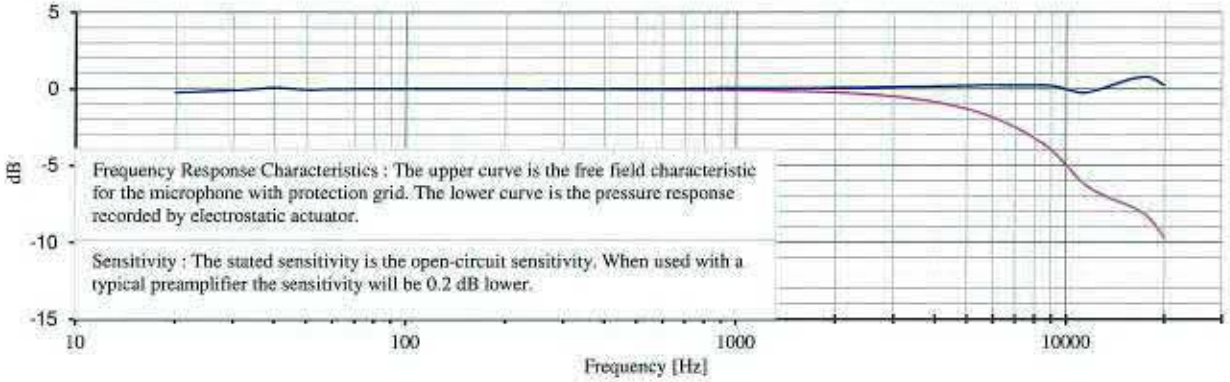
Customer: TMS Rental
Address:

Calibration Date: Apr 17, 2015 08:16:48
Due Date:

Sensitivity:	**250 Hz**	**1 kHz**	
	-25.38	-25.46	dB re. 1V/Pa
	53.81	53.36	mV/Pa

Cal. Results: In Tolerance

Temperature:	74 (23)	°F (°C)
Humidity:	44	%
Ambient Pressure:	997.5	mbar
Polarization Voltage:	0	VDC



Traceability: The calibration is traceable through 683/281764-12.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note: As Found / As Left In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.24	**630**	0.00	**4500**	0.19		
25	-0.16	**800**	0.04	**5000**	0.22		
31.5	-0.07	**1000**	0.04	**5600**	0.25		
40	0.07	**1120**	0.05	**6300**	0.25		
50	-0.05	**1250**	0.05	**7100**	0.23		
63	-0.01	**1400**	0.06	**8000**	0.24		
80	0.01	**1600**	0.06	**9000**	0.21		
100	0.00	**1800**	0.07	**10000**	-0.01		
125	0.01	**2000**	0.09	**11200**	-0.24		
160	0.01	**2240**	0.09	**12500**	-0.05		
200	0.00	**2500**	0.11	**14000**	0.29		
250	0.00	**2800**	0.13	**16000**	0.68		
315	0.01	**3150**	0.15	**18000**	0.77		
400	0.00	**3550**	0.16	**20000**	0.23		
500	0.02	**4000**	0.16				

Technician: Wayne Underwood

Approval: _____

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/15/2014	9/15/2015

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CALIBRATION CERT 2649.01

~ *Calibration Report* ~

Microphone Model: 377B02 Serial Number: 153864 Description: 1/2" Free-Field Microphone

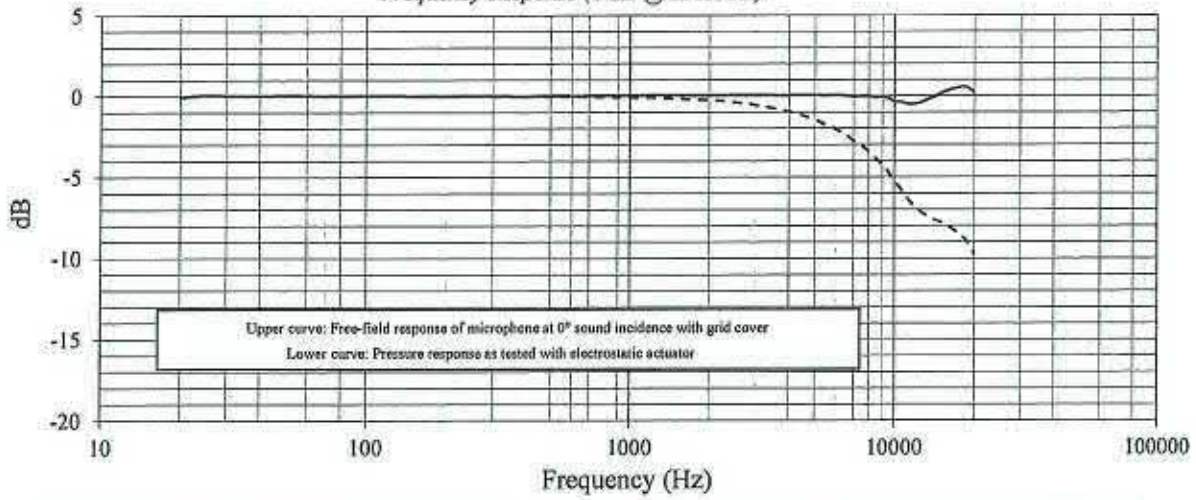
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 51.28 mV/Pa
-25.8 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 12.7 pF

Temperature: 77 °F (25°C) Ambient Pressure: 1002 mbar Relative Humidity: 14 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	-0.04	-0.04	1679	-0.19	0.04	7499	-3.08	-0.01	-	-	-
25.1	0.07	0.07	1778	-0.20	0.05	7943	-3.38	0.01	-	-	-
31.6	0.03	0.03	1884	-0.23	0.05	8414	-3.81	-0.08	-	-	-
39.8	0.02	0.02	1995	-0.26	0.05	8913	-4.17	-0.06	-	-	-
50.1	0.04	0.04	2114	-0.27	0.07	9441	-4.65	-0.13	-	-	-
63.1	0.03	0.03	2239	-0.30	0.07	10000	-5.28	-0.33	-	-	-
79.4	0.03	0.03	2371	-0.34	0.07	10593	-5.77	-0.37	-	-	-
100.0	0.02	0.02	2512	-0.38	0.08	11220	-6.35	-0.49	-	-	-
125.9	0.02	0.02	2661	-0.43	0.08	11885	-6.80	-0.48	-	-	-
158.5	0.01	0.01	2818	-0.48	0.08	12589	-7.17	-0.40	-	-	-
199.5	0.00	0.00	2985	-0.55	0.07	13335	-7.39	-0.20	-	-	-
251.2	0.00	0.00	3162	-0.59	0.09	14125	-7.63	-0.04	-	-	-
316.2	-0.01	0.00	3350	-0.68	0.06	14962	-7.79	0.18	-	-	-
398.1	-0.01	-0.01	3548	-0.77	0.05	15849	-8.01	0.34	-	-	-
501.2	-0.02	0.02	3758	-0.86	0.04	16788	-8.27	0.45	-	-	-
631.0	-0.03	0.01	3981	-0.95	0.05	17783	-8.56	0.55	-	-	-
794.3	-0.05	0.04	4217	-1.05	0.06	18837	-8.99	0.52	-	-	-
1000.0	-0.08	0.04	4467	-1.17	0.06	19953	-9.70	0.23	-	-	-
1059.3	-0.09	0.04	4732	-1.31	0.06	-	-	-	-	-	-
1122.0	-0.10	0.04	5012	-1.47	0.06	-	-	-	-	-	-
1188.5	-0.09	0.06	5309	-1.65	0.05	-	-	-	-	-	-
1258.9	-0.10	0.06	5623	-1.83	0.05	-	-	-	-	-	-
1333.5	-0.12	0.06	5957	-2.01	0.06	-	-	-	-	-	-
1412.5	-0.13	0.06	6310	-2.23	0.06	-	-	-	-	-	-
1496.2	-0.15	0.05	6683	-2.51	0.01	-	-	-	-	-	-
1584.9	-0.17	0.04	7080	-2.81	-0.03	-	-	-	-	-	-

Technician: Leonard Lukasik Date: March 24, 2015

ACCREDITED
Cert. No. 1002.01

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VIBRATION DIVISION

3425 Walden Avenue, Depew, New York, 14043
TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL112-351002B06.845

~ *Certificate of Calibration and Compliance* ~

Microphone Model: 377B02 Serial Number: 153864 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	11/3/14	11/3/15
Larson Davis	PRM915	122	CA865	10/21/14	10/21/15
Larson Davis	PRM902	4943	CA1162	10/27/14	10/27/15
Larson Davis	PRM916	144	CA2001	8/25/14	8/25/15
Larson Davis	CAL250	4250	CA1116	7/15/14	7/15/15
Larson Davis	2201	145	CA2046	5/12/14	5/12/15
Bruel & Kjaer	4192	2657834	CA1270	12/4/14	12/4/15
Larson Davis	GPRM902	5282	CA2063	4/10/14	4/10/15
Newport	iTHX-SD/N	1080002	CA1511	not required	not required
Larson Davis	PRA951-4	242	CA1456	11/10/14	11/10/15
Larson Davis	ADP005	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open circuit sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik

Date: March 24, 2015

ACCREDITED
Cert. No. 1082.01

PCB PIEZOTRONICS
VIBRATION DIVISION
3425 Walden Avenue, Depew, New York, 14043
TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

~ Calibration Report ~

Microphone Model: 377B02 Serial Number: 153871 Description: 1/2" Free-Field Microphone

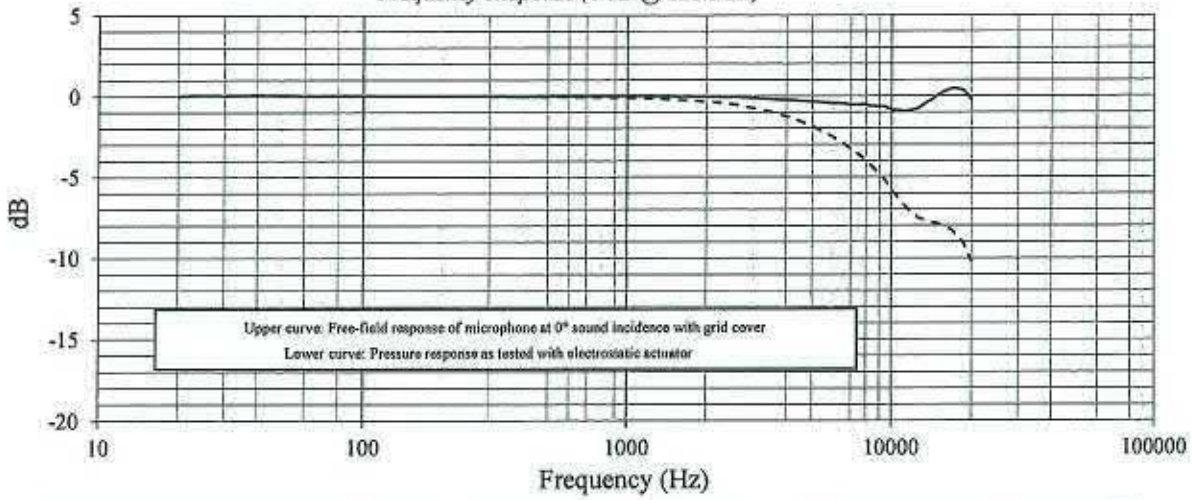
Calibration Data

Open Circuit Sensitivity @ 251.2 Hz: 56.20 mV/Pa
-25.01 dB re 1V/Pa

Polarization Voltage, External: 0 V
Capacitance: 13.2 pF

Temperature: 76 °F (24°C) Ambient Pressure: 1002 mbar Relative Humidity: 14 %

Frequency Response (0 dB @ 251.2 Hz)



Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)	Freq (Hz)	Lower (dB)	Upper (dB)
20.0	0.00	0.00	1679	-0.25	-0.02	7499	-3.62	-0.55	-	-	-
25.1	0.07	0.07	1778	-0.28	-0.03	7943	-3.92	-0.53	-	-	-
31.6	0.04	0.04	1884	-0.31	-0.03	8414	-4.36	-0.63	-	-	-
39.8	0.07	0.07	1995	-0.34	-0.03	8913	-4.74	-0.63	-	-	-
50.1	0.04	0.04	2114	-0.37	-0.03	9441	-5.19	-0.67	-	-	-
63.1	0.03	0.03	2239	-0.41	-0.04	10000	-5.79	-0.84	-	-	-
79.4	0.02	0.02	2371	-0.47	-0.06	10593	-6.28	-0.88	-	-	-
100.0	0.02	0.02	2512	-0.51	-0.05	11220	-6.79	-0.93	-	-	-
125.9	0.01	0.01	2661	-0.58	-0.07	11885	-7.18	-0.86	-	-	-
158.5	0.01	0.01	2818	-0.66	-0.10	12589	-7.52	-0.75	-	-	-
199.5	0.01	0.01	2985	-0.73	-0.11	13335	-7.66	-0.47	-	-	-
251.2	0.00	0.00	3162	-0.82	-0.14	14125	-7.82	-0.23	-	-	-
316.2	-0.01	0.00	3350	-0.90	-0.16	14962	-7.89	0.08	-	-	-
398.1	-0.02	-0.02	3548	-1.01	-0.19	15849	-8.06	0.29	-	-	-
501.2	-0.03	0.01	3758	-1.13	-0.23	16788	-8.28	0.44	-	-	-
631.0	-0.04	0.00	3981	-1.24	-0.24	17783	-8.67	0.44	-	-	-
794.3	-0.06	0.03	4217	-1.37	-0.26	18837	-9.24	0.27	-	-	-
1000.0	-0.10	0.03	4467	-1.53	-0.30	19953	-10.17	-0.24	-	-	-
1059.3	-0.10	0.03	4732	-1.69	-0.32	-	-	-	-	-	-
1122.0	-0.12	0.02	5012	-1.87	-0.34	-	-	-	-	-	-
1188.5	-0.13	0.02	5309	-2.07	-0.37	-	-	-	-	-	-
1258.9	-0.15	0.01	5623	-2.29	-0.41	-	-	-	-	-	-
1333.5	-0.17	0.01	5957	-2.51	-0.44	-	-	-	-	-	-
1412.5	-0.18	0.01	6310	-2.74	-0.45	-	-	-	-	-	-
1496.2	-0.21	-0.01	6683	-3.02	-0.50	-	-	-	-	-	-
1584.9	-0.23	-0.02	7080	-3.33	-0.55	-	-	-	-	-	-

Technician: Leonard Lukasik Date: March 24, 2015

ACCREDITED
Cert. No. 1662.01

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VIBRATION DIVISION

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TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL:112-351005/1468-002

~ *Certificate of Calibration and Compliance* ~

Microphone Model: 377B02 Serial Number: 153871 Manufacturer: PCB

Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

Reference Equipment

Manufacturer	Model #	Serial #	PCB Control #	Cal Date	Due Date
National Instruments	PCIe-6351	1896F08	CA1918	11/3/14	11/3/15
Larson Davis	PRM915	122	CA865	10/21/14	10/21/15
Larson Davis	PRM902	4943	CA1162	10/27/14	10/27/15
Larson Davis	PRM916	144	CA2001	8/25/14	8/25/15
Larson Davis	CAL250	4250	CA1116	7/15/14	7/15/15
Larson Davis	2201	145	CA2046	5/12/14	5/12/15
Bruel & Kjaer	4192	2657834	CA1270	12/4/14	12/4/15
Larson Davis	GPRM902	5282	CA2063	4/10/14	4/10/15
Newport	ITHX-SD/N	1080002	CA1511	not required	not required
Larson Davis	PRA951-4	242	CA1456	11/10/14	11/10/15
Larson Davis	ADP005	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required
0	0	0	0	not required	not required

Frequency sweep performed with B&K UA0033 electrostatic actuator.

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Open circuit sensitivity is measured using the insertion voltage method following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-20.

Technician: Leonard Lukasik Date: March 24, 2015

ACCREDITED
Cal. No. 1662.01

PCB PIEZOTRONICS
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THE MODAL SHOP INC.
A PCB GROUP CO.

~Calibration Certificate~

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	51525
Model:	CAL200	Calibration Date:	Feb 09, 2015 11:27:22
Serial Number:	11083	Due Date:	
Description:	Acoustic Calibrator	Technician:	Wayne Underwood
Customer:	TMS Rental	Approval:	

Calibration Results:

Temperature:	22 °C (71 °F)
Humidity:	28.60%
Pressure:	993.8 mbar

Measured SPL : 113.96 dB re. 20µPa

Measured Frequency : 1,000.00 Hz

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found/As Left; In Tolerance**

Measurement uncertainty at 95% confidence level: 0.3 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the customer.

This calibration is traceable through : 683/281764-12

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	77606	9/15/2014	9/15/2015

THE MODAL SHOP INC
A PCB GROUP CO.

~Calibration Certificate~

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	51525
Model:	CAL200	Calibration Date:	Feb 09, 2015 11:24:42
Serial Number:	11083	Due Date:	
Description:	Acoustic Calibrator	Technician:	Wayne Underwood
Customer:	TMS Rental	Approval:	

Calibration Results:

Measured SPL : 93.92 dB re. 20µPa

Measured Frequency : 1,000.00 Hz

Temperature:	22 °C (71 °F)
Humidity:	28.60%
Pressure:	993.8 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found/As Left; In Tolerance**

Measurement uncertainty at 95% confidence level: 0.3 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the customer.

This calibration is traceable through : 683/281764-12

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	77606	9/15/2014	9/15/2015

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2
Monitoring Location: ST-1 46 Sloan Rd Analyst: Wargo / Sundaresan

Sound Level Meter
Model #: LD831
Serial #: 3382 / 3819 / 3174
Weighting: A / C / Flat
Response: Slow / Fast / Impl
Windscreen : Yes / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / 114
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather
Serial #: 140176
Wind: Steady/Gusty (Calm)
Precipitation: Yes (explain) (No)
Avg Wind Speed/Direction: 4.3 / WSW
Temp (°F): 76.3 °F RH (%): 22.9
Bar Psr (Hg): 30.08 Cloud Cover (%): 0%

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	4:08pm								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	4:28								Car
21									
22									
23									
24									
25									
26	4:35								Truck Backing
27									
28									
29									
30									
31		4:48pm							

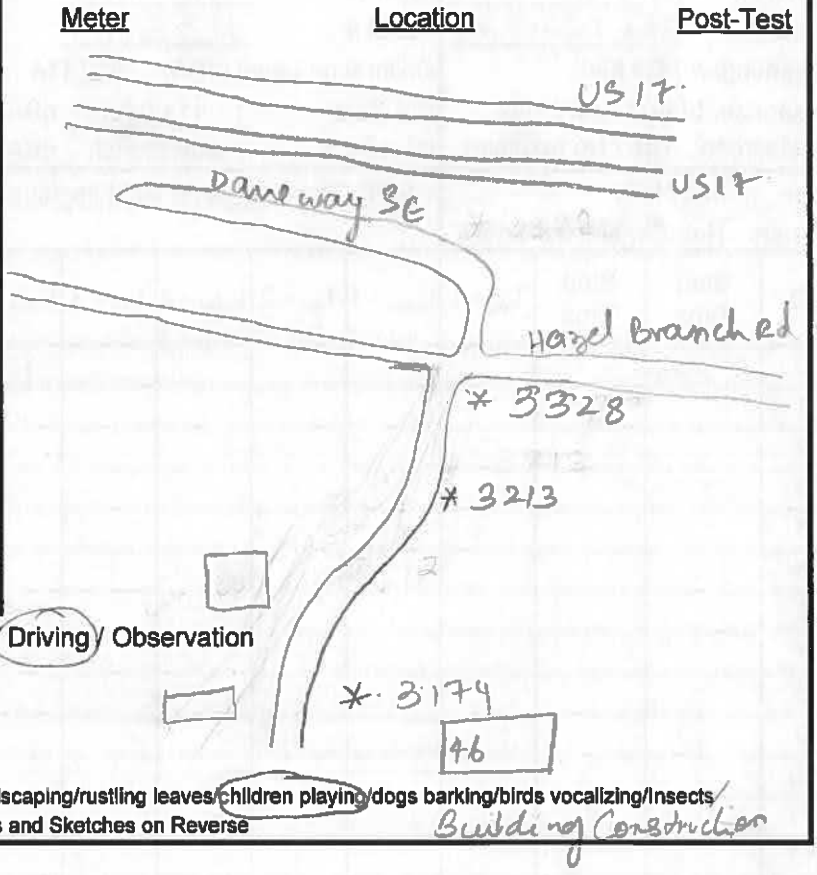
Stop @ 4:48pm

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/SB	Hazel Branch NB/SB
Speed (post/obs)*	60	50
Number of Lanes	2 / 2	1/1
Width (pave/row)	48	24
1- or 2- way	2 way/2 way	2 way
Grade		
Bus Stops	—	1
Stoplights	—	—
Motorcycles	—	—
Automobiles	524/420	12/12
Medium Trucks	16/4	—
Heavy Trucks	7/19	—
Buses	1/1	1 / 0
Count duration	20 mins	20 mins

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No S 7

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects/
Additional Notes and Sketches on Reverse

Building Construction

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31825110 | Date: 10/30/2018 | Page 1 of 2

Monitoring Location: ST-1 46 Sloan Road | Analyst: Wargo/Sundaresan

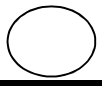
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	4.3/WSW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 76.3	RH (%): 22.9
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.08	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		4:09 PM	66.6	82.8	59.6	76.3	57.5	77.2	
1	4:09 PM	4:10 PM	64.9	81.8	58.7	74.3	57.2	73.6	
2	4:10 PM	4:11 PM	64.3	83.9	58.0	74.9	56.6	75.2	
3	4:11 PM	4:12 PM	64.7	80.5	58.3	78.0	56.6	71.6	
4	4:12 PM	4:13 PM	61.9	80.6	55.1	71.0	55.0	80.4	
5	4:13 PM	4:14 PM	65.6	82.7	58.6	86.9	54.5	73.0	
6	4:14 PM	4:15 PM	62.5	79.7	56.4	72.6	56.2	71.6	
7	4:15 PM	4:16 PM	64.8	83.1	58.7	74.9	56.3	73.0	
8	4:16 PM	4:17 PM	65.7	80.8	58.9	73.5	57.7	76.7	
9	4:17 PM	4:18 PM	63.4	79.9	57.9	97.0	56.2	72.8	
10	4:18 PM	4:19 PM	66.0	84.0	57.6	79.6	55.0	72.4	
11	4:19 PM	4:20 PM	64.2	80.6	57.6	75.4	55.1	71.8	
12	4:20 PM	4:21 PM	64.0	80.6	57.4	81.1	55.9	77.1	
13	4:21 PM	4:22 PM	65.6	93.9	60.4	87.3	53.1	74.0	
14	4:22 PM	4:23 PM	72.8	107.9	66.6	96.8	64.7	90.6	
15	4:23 PM	4:24 PM	65.1	93.8	58.3	88.8	56.9	76.3	
16	4:24 PM	4:25 PM	63.2	79.8	57.0	78.5	56.4	83.6	
17	4:25 PM	4:26 PM	63.1	81.4	56.2	70.5	55.1	70.3	
18	4:26 PM	4:27 PM	65.2	79.9	58.7	75.4	56.2	72.6	
19	4:27 PM	4:28 PM	64.7	81.8	56.9	89.3	55.6	73.9	
20	4:28 PM	4:29 PM	70.2	108.0	63.2	99.0	59.8	95.0	Car passing
21	4:29 PM	4:30 PM	64.0	82.3	56.2	72.5	56.0	86.7	
22	4:30 PM	4:31 PM	62.4	81.1	55.2	71.4	53.0	68.4	
23	4:31 PM	4:32 PM	63.4	81.7	56.9	72.4	54.7	69.2	
24	4:32 PM	4:33 PM	65.9	84.2	59.5	75.9	56.5	72.2	
25	4:33 PM	4:34 PM	67.6	85.0	57.6	72.9	57.1	74.9	
26	4:34 PM	4:35 PM	64.7	80.7	59.1	76.7	56.8	71.9	
27	4:35 PM	4:36 PM	65.0	89.6	57.6	77.5	55.6	78.0	Truck Backing
28	4:36 PM	4:37 PM	65.2	85.9	58.5	76.9	56.5	72.4	
29	4:37 PM	4:38 PM	66.8	88.4	59.9	78.1	58.5	76.6	
30	4:38 PM	4:39 PM	64.2	81.9	57.4	75.7	57.2	80.7	
TOT			65.8		59.1		57.1		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/SB	Hazel Branch NB/SB
Speed (post/**obs**)*	60	50
Number of Lanes	2/2	1/1
Width (pave/row)	48	24
1- or 2- way	2 Way	2 Way
Grade	---	---
Bus Stops	---	1
Stoplights	---	---
Motorcycles	---	---
Automobiles	524/420	12/12
Medium Trucks	16/4	---
Heavy Trucks	7/19	---
Buses	1/1	1/1
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Building Construction

Other Noise Sources: distant: aircraft/**roadway traffic**/trains/landscaping/rustling leaves/**children playing**/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2

Monitoring Location: ST-2 112 Maco Rd Analyst: Wargo/Sundaresan.

Sound Level Meter
Model #: LD831
Serial #: 3174/328/3382
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient weather.
Serial #: 140176
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) (No)
Avg Wind Speed/Direction: 0.6mph/NW.
Temp (°F): 67.6. RH (%): 27.7
Bar Psr (Hg): 30.04 Cloud Cover (%): 0%.

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

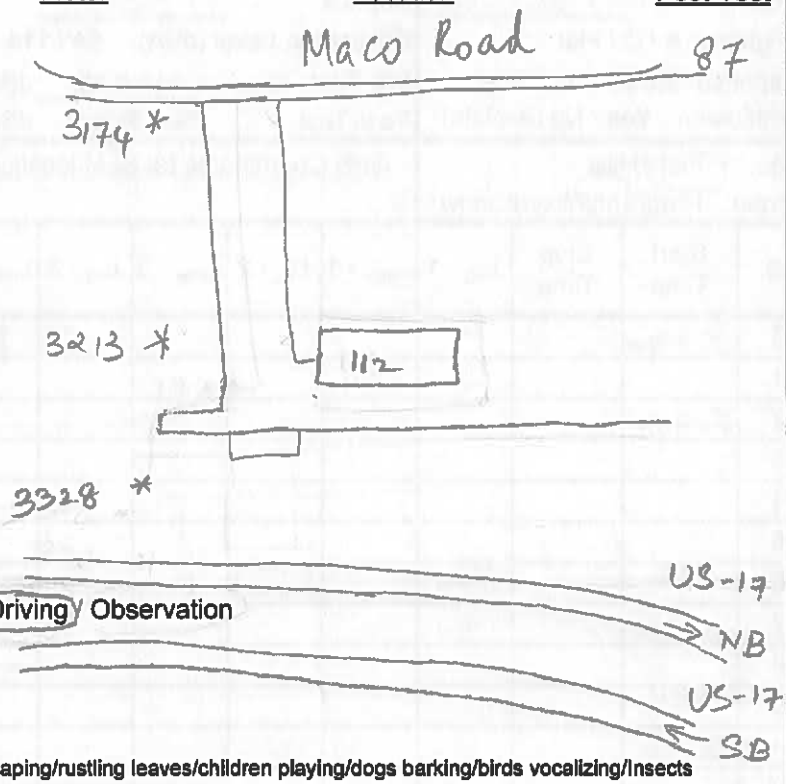
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	5:19pm								
1									
2	5:21pm								Car into driveway
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30		5:49pm							
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB / SB	Maco Rd NB/SB
Speed (post/obs)*	60	60
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade		
Bus Stops	—	—
Stoplights	—	—
Motorcycles	0 / 1	—
Automobiles	426 544	93 72
Medium Trucks	8 / 58	2 / 1
Heavy Trucks	4 / 18	1 / 0
Buses	0 / 2	0 / 2
Count duration	20 min	20 min

compass

Site Diagram:



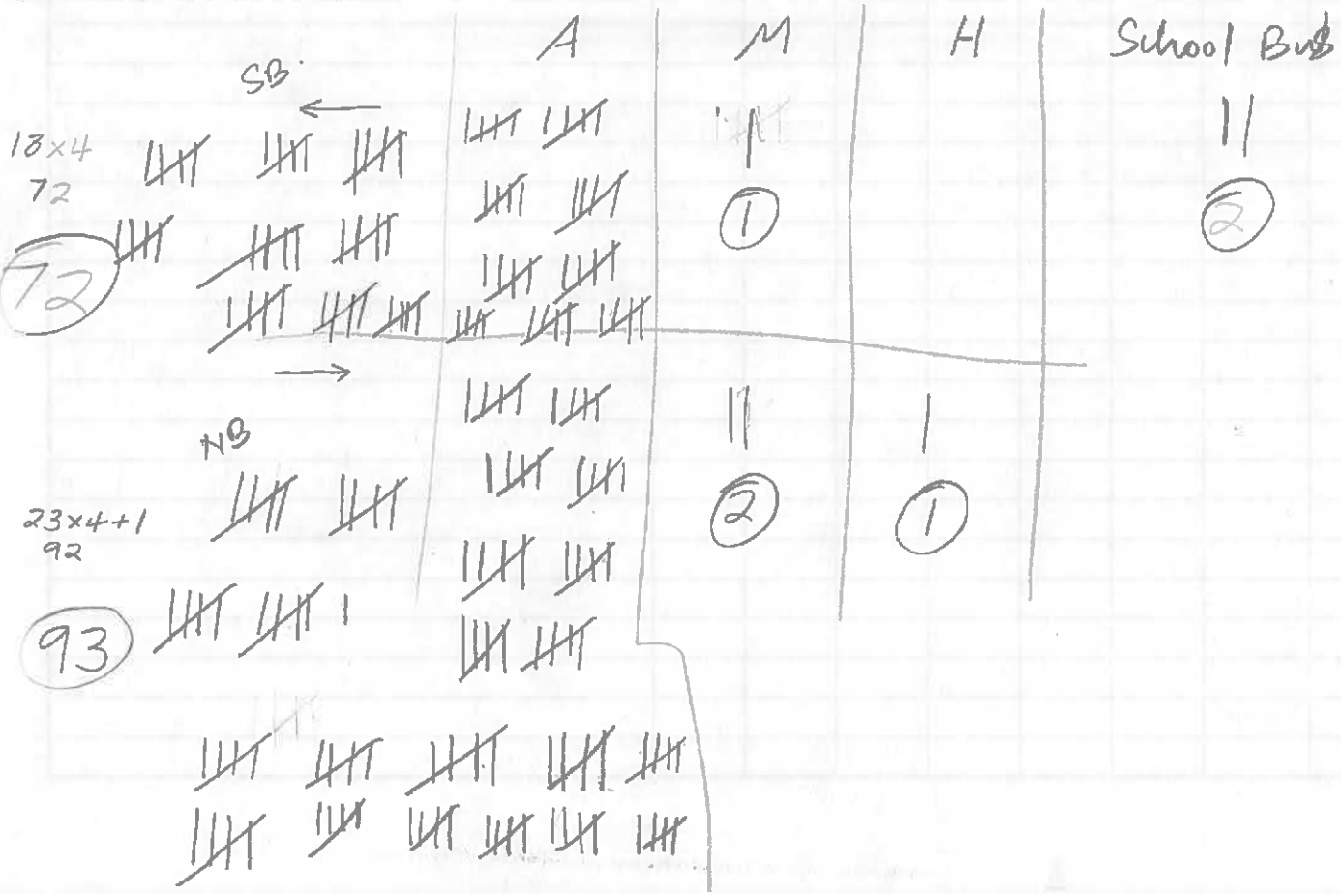
- note coordinate system * - Speed estimated by Radar (Driving) / Observation

Photos Taken? Yes/No S 6

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse



AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31825110 | Date: 10/30/2018 | Page 1 of 2

Monitoring Location: ST-2 112 Maco Road | Analyst: Wargo/Sundaresan

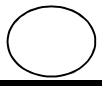
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0.6/NW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 67.6	RH (%): 27.7
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.08	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		5:19 PM	62.5	80.8	61.5	79.7	71.7	99.6	
1	5:19 PM	5:20 PM	63.1	78.6	62.2	82.5	68.9	91.7	
2	5:20 PM	5:21 PM	62.9	89.7	61.7	84.0	70.6	92.9	Car into driveway
3	5:21 PM	5:22 PM	62.1	89.8	62.5	80.4	71.2	95.6	
4	5:22 PM	5:23 PM	63.2	87.3	60.0	82.8	68.5	91.9	
5	5:23 PM	5:24 PM	61.4	84.2	61.1	83.4	64.2	89.2	
6	5:24 PM	5:25 PM	62.4	78.2	60.7	77.8	68.6	94.4	
7	5:25 PM	5:26 PM	63.7	81.3	64.2	84.7	72.8	99.9	
8	5:26 PM	5:27 PM	63.2	81.1	59.9	76.5	66.3	87.8	
9	5:27 PM	5:28 PM	61.3	82.7	64.6	84.1	71.8	96.4	
10	5:28 PM	5:29 PM	61.7	79.0	58.3	75.2	69.8	95.4	
11	5:29 PM	5:30 PM	63.6	79.7	60.7	78.6	65.7	91.2	
12	5:30 PM	5:31 PM	60.2	75.9	60.4	76.6	68.9	89.8	
13	5:31 PM	5:32 PM	61.4	77.9	57.9	76.1	66.3	89.7	
14	5:32 PM	5:33 PM	62.7	83.2	61.4	78.2	64.4	88.4	
15	5:33 PM	5:34 PM	62.9	79.4	60.3	76.8	68.2	89.8	
16	5:34 PM	5:35 PM	62.3	78.8	60.3	78.0	60.8	83.8	
17	5:35 PM	5:36 PM	62.4	80.3	60.3	76.8	66.0	88.0	
18	5:36 PM	5:37 PM	61.9	82.4	61.3	77.9	68.8	91.0	
19	5:37 PM	5:38 PM	62.2	79.5	61.4	78.2	68.5	89.9	
20	5:38 PM	5:39 PM	61.2	76.7	60.6	76.9	68.2	88.2	
21	5:39 PM	5:40 PM	64.3	84.9	62.9	82.4	69.4	92.1	
22	5:40 PM	5:41 PM	60.8	76.0	63.2	80.2	70.0	90.1	
23	5:41 PM	5:42 PM	61.2	77.4	59.8	77.2	69.8	94.1	
24	5:42 PM	5:43 PM	60.9	77.0	58.4	76.8	66.1	89.9	
25	5:43 PM	5:44 PM	61.4	77.1	59.4	75.5	63.6	87.5	
26	5:44 PM	5:45 PM	62.9	81.0	63.3	84.9	69.5	95.0	
27	5:45 PM	5:46 PM	63.1	78.3	61.9	78.3	68.0	88.4	
28	5:46 PM	5:47 PM	62.6	77.9	63.2	81.1	69.7	91.1	
29	5:47 PM	5:48 PM	61.2	77.1	60.8	77.1	70.6	93.7	
30	5:48 PM	5:49 PM	62.6	78.7	59.4	77.0	67.0	90.2	
TOT			62.3		61.4		68.9		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/SB	Maco Rd NB/SB
Speed (post/**obs**)*	60	60
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade	---	---
Bus Stops	---	---
Stoplights	---	---
Motorcycles	0/1	---
Automobiles	426/544	93/72
Medium Trucks	8/58	2/1
Heavy Trucks	4/18	1/0
Buses	0/2	1/0
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2

Monitoring Location: ST3 3 Stoney Creek Lane Analyst: WARGO/SUNDARESAN

Sound Level Meter
Model #: LD831
Serial #: 3174/3213/3382
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient weather
Serial #: 140176
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) / (No)
Avg Wind Speed/Direction: 0 mph N
Temp (°F): 64-1 RH (%): 42.3
Bar Psr (Hg): 30.12 Cloud Cover (%): 0%

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

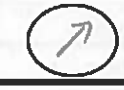
GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	6:07								
1									
2									
3	6:10								Honked
4									
5									
6									
7									
8	6:15								Walker
9									
10									
11									
12									
13									
14	6:21								U-turn
15									
16									
17									
18									
19									
20		6:30							
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	I-140 ramp	HB NB/SB	Stoney Creek EB/WB
Speed (post/obs)*	50	50	30
Number of Lanes	2	2	2
Width (pave/row)	24	24	24
1- or 2- way	1	2	2
Grade			
Bus Stops	—	—	—
Stoplights	—	—	—
Motorcycles	—	—	—
Automobiles	81	11/21	15/13
Medium Trucks	4	—	0/1
Heavy Trucks	2	—	—
Buses	—	—	—
Count duration	20	20	20mins.

compass



Site Diagram:

- note coordinate system * - Speed estimated by Radar (Driving) / Observation

Photos Taken? (Yes)/No S-6.

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31825110 | Date: 10/30/2018 | Page 1 of 2

Monitoring Location: ST-3 3 Stoney Creek Road | Analyst: Wargo/Sundaresan

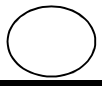
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 64.1	RH (%): 42.3
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.12	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		6:07 PM	60.2	81.2	58.6	79.2	58.2	75.7	
1	6:07 PM	6:08 PM	63.8	85.7	59.9	81.9	59.8	83.0	
2	6:08 PM	6:09 PM	66.3	87.8	61.0	77.1	60.4	80.2	
3	6:09 PM	6:10 PM	76.2	108.2	70.9	101.3	68.2	98.6	Car Honked
4	6:10 PM	6:11 PM	59.7	82.4	60.8	80.1	58.6	77.8	
5	6:11 PM	6:12 PM	59.6	79.7	59.9	83.9	59.2	84.5	
6	6:12 PM	6:13 PM	62.6	85.5	60.1	82.8	60.0	80.6	
7	6:13 PM	6:14 PM	61.3	83.0	61.0	88.3	62.8	88.0	
8	6:14 PM	6:15 PM	58.1	76.2	59.0	81.8	58.5	81.4	Walker passed by
9	6:15 PM	6:16 PM	62.8	80.3	61.1	83.9	60.2	85.2	
10	6:16 PM	6:17 PM	59.9	77.1	59.5	75.6	58.4	75.5	
11	6:17 PM	6:18 PM	63.7	84.5	60.4	88.6	63.3	87.2	
12	6:18 PM	6:19 PM	62.3	81.2	62.5	85.4	60.3	81.7	
13	6:19 PM	6:20 PM	64.4	84.6	59.3	75.3	57.8	75.6	
14	6:20 PM	6:21 PM	62.5	83.0	60.0	81.6	59.6	82.2	Car took U-Turn
15	6:21 PM	6:22 PM	64.8	84.0	60.8	84.9	62.2	86.3	
16	6:22 PM	6:23 PM	60.3	76.9	61.7	83.6	59.7	83.6	
17	6:23 PM	6:24 PM	63.5	81.9	61.6	85.8	61.7	83.4	
18	6:24 PM	6:25 PM	61.6	78.5	60.9	84.0	60.9	83.6	
19	6:25 PM	6:26 PM	65.0	87.9	62.3	87.1	62.7	90.5	
20	6:26 PM	6:27 PM	61.6	82.8	59.1	76.9	56.8	75.6	
21	6:27 PM	6:28 PM	64.1	83.2	58.4	79.8	59.1	83.4	
22	6:28 PM	6:29 PM	57.6	75.7	60.8	80.5	60.0	80.8	
23	6:29 PM	6:30 PM	55.7	71.7	55.7	76.6	56.1	94.5	
24									
25									
26									
27									
28									
29									
30									
TOT			65.3		61.9		61.1		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	I-140 Ramp	HB NB/ SB	Stoney Creek EB/WB
Speed (post/**obs**)*	50	50	30
Number of Lanes	2	2	2
Width (pave/row)	24	24	24
1- or 2- way	1	2	2
Grade	---	---	---
Bus Stops	---	---	---
Stoplights	---	---	---
Motorcycles	---	---	---
Automobiles	81	11/21	15/13
Medium Trucks	4	---	0/7
Heavy Trucks	2	---	---
Buses	---	---	---
Count duration	20min	20min	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/31/18 Page 1 of 2

Monitoring Location: ST-4 7 Bridleway SC Analyst: Wargo/Sundaresan

Sound Level Meter
Model #: LD831
Serial #: 3174/3213/3382
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather
Serial #: 140176
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) (No)
Avg Wind Speed/Direction: 0-9mph / SW
Temp (°F): 69.6 RH (%): 42.8
Bar Psr (Hg): 30.16 Cloud Cover (%): 0%

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

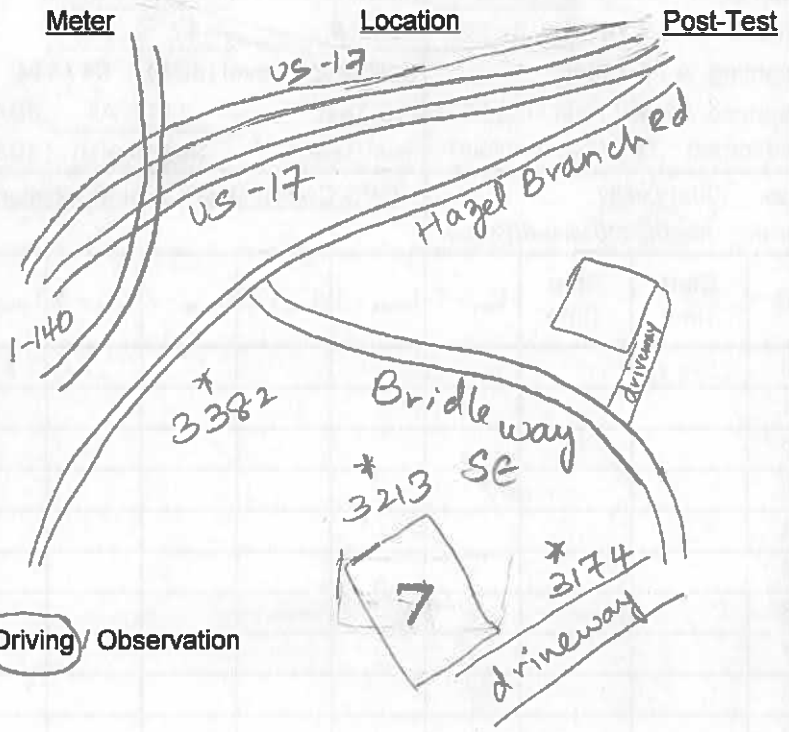
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	11:01am								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15		11:15am							
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US17 N/S	I-140 NB	HB N/S	Bridle EB/WB
Speed (post/obs)*	60	50	50	45
Number of Lanes	4	2	2	2
Width (pave/row)	48	24	24	24
1- or 2- way	2	1	2	2
Grade				
Bus Stops				
Stoplights				
Motorcycles	—	—	—	—
Automobiles	331 188	62	20 16	5 6
Medium Trucks	11/8	17	1/2	0/1
Heavy Trucks	9/5	5	—	—
Buses	0/2	—	—	—
Count duration	20m	20m	20m	20m

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / (Driving) / Observation

Photos Taken? (Yes) / No S-6

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/(dogs barking)/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

I-140 Ramp NB (2x5)+2 = (62) | A || | M (17) | H (5)

Hazels Branch SB ← A (14) | M (2) | H 0

Bridle Way ↑A (6) | M (1) | H 0

→ A NB (1) | 0

↓A (5) | 0 | 0

(20)

11.07

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31825110 | Date: 10/31/2018 | Page 1 of 2

Monitoring Location: ST-4 7 Bridle Way SE | Analyst: Wargo/Sundaresan

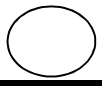
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0.9/SW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 69.6	RH (%): 42.8
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.12	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		11:01 AM	55.6	80.7	CORRUPTED		61.5	84.1	
1	11:01 AM	11:02 AM	55.6	75.0			54.3	75.6	
2	11:02 AM	11:03 AM	63.5	93.3			51.7	76.0	
3	11:03 AM	11:04 AM	55.8	79.2			50.5	72.4	
4	11:04 AM	11:05 AM	58.4	83.2			55.6	83.2	
5	11:05 AM	11:06 AM	59.7	85.7			50.4	72.3	
6	11:06 AM	11:07 AM	60.6	86.5			54.5	82.2	
7	11:07 AM	11:08 AM	60.0	84.6			51.8	75.7	
8	11:08 AM	11:09 AM	63.3	87.4			52.9	72.2	
9	11:09 AM	11:10 AM	59.2	83.5			49.5	70.0	
10	11:10 AM	11:11 AM	65.2	88.8			53.6	74.3	
11	11:11 AM	11:12 AM	60.6	85.8			56.9	83.4	
12	11:12 AM	11:13 AM							
13	11:13 AM	11:14 AM							
14	11:14 AM	11:15 AM							
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
TOT			60.8				55.1		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/ SB	I-40 NB	HB NB/ SB	Bridle EB/ WB
Speed (post/**obs**)*	60	50	50	45
Number of Lanes	4	2	2	2
Width (pave/row)	48	24	24	24
1- or 2- way	2	1	2	2
Grade	---	---	---	---
Bus Stops	---	---	---	---
Stoplights	---	---	---	---
Motorcycles	---	---	---	---
Automobiles	331/ 188	62	20/16	5/6
Medium Trucks	11/8	17	1/2	0/1
Heavy Trucks	9/5	5	---	---
Buses	0/2	---	---	---
Count duration	20min	20min	20min	20min

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/**dogs barking**/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/31/18 Page 1 of 2

Monitoring Location: ST-5 71 Goodman Rd Analyst: Wargo/Sundaresan

Sound Level Meter
Model #: LD831
Serial #: 3174/3213/3382
Weighting: A / C / Flat
Response: Slow / Fast / Impl
Windscreen : Yes / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11331
Calibration Level (dBA): 94 / 114
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather
Serial #: 0140176
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) No
Avg Wind Speed/Direction: 0.4 mph / SSW
Temp (°F): 77.0 RH (%): 34%
Bar Psr (Hg): 30.13 Cloud Cover (%): 0%

Topo: Flat / Hilly
Terrain: Hard / Soft / Mixed / Snow

GPS Coordinates (at SLM location)#

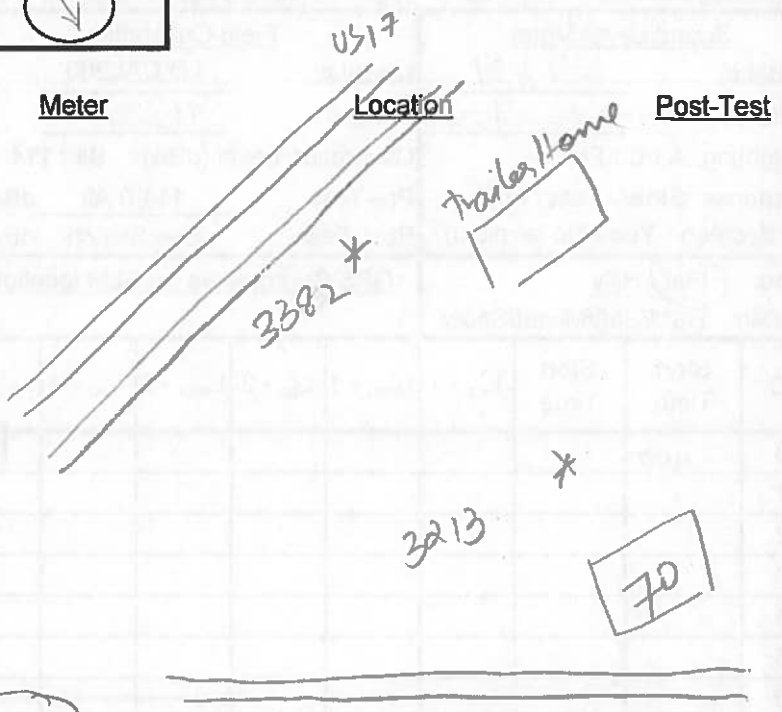
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	12:11pm								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20		12:31pm							
21									
22									
23									
24									
25									
26		12:37pm							
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/SB	HB NB/SB
Speed (post/obs)*	60	50
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade		
Bus Stops	—	—
Stoplights	—	—
Motorcycles	—	—
Automobiles	332/312	8/11
Medium Trucks	16/12	—
Heavy Trucks	8/4	—
Buses	—	—
Count duration	20	20

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar (Driving) Observation

Photos Taken? (Yes)/No

Additional Notes/Comments: S-4.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	ST-5 77 Goodman Rd			Analyst:	Wargo/Sundaresan

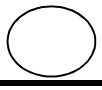
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0.4/SSW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 77	RH (%): 34
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.13	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		12:11 PM	62.6	81.0	56.4	73.8			
1	12:11 PM	12:12 PM	61.3	79.0	56.1	75.0			
2	12:12 PM	12:13 PM	64.4	84.0	55.4	71.3			
3	12:13 PM	12:14 PM	61.0	78.6	58.5	79.0			
4	12:14 PM	12:15 PM	61.1	79.1	54.6	70.7			
5	12:15 PM	12:16 PM	62.1	78.9	55.2	72.0			
6	12:16 PM	12:17 PM	61.2	77.7	56.7	73.7			
7	12:17 PM	12:18 PM	61.7	77.4	54.4	70.9			
8	12:18 PM	12:19 PM	63.4	81.1	55.5	71.5			
9	12:19 PM	12:20 PM	63.9	79.2	58.4	76.9			
10	12:20 PM	12:21 PM	60.7	77.3	57.5	74.4			
11	12:21 PM	12:22 PM	62.6	79.1	55.3	71.5			
12	12:22 PM	12:23 PM	58.1	77.1	55.0	71.1			
13	12:23 PM	12:24 PM	60.0	75.9	53.1	71.3			
14	12:24 PM	12:25 PM	62.8	80.3	54.5	69.9			
15	12:25 PM	12:26 PM	61.1	78.0	56.5	77.9			
16	12:26 PM	12:27 PM	59.2	77.0	54.5	71.3			
17	12:27 PM	12:28 PM	67.9	88.3	54.2	73.1			
18	12:28 PM	12:29 PM	64.6	81.8	62.2	81.4			
19	12:29 PM	12:30 PM	59.5	76.6	58.3	74.9			
20	12:30 PM	12:31 PM	65.6	85.6	54.3	70.3			
21	12:31 PM	12:32 PM	63.1	78.7	59.5	82.2			
22	12:32 PM	12:33 PM	59.7	77.8	57.0	72.7			
23	12:33 PM	12:34 PM	64.3	82.5	54.7	71.4			
24	12:34 PM	12:35 PM	63.7	83.8	57.8	74.7			
25	12:35 PM	12:36 PM	63.0	80.1	57.1	78.3			
26	12:36 PM	12:37 PM	64.4	77.3	57.2	73.2			
27									
28									
29									
30									
TOT			62.9		56.8				

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 NB/SB	Hazel Branch NB/SB
Speed (post/**obs**)*	60	50
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade	---	---
Bus Stops	---	---
Stoplights	---	---
Motorcycles	---	---
Automobiles	332/312	8/11
Medium Trucks	16/12	---
Heavy Trucks	8/4	---
Buses	---	---
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/21/2015 Page 1 of 2
Monitoring Location: STC 163 Goodman Rd Analyst: Moore-Smith

Sound Level Meter
Model #: Soundbook
Serial #: Soundbook
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: ambient weather WM-5
Serial #: 140293
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain)/(No)
Avg Wind Speed/Direction: 0.0
Temp (°F): 54 RH (%): 70
Bar Psr (Hg): 30.24 Cloud Cover (%): 25

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

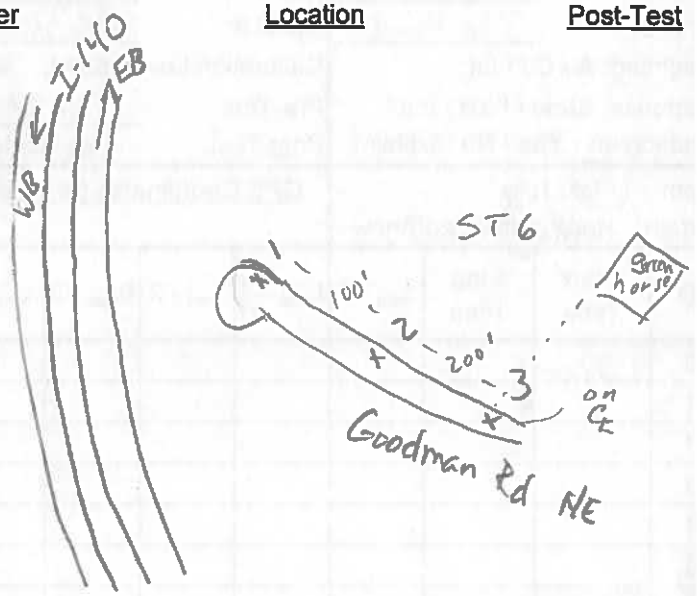
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	9:07AM								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30		9:31AM							
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	I-140 EB	I-140 WB
Speed (post/obs)*	75	75
Number of Lanes	2	2
Width (pave/row)	36	36
1- or 2- way	2	2
Grade	at grade	at grade
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0	0
Automobiles	88	84
Medium Trucks	2	6
Heavy Trucks	12	9
Buses	0	0
Count duration	10	20

compass (N ↑)

Site Diagram:



- note coordinate system * - Speed estimated by Radar / (Driving) / Observation

Photos Taken? (Yes)/No Greg

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

Count 5 & 6

I140WB = 13-16

I-140EB = 5-8

Calibration

M1: M_N: 831 S_N: 3547 Cal = 113.97

M2: M_N: 831 S_N: 3548 Cal = 114.03

M3 M_N: LxT2 S_N: 4662 Cal = 114.03

Count 5

15 min 13-16 = 67 - 1 - 9

5-8 = 69 - 6 - 7

13-16: 88 - 2 - 12

Count 6

5 min 13-16 = 21 - 1 - 3

5-8 = 15 - 2 - 2

5-8: 84 - 8 - 9

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	ST-6 163 Goodman Rd			Analyst:	Moore/Smith

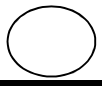
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3547/3548/4882	Serial #:	11336	Serial #:	140293
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 54	RH (%): 70
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.24	Cloud Cover (%): <5

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		9:07 AM	62.2	81.9	61.5	79.2	57.6	82.5	
1	9:07 AM	9:08 AM	64.9	81.9	61.2	77.4	59.1	82.7	
2	9:08 AM	9:09 AM	63.0	85.3	62.6	78.1	57.9	82.0	
3	9:09 AM	9:10 AM	65.0	82.8	62.3	81.9	59.5	80.7	
4	9:10 AM	9:11 AM	65.8	87.4	59.2	75.4	59.1	83.6	
5	9:11 AM	9:12 AM	59.9	79.0	60.3	79.4	56.1	78.4	
6	9:12 AM	9:13 AM	63.6	94.0	63.1	82.0	58.0	87.1	
7	9:13 AM	9:14 AM	65.9	86.2	58.2	74.7	59.3	89.8	
8	9:14 AM	9:15 AM	61.3	79.0	65.4	84.7	57.0	81.7	
9	9:15 AM	9:16 AM	68.3	88.2	60.4	79.5	61.5	86.1	
10	9:16 AM	9:17 AM	64.8	85.2	60.8	79.6	58.0	83.8	
11	9:17 AM	9:18 AM	62.5	83.2	62.7	80.2	58.1	83.4	
12	9:18 AM	9:19 AM	64.8	82.5	59.0	76.1	58.6	86.1	
13	9:19 AM	9:20 AM	65.2	92.4	62.9	87.8	58.6	87.1	
14	9:20 AM	9:21 AM	63.5	85.6	59.4	79.6	57.7	82.6	
15	9:21 AM	9:22 AM	63.1	82.4	63.0	79.9	57.7	82.6	
16	9:22 AM	9:23 AM	64.6	82.1	61.0	81.8	59.3	82.3	
17	9:23 AM	9:24 AM	64.2	84.9	62.2	81.0	58.4	83.2	
18	9:24 AM	9:25 AM	64.7	84.8	61.6	82.6	58.9	83.2	
19	9:25 AM	9:26 AM	65.2	85.6	61.5	78.8	58.5	86.8	
20	9:26 AM	9:27 AM	63.9	84.9	57.2	74.0	58.2	83.2	
21	9:27 AM	9:28 AM	60.5	78.7	59.0	76.0	55.3	78.5	
22	9:28 AM	9:29 AM	61.5	80.5	61.2	79.7	56.0	80.8	
23	9:29 AM	9:30 AM	63.5	82.5	57.3	77.6	57.6	87.4	
24	9:30 AM	9:31 AM	60.3	83.7	59.0	76.0	55.1	80.4	
25	9:31 AM	9:32 AM	62.8	80.4	63.9	84.4	56.9	81.7	
26	9:32 AM	9:33 AM	66.6	86.6	59.1	78.9	60.4	84.5	
27	9:33 AM	9:34 AM	60.7	80.3	60.1	79.1	55.9	82.5	
28	9:34 AM	9:35 AM	63.0	82.4	61.0	80.2	57.3	81.8	
29	9:35 AM	9:36 AM							
30	9:36 AM	9:37 AM							
TOT			64.1		61.3		58.2		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	I-140 WB	I-140 EB
Speed (post/**obs**)*	75	75
Number of Lanes	2	2
Width (pave/row)	36	36
1- or 2- way	2	2
Grade	At grade	At grade
Bus Stops	---	---
Stoplights	---	---
Motorcycles	---	---
Automobiles	88	84
Medium Trucks	2	8
Heavy Trucks	12	9
Buses	---	---
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/31/2018 Page 1 of 2

Monitoring Location: ST7 106 Tillington Ct Analyst: Moore-Smith

Sound Level Meter
Model #: See back
Serial #: See back
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather WMS
Serial #: 140293
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) / (No)
Avg Wind Speed/Direction: 0mph
Temp (°F): 69°F RH (%): 41
Bar Psr (Hg): 30.22 Cloud Cover (%): 3%

Topo: (Flat) Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	10:46 AM								~~Started free meter at 10:31 AM however, right as we started a lady got in her car for 13 mins said let it run. Start~~
1									
2									
3	10:31								
4									10:31 - 10:45 AM for M1-3547
5									disregard data
6									
7									
8									
9	10:55 AM								Car passed M2
10									
11	10:57 AM								" "
12									
13									
14									
15									
16									
17	11:03								" "
18									
19									
20									
21									
22									
23									
24									
25									
26	11:12 AM								Dog barking near M1
27									
28	11:14 AM								Car drove past M2
29									
30		11:16am							
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Lanvale NB	Lanvale SB
Speed (post/obs)*	45	45
Number of Lanes	4	4
Width (pave/row)	12	12
1- or 2- way	2-way	2-way
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0	0
Automobiles	61	59
Medium Trucks	1	2
Heavy Trucks	0	0
Buses	2	1
Count duration	20 min	20 min

compass

Site Diagram:

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No Hunter

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

Calibration

M1: MN: 831 SN: 3547 Cal. 113.99

M2: MN: 831 SN: 3548 Cal. 114.03

M3: MN: LxT2 SN: 4882 Cal. 114.03

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	ST-7 106 Tillington Ct			Analyst:	Moore/Smith

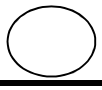
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3547/3548/4882	Serial #:	11336	Serial #:	140293
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	0
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 69	RH (%): 41
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.22	Cloud Cover (%): 3

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		10:46 AM							
1	10:46 AM	10:47 AM	47.7	71.2	47.0	75.3	42.6	77.2	
2	10:47 AM	10:48 AM	46.0	67.5	45.2	63.1	45.0	82.6	
3	10:48 AM	10:49 AM	44.4	65.7	42.7	60.6	42.4	83.2	
4	10:49 AM	10:50 AM	42.4	62.9	41.8	59.6	41.2	82.6	
5	10:50 AM	10:51 AM	40.9	58.9	40.7	58.4	40.0	87.0	
6	10:51 AM	10:52 AM	40.3	58.9	39.5	59.6	39.8	76.9	
7	10:52 AM	10:53 AM	39.9	70.4	40.6	64.4	40.7	84.7	
8	10:53 AM	10:54 AM	43.0	62.4	43.2	60.6	43.6	87.7	
9	10:54 AM	10:55 AM	43.7	61.9	50.3	77.5	46.8	85.5	Car passed meter two
10	10:55 AM	10:56 AM	36.9	61.4	39.7	59.6	40.8	78.4	
11	10:56 AM	10:57 AM	41.9	59.9	53.0	76.9	49.9	89.2	Car passed meter two
12	10:57 AM	10:58 AM	42.1	62.4	45.5	69.0	41.7	83.6	
13	10:58 AM	10:59 AM	42.0	59.9	41.6	62.1	42.6	89.6	
14	10:59 AM	11:00 AM	43.1	60.7	44.2	63.6	43.9	77.6	
15	11:00 AM	11:01 AM	43.6	60.7	42.7	59.6	44.2	88.1	
16	11:01 AM	11:02 AM	43.5	73.7	42.1	64.7	44.5	80.9	
17	11:02 AM	11:03 AM	44.1	70.8	50.2	74.5	45.0	80.9	Car passed meter two
18	11:03 AM	11:04 AM	42.5	67.5	39.2	58.4	39.8	79.6	
19	11:04 AM	11:05 AM	39.1	57.7	41.0	65.9	43.2	89.1	
20	11:05 AM	11:06 AM	43.1	59.9	43.0	59.6	43.4	94.0	
21	11:06 AM	11:07 AM	44.6	59.9	46.2	60.6	48.7	83.2	
22	11:07 AM	11:08 AM	43.8	60.7	44.8	64.7	44.6	91.2	
23	11:08 AM	11:09 AM	42.5	57.7	42.2	59.6	42.8	84.3	
24	11:09 AM	11:10 AM	43.7	59.9	43.2	60.6	43.1	85.1	
25	11:10 AM	11:11 AM	42.4	62.9	42.5	60.6	41.6	85.5	
26	11:11 AM	11:12 AM	39.9	57.7	39.3	59.6	44.7	77.0	Dog barked near M1
27	11:12 AM	11:13 AM	42.2	62.4	41.7	59.6	41.8	79.3	
28	11:13 AM	11:14 AM	44.2	63.7	44.2	68.1	47.9	80.7	Car passed meter two
29	11:14 AM	11:15 AM	43.9	61.9	49.2	73.9	44.5	87.3	
30	11:15 AM	11:16 AM	42.1	61.9	44.1	60.6	44.3	81.9	
TOT			43.1		45.3		44.3		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Lanvale NB	Lanvale SB
Speed (post/**obs**)*	45	45
Number of Lanes	1	1
Width (pave/row)	12	12
1- or 2- way	2	2
Grade	0	0
Bus Stops	---	---
Stoplights	---	---
Motorcycles	---	---
Automobiles	61	59
Medium Trucks	1	2
Heavy Trucks	0	0
Buses	2	1
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/31/18 Page 1 of 2

Monitoring Location: ST8A - 2184 Springstone Dr Analyst: Wargo/Sundaresan

Sound Level Meter	Field Calibration	Weather Data
Model #: LD831	Model #: LD CAL200	Model #: Ambient Weather
Serial #: 3382	Serial #: 11336	Serial #: 0140176
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / **114**	Wind: Steady/Gusty/(Calm)
Response: **Slow** / Fast / Impl	Pre-Test 114.0 All dBA	Precipitation: Yes (explain) / (No)
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: 2.0 mph/SW.
Topo: (Flat) / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): 81.7 RH (%): 28.0
Terrain: Hard/(Soft)/Mixed/Snow		Bar Psr (Hg): 30.06 Cloud Cover (%): 0%

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	1:20pm								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15	1:35pm								Car Drove by
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30		1:50pm							
31									

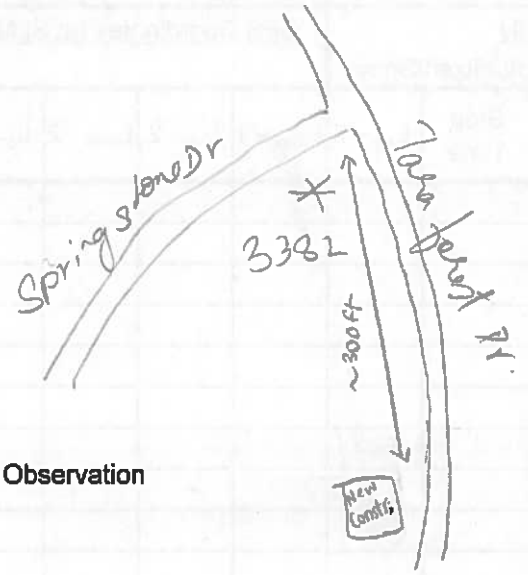
AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass ↑

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No S-3

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects/ construction

Additional Notes and Sketches on Reverse

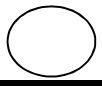
AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	STA-8 - 2184 Springstone Dr			Analyst:	Wargo/Sundaresan

Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	2.0/SW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 81.7	RH (%): 28
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.06	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		1:20 PM	45.3	83.4					
1	1:20 PM	1:21 PM	44.3	63.8					
2	1:21 PM	1:22 PM	41.1	70.4					
3	1:22 PM	1:23 PM	40.0	60.7					
4	1:23 PM	1:24 PM	39.9	64.7					
5	1:24 PM	1:25 PM	40.9	78.7					
6	1:25 PM	1:26 PM	41.1	71.7					
7	1:26 PM	1:27 PM	43.0	79.1					
8	1:27 PM	1:28 PM	39.4	62.5					
9	1:28 PM	1:29 PM	41.1	77.5					
10	1:29 PM	1:30 PM	40.8	70.7					
11	1:30 PM	1:31 PM	40.8	63.4					
12	1:31 PM	1:32 PM	43.3	65.5					
13	1:32 PM	1:33 PM	43.1	70.2					
14	1:33 PM	1:34 PM	43.4	62.5					
15	1:34 PM	1:35 PM	48.7	81.5					Car drove by
16	1:35 PM	1:36 PM	37.7	60.7					
17	1:36 PM	1:37 PM	38.7	57.7					
18	1:37 PM	1:38 PM	40.4	70.4					
19	1:38 PM	1:39 PM	39.2	66.0					
20	1:39 PM	1:40 PM	40.4	64.4					
21	1:40 PM	1:41 PM	42.4	62.5					
22	1:41 PM	1:42 PM	41.6	63.4					
23	1:42 PM	1:43 PM	39.6	57.7					
24	1:43 PM	1:44 PM	39.5	69.0					
25	1:44 PM	1:45 PM	39.8	59.9					
26	1:45 PM	1:46 PM	40.7	69.0					
27	1:46 PM	1:47 PM	41.1	64.7					
28	1:47 PM	1:48 PM	44.5	76.3					
29	1:48 PM	1:49 PM	42.1	66.4					
30	1:49 PM	1:50 PM	41.8	73.0					
TOT			42.2						

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir			compass 
Speed (post/obs)*			
Number of Lanes			
Width (pave/row)			
1- or 2- way			
Grade			
Bus Stops			
Stoplights			
Motorcycles			
Automobiles			
Medium Trucks			
Heavy Trucks			
Buses			
Count duration			

Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Construction

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/2018 Page 1 of 2

Monitoring Location: ST9 101 Riverview Dr Analyst: Moore-Smith

Sound Level Meter

Model #: See back

Serial #: See back

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: LD CAL200

Serial #: 11336

Calibration Level (dBA): 94 / **114**

Pre-Test 114.0 All dBA

Post-Test See Sketch dBA

Weather Data

Model #: Ambient weather WM-5

Serial #: 140293

Wind: Steady/Gusty/(Calm)

Precipitation: Yes (explain) / (No)

Avg Wind Speed/Direction: < 1 SW

Temp (°F): 61.5 RH (%): 41

Bar Psr (Hg): 30.18 Cloud Cover (%): 0

Topo: (Flat) Hilly

Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	5:48pm								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30		6:18pm							
31									

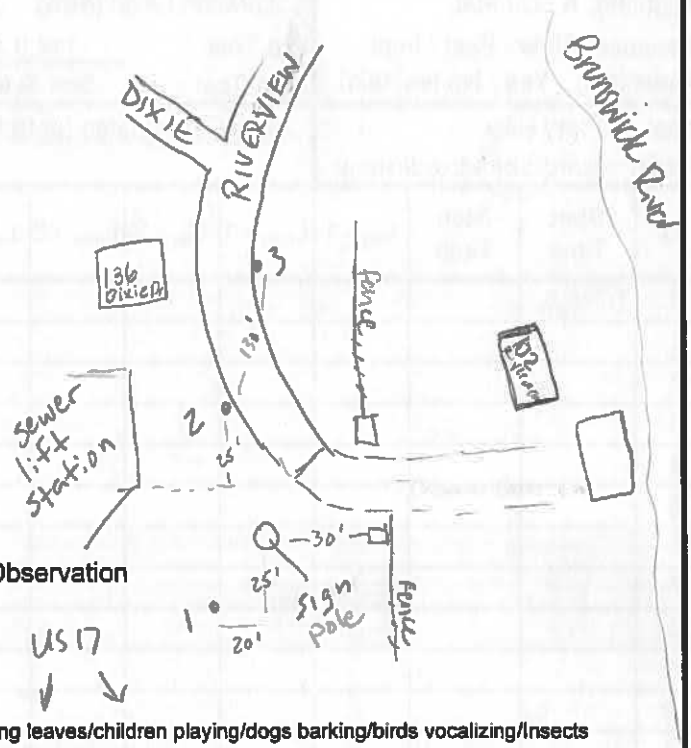
AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US17 SB	US 17 NB
Speed (post/obs)*	60	60
Number of Lanes	2	2
Width (pave/row)	36?	36?
1- or 2- way	1	1
Grade		
Bus Stops	0	0
Stoplights	0	0
Motorcycles	5	1
Automobiles	1047	831
Medium Trucks	6	14
Heavy Trucks	14	11
Buses	0	0
Count duration	20	20

compass: (1/4)

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar (Driving) / Observation

Photos Taken? (Yes) No Greg

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

Bins
US 17 SB = 13-16
US 17 NB = 5-8

Count 3 (13-16) = 770-5-7 5mc
Count 3 (5-8) = 636-16-7 1-mc

Count 4 (13-16) = 247-1-5
Count 4 (5-8) = 195-4-2

Calibration

M1: MN=831 SN=3547 Cal=113.99

M2: MN=831 SN=3548 Cal=114.04

M3: MN=LxT1' SN=4682 Cal=114.01

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	ST-9 101 Riverview Dr			Analyst:	Moore/Smith

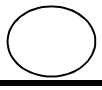
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3547/3548/4882	Serial #:	11336	Serial #:	140293
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	1/SW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 61.5	RH (%): 41
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.18	Cloud Cover (%): 3

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		5:48 PM	64.0	84.5	62.3	81.8	61.8	90.1	
1	5:48 PM	5:49 PM	61.8	78.7	62.3	101.6	60.0	87.9	
2	5:49 PM	5:50 PM	61.4	81.0	61.4	85.6	60.1	90.8	
3	5:50 PM	5:51 PM	62.3	78.0	61.3	77.4	59.9	84.5	
4	5:51 PM	5:52 PM	61.4	75.6	60.0	79.2	59.2	91.9	
5	5:52 PM	5:53 PM	61.7	81.2	61.7	78.8	60.0	85.1	
6	5:53 PM	5:54 PM	64.2	88.6	62.3	82.5	60.6	87.5	
7	5:54 PM	5:55 PM	62.2	83.0	60.9	76.9	58.9	84.4	
8	5:55 PM	5:56 PM	61.7	77.9	61.1	74.9	60.1	86.6	
9	5:56 PM	5:57 PM	61.6	77.6	61.0	77.9	59.4	86.4	
10	5:57 PM	5:58 PM	60.6	76.9	59.6	74.8	58.0	83.8	
11	5:58 PM	5:59 PM	61.5	77.6	60.3	79.6	58.9	82.5	
12	5:59 PM	6:00 PM	61.1	77.4	59.9	76.6	58.3	83.5	
13	6:00 PM	6:01 PM	60.1	75.4	59.4	77.3	57.8	85.3	
14	6:01 PM	6:02 PM	61.7	78.5	62.0	76.2	60.2	85.0	
15	6:02 PM	6:03 PM	61.6	75.8	59.8	76.2	59.4	86.3	
16	6:03 PM	6:04 PM	60.4	75.0	61.3	79.7	59.2	84.3	
17	6:04 PM	6:05 PM	61.2	76.5	61.6	81.2	59.7	85.7	
18	6:05 PM	6:06 PM	62.3	78.7	60.6	75.0	59.7	85.5	
19	6:06 PM	6:07 PM	60.8	76.1	60.9	76.2	59.3	84.8	
20	6:07 PM	6:08 PM	66.4	91.2	65.6	91.1	64.3	94.3	
21	6:08 PM	6:09 PM	62.4	76.8	62.4	78.5	61.2	84.9	
22	6:09 PM	6:10 PM	62.2	77.3	61.8	78.7	60.6	88.7	
23	6:10 PM	6:11 PM	61.0	81.9	61.3	77.8	60.3	87.0	
24	6:11 PM	6:12 PM	62.6	77.3	62.7	83.2	61.7	87.1	
25	6:12 PM	6:13 PM	62.5	76.8	62.0	77.6	60.7	84.6	
26	6:13 PM	6:14 PM	62.7	78.5	62.0	80.5	61.0	84.7	
27	6:14 PM	6:15 PM	63.0	81.0	62.3	77.9	61.5	88.8	
28	6:15 PM	6:16 PM	62.6	80.9	62.4	80.7	61.6	87.7	
29	6:16 PM	6:17 PM	61.8	76.7	62.4	80.5	60.3	87.2	
30	6:17 PM	6:18 PM	62.3	76.8	62.2	76.8	62.2	84.9	
TOT			62.2		61.7		60.4		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17 SB	US 17 NB
Speed (post/**obs**)*	60	60
Number of Lanes	2	2
Width (pave/row)	48	48
1- or 2- way	1	1
Grade	0	0
Bus Stops	---	---
Stoplights	---	---
Motorcycles	5	1
Automobiles	1047	831
Medium Trucks	6	14
Heavy Trucks	14	11
Buses	0	0
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2

Monitoring Location: STA-10 3014 Sneedales Dr Analyst: Wargo/Sundaregan

Sound Level Meter
Model #: LD 831
Serial #: 3382
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather
Serial #: 140176
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 2.0 mph / NNW
Temp (°F): 73.1 RH (%): 20.8%
Bar Psr (Hg): 30.09 Cloud Cover (%): 0%

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

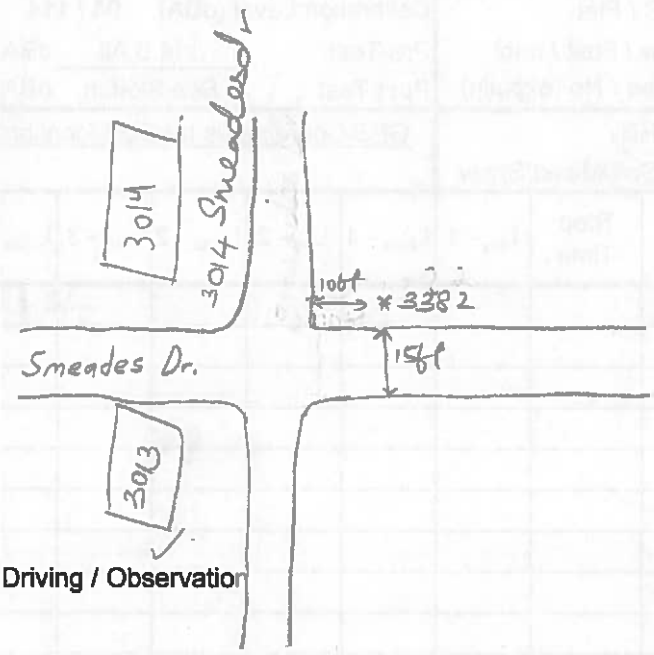
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	3:05pm								
1									
2	3:07pm								Car drove by
3									
4									
5	3:10pm								Car drove by
6	3:11pm								2 Cars drove by.
7	3:12pm								Medium drove by
8	3:13pm								Car drove by
9									
10	3:15								Medium
11									
12									
13									
14	3:19								Car
15	3:20								Medium
16	3:21								2 Car + 1 Medium
17									
18	3:23								Medium
19									
20									
21									
22									
23	3:28								Car
24	3:29								2 Cars
25									
26	3:31								Car
27									
28									
29									
30		3:35PM							
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

	Meter	Location	Post-Test
Roadway Name/Dir			
Speed (post/obs)*			
Number of Lanes			
Width (pave/row)			
1- or 2- way			
Grade			
Bus Stops			
Stoplights			
Motorcycles			
Automobiles			
Medium Trucks			
Heavy Trucks			
Buses			
Count duration			

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No ~~Yes~~/No 64

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse home repairs

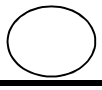
AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	STA-10 - 3014 Smeades Drive			Analyst:	Wargo/Sundaresan

Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	2.0/NNW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 73.1	RH (%): 20.8
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.09	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		3:05 PM	39.1	68.2					
1	3:05 PM	3:06 PM	40.8	69.6					
2	3:06 PM	3:07 PM	47.1	77.7					Car drove by
3	3:07 PM	3:08 PM	39.0	68.0					
4	3:08 PM	3:09 PM	40.0	81.4					
5	3:09 PM	3:10 PM	47.9	83.8					Car drove by
6	3:10 PM	3:11 PM	48.1	69.3					Two cars drove by
7	3:11 PM	3:12 PM	40.6	62.6					One medium
8	3:12 PM	3:13 PM	44.9	78.4					Car drove by
9	3:13 PM	3:14 PM	47.5	75.0					
10	3:14 PM	3:15 PM	46.0	76.1					Medium
11	3:15 PM	3:16 PM	48.2	80.7					
12	3:16 PM	3:17 PM	39.3	65.1					
13	3:17 PM	3:18 PM	51.8	79.7					
14	3:18 PM	3:19 PM	51.7	81.8					Car drove by
15	3:19 PM	3:20 PM	50.2	73.5					Medium
16	3:20 PM	3:21 PM	51.2	72.8					2 car & 1 medium
17	3:21 PM	3:22 PM	47.6	74.9					
18	3:22 PM	3:23 PM	43.0	65.1					Medium
19	3:23 PM	3:24 PM	44.4	75.5					
20	3:24 PM	3:25 PM	49.8	80.7					
21	3:25 PM	3:26 PM	43.4	74.5					
22	3:26 PM	3:27 PM	45.3	74.5					
23	3:27 PM	3:28 PM	46.2	78.6					Car
24	3:28 PM	3:29 PM	46.1	73.3					Two cars
25	3:29 PM	3:30 PM	46.0	68.6					
26	3:30 PM	3:31 PM	46.3	74.0					Car
27	3:31 PM	3:32 PM	46.2	79.4					
28	3:32 PM	3:33 PM	43.4	65.6					
29	3:33 PM	3:34 PM	45.2	69.4					
30	3:34 PM	3:35 PM	47.6	70.3					
TOT			47.0						

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir			compass 
Speed (post/obs)*			
Number of Lanes			
Width (pave/row)			
1- or 2- way			
Grade			
Bus Stops			
Stoplights			
Motorcycles			
Automobiles			
Medium Trucks			
Heavy Trucks			
Buses			
Count duration			

Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Home repairs

Other Noise Sources: distant: aircraft/**roadway traffic**/trains/landscaping/rustling leaves/children **playing/dogs** barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/3/18 Page 1 of 2
Monitoring Location: ST-11 405 Southern Blvd Analyst: Waggo/Smith/Sundarrea

Sound Level Meter
Model #: LD 831
Serial #: 3174/3215/3282
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Weather
Serial #: b40176
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) (No)
Avg Wind Speed/Direction: 1.5 / SW
Temp (°F): 82.8 RH (%): 27.1
Bar Psr (Hg): 30.03 Cloud Cover (%): 0%

Topo: (Flat) / Hilly
Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	3:31pm								
1	3:32pm								Car backing up
2									
3									
4	3:35pm								5 cars passing
5	3:36pm								2 cars passing
6	3:37pm								1 car and truck passing
7	3:38pm								1 car passing 0
8									
9	3:40pm								6 cars passing
10									
11									
12	3:43pm								2 cars passing
13	3:44pm								2 cars passing
14	3:45pm								3 car passing & Truck
15	3:46pm								3 cars passing & 1 backing
16	3:47pm								3 cars passing.
17	3:48pm								1 car passing
18	3:49pm								Minivan passing / 2 cars
19	3:50pm								1 car 0
20	3:51pm								1 car & Pest control Truck
21	3:52pm								2 cars passing.
22	3:53pm								Car.
23									
24	3:55pm								2 cars / honking.
25	3:56pm								2 cars
26	3:57pm								3 Car Passing.
27	3:58pm								4 cars 0
28									
29	4:00pm								4 cars
30		4:01pm							
31									

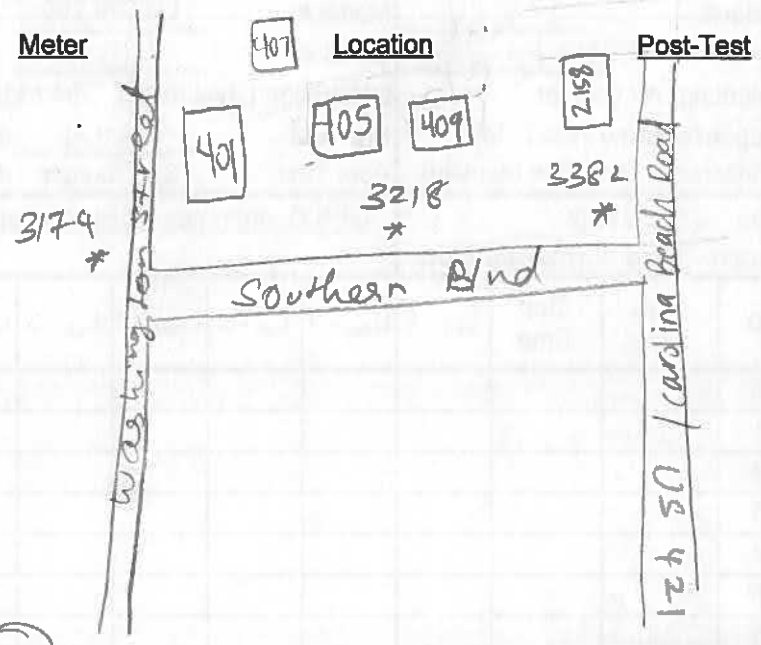
A 40
M 4

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421 NB/SB	Southern Blvd EB/WB
Speed (post/obs)*	50	30
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade	—	—
Bus Stops	—	—
Stoplights	1	
Motorcycles	5/4	—
Automobiles	386/394	20/20
Medium Trucks	23/22	2/2
Heavy Trucks	24/23	—
Buses	2/2	—
Count duration	20min	20 mins

compass: ↑

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No G8

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	ST-11 405 Southern Blvd			Analyst:	Wargo/Smith/Sundaresan

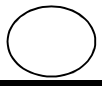
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3382/3213/3174	Serial #:	11336	Serial #:	140176
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	1.5/SW
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 82.8	RH (%): 27.1
Terrain: Hard/Soft/**Mixed**/Snow				Bar Psr (Hg): 30.03	Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		3:31 PM	64.8	85.0	60.8	86.0	60.7	86.5	
1	3:31 PM	3:32 PM	65.0	87.5	57.7	86.5	57.2	81.2	Car backing up
2	3:32 PM	3:33 PM	66.3	87.5	59.9	79.5	51.5	70.4	
3	3:33 PM	3:34 PM	65.7	84.7	59.8	84.1	55.4	80.2	
4	3:34 PM	3:35 PM	65.7	83.8	63.2	84.2	63.3	84.6	5 cars
5	3:35 PM	3:36 PM	68.3	90.9	65.8	92.2	64.2	88.9	2 cars
6	3:36 PM	3:37 PM	62.6	85.3	63.0	88.6	67.0	91.2	1 car and truck passing
7	3:37 PM	3:38 PM	67.6	88.0	57.5	75.0	49.8	66.8	car
8	3:38 PM	3:39 PM	63.8	83.4	61.4	83.3	61.7	83.2	
9	3:39 PM	3:40 PM	67.2	93.2	60.9	85.9	53.1	73.9	6 cars
10	3:40 PM	3:41 PM	61.1	80.1	55.5	74.7	49.4	92.2	
11	3:41 PM	3:42 PM	67.4	87.6	60.5	88.5	52.2	69.4	
12	3:42 PM	3:43 PM	62.8	80.1	58.5	84.0	58.7	82.3	2 cars
13	3:43 PM	3:44 PM	64.7	84.6	63.5	85.7	62.6	85.7	2 cars
14	3:44 PM	3:45 PM	74.7	100.4	72.6	97.2	70.4	95.1	3 cars and truck
15	3:45 PM	3:46 PM	63.9	86.6	57.8	83.2	56.3	80.7	3 cars passing and 1 backing
16	3:46 PM	3:47 PM	67.6	92.4	62.2	84.8	62.4	91.9	3 cars
17	3:47 PM	3:48 PM	61.8	85.9	61.0	86.3	60.8	87.8	1 car
18	3:48 PM	3:49 PM	66.0	84.0	60.7	84.0	58.4	83.9	minivan and 2 cars
19	3:49 PM	3:50 PM	60.9	80.4	55.6	80.5	56.1	83.5	1 car
20	3:50 PM	3:51 PM	65.9	87.8	59.9	84.0	50.9	68.5	1 car and pest control truck
21	3:51 PM	3:52 PM	64.0	86.1	61.6	87.9	55.6	79.5	2 cars
22	3:52 PM	3:53 PM	67.4	87.2	61.2	80.4	53.9	76.8	car
23	3:53 PM	3:54 PM	63.6	85.4	61.1	85.8	59.2	87.9	
24	3:54 PM	3:55 PM	64.0	83.8	61.4	89.1	59.3	91.0	2 cars and honking
25	3:55 PM	3:56 PM	66.3	91.2	64.3	89.6	63.0	87.3	2 cars
26	3:56 PM	3:57 PM	65.8	86.9	62.1	87.6	60.3	89.8	3 cars
27	3:57 PM	3:58 PM	65.8	86.9	65.2	89.8	64.0	89.8	4 cars
28	3:58 PM	3:59 PM	60.9	81.6	57.8	79.0	51.3	72.2	
29	3:59 PM	4:00 PM	67.9	87.2	63.6	88.9	62.4	91.8	4 cars
30	4:00 PM	4:01 PM	61.8	84.3	58.8	82.8	50.4	69.2	
TOT			66.4		62.9		61.3		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421 NB/SB	Southern Blvd EB/WB
Speed (post/**obs**)*	50	30
Number of Lanes	4	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade	---	---
Bus Stops	---	---
Stoplights	1	---
Motorcycles	5/4	---
Automobiles	386/394	20/20
Medium Trucks	23/22	2/2
Heavy Trucks	24/23	---
Buses	2/2	---
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/**children playing**/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/31/2018 Page 1 of 2

Monitoring Location: ST12 817 Wolbrook Rd Analyst: Moore-Smith

Sound Level Meter
Model #: LD831
Serial #: 3547/3549/4882
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #:
Serial #:
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) (No)
Avg Wind Speed/Direction: 1.1 W
Temp (°F): 74 RH (%): 37.1
Bar Psr (Hg): 30.13 Cloud Cover (%): 3%

Topo: (Flat) Hilly
Terrain: Hard/Soft/Mixed/Snow

GPS Coordinates (at SLM location)#

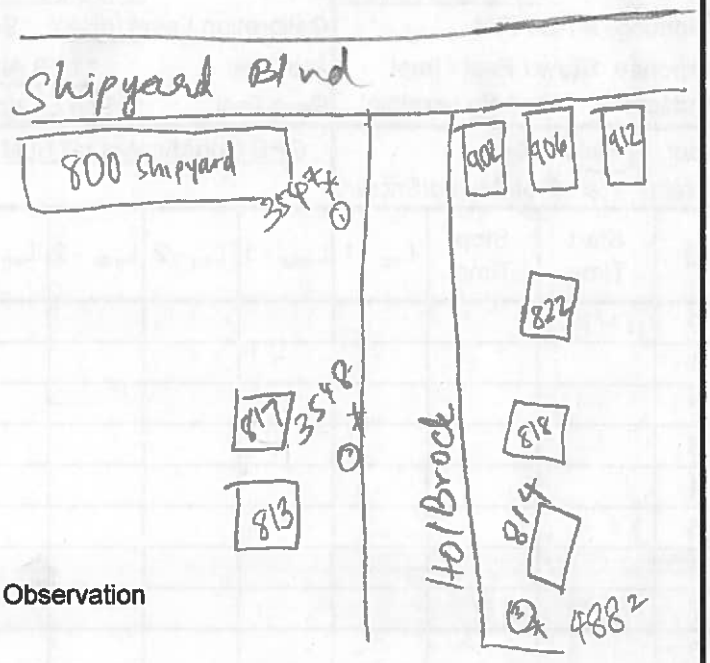
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	11:47AM								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30	12:17AM								
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Shipyard EB	Shipyard WB
Speed (post/obs)*	45	45
Number of Lanes	2	2
Width (pave/row)	24	24
1- or 2- way	1	1
Grade	at grade	at grade
Bus Stops	0	0
Stoplights	0	0
Motorcycles	1	1
Automobiles	220	256
Medium Trucks	3	6
Heavy Trucks	2	8
Buses	0	0
Count duration	20	20

compass ↑

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No Grey

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

Count 7 & 8
Shipyard Rd EB = 13-16
Shipyard Rd WB = 5-8

Count 7
13-16 149-1-0 1mc
5-8 192-5-2 1mc

Count 8
13-16 71-2-2
5-8 64-1-2

Calibration

M1: MN. 831 SN: 3547 Cal 113.99
M2: MN: 831 SN: 3548 Cal 114.03
M3: MN: LxT2 SN. 4882 Cal 114.03

Traffic at Holbrook Rd

	NB	SB
Autos	8	18
M Trucks	0	0
H Trucks	0	0

* 2 lane 24' wide
2 way
35 mph

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/31/2018	Page 1 of 2
Monitoring Location:	ST-12 87 Holbrook Rd			Analyst:	Moore/Smith

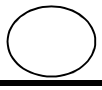
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3547/3548/4882	Serial #:	11336	Serial #:	140293
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	1.1/W
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 74	RH (%): 37.1
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.13	Cloud Cover (%): 3

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		11:47 AM	59.5	85.5	58.3	90.5	54.8	87.3	
1	11:47 AM	11:48 AM	62.7	81.0	56.0	80.4	48.2	82.8	
2	11:48 AM	11:49 AM	61.5	83.4	62.1	86.0	62.3	91.3	
3	11:49 AM	11:50 AM	56.4	76.8	51.6	72.4	45.7	79.9	
4	11:50 AM	11:51 AM	62.8	82.6	57.2	79.3	59.1	93.9	
5	11:51 AM	11:52 AM	61.8	82.8	58.6	82.9	54.8	89.9	
6	11:52 AM	11:53 AM	59.0	77.9	58.0	79.4	53.1	83.1	
7	11:53 AM	11:54 AM	63.3	84.3	59.5	80.8	55.8	85.3	
8	11:54 AM	11:55 AM	58.4	80.7	58.0	79.9	60.2	90.7	
9	11:55 AM	11:56 AM	61.9	84.0	54.4	80.4	47.4	79.9	
10	11:56 AM	11:57 AM	63.1	81.3	58.6	83.0	54.5	84.7	
11	11:57 AM	11:58 AM	63.1	85.7	59.6	84.9	58.5	88.7	
12	11:58 AM	11:59 AM	65.3	85.9	60.8	80.6	50.8	82.3	
13	11:59 AM	12:00 PM	59.6	77.4	56.3	76.1	48.2	84.0	
14	12:00 PM	12:01 PM	64.5	86.9	61.0	81.9	59.9	88.5	
15	12:01 PM	12:02 PM	62.8	82.9	56.4	79.6	48.0	82.4	
16	12:02 PM	12:03 PM	60.2	79.8	56.5	85.4	48.9	84.7	
17	12:03 PM	12:04 PM	72.6	98.9	69.5	99.2	62.1	93.5	
18	12:04 PM	12:05 PM	65.0	89.7	60.6	83.9	58.4	85.6	
19	12:05 PM	12:06 PM	67.4	90.0	60.2	82.4	65.3	103.3	
20	12:06 PM	12:07 PM	63.7	84.1	63.3	85.9	60.4	89.5	
21	12:07 PM	12:08 PM	64.2	88.0	60.1	81.7	52.9	82.0	
22	12:08 PM	12:09 PM	63.5	85.2	59.0	80.4	56.4	90.4	
23	12:09 PM	12:10 PM	64.8	84.9	61.6	84.5	61.0	94.5	
24	12:10 PM	12:11 PM	60.9	78.6	59.8	79.7	59.1	91.0	
25	12:11 PM	12:12 PM	66.5	88.9	62.3	86.8	54.6	86.1	
26	12:12 PM	12:13 PM	62.1	84.2	58.5	79.4	54.2	80.2	
27	12:13 PM	12:14 PM	69.3	91.8	60.0	79.3	53.5	86.5	
28	12:14 PM	12:15 PM	66.3	86.6	64.6	87.5	56.8	87.1	
29	12:15 PM	12:16 PM	65.7	85.4	62.4	85.7	61.4	92.6	
30	12:16 PM	12:17 PM							
TOT			64.7		61.0		58.1		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Shipyard EB	Shipyard WB
Speed (post/**obs**)*	45	45
Number of Lanes	2	2
Width (pave/row)	24	24
1- or 2- way	1	1
Grade	at grade	at grade
Bus Stops	---	---
Stoplights	---	---
Motorcycles	1	1
Automobiles	220	256
Medium Trucks	3	6
Heavy Trucks	2	8
Buses	0	0
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter

Location

Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/2018 Page 1 of 2
Monitoring Location: ST-13 448 Cape fear blvd Analyst: Moore - Smith

Sound Level Meter
Model #: LD831
Serial #: 3547/3548/4882
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen: **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: Ambient Vantage WMS
Serial #: 140 263
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 1.4 S
Temp (°F): 75.9 RH (%): 28.7
Bar Psr (Hg): 30.11 Cloud Cover (%): 25

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0									
1	4:17pm								
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									4:43 large utility truck on side rd
13									
14									4:43 Dogs barking by last monitor
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30		4:47pm							
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US421SB/421NB	Cape Fear Blvd EB/WB
Speed (post/obs)*	60	35
Number of Lanes	2/1 Hard Lane/2	2
Width (pave/row)	60	27
1- or 2- way	2	2
Grade	at Grade	at Grade
Bus Stops	1 on NB	—
Stoplights	1	—
Motorcycles	—	—
Automobiles	472SB/426NB	9WB/3EB
Medium Trucks	11/14	—
Heavy Trucks	16/26	—
Buses	—	—
Count duration	20	20

compass

Site Diagram:

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No Greg

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

Calibration

M1: MN=831 SN=3547 Cal=113.99

M2: MN=831 SN=3548 Cal=114.04

M3: MN=LxT1 SN=4662 Cal=114.01

NB traffic backs up at light

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	ST-13 448 Cape Fear Blvd			Analyst:	Moore/Smith

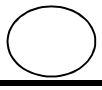
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	AmbientWeather
Serial #:	3547/3548/4882	Serial #:	11336	Serial #:	140293
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	1.4/S
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): 75.9	RH (%): 28.7
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): 30.11	Cloud Cover (%): <5

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0		4:17 PM	60.5	77.9	62.1	86.5	52.3	87.4	
1	4:17 PM	4:18 PM	65.8	92.7	57.5	79.9	55.1	91.2	
2	4:18 PM	4:19 PM	64.9	87.2	59.8	79.0	52.1	83.4	
3	4:19 PM	4:20 PM	64.2	85.9	58.4	82.6	51.7	91.4	
4	4:20 PM	4:21 PM	59.4	77.6	56.0	76.3	55.4	90.0	
5	4:21 PM	4:22 PM	61.7	80.0	59.7	78.2	52.2	86.7	
6	4:22 PM	4:23 PM	64.4	86.6	57.5	78.7	52.1	84.6	
7	4:23 PM	4:24 PM	62.2	79.8	59.0	76.2	53.7	85.8	
8	4:24 PM	4:25 PM	61.4	80.1	55.7	71.3	50.8	85.8	
9	4:25 PM	4:26 PM	59.0	78.3	57.1	75.0	47.8	83.7	
10	4:26 PM	4:27 PM	63.7	80.3	60.8	84.3	59.1	91.5	
11	4:27 PM	4:28 PM	62.2	83.8	55.4	71.9	49.6	82.1	
12	4:28 PM	4:29 PM	60.6	77.3	59.4	82.1	50.3	84.0	
13	4:29 PM	4:30 PM	65.0	83.8	59.0	86.2	59.6	89.1	
14	4:30 PM	4:31 PM	64.1	88.6	64.2	89.6	57.8	93.7	
15	4:31 PM	4:32 PM	63.7	81.3	61.9	87.6	62.9	99.4	
16	4:32 PM	4:33 PM	65.2	84.9	54.5	73.1	59.5	92.9	
17	4:33 PM	4:34 PM	61.2	80.0	58.3	74.2	49.4	85.2	
18	4:34 PM	4:35 PM	62.2	79.5	57.5	77.1	51.4	83.9	
19	4:35 PM	4:36 PM	60.7	78.2	58.7	79.0	52.1	83.3	
20	4:36 PM	4:37 PM	65.7	85.8	59.8	77.1	53.9	85.8	
21	4:37 PM	4:38 PM	62.4	82.5	57.4	77.5	52.8	84.8	
22	4:38 PM	4:39 PM	61.4	85.8	62.0	87.7	60.0	93.1	
23	4:39 PM	4:40 PM	61.1	81.2	58.4	78.9	52.3	84.8	
24	4:40 PM	4:41 PM	62.8	87.4	63.0	88.5	51.5	86.1	
25	4:41 PM	4:42 PM	68.9	95.3	64.0	92.5	56.4	85.5	
26	4:42 PM	4:43 PM	64.5	85.0	60.8	88.2	54.7	84.6	Large utility truck outside rd and dogs barking by last meter
27	4:43 PM	4:44 PM	62.1	86.1	60.3	87.1	57.5	87.6	
28	4:44 PM	4:45 PM	64.3	86.1	61.9	90.7	59.3	88.4	
29	4:45 PM	4:46 PM	65.2	90.5	61.3	86.8	53.9	84.9	
30	4:46 PM	4:47 PM							
TOT			63.6		60.1		55.9		

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421 SB/NB	Cape Fear Blvd EB/WB
Speed (post/**obs**)*	60	35
Number of Lanes	2	2
Width (pave/row)	48	24
1- or 2- way	2	2
Grade	at grade	at grade
Bus Stops	0/1	---
Stoplights	---	---
Motorcycles	1	1
Automobiles	472/426	9/3
Medium Trucks	11/14	---
Heavy Trucks	18/26	---
Buses	---	---
Count duration	20 mins	20 mins

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / **Driving** / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/2015 Page 1 of 2

Monitoring Location: LT1 7372 Ruby Stone Court Analyst: Moore-Vargo. Supraja-Smith

Sound Level Meter
Model #: 831/LXT
Serial #: 3004
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: N/A
Serial #: N/A
Wind: Steady/Gusty/**Calm**
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: N/A
Temp (°F): VAR RH (%): VAR
Bar Psr (Hg): VAR Cloud Cover (%): VAR

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

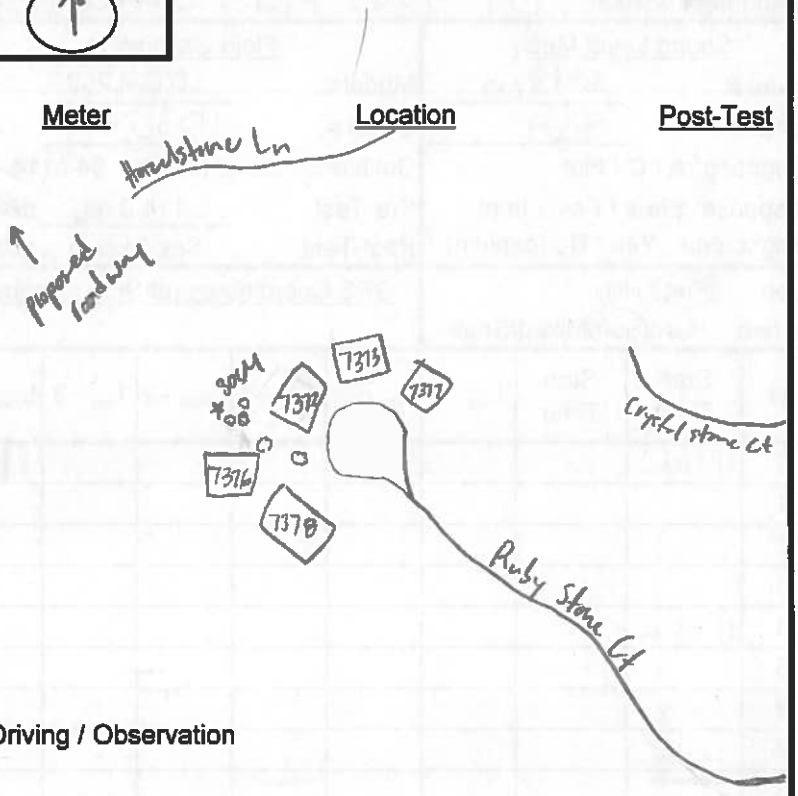
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	11:16am								Started before walking away. Dog leaves
1									
2									
3									
4	11:20 m								Grey removed wind chime
5									
6									
7									
8									
9									
10	7:20pm								Battery change, 45mins.
11									
12									
13									
14									
15									
16									
17									
18	10:38am								16.25h.
19	10:41am								Battery change/ Recalibrate
20									
21									
22									
23									
24									
25	2:30pm	2:30pm							Meter Stopped.
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass ↑

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No Hunter

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 1 7372 Ruby Stone Court			Analyst:	Moore/Wargo/Sundaresan/Smith

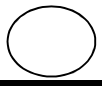
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	3004	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	11:16 AM								started before walking away from dry leaves
1									
2									
3									
4	11:20 AM								Greg removed wind chimes
5									
6									
7									
8									
9									
10	7:00 PM								Battery change, 45 mins data
11									
12									
13									
14									
15									
16									
17									
18	10:38 AM								16.25 Hours of data
19	10:41 AM								Battery change/recalibrate
20									
21									
22									
23									
24									
25		2:30 PM							Meter stopped
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2

Monitoring Location: LT-2. 8639 Orchard Loop Rd Analyst: Smith/Wargo/Moore/ und

Sound Level Meter
- Model #: 831
- Serial #: 3308
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: LD CAL200
- Serial #: 11336
- Calibration Level (dBA): 94 / (114)
- Pre-Test: 114.0 All dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: N/A
- Serial #: N/A
- Wind: Steady/Gusty/Calm
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N A
- Temp (°F): N/A RH (%): N/A
- Bar Psr (Hg): N/A Cloud Cover (%): N/A

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	12:14pm								Setting up the meter
1									
2	~7pm								Meter Malfunctions
3									
4									
5									
6									
7									
8									
9									
10	9:51am								~14h 45m change batteries
11									
12									
13	10:01am								calibrated meter
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25	2:07pm	2:07pm							stopped
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No Sundaresan.

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 2 8639 Orchard Loop Rd			Analyst:	Moore/Wargo/Sundaresan/Smith

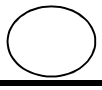
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	3308	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	12:14 PM								Meter setup
1									
2	~7 PM								Meter malfunction restart
3									
4									
5									
6									
7									
8									
9									
10	~7:00 PM								~14.75h of data, change batteries
11									
12									
13									
14									
15	10:21 AM								Meter calibrated
16									
17									
18	10:38 AM								16.25 Hours of data
19	10:41 AM								Battery change/recalibrate
20									
21									
22									
23									
24									
25		2:07 PM							Meter stopped
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31825110 | Date: 10/30/18 | Page 1 of 2

Monitoring Location: LT3 USS North Carolina | Analyst: Moore-Smith

Sound Level Meter
- Model #: 831
- Serial #: 3173
- Weighting: A / C / Flat
- Response: Slow / Fast / Impl
- Windscreen : (Yes) / No (explain)

Field Calibration
- Model #: LD CAL200
- Serial #: 11336
- Calibration Level (dBA): 94 (114)
- Pre-Test 13:36 114.0 All dBA
- Post-Test See Sketch dBA

Weather Data
- Model #: NA
- Serial #: NA
- Wind: Steady/Gusty/Calm
- Precipitation: Yes (explain) / No
- Avg Wind Speed/Direction: NA
- Temp (°F): NA RH (%): NA
- Bar Psr (Hg): NA Cloud Cover (%): NA

Topo: (Flat) / Hilly
Terrain: Hard/Soft/Mixed/Snow

GPS Coordinates (at SLM location)#

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	8:34pm								Started meter
1									Walking around meter
2	8:36pm								" "
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									Pictures!
24									
25									
26									
27									
28									
29									
30									
31		8:34pm							

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes/No) GPS

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 3 USS North Carolina			Analyst:	Moore/Smith

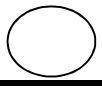
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	3173	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	113.36 dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	8:34 PM								Started meter
1									walking around meter
2	8:36 PM								walking around meter
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/18 Page 1 of 2

Monitoring Location: LT-4 1252 S. Brook Rd Analyst: Wagoo/Sundaresan.

Sound Level Meter	Field Calibration	Weather Data
Model #: LD831	Model #: LD CAL200	Model #: NA
Serial #: 3556	Serial #: 11336	Serial #: NA
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / (114)	Wind: Steady/Gusty/Calm
Response: **Slow** / Fast / Impl	Pre-Test 114.0 All dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: NA
Topo: (Flat) / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): NA RH (%): NA
Terrain: Hard/(Soft)/Mixed/Snow		Bar Psr (Hg): NA Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	2:33pm								Setup/Lock meter
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31		2:33pm							

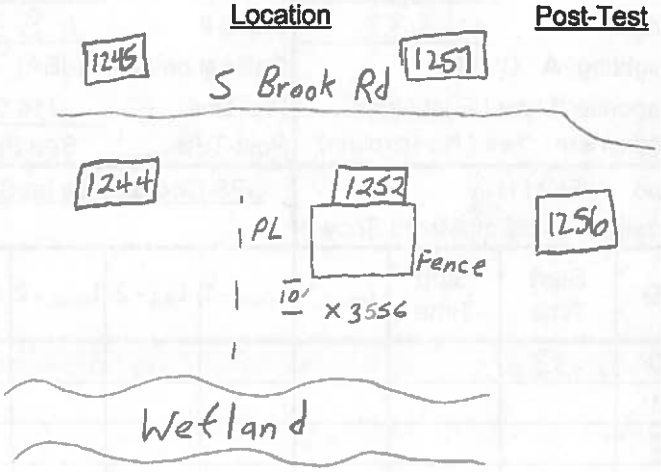
AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No 53

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 4 1252 S. Brook Rd			Analyst:	Wargo/Sundaresan

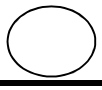
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	3556	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	2:33 PM								Meter setup
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/2018 Page 1 of 2

Monitoring Location: LT5 217 Wollina Rd Analyst: Moore - Smith

Sound Level Meter	Field Calibration	Weather Data
Model #: 831	Model #: LD CAL200	Model #: NA
Serial #: 3173	Serial #: 11336	Serial #: NA
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 (114)	Wind: Steady/Gusty/Calm
Response: **Slow** / Fast / Impl	Pre-Test 114.0 All dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: NA
Topo: (Flat) / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): NA RH (%): NA
Terrain: Hard/(Soft)/Mixed/Snow		Bar Psr (Hg): NA Cloud Cover (%): NA

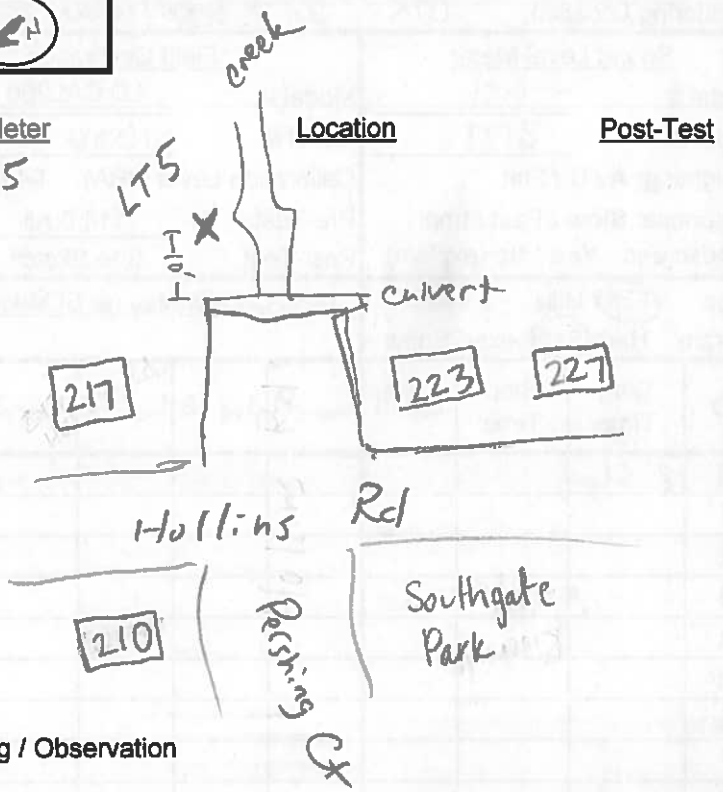
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	2:51pm								set up mics & walked away
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13	3:04pm								Cars was started to leave location
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25	7:44pm	7:44pm							Retrieved meter
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes) No Hunter

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 5 217 Hollins Rd			Analyst:	Moore/Smith

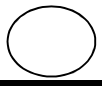
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	3173	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	2:51 PM								Started meter and stepped away
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13	3:07 PM								Car was started to learn location
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25	7:44 PM								Meter retrieved
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31825110 Date: 10/30/2018 Page 1 of 2

Monitoring Location: LT-C 312 Williamson Dr Analyst: Moore - Smith

Sound Level Meter
Model #: LXT1
Serial #: 5554
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: LD CAL200
Serial #: 11336
Calibration Level (dBA): 94 / **114**
Pre-Test 114.09 114.0 All dBA
Post-Test See Sketch dBA

Weather Data
Model #: NA
Serial #: NA
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: NA
Temp (°F): NA RH (%): NA
Bar Psr (Hg): NA Cloud Cover (%): NA

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

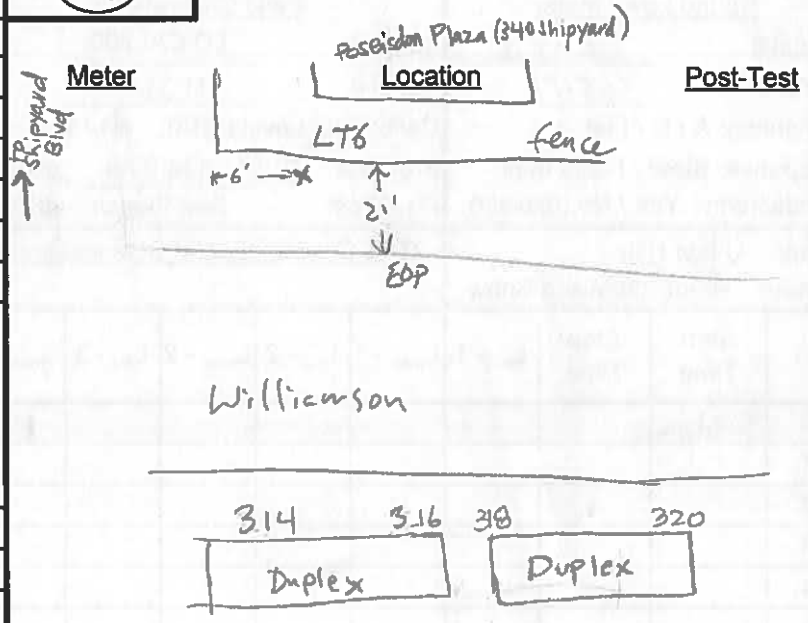
ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	3:31pm								Started meter & stepped away
1									
2									
3									
4									
5									
6									
7	3:37pm								Greg walked close to meter
8									
9	3:39pm								started car close to meter
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31		3:31pm							

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes/No) Hunter

Additional Notes/Comments:

* decent amount of traffic along Williamson Rd. 316 Williamson Rd.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name:	U-4738 Cape Fear Crossing	Project #:	31825110	Date: 10/30/2018	Page 1 of 2
Monitoring Location:	LT 6 312 Williamson Dr			Analyst:	Moore/Smith

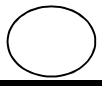
Sound Level Meter		Field Calibration		Weather Data	
Model #:	LD831	Model #:	LD CAL200	Model #:	NA
Serial #:	5554	Serial #:	11336	Serial #:	NA
Weighting: **A** / C / Flat		Calibration Level (dBA):	94 / **114**	Wind: Steady/Gusty/**Calm**	
Response: **Slow** / Fast / Impl		Pre-Test	114.0 All dBA	Precipitation: Yes (explain) / **No**	
Windscreen : **Yes** / No (explain)		Post-Test	See Sketch dBA	Avg Wind Speed/Direction:	NA
Topo: **Flat** / Hilly		GPS Coordinates (at SLM location)#		Temp (°F): NA	RH (%): NA
Terrain: Hard/**Soft**/Mixed/Snow				Bar Psr (Hg): NA	Cloud Cover (%): NA

ID	Start Time	Stop Time	L_{eq} - 1	L_{max} - 1	L_{eq} - 2	L_{max} - 2	L_{eq} - 3	L_{max} - 3	Notes/Events
0	3:31 PM								Started meter and stepped away
1									
2									
3									
4									
5									
6									
7	3:37 PM								Greg walked close to the meter
8									
9	3:39 PM								Car started close to the meter
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

AECOM Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir		
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

decent amount of traffic along williamson road.

Other Noise Sources: distant: aircraft**/roadway traffic**/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/15 | Page 1 of 2

Monitoring Location: ST5 - 7909 US 17 S | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 831

Serial #: See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): 94 / **114**

Pre-Test: All: 114.0 dBA

Post-Test: See Sketch dBA

Weather Data

Model #: Accu Weather

Serial #: —

Wind: Steady/Gusty/(Calm)

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: —

Temp (°F): 90 RH (%): 53

Bar Psr (Hg): 30.10 Cloud Cover (%): 60

Topo: (Flat)/Hilly

Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#

See Sketch

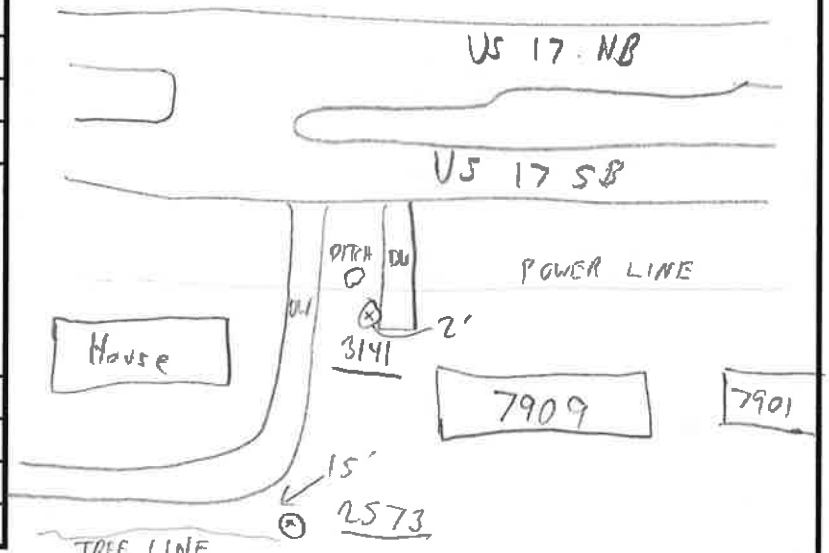
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	4:38	4:39							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9	4:46	4:47							Truck starting
10	↓	↓							
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21	4:58	4:59							
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17	
Speed (post/obs)*	55	
Number of Lanes	4	
Width (pave/row)	24/24	
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles	2 NB / 2 SB	
Automobiles	264 NB 330 SB	
Medium Trucks	7 NB / 6 SB	
Heavy Trucks	5 NB / 5 SB	
Buses	0 NB / 1 SB	
Count duration	15 min	

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No

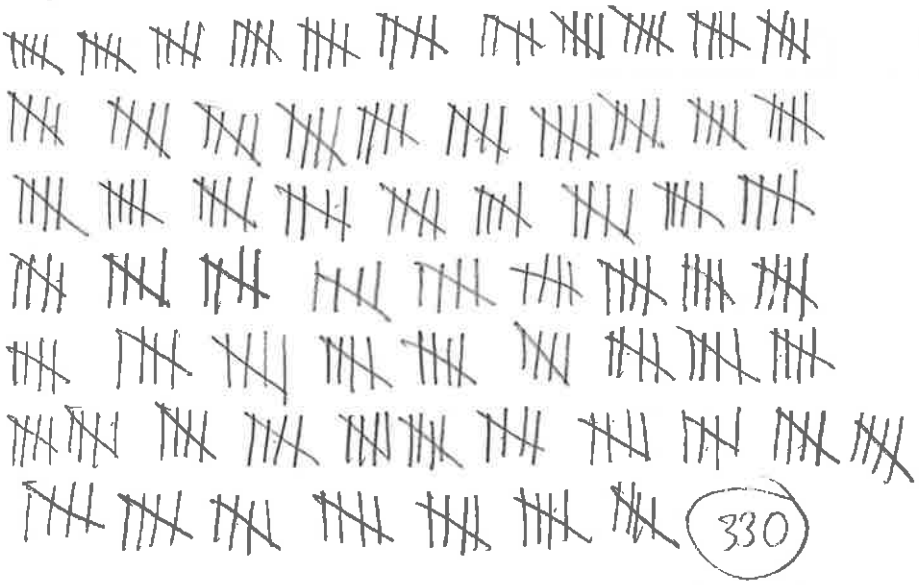
Additional Notes/Comments: CACADAS/CRICKETS

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

US 17 SB

C

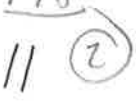


M

H

B

Mo



URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 | Page 1 of 2

Monitoring Location: Short-Term 5: 7909 US 17 S | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: See Sketch
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 11083
- Calibration Level (dBA): 94 / **114**
- Pre-Test: All 114.0 dBA
- Post-Test: All 113.8 dBA

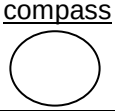
Weather Data
- Model #: AccuWeather
- Serial #: N/A
- Wind: Steady/Gusty/**Calm**
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N/A
- Temp (°F): 90 RH (%): 53
- Bar Psr (Hg): 30.10 Cloud Cover (%): 60

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#: See Sketch

ID	Start Time	Stop Time	3141 L_{eq}	3141 L_{max}	2573 L_{eq}	2573 L_{max}			Notes/Events
0									
1	4:38 PM	4:39 PM	70.7	94.5	60.6	80.1			
2	4:39 PM	4:40 PM	73.9	96.3	62.1	81.0			
3	4:40 PM	4:41 PM	70.9	89.1	59.5	75.4			
4	4:41 PM	4:42 PM	68.9	90.3	57.7	75.8			
5	4:42 PM	4:43 PM	70.5	91.2	58.6	76.9			
6	4:43 PM	4:44 PM	72.1	90.8	61.2	76.6			
7	4:44 PM	4:45 PM	73.7	93.0	61.2	84.2			
8	4:45 PM	4:46 PM	69.6	90.6	59.7	77.8			
9	4:46 PM	4:47 PM	71.7	89.6	59.6	76.1			Truck Starting
10	4:47 PM	4:48 PM	72.1	90.6	60.5	77.8			
11	4:48 PM	4:49 PM	72.3	91.5	59.6	77.2			
12	4:49 PM	4:50 PM	70.7	90.6	59.4	79.7			
13	4:50 PM	4:51 PM	70.4	91.2	59.1	76.0			
14	4:51 PM	4:52 PM	71.6	90.6	60.3	80.7			
15	4:52 PM	4:53 PM	72.0	98.2	59.5	84.2			
16	4:53 PM	4:54 PM	72.0	95.4	60.3	78.5			
17	4:54 PM	4:55 PM	70.6	89.8	59.9	77.2			
18	4:55 PM	4:56 PM	71.3	90.6	59.7	80.6			
19	4:56 PM	4:57 PM	72.6	96.7	61.1	82.4			
20	4:57 PM	4:58 PM	70.5	90.7	59.3	79.2			
21	4:58 PM	4:59 PM	73.8	94.6	61.8	80.1			
22			71.7						
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

			compass	Site Diagram:	
Roadway Name/Dir	US 17				
Speed (post/obs)*	55				
Number of Lanes	4				
Width (pave/row)	30'/30'		Meter	Location	Post-Test
1- or 2- way	2		3141	34°11'48.6"N 78°03'54.4"W	113.8
Grade	0		2573	34°11'49.7"N 78°03'54.8"W	113.8
Bus Stops	0				
Stoplights	0				
Motorcycles	2 NB, 2 SB				
Automobiles	264 NB, 330 SB				
Medium Trucks	7 NB, 6 SB				
Heavy Trucks	5 NB, 5 SB				
Buses	0 NB, 1 SB				
Count duration	15 min.				

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments: Sicadas.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/15 | Page 1 of 2

Monitoring Location: ST 7 - Cloudbreak Ct. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 831

Serial #: 2573

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): 94 / **114**

Pre-Test: All: 114.0 dBA

Post-Test: See Sketch dBA

Weather Data

Model #: AccuWeather

Serial #: —

Wind: Steady/Gusty/(Calm)

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: —

Temp (°F): 75 RH (%): 92

Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: (Flat) / Hilly

Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#

See Sketch

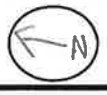
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	8:28	8:29							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	8:47	8:48							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

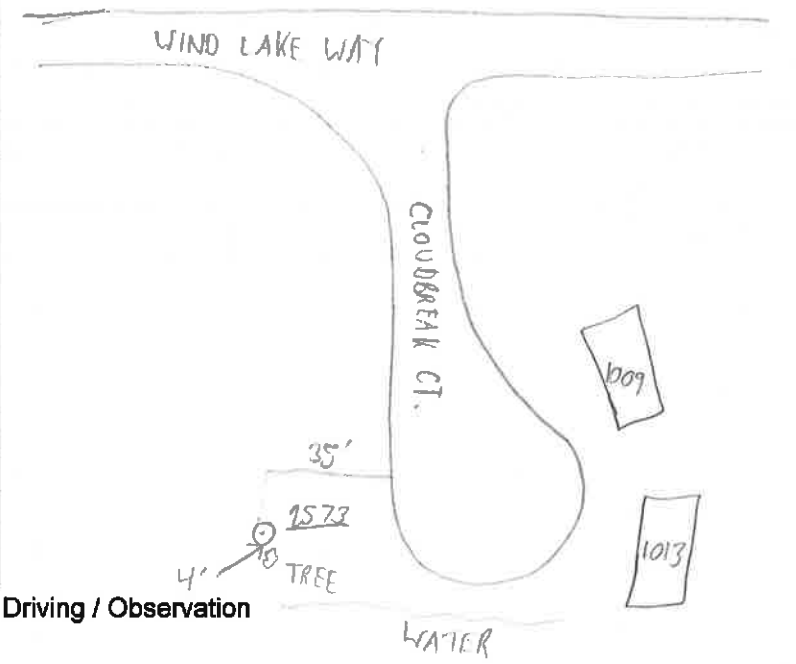
Roadway Name/Dir	CLOUDBREAK CT.	
Speed (post/obs)*	25	
Number of Lanes	2	
Width (pave/row)	VAR	
1- or 2- way	2	
Grade	–	
Bus Stops	–	
Stoplights	–	
Motorcycles	–	
Automobiles	–	
Medium Trucks	–	
Heavy Trucks	–	
Buses	–	
Count duration	–	

compass



Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No

Additional Notes/Comments: US 74/76 and US 17 can be heard in distance, distant grass mowing

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/2015 | Page 1 of 2

Monitoring Location: Short-Term 7: Cloudbreak Ct. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 831
Serial #: 2573
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200
Serial #: 11083
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test 113.7 dBA

Weather Data

Model #: AccuWeather
Serial #: N/A
Wind: Steady/Gusty/**Calm**
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: N/A
Temp (°F): 75 RH (%): 92
Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/**Soft**/Mixed/Snow

GPS Coordinates (at SLM location)#
34°13'32.5"N 78°00'54.9"W

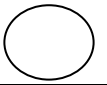
ID	Start Time	Stop Time	2573 L_{eq}	2573 L_{max}					Notes/Events
0									
1	8:28 AM	8:29 AM	51.8	69.6					
2	8:29 AM	8:30 AM	52.0	66.5					
3	8:30 AM	8:31 AM	52.7	66.8					
4	8:31 AM	8:32 AM	52.7	67.7					
5	8:32 AM	8:33 AM	51.0	66.1					
6	8:33 AM	8:34 AM	52.1	67.5					
7	8:34 AM	8:35 AM	52.5	67.1					
8	8:35 AM	8:36 AM	51.8	67.3					
9	8:36 AM	8:37 AM	51.0	65.3					
10	8:37 AM	8:38 AM	50.9	64.8					
11	8:38 AM	8:39 AM	52.5	66.5					
12	8:39 AM	8:40 AM	52.4	67.4					
13	8:40 AM	8:41 AM	51.1	65.3					
14	8:41 AM	8:42 AM	52.0	67.4					
15	8:42 AM	8:43 AM	51.6	65.9					
16	8:43 AM	8:44 AM	50.5	64.2					
17	8:44 AM	8:45 AM	51.5	65.5					
18	8:45 AM	8:46 AM	50.5	64.5					
19	8:46 AM	8:47 AM	51.9	65.9					
20	8:47 AM	8:48 AM	51.7	68.8					
21			51.8						
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Cloudbreak Ct.	
Speed (post/obs)*	25	
Number of Lanes	2	
Width (pave/row)	VAR.	
1- or 2- way	2	
Grade	N/A	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 60401048 Date: 8/18/15 Page 1 of 2

Monitoring Location: ST8 - Across from 1018 Sun Skipper Ln Analyst: Bell/Burris

Sound Level Meter
Model #: LD 831
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test All: 114.0 dBA
Post-Test See Sketch dBA

Weather Data
Model #: AccuWeather
Serial #: —
Wind: Steady/Gusty/(Calm)
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: —
Temp (°F): 79 RH (%): 80
Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#
See Sketch

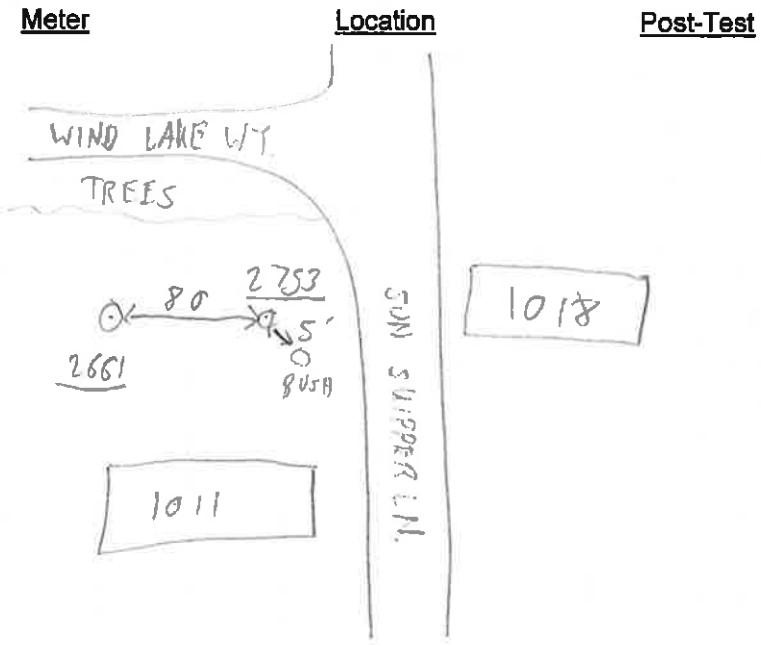
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	8:56	8:57							
2	↓	↓							
3	↓	↓							
4	↓	↓							
5	↓	↓							
6	↓	↓							
7	↓	↓							
8	↓	↓							
9	↓	↓							
10	↓	↓							
11	↓	↓							
12	↓	↓							
13	↓	↓							
14	↓	↓							
15	↓	↓							
16	↓	↓							
17	↓	↓							
18	↓	↓							
19	↓	↓							
20	9:15	9:16							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Sun Shipper Ln.	US 74	compass: N
Speed (post/obs)*	25	60	
Number of Lanes	1		
Width (pave/row)	20'		
1- or 2- way	1		
Grade	—		
Bus Stops	—		
Stoplights	—		
Motorcycles	—		
Automobiles	—	Get Count Data	
Medium Trucks	—		
Heavy Trucks	—		
Buses	—		
Count duration	15 min.		

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes) No

Additional Notes/Comments: Get count data for US 74-76, grass mowing in distance.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/2015 | Page 1 of 2

Monitoring Location: Short-Term 8: Across from 1018 Sun Skipper Ln. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 831

Serial #: See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 11083

Calibration Level (dBA): 94 / **114**

Pre-Test 114.0 dBA

Post-Test See Sketch dBA

Weather Data

Model #: AccuWeather

Serial #: N/A

Wind: Steady/Gusty/**Calm**

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: N/A

Temp (°F): 79 RH (%): 80

Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: **Flat** / Hilly

Terrain: Hard/**Soft**/Mixed/Snow

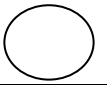
GPS Coordinates (at SLM location)#: See Sketch

ID	Start Time	Stop Time	2573 L_{eq}	2573 L_{max}	2661 L_{eq}	2661 L_{max}			Notes/Events
0									
1	8:56 AM	8:57 AM	53.4	76.3	56.1	71.3			
2	8:57 AM	8:58 AM	53.6	68.5	55.0	69.7			
3	8:58 AM	8:59 AM	52.3	67.0	52.8	69.4			
4	8:59 AM	9:00 AM	51.1	68.4	53.7	69.9			
5	9:00 AM	9:01 AM	52.1	69.3	54.1	69.9			
6	9:01 AM	9:02 AM	51.3	67.7	52.2	76.9			
7	9:02 AM	9:03 AM	51.2	68.9	53.7	71.8			
8	9:03 AM	9:04 AM	51.6	70.0	54.9	72.0			
9	9:04 AM	9:05 AM	54.3	70.8	55.3	71.4			
10	9:05 AM	9:06 AM	51.9	70.0	54.0	71.1			
11	9:06 AM	9:07 AM	52.4	70.4	53.6	70.0			
12	9:07 AM	9:08 AM	51.5	66.1	53.3	68.2			
13	9:08 AM	9:09 AM	53.2	73.1	56.6	80.2			
14	9:09 AM	9:10 AM	53.9	77.1	55.5	71.3			
15	9:10 AM	9:11 AM	56.0	70.0	55.5	71.3			
16	9:11 AM	9:12 AM	52.1	67.8	54.8	70.5			
17	9:12 AM	9:13 AM	51.8	66.5	53.7	69.0			
18	9:13 AM	9:14 AM	52.2	80.3	55.3	72.1			
19	9:14 AM	9:15 AM	58.7	76.6	58.7	76.7			
20	9:15 AM	9:16 AM	52.4	69.5	54.8	71.1			
21			53.3		54.9				
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Sun Skipper Ln.	US 74-76
Speed (post/obs)*	25	60
Number of Lanes	2	4
Width (pave/row)	20'	34'/34'
1- or 2- way	2	2
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0	0
Automobiles	0	289 EB 236 WB
Medium Trucks	0	13 EB/11 WB
Heavy Trucks	0	16 EB/13 WB
Buses	0	0
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
2573	34°13'44.9"N 78°01'08.9"W	113.7
2661	34°13'45.0"N 78°01'07.8"W	113.8

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/15 | Page 1 of 2

Monitoring Location: ST9 - Blackwell Rd. | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: See Sketch
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 5789
- Calibration Level (dBA): 94 / **114**
- Pre-Test: All: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: AccuWeather
- Serial #: —
- Wind: Steady/Gusty/(Calm)
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: —
- Temp (°F): 79 RH (%): 80
- Bar Psr (Hg): 30.08 Cloud Cover (%): 100

Topo: Flat / Hilly
Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#: See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	9:44	9:45							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	10:03	10:04							
21									
22									
23									
24									
25									
26									
27									
28									
29									

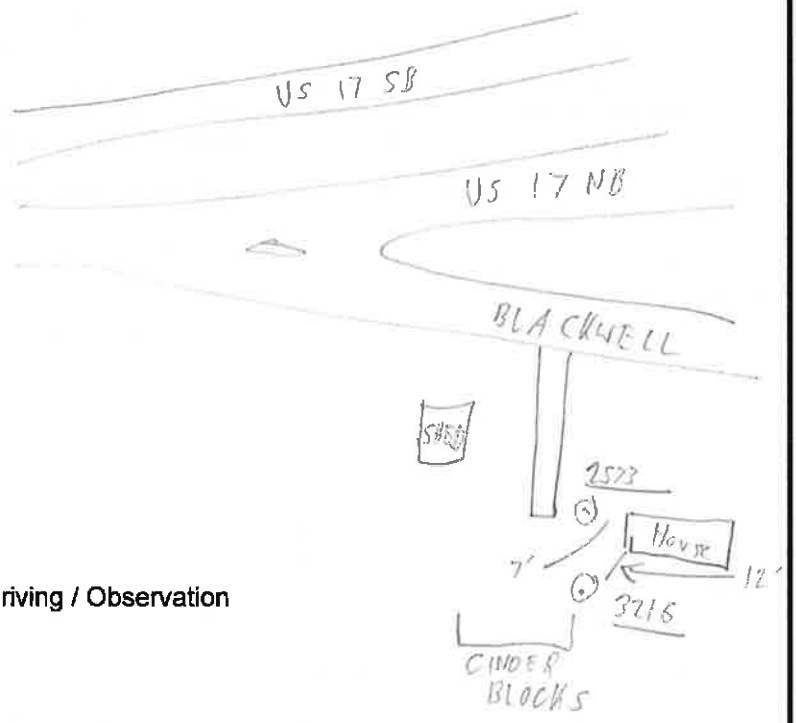
URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17	Blackwell
Speed (post/obs)*	55	45
Number of Lanes	5	2
Width (pave/row)	30'/36'	24'
1- or 2- way	2	2
Grade	-	-
Bus Stops	-	-
Stoplights	-	-
Motorcycles	0 NB / 0 SB	-
Automobiles	330 NB 295 SB	20 EB 6 WB
Medium Trucks	6 NB / 3 SB	-
Heavy Trucks	6 NB / 11 SB	-
Buses	0 NB / 0 SB	-
Count duration	15 Min	15 Min

compass

Site Diagram:

Meter Location Post-Test



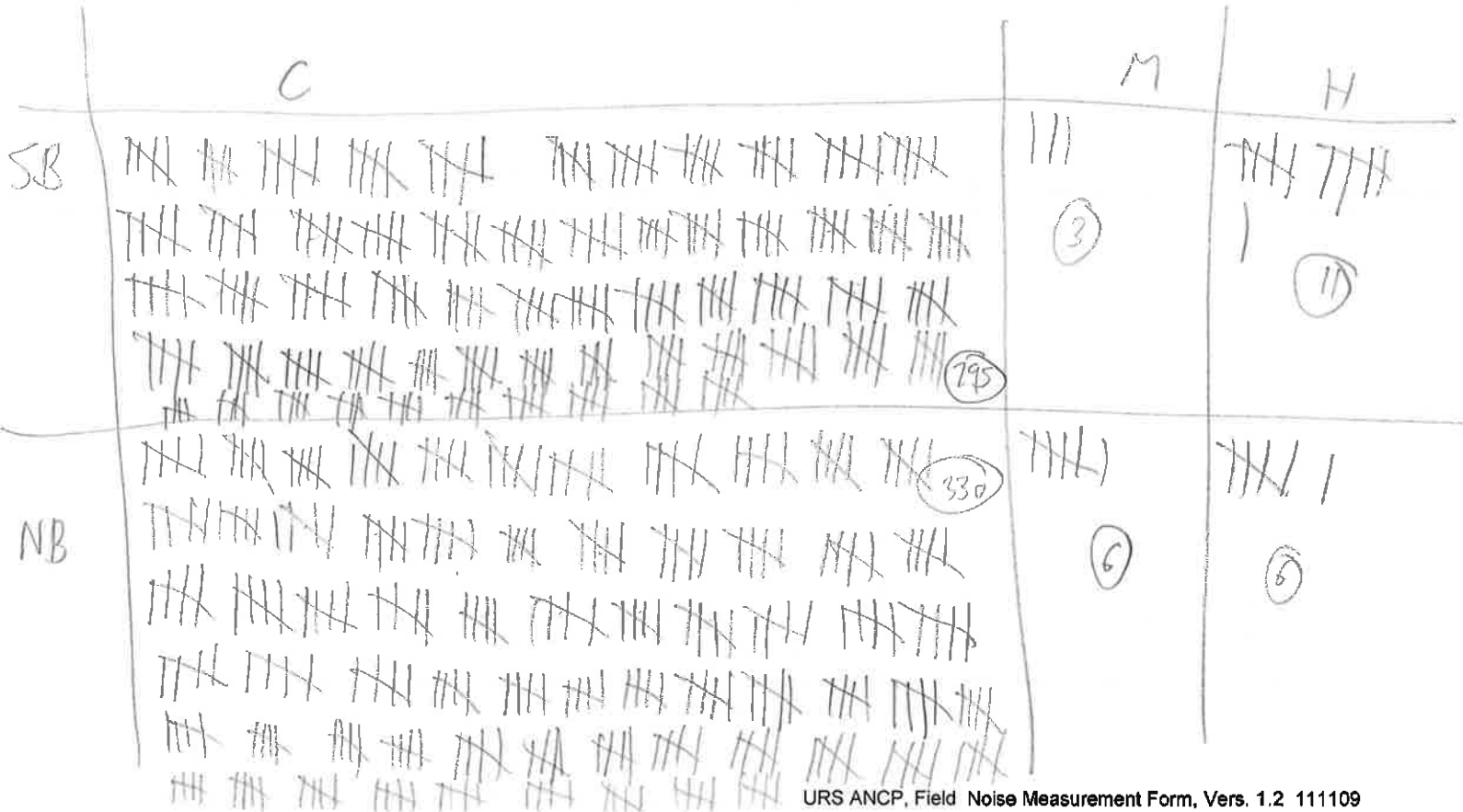
- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse



URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/2015 | Page 1 of 2

Monitoring Location: Short-Term 9: 9621 Blackwell Rd. | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: See Sketch
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 11083
- Calibration Level (dBA): 94 / **114**
- Pre-Test: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: AccuWeather
- Serial #: N/A
- Wind: Steady/Gusty/**Calm**
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N/A
- Temp (°F): 79 RH (%): 80
- Bar Psr (Hg): 30.08 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#: See Sketch

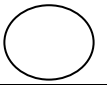
ID	Start Time	Stop Time	2573 L_{eq}	2573 L_{max}	3216 L_{eq}	3216 L_{max}			Notes/Events
0									
1	9:44 AM	9:45 AM	55.7	75.2	54.9	69.5			
2	9:45 AM	9:46 AM	55.9	71.9	54.5	69.8			
3	9:46 AM	9:47 AM	55.0	72.7	54.7	71.5			
4	9:47 AM	9:48 AM	56.7	73.3	56.1	71.0			
5	9:48 AM	9:49 AM	57.1	74.9	55.2	70.4			
6	9:49 AM	9:50 AM	57.1	74.5	55.0	71.0			
7	9:50 AM	9:51 AM	55.1	75.3	55.0	74.1			
8	9:51 AM	9:52 AM	54.6	72.1	54.4	70.0			
9	9:52 AM	9:53 AM	55.9	74.3	54.6	74.6			
10	9:53 AM	9:54 AM	56.2	71.7	55.8	70.7			
11	9:54 AM	9:55 AM	54.8	77.4	54.4	69.0			
12	9:55 AM	9:56 AM	58.2	80.1	56.3	76.3			
13	9:56 AM	9:57 AM	58.0	80.1	56.0	71.7			
14	9:57 AM	9:58 AM	58.3	78.9	54.2	69.8			
15	9:58 AM	9:59 AM	56.2	77.1	55.6	72.7			
16	9:59 AM	10:00 AM	59.0	80.1	57.6	81.3			
17	10:00 AM	10:01 AM	58.1	75.5	56.2	74.1			
18	10:01 AM	10:02 AM	60.1	84.8	56.7	77.3			
19	10:02 AM	10:03 AM	55.4	72.3	54.8	70.3			
20	10:03 AM	10:04 AM	59.5	81.8	56.7	78.7			
21			57.1		**55.5**				
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17	Blackwell Rd.
Speed (post/obs)*	55	45
Number of Lanes	4	2
Width (pave/row)	30'/30'	24'
1- or 2- way	2	2
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0	0
Automobiles	330 NB 295 SB	20 EB 6 WB
Medium Trucks	6 NB, 3 SB	0
Heavy Trucks	6 NB, 11 SB	0
Buses	0	0
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
2573	34°13'07.1"N 78°00'50.9"W	113.7
3216	34°13'06.8"N 78°00'50.6"W	113.8

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/15 | Page 1 of 2

Monitoring Location: ST10 - 2422 Red Maple Ct. | Analyst: Bell/Burris

Sound Level Meter	Field Calibration	Weather Data
Model #: LD 831	Model #: CAL200	Model #: AccuWeather
Serial #: See Sketch	Serial #: 5789	Serial #: —
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / **114**	Wind: Steady/Gusty/Calm
Response: **Slow** / Fast / Impl	Pre-Test All: 114.0 dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: —
Topo: Flat / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): 85 RH (%): 65
Terrain: Hard/Soft/Mixed/Snow	See Sketch	Bar Psr (Hg): 30.07 Cloud Cover (%): 100

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	12:28	12:29							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	19:47	19:48							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

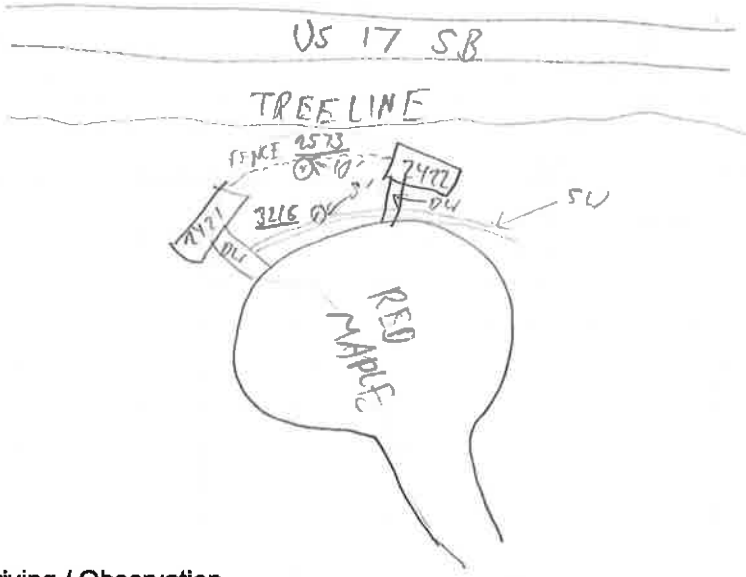
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Red Maple Ct	US 17
Speed (post/obs)*	20	
Number of Lanes	2	
Width (pave/row)	VAR	
1- or 2- way	2	
Grade	-	
Bus Stops	-	
Stoplights	-	
Motorcycles		
Automobiles		Get Traffic Data
Medium Trucks		
Heavy Trucks		
Buses		
Count duration	15 min.	

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No

Additional Notes/Comments:

Get traffic data for US 17. No access beyond fence.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/18/2015 | Page 1 of 2

Monitoring Location: Short-Term 10: 2422 Red Maple Ct. | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: See Sketch
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 11083
- Calibration Level (dBA): 94 / **114**
- Pre-Test: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: AccuWeather
- Serial #: N/A
- Wind: Steady/Gusty/**Calm**
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N/A
- Temp (°F): 85 RH (%): 65
- Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#: See Sketch

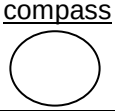
ID	Start Time	Stop Time	2573 L_{eq}	2573 L_{max}	3216 L_{eq}	3216 L_{max}			Notes/Events
0									
1	12:28 PM	12:29 PM	59.5	75.4	58.5	75.0			
2	12:29 PM	12:30 PM	59.9	76.9	57.8	73.6			
3	12:30 PM	12:31 PM	59.4	74.7	61.3	84.9			
4	12:31 PM	12:32 PM	62.9	84.6	58.0	74.1			
5	12:32 PM	12:33 PM	59.6	76.6	59.1	74.0			
6	12:33 PM	12:34 PM	60.6	76.6	58.7	75.8			
7	12:34 PM	12:35 PM	60.5	78.0	58.0	75.5			
8	12:35 PM	12:36 PM	59.9	75.3	59.1	73.8			
9	12:36 PM	12:37 PM	60.8	75.8	57.6	72.9			
10	12:37 PM	12:38 PM	60.1	75.1	59.2	74.3			
11	12:38 PM	12:39 PM	61.1	75.2	59.4	74.7			
12	12:39 PM	12:40 PM	61.8	76.6	58.9	75.3			
13	12:40 PM	12:41 PM	61.3	78.4	60.7	78.4			
14	12:41 PM	12:42 PM	62.7	79.4	59.0	74.0			
15	12:42 PM	12:43 PM	61.2	76.7	59.8	77.0			
16	12:43 PM	12:44 PM	61.5	77.3	58.8	75.7			
17	12:44 PM	12:45 PM	60.3	75.9	57.5	72.4			
18	12:45 PM	12:46 PM	59.1	74.4	58.3	74.6			
19	12:46 PM	12:47 PM	59.8	75.7	58.7	76.1			
20	12:47 PM	12:48 PM	60.3	77.0	60.4	78.2			
21			60.7		59.1				
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 17/74/76 EB, US 74/76 WB	US 17 SB Ramp
Speed (post/obs)*	60	55
Number of Lanes	3 EB/2 WB	2
Width (pave/row)	44' EB/32 WB'	30'
1- or 2- way	2	1
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0	0
Automobiles	826 EB 258 WB	418
Medium Trucks	36 EB/11 WB	18
Heavy Trucks	45 EB/11 WB	23
Buses	0	0
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
2573	34°13'41.4"N 78°00'14.9"W	113.7
3216	34°13'41.6"N 78°00'15.3"W	113.8

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/15 | Page 1 of 2

Monitoring Location: ST 12 - Lot on Sandy Grove Rd | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: 3141
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 5789
- Calibration Level (dBA): 94 / **114**
- Pre-Test: All: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: AccuWeather
- Serial #: —
- Wind: Steady/Gusty/(Calm)
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: —
- Temp (°F): 86 RH (%): 53
- Bar Psr (Hg): 30 Cloud Cover (%): 0

Topo: (Flat) / Hilly

Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#

See Sketch

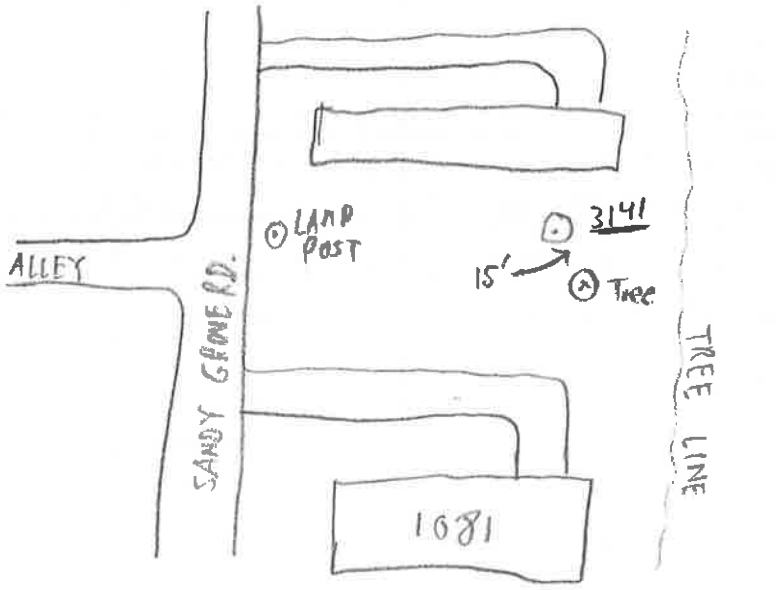
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	11:20	11:21							
2	"	"							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14	"								
15									
16									
17									
18									
19	V	V							
20	11:39	11:40							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	SANDY GROVE RD.	
Speed (post/obs)*	20	
Number of Lanes	2	
Width (pave/row)	20'	
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles	—	
Automobiles	—	
Medium Trucks	—	
Heavy Trucks	—	
Buses	—	
Count duration	—	

compass: N

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No

Additional Notes/Comments: Occasional hammering in distance

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 |

Monitoring Location: Short-Term 12: Lot on Sandy Grove Rd. | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: 3141
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 11083
- Calibration Level (dBA): 94 / **114**
- Pre-Test: 114.0 dBA
- Post-Test: 113.8 dBA

Weather Data
- Model #: AccuWeather
- Serial #: N/A
- Wind: Steady/Gusty/**Calm**
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N/A
- Temp (°F): 86 RH (%): 53
- Bar Psr (Hg): 30.08 Cloud Cover (%): 0

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#: 34°10'51.5"N 78°00'52.3"W

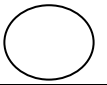
ID	Start Time	Stop Time	3141 L_{eq}	3141 L_{max}					Notes/Events
0									
1	11:20 AM	11:21 AM	44.7	68.3					
2	11:21 AM	11:22 AM	37.6	62.7					
3	11:22 AM	11:23 AM	37.3	52.3					
4	11:23 AM	11:24 AM	37.7	52.3					
5	11:24 AM	11:25 AM	39.1	62.7					
6	11:25 AM	11:26 AM	39.1	55.3					
7	11:26 AM	11:27 AM	38.6	52.3					
8	11:27 AM	11:28 AM	38.3	52.3					
9	11:28 AM	11:29 AM	40.7	60.8					
10	11:29 AM	11:30 AM	38.3	55.3					
11	11:30 AM	11:31 AM	37.9	58.3					
12	11:31 AM	11:32 AM	36.9	52.3					
13	11:32 AM	11:33 AM	36.2	52.3					
14	11:33 AM	11:34 AM	35.2	52.3					
15	11:34 AM	11:35 AM	45.3	69.6					
16	11:35 AM	11:36 AM	35.5	55.3					
17	11:36 AM	11:37 AM	37.0	52.3					
18	11:37 AM	11:38 AM	36.3	52.3					
19	11:38 AM	11:39 AM	36.0	52.3					
20	11:39 AM	11:40 AM	36.4	73.0					
21			39.3						
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Sandy Grove Pl.	
Speed (post/obs)*	25	
Number of Lanes	2	
Width (pave/row)	24'	
1- or 2- way	2	
Grade	N/A	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter	Location	Post-Test
3141	34°10'51.5"N 78°00'52.3"W	113.8

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/15 | Page 1 of 2

Monitoring Location: ST13 - 1245 S. Brook Rd | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: 3141
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 5789
- Calibration Level (dBA): 94 / **114**
- Pre-Test: All: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: AccuWeather
- Serial #: —
- Wind: Steady/Gusty/(Calm)
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: —
- Temp (°F): 89 RH (%): 50
- Bar Psr (Hg): 30.15 Cloud Cover (%): 10

Topo: (Flat) / Hilly

Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#: See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	12:48	12:49							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	1:07	1:08							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

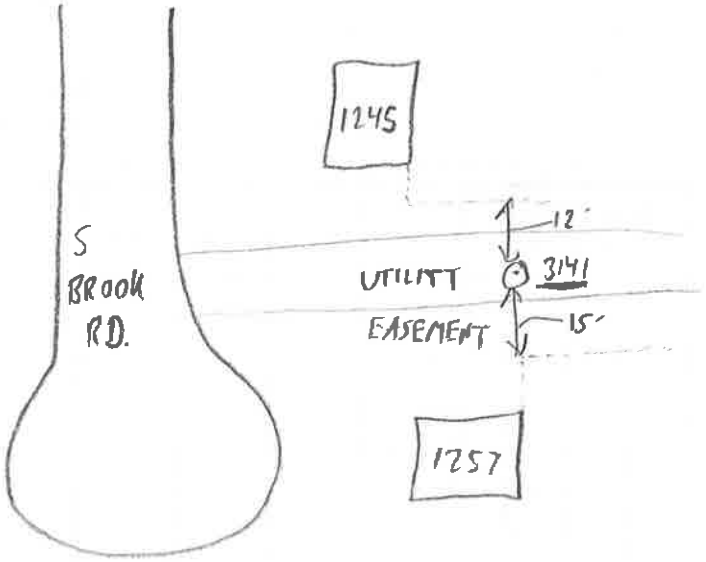
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	S. BROOK RD.	
Speed (post/obs)*	25	
Number of Lanes	1	
Width (pave/row)	22'	
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles	—	
Automobiles	—	
Medium Trucks	—	
Heavy Trucks	—	
Buses	—	
Count duration	—	

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 | Page 1 of 2

Monitoring Location: Short-Term 13: 1245 S. Brook Rd. | Analyst: Bell/Burris

Sound Level Meter
- Model #: LD 831
- Serial #: 3141
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 11083
- Calibration Level (dBA): 94 / **114**
- Pre-Test: 114.0 dBA
- Post-Test: 113.8 dBA

Weather Data
- Model #: AccuWeather
- Serial #: N/A
- Wind: Steady/Gusty/**Calm**
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: N/A
- Temp (°F): 89 RH (%): 50
- Bar Psr (Hg): 30.15 Cloud Cover (%): 20

Topo: **Flat** / Hilly
Terrain: Hard/**Soft**/Mixed/Snow

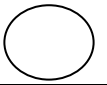
GPS Coordinates (at SLM location)#: 34°10'55.7"N 78°00'15.4"W

ID	Start Time	Stop Time	3141 L_{eq}	3141 L_{max}					Notes/Events
0									
1	12:48 PM	12:49 PM	36.3	60.8					
2	12:49 PM	12:50 PM	38.4	57.1					
3	12:50 PM	12:51 PM	40.0	65.3					
4	12:51 PM	12:52 PM	39.1	55.3					
5	12:52 PM	12:53 PM	38.8	57.1					
6	12:53 PM	12:54 PM	39.2	64.1					
7	12:54 PM	12:55 PM	37.2	55.3					
8	12:55 PM	12:56 PM	37.3	52.3					
9	12:56 PM	12:57 PM	36.1	52.3					
10	12:57 PM	12:58 PM	36.8	52.3					
11	12:58 PM	12:59 PM	38.5	52.3					
12	12:59 PM	1:00 PM	38.4	82.6					
13	1:00 PM	1:01 PM	39.7	84.8					
14	1:01 PM	1:02 PM	38.7	55.3					
15	1:02 PM	1:03 PM	39.4	55.3					
16	1:03 PM	1:04 PM	40.6	57.1					
17	1:04 PM	1:05 PM	40.3	60.1					
18	1:05 PM	1:06 PM	38.3	72.3					
19	1:06 PM	1:07 PM	42.0	60.8					
20	1:07 PM	1:08 PM	40.6	83.7					
21			39.0						
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	S. Brook Rd.	
Speed (post/obs)*	25	
Number of Lanes	2	
Width (pave/row)	22'	
1- or 2- way	2	
Grade	N/A	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter	Location	Post-Test
3141	34°10'55.7"N 78°00'15.4"W	113.8

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 14: 1245 S. Brook Rd. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test See Sketch dBA

Weather Data

Model #: SM-28
Serial #: 3386
Wind: **Steady**/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 3 SW
Temp (°F): 81 RH (%): 47
Bar Psr (Hg): 30.08 Cloud Cover (%): 90

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#
See Sketch

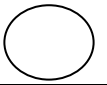
ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	1:25 PM	1:26 PM	68.4	81.7	75.9	89.5	61.0	74.0	
2	1:26 PM	1:27 PM	58.4	63.5	65.1	72.1	52.8	57.8	
3	1:27 PM	1:28 PM	62.7	70.5	69.3	80.4	57.4	66.5	
4	1:28 PM	1:29 PM	60.7	65.6	68.0	73.5	55.0	59.2	
5	1:29 PM	1:30 PM	61.8	69.6	68.8	77.7	56.0	61.7	
6	1:30 PM	1:31 PM	60.3	65.9	67.9	74.9	54.2	57.5	
7	1:31 PM	1:32 PM	59.3	64.6	66.8	73.3	53.4	57.4	
8	1:32 PM	1:33 PM	61.4	66.4	68.7	75.4	55.2	60.1	
9	1:33 PM	1:34 PM	62.4	68.1	67.0	73.4	57.7	64.1	
10	1:34 PM	1:35 PM	60.4	64.4	67.1	73.0	55.4	61.9	
11	1:35 PM	1:36 PM	58.8	62.6	66.1	71.2	52.7	54.7	
12	1:36 PM	1:37 PM	65.1	76.1	70.8	78.0	60.7	73.4	
13	1:37 PM	1:38 PM	61.7	68.9	69.5	78.3	55.7	62.1	
14	1:38 PM	1:39 PM	58.7	62.8	66.5	72.9	52.5	54.7	
15	1:39 PM	1:40 PM	59.7	66.5	65.8	71.9	54.2	62.6	
16	1:40 PM	1:41 PM	58.3	67.1	64.8	72.0	52.6	61.9	
17	1:41 PM	1:42 PM	58.3	62.6	64.1	71.9	52.5	54.5	
18	1:42 PM	1:43 PM	59.7	63.4	67.9	73.5	53.3	56.5	
19	1:43 PM	1:44 PM	61.1	69.0	69.3	78.4	55.0	63.5	
20	1:44 PM	1:45 PM	58.1	62.8	65.9	71.2	52.0	55.1	
21			61.7		68.8		55.8		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	3rd St.	Wooster St.
Speed (post/obs)*	35	35
Number of Lanes	5	4
Width (pave/row)	60'	48'
1- or 2- way	2	1
Grade	0	0
Bus Stops	0	0
Stoplights	1	1
Motorcycles	0	1
Automobiles	149 NB 157 SB	319
Medium Trucks	4 NB/1 SB	4
Heavy Trucks	1 NB, 0 SB	1
Buses	1 NB, 0 SB	0
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°13'33.9"N 77°56'40.5"W	114.1
1651	34°13'34.0"N 77°56'41.1"W	113.9
1652	34°13'33.9"N 77°56'39.6"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31830185 Date: _____ Page 1 of 2

Monitoring Location: ST 15- US 421 / Willard (1602) Analyst: Bell / Burns

Sound Level Meter
- Model #: LO 820
- Serial #: See Sketch
- Weighting: **A** / C / Flat
- Response: **Slow** / Fast / Impl
- Windscreen : **Yes** / No (explain)

Field Calibration
- Model #: CAL200
- Serial #: 5789
- Calibration Level (dBA): 94 / 114
- Pre-Test: All: 114.0 dBA
- Post-Test: See Sketch dBA

Weather Data
- Model #: WSM-78
- Serial #: 03386
- Wind: Steady/Gusty/Calm
- Precipitation: Yes (explain) / **No**
- Avg Wind Speed/Direction: 4.0 W
- Temp (°F): 81 RH (%): 50
- Bar Psr (Hg): 30.08 Cloud Cover (%): 90

Topo: (Flat) / Hilly
Terrain: Hard/Soft/Mixed/Snow

GPS Coordinates (at SLM location)*: See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	2:07 PM	2:08 PM							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									Seagulls squawking
10									↓
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	2:26 PM	2:27 PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

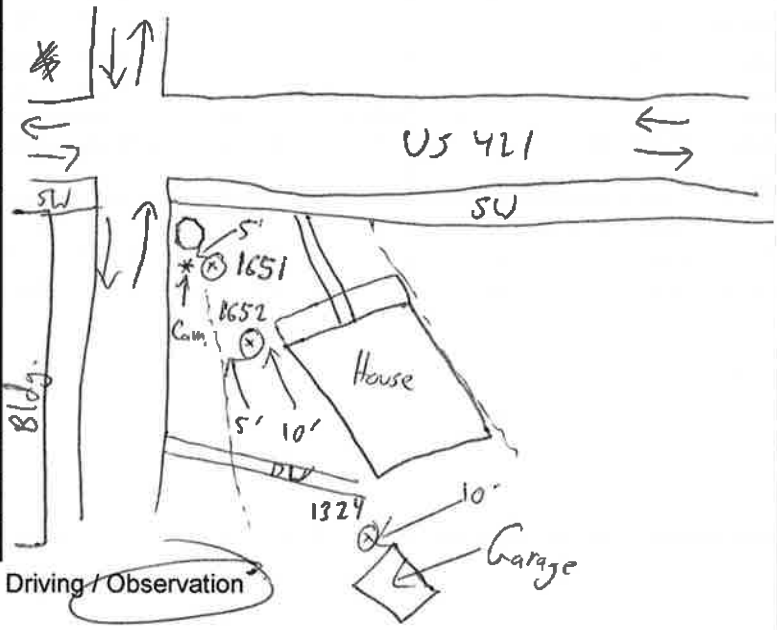
URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Burnett	Willard
Speed (post/obs)*	35	20
Number of Lanes	4	2
Width (pave/row)		
1- or 2- way	2	2
Grade	—	—
Bus Stops	—	—
Stoplights	—	—
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No 1-6

Additional Notes/Comments: Birds chirping, truck traffic on Front Street, light wind gusts

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 15: 1602 Willard St. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test See Sketch dBA

Weather Data

Model #: SM-28
Serial #: 3386
Wind: **Steady**/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 4 W
Temp (°F): 81 RH (%): 50
Bar Psr (Hg): 30.08 Cloud Cover (%): 90

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#
See Sketch

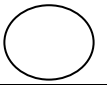
ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	2:07 PM	2:08 PM	59.3	62.0	71.1	80.0	60.0	69.1	
2	2:08 PM	2:09 PM	59.2	66.1	70.2	76.7	58.8	64.4	
3	2:09 PM	2:10 PM	58.2	62.3	71.6	80.7	60.9	68.7	
4	2:10 PM	2:11 PM	60.9	66.4	72.5	77.7	61.7	66.2	
5	2:11 PM	2:12 PM	62.1	67.1	70.0	76.4	58.3	64.1	
6	2:12 PM	2:13 PM	59.4	65.6	71.5	80.1	61.0	69.5	
7	2:13 PM	2:14 PM	60.9	67.7	70.7	76.4	59.5	64.2	
8	2:14 PM	2:15 PM	59.2	63.9	71.7	77.3	62.3	68.7	
9	2:15 PM	2:16 PM	63.8	71.8	72.3	79.1	63.2	73.1	Seagulls making noise
10	2:16 PM	2:17 PM	62.1	69.4	71.7	78.3	60.9	66.5	Seagulls making noise
11	2:17 PM	2:18 PM	60.5	64.7	71.4	77.7	60.5	66.7	Seagulls making noise
12	2:18 PM	2:19 PM	60.4	65.2	70.0	77.3	59.2	65.4	
13	2:19 PM	2:20 PM	59.4	64.8	71.0	78.1	59.8	65.2	
14	2:20 PM	2:21 PM	60.0	63.5	75.1	82.1	64.7	73.9	
15	2:21 PM	2:22 PM	64.1	73.3	73.1	79.7	61.4	67.9	
16	2:22 PM	2:23 PM	60.3	66.3	69.9	74.0	58.6	62.2	
17	2:23 PM	2:24 PM	58.0	61.4	70.6	76.5	59.5	65.3	
18	2:24 PM	2:25 PM	58.7	64.5	72.5	80.0	61.6	68.0	
19	2:25 PM	2:26 PM	60.4	65.4	70.4	75.7	59.4	63.4	
20	2:26 PM	2:27 PM	59.1	62.5	72.1	77.2	61.6	65.0	
21			60.6		71.7		61.0		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Burnett St	Willard St.
Speed (post/obs)*	35	20
Number of Lanes	4	2
Width (pave/row)	48'	24'
1- or 2- way	2	2
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	2 NB/0 SB	0
Automobiles	185 NB 152 SB	0
Medium Trucks	3 NB/3 SB	0
Heavy Trucks	0 NB/2 SB	0
Buses	0 NB/2 SB	0
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°12'54.5"N 77°56'40.9"W	114.1
1651	34°12'54.8"N 77°56'39.4"W	113.9
1652	34°12'54.6"N 77°56'40.0"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments: Birds chirping, truck traffic on front street, light wind gusts.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31830185 Date: 5/6/15 Page 1 of 2

nitoring Location: ST 16 - 1931 Washington St Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820

Serial #: See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): **94** / **114**

Pre-Test All: 114.0 dBA

Post-Test See Sketch dBA

Weather Data

Model #: SM-28

Serial #: ~~0003~~ 03386

Wind: Steady/Gusty/Calm

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: 4 E

Temp (°F): 81 RH (%): 50

Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: (Flat) / Hilly

Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#

See Sketch

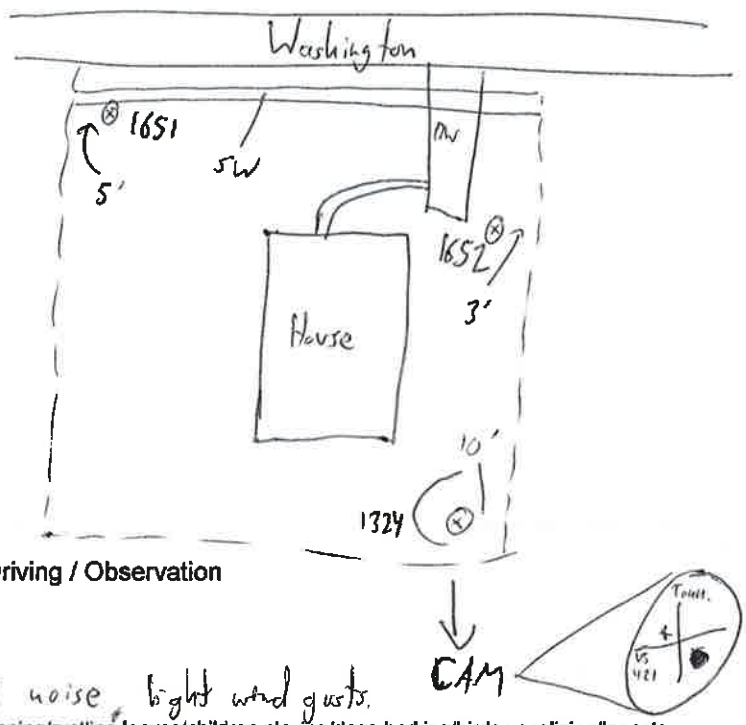
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	1:40 PM	2:41 PM							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	2:54 PM	3:00 PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	Washington
Speed (post/obs)*	45	25
Number of Lanes	5	2
Width (pave/row)		
1- or 2- way	2	2
Grade	—	—
Bus Stops	—	—
Stoplights	—	—
Motorcycles		—
Automobiles	See Video	NB 3 SB 3
Medium Trucks		—
Heavy Trucks		—
Buses		NB 1 / SB 0
Count duration	10 min	15 min

compass: N →

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No 7-10

Additional Notes/Comments: Birds chirping, US 421 noise, light wind gusts.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 16: 1931 Washington St. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820

Serial #: See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): 94 / **114**

Pre-Test 114.0 dBA

Post-Test See Sketch dBA

Weather Data

Model #: SM-28

Serial #: 3386

Wind: **Steady**/Gusty/Calm

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: 4 E

Temp (°F): 81 RH (%): 50

Bar Psr (Hg): 30.07 Cloud Cover (%): 100

Topo: **Flat** / Hilly

Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#

See Sketch

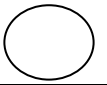
ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	2:40 PM	2:41 PM	56.9	59.0	54.4	59.8	51.5	54.3	
2	2:41 PM	2:42 PM	61.6	70.2	57.8	65.2	56.1	66.0	
3	2:42 PM	2:43 PM	56.0	58.6	53.1	55.0	50.9	54.6	
4	2:43 PM	2:44 PM	56.5	60.0	52.7	55.7	52.1	56.9	
5	2:44 PM	2:45 PM	56.5	58.2	58.7	69.8	53.5	61.2	
6	2:45 PM	2:46 PM	55.8	58.5	51.9	55.0	51.1	56.0	
7	2:46 PM	2:47 PM	57.1	60.0	58.8	71.0	52.5	58.9	
8	2:47 PM	2:48 PM	57.4	60.0	53.7	56.3	52.8	56.9	
9	2:48 PM	2:49 PM	53.9	57.4	51.0	54.1	48.6	51.0	
10	2:49 PM	2:50 PM	56.0	58.4	52.1	54.4	51.0	53.0	
11	2:50 PM	2:51 PM	52.8	56.1	51.1	59.0	48.2	56.2	
12	2:51 PM	2:52 PM	56.5	60.8	55.4	66.2	52.6	61.8	
13	2:52 PM	2:53 PM	55.7	59.7	64.8	76.9	57.8	68.1	
14	2:53 PM	2:54 PM	56.6	60.6	53.8	59.4	51.9	56.5	
15	2:54 PM	2:55 PM	57.8	64.1	53.8	59.7	53.5	61.4	
16	2:55 PM	2:56 PM	55.5	58.6	54.2	61.7	51.4	58.8	
17	2:56 PM	2:57 PM	52.7	56.1	56.1	66.6	49.6	57.5	
18	2:57 PM	2:58 PM	61.9	71.9	57.0	65.1	59.2	69.8	
19	2:58 PM	2:59 PM	56.0	62.3	52.5	57.5	51.6	60.6	
20	2:59 PM	3:00 PM	56.7	58.7	52.9	54.9	51.4	54.3	
21			57.1		56.5		53.4		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	Washington St.
Speed (post/obs)*	45	25
Number of Lanes	5	2
Width (pave/row)	60'	36'
1- or 2- way	2	2
Grade	0	0
Bus Stops	0	0
Stoplights	0	0
Motorcycles	0 NB/6 SB	0
Automobiles	215 NB 176 SB	3 NB 3 SB
Medium Trucks	7 NB/9 SB	0
Heavy Trucks	24 NB/45 SB	0
Buses	0	1 NB/0 SB
Count duration	15 min.	15 min.

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°12'24.5"N 77°56'38.6"W	114.1
1651	34°12'23.9"N 77°56'39.4"W	113.9
1652	34°12'24.3"N 77°56'39.2"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments: Birds chirping, US 421 noise, light wind gusts.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31830185 Date: 5/6/15 Page 1 of 2

Monitoring Location: ST 17 - Apostolic Tabernacle Analyst: Bell/Burris

Sound Level Meter
Model #: LD 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / 114
Pre-Test All: 114.0 dBA
Post-Test See Sketch dBA

Weather Data
Model #: SM-78
Serial #: 03386
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: S/W
Temp (°F): 78 RH (%): 51
Bar Psr (Hg): 30.04 Cloud Cover (%): 100

Topo: (Flat) / Hilly
Terrain: Hard/Soft/(Mixed)/Snow

GPS Coordinates (at SLM location)#
See Sketch

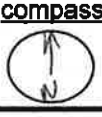
ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	4:52 PM	4:53 PM							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	5:11 PM	5:12 PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

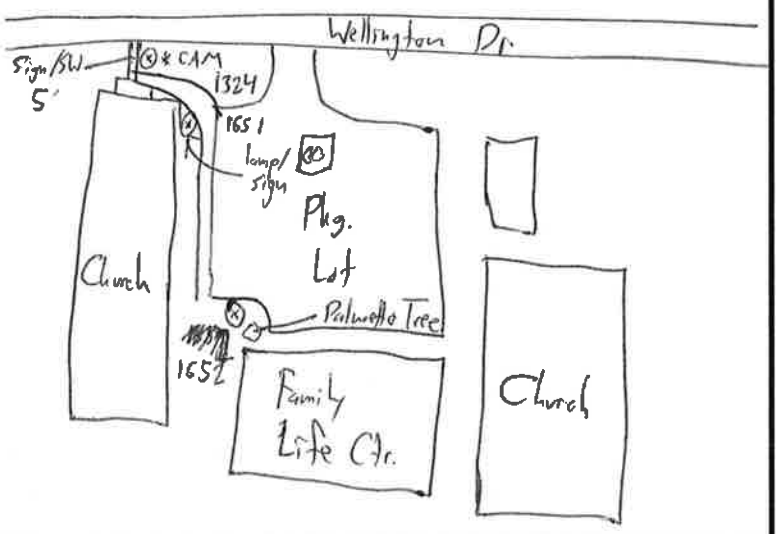
Roadway Name/Dir	Wellington		
Speed (post/obs)*	35		
Number of Lanes	2		
Width (pave/row)			
1- or 2- way	2		
Grade	–		
Bus Stops	–		
Stoplights	–		
Motorcycles			
Automobiles	Video		
Medium Trucks			
Heavy Trucks			
Buses			
Count duration	15 min.		

compass



Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No 25-29

Additional Notes/Comments:

Equipment storage across st, light gusts, birds.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 17: Apostolic Temple | Analyst: Bell/Burris

Sound Level Meter
Model #: LD 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test See Sketch dBA

Weather Data
Model #: SM-28
Serial #: 3386
Wind: **Steady**/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 6 W
Temp (°F): 78 RH (%): 51
Bar Psr (Hg): 30.04 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

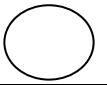
GPS Coordinates (at SLM location)#
See Sketch

ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	4:52 PM	4:53 PM	68.6	74.1	61.6	65.9	56.5	61.4	
2	4:53 PM	4:54 PM	66.3	73.6	61.2	65.9	55.9	60.2	
3	4:54 PM	4:55 PM	67.2	74.3	60.8	66.9	55.7	61.9	
4	4:55 PM	4:56 PM	64.0	76.2	56.5	66.1	52.0	60.1	
5	4:56 PM	4:57 PM	60.3	69.6	56.4	63.4	52.6	57.1	
6	4:57 PM	4:58 PM	61.8	70.1	57.4	64.2	54.2	60.4	
7	4:58 PM	4:59 PM	63.8	74.2	58.2	67.3	54.1	62.0	
8	4:59 PM	5:00 PM	67.9	74.1	61.2	66.3	56.3	61.0	
9	5:00 PM	5:01 PM	70.4	81.9	64.8	75.8	59.4	69.9	
10	5:01 PM	5:02 PM	69.5	79.8	63.6	71.2	59.4	69.9	
11	5:02 PM	5:03 PM	63.3	73.1	59.5	69.4	58.4	70.5	
12	5:03 PM	5:04 PM	62.8	71.6	56.8	64.0	53.0	60.0	
13	5:04 PM	5:05 PM	61.2	70.9	55.9	63.3	52.7	59.3	
14	5:05 PM	5:06 PM	66.4	77.6	60.3	70.2	55.6	65.4	
15	5:06 PM	5:07 PM	66.4	74.7	60.6	65.1	56.0	62.9	
16	5:07 PM	5:08 PM	67.5	76.2	59.8	66.1	55.1	60.7	
17	5:08 PM	5:09 PM	69.9	82.8	61.8	72.1	55.8	65.7	
18	5:09 PM	5:10 PM	68.5	81.3	62.2	73.6	58.1	69.5	
19	5:10 PM	5:11 PM	66.1	72.9	59.7	64.9	54.2	59.6	
20	5:11 PM	5:12 PM	63.6	73.4	58.2	66.8	54.4	63.1	
21			66.7		60.5		56.0		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Wellington St.	
Speed (post/obs)*	35	
Number of Lanes	2	
Width (pave/row)	24'	
1- or 2- way	2	
Grade	0	
Bus Stops	0	
Stoplights	0	
Motorcycles	0	
Automobiles	48 NB 37 SB	
Medium Trucks	0	
Heavy Trucks	2 NB/0 SB	
Buses	0	
Count duration	15 min.	

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°11'41.1"N 77°55'58.4"W	114.1
1651	34°11'40.7"N 77°55'58.1"W	113.9
1652	34°11'40.2"N 77°55'57.5"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments: Some noise from equipment storage facility across street, birds chirping, light wind gusts.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 31830185 | Date: 3/6/15 | Page 1 of 2

Monitoring Location: ST 18 - 309 Davie St | Analyst: Bell / Burris

Sound Level Meter
Model #: LD 820
Serial #: 1652
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test: All: 114.0 dBA
Post-Test: See Sketch dBA

Weather Data
Model #: SM-28
Serial #: 03386
Wind: **Steady**/Gusty/Calm
Precipitation: **Yes (explain)** / **No**
Avg Wind Speed/Direction: 4/W
Temp (°F): 81 RH (%): 48
Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: (Flat) / Hilly
Terrain: Hard/(Soft)/Mixed/Snow

GPS Coordinates (at SLM location)#
See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	3:15 PM	3:16 PM							
2									
3									Scooter went by
4									
5									
6									
7									
8									
9									Helicopter
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	3:24 PM	3:25 PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

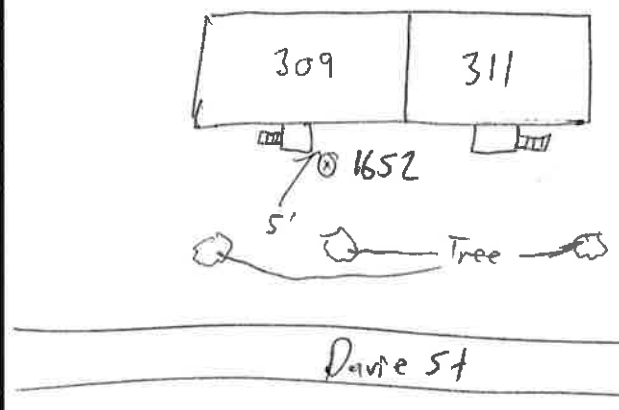
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Davie St.		
Speed (post/obs)*	20		
Number of Lanes	2		
Width (pave/row)	20'		
1- or 2- way	2		
Grade	—		
Bus Stops	—		
Stoplights	—		
Motorcycles	—		
Automobiles	—		
Medium Trucks	—		
Heavy Trucks	—		
Buses	—		
Count duration	15 min.		

compass: N

Site Diagram:

Meter | Location | Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No 11-14

Additional Notes/Comments:

Kids playing in distance, cars on other roads, light gusts, birds chirping.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 |

Monitoring Location: Short-Term 18: 309 Davie St. | Analyst: Bell/Burris

Sound Level Meter
Model #: LD 820
Serial #: 1652
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test 111.3 dBA

Weather Data
Model #: SM-28
Serial #: 3386
Wind: **Steady**/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 4 W
Temp (°F): 81 RH (%): 48
Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/**Soft**/Mixed/Snow

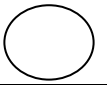
GPS Coordinates (at SLM location)#
34°11'24.2"N 77°56'22.4"W

ID	Start Time	Stop Time	1652 L_{eq}	1652 L_{max}					Notes/Events
0									
1	3:15 PM	3:16 PM	53.9	63.3					
2	3:16 PM	3:17 PM	54.2	67.8					Scooter went by
3	3:17 PM	3:18 PM	48.3	55.9					
4	3:18 PM	3:19 PM	47.7	52.6					
5	3:19 PM	3:20 PM	47.4	50.8					
6	3:20 PM	3:21 PM	47.2	49.6					
7	3:21 PM	3:22 PM	52.5	64.1					Helicopter
8	3:22 PM	3:23 PM	52.7	65.5					Helicopter
9	3:23 PM	3:24 PM	46.3	50.7					
10	3:24 PM	3:25 PM	47.2	50.2					
11	3:25 PM	3:26 PM	44.4	46.5					
12	3:26 PM	3:27 PM	48.0	52.3					
13	3:27 PM	3:28 PM	45.0	48.0					
14	3:28 PM	3:29 PM	49.6	60.8					
15	3:29 PM	3:30 PM	45.3	48.5					
16	3:30 PM	3:31 PM	46.9	51.3					
17	3:31 PM	3:32 PM	46.0	50.0					
18	3:32 PM	3:33 PM	47.8	53.9					
19	3:33 PM	3:34 PM	47.7	56.2					
20	3:34 PM	3:35 PM	46.7	52.4					
21			49.3						
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Davie St.	
Speed (post/obs)*	20	
Number of Lanes	2	
Width (pave/row)	20'	
1- or 2- way	2	
Grade	N/A	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter Location Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments: Kids playing in distance, cars on other roads, light gusts, birds chirping.

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31830185 Date: 5/6/15 Page 1 of 2

nitoring Location: ST 19 - Oak Grove Pres. Church Analyst: Bell / Burris

Sound Level Meter

Model #: LD 820

Serial #: ~~03386~~ See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): 94 / **114**

Pre-Test: All: 114.0 dBA

Post-Test: See Sketch dBA

Weather Data

Model #: SM-28

Serial #: 03386

Wind: ~~Steady~~/Gusty/Calm

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: 4/W

Temp (°F): 84 RH (%): 45

Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: (Flat) / Hilly

Terrain: Hard/~~Soft~~/Mixed/Snow

GPS Coordinates (at SLM location)#

See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	3:45PM	3:46 PM							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	4:04PM	4:05PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

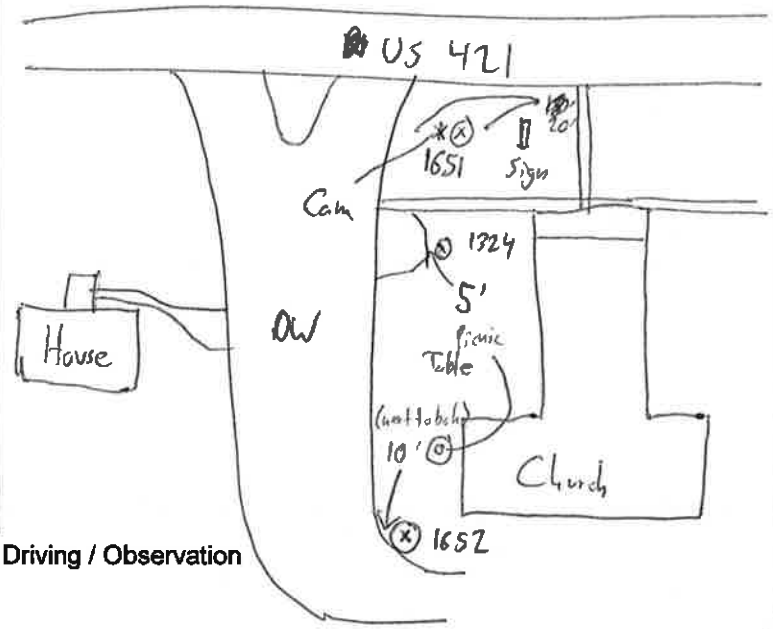
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	
Speed (post/obs)*	45	
Number of Lanes	5	
Width (pave/row)		
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles		
Automobiles	Video	
Medium Trucks		
Heavy Trucks		
Buses		
Count duration	15 min	

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No 15-18

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 19: Oak Grove Presbyterian Church | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820

Serial #: See Sketch

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 5789

Calibration Level (dBA): 94 / **114**

Pre-Test 114.0 dBA

Post-Test See Sketch dBA

Weather Data

Model #: SM-28

Serial #: 3386

Wind: **Steady**/Gusty/Calm

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: 4 W

Temp (°F): 84 RH (%): 45

Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: **Flat** / Hilly

Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#

See Sketch

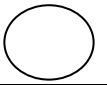
ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	3:45 PM	3:46 PM	67.1	73.9	74.2	81.2	54.6	60.6	
2	3:46 PM	3:47 PM	66.1	72.9	73.8	80.7	53.8	59.9	
3	3:47 PM	3:48 PM	72.3	81.6	79.0	91.0	59.7	69.4	
4	3:48 PM	3:49 PM	63.0	69.6	70.6	77.4	51.3	56.2	
5	3:49 PM	3:50 PM	71.4	74.7	77.4	82.1	58.6	64.6	
6	3:50 PM	3:51 PM	66.7	76.0	72.5	81.0	54.8	61.7	
7	3:51 PM	3:52 PM	70.9	75.2	77.6	82.0	58.4	65.2	
8	3:52 PM	3:53 PM	60.6	65.1	67.8	73.3	50.4	52.8	
9	3:53 PM	3:54 PM	70.1	74.2	76.9	81.5	57.5	62.1	
10	3:54 PM	3:55 PM	64.9	72.9	71.2	78.9	53.2	58.6	
11	3:55 PM	3:56 PM	70.4	77.0	76.8	83.8	57.7	64.7	
12	3:56 PM	3:57 PM	68.6	75.9	73.9	81.5	57.4	66.3	
13	3:57 PM	3:58 PM	65.7	72.6	72.8	80.0	55.1	61.1	
14	3:58 PM	3:59 PM	69.2	73.6	75.4	80.4	56.4	61.9	
15	3:59 PM	4:00 PM	65.7	71.5	71.1	77.3	53.8	58.4	
16	4:00 PM	4:01 PM	69.9	80.1	76.5	87.0	57.9	66.1	
17	4:01 PM	4:02 PM	65.1	71.4	72.3	79.4	53.1	59.1	
18	4:02 PM	4:03 PM	70.8	73.9	77.4	81.9	57.5	60.9	
19	4:03 PM	4:04 PM	62.8	67.9	70.2	76.0	51.5	56.3	
20	4:04 PM	4:05 PM	69.3	73.0	76.3	80.4	56.3	60.0	
21			68.5		75.1		56.2		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	
Speed (post/obs)*	45	
Number of Lanes	5	
Width (pave/row)	60'	
1- or 2- way	2	
Grade	0	
Bus Stops	0	
Stoplights	0	
Motorcycles	0 NB/3 SB	
Automobiles	241 NB 257 SB	
Medium Trucks	12 NB/8 SB	
Heavy Trucks	29 NB/20 SB	
Buses	5 NB/4 SB	
Count duration	15 min.	

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°10'36.5"N 77°55'34.5"W	114.1
1651	34°10'36.7"N 77°55'34.2"W	113.9
1652	34°10'36.0"N 77°55'36.0"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 31830185 Date: 5/6/15 Page 1 of 2

Monitoring Location: ST-20 Breezewood Apptr. Analyst: Bell/Burris

Sound Level Meter
Model #: LO 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test All: 114.0 dBA
Post-Test See Sketch dBA

Weather Data
Model #: SM-28
Serial #: 03386
Wind: Steady/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: S/W
Temp (°F): 76 RH (%): 51
Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: (Flat) Hilly
Terrain: Hard/Soft/Mixed/Snow

GPS Coordinates (at SLM location)#
See Sketch

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	4:15 PM	4:16 PM							
2	↓	↓							
3									
4									
5									
6									
7									
8									
9									Horn in driveway
10									
11									
12									
13									
14									
15									
16									
17									
18									
19	↓	↓							
20	4:34 PM	4:35 PM							
21									
22									
23									
24									
25									
26									
27									
28									
29									

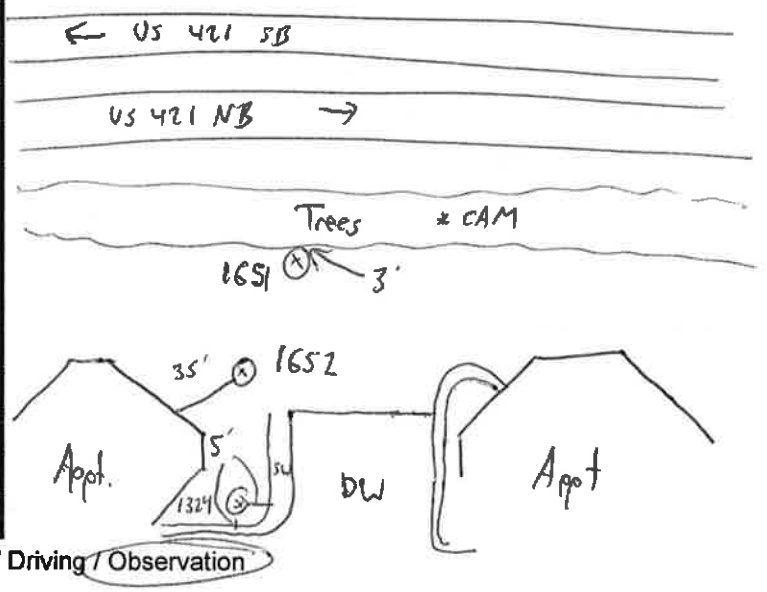
URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	
Speed (post/obs)*	45	
Number of Lanes	4	
Width (pave/row)		
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles		
Automobiles	Video	
Medium Trucks		
Heavy Trucks		
Buses		
Count duration	10 min	

compass

Site Diagram:



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No 19-~~20~~24

Additional Notes/Comments: Birds, light gusts, leaves rustling

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

Post-Calibration 5/6/15

1324: 114.1

1651: 113.9

1652: 111.3

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 5/6/2015 | Page 1 of 2

Monitoring Location: Short-Term 20: Breezewood Apartments | Analyst: Bell/Burris

Sound Level Meter
Model #: LD 820
Serial #: See Sketch
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration
Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test See Sketch dBA

Weather Data
Model #: SM-28
Serial #: 3386
Wind: **Steady**/Gusty/Calm
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: 6 W
Temp (°F): 76 RH (%): 51
Bar Psr (Hg): 30.05 Cloud Cover (%): 100

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

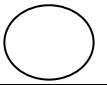
GPS Coordinates (at SLM location)#
See Sketch

ID	Start Time	Stop Time	1324 L_{eq}	1324 L_{max}	1651 L_{eq}	1651 L_{max}	1652 L_{eq}	1652 L_{max}	Notes/Events
0									
1	4:15 PM	4:16 PM	59.4	65.9	71.5	78.1	65.5	71.2	
2	4:16 PM	4:17 PM	57.5	65.7	69.7	79.7	63.4	71.7	
3	4:17 PM	4:18 PM	56.6	59.6	68.8	73.4	62.7	66.3	
4	4:18 PM	4:19 PM	54.7	58.4	66.2	71.0	60.3	64.7	
5	4:19 PM	4:20 PM	58.9	63.7	70.6	74.1	64.7	70.7	
6	4:20 PM	4:21 PM	56.7	64.4	68.1	76.7	62.0	69.2	
7	4:21 PM	4:22 PM	57.8	61.5	69.1	75.0	63.6	69.2	
8	4:22 PM	4:23 PM	57.5	59.5	70.1	73.2	64.1	66.3	
9	4:23 PM	4:24 PM	57.2	61.3	68.6	75.6	62.4	67.9	
10	4:24 PM	4:25 PM	57.2	61.5	69.2	75.7	62.7	68.0	
11	4:25 PM	4:26 PM	53.7	57.6	65.0	70.8	59.0	64.0	
12	4:26 PM	4:27 PM	59.6	65.7	71.8	77.2	65.5	70.3	
13	4:27 PM	4:28 PM	56.0	63.7	67.5	76.5	61.1	68.8	
14	4:28 PM	4:29 PM	57.5	60.1	70.2	74.5	63.8	67.4	
15	4:29 PM	4:30 PM	54.1	58.0	66.0	71.5	60.0	64.9	
16	4:30 PM	4:31 PM	57.2	61.0	69.3	73.2	63.2	66.6	
17	4:31 PM	4:32 PM	57.8	62.6	70.3	76.6	64.1	68.5	
18	4:32 PM	4:33 PM	56.2	61.7	67.2	73.9	61.9	67.5	
19	4:33 PM	4:34 PM	57.1	58.9	69.6	72.2	63.5	65.8	
20	4:34 PM	4:35 PM	57.5	62.8	68.6	74.2	63.1	68.5	
21			57.3		69.2		63.1		
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	US 421	
Speed (post/obs)*	45	
Number of Lanes	4	
Width (pave/row)	48'	
1- or 2- way	2	
Grade	0	
Bus Stops	0	
Stoplights	0	
Motorcycles	0 NB/4 SB	
Automobiles	223 NB 337 SB	
Medium Trucks	5 NB/9 SB	
Heavy Trucks	8 NB/32 SB	
Buses	7 NB/10 SB	
Count duration	15 min.	

compass



Site Diagram:

Meter	Location	Post-Test
1324	34°10'08.4"N 77°55'14.0"W	114.1
1651	34°10'08.0"N 77°55'15.6"W	113.9
1652	34°10'08.1"N 77°55'14.8"W	111.3

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/15 | Page 1 of 2

Monitoring Location: LT1 - Traffic Circle on Colo Ct. | Analyst: Bell/Burris

Sound Level Meter	Field Calibration	Weather Data
Model #: LD 820	Model #: CAL200	Model #: —
Serial #: 1652	Serial #: 5789	Serial #: —
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / **114**	Wind: Steady/Gusty/(Calm)
Response: **Slow** / Fast / Impl	Pre-Test All: 114.0 dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: —
Topo: (Flat) / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): VAR RH (%): VAR
Terrain: Hard/Soft/(Mixed)/Snow	See Sketch	Bar Psr (Hg): VAR Cloud Cover (%): VAR

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	10:55	10:56							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									

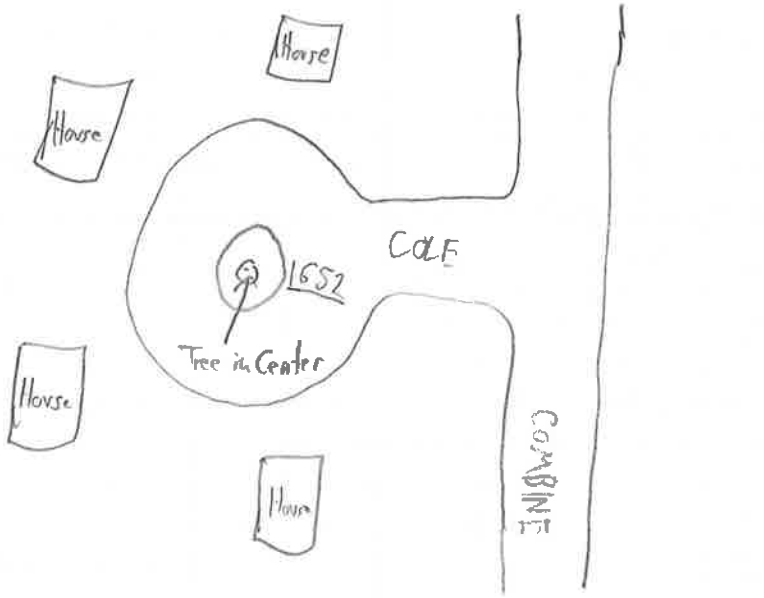
URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Cole		
Speed (post/obs)*	10		
Number of Lanes	1		
Width (pave/row)	12'		
1- or 2- way	1		
Grade	–		
Bus Stops	–		
Stoplights	–		
Motorcycles	–		
Automobiles	–		
Medium Trucks	–		
Heavy Trucks	–		
Buses	–		
Count duration	–		

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? (Yes)/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 | Page 1 of 2

Monitoring Location: Long-Term 1: Traffic Circle on Cole Ct. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820
Serial #: 1652
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test 113.4 dBA

Weather Data

Model #: AccuWeather
Serial #: N/A
Wind: Steady/Gusty/**Calm**
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: N/A
Temp (°F): VAR RH (%): VAR
Bar Psr (Hg): VAR Cloud Cover (%): VAR

Topo: **Flat** / Hilly
Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#
34°11'07.8"N 78°04'33.3"W

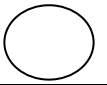
ID	Start Time	Stop Time	L_{eq}	L_{max}					Notes/Events
0									
1	10:51 AM	10:52 AM	54.2	69.6					
2	10:52 AM	10:53 AM	51.3	62.8					
3	10:53 AM	10:54 AM	45.2	55.8					
4	10:54 AM	10:55 AM	41.2	46.6					
5	10:55 AM	10:56 AM	47.9	56.1					
6	10:56 AM	10:57 AM	49.4	52.3					
7	10:57 AM	10:58 AM	44.4	53.3					
8	10:58 AM	10:59 AM	44.9	53.3					
9	10:59 AM	11:00 AM	41.6	46.8					
10	11:00 AM	11:01 AM	41.9	49.8					
11	11:01 AM	11:02 AM	44.1	52.1					
12	11:02 AM	11:03 AM	43	50.7					
13	11:03 AM	11:04 AM	46.8	55.7					
14	11:04 AM	11:05 AM	47.1	55.7					
15	11:05 AM	11:06 AM	40.5	44.4					
16	11:06 AM	11:07 AM	42.3	47.4					
17	11:07 AM	11:08 AM	44.3	48.3					
18	11:08 AM	11:09 AM	42.5	46.8					
19	11:09 AM	11:10 AM	42.4	47.4					
20	11:10 AM	11:11 AM	39.4	40.7					
21	11:11 AM	11:12 AM	38.8	40.3					
22	11:12 AM	11:13 AM	37.9	41.8					
23	11:13 AM	11:14 AM	37	39.9					
24	11:14 AM	11:15 AM	37.3	39.4					
25	11:15 AM	11:16 AM	37.7	42.2					
26	11:16 AM	11:17 AM	43.6	53.8					
27	11:17 AM	11:18 AM	36.5	38.7					
28	11:18 AM	11:19 AM	36.6	39.9					
29	11:19 AM	11:20 AM	44.6	54.9					
30	11:20 AM	11:21 AM	42.3	45.4					
31	11:21 AM	11:22 AM	43.1	53.4					

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Cole Ct.	
Speed (post/obs)*	10	
Number of Lanes	2	
Width (pave/row)	VAR	
1- or 2- way	1	
Grade	0	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter

Location

34°11'07.8"N 78°04'33.3"W

Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 60401048 Date: 8/17/15 Page 1 of 2

Monitoring Location: LT2 - Empty Lot on Strider Ct. Analyst: Bell/Burris

Sound Level Meter	Field Calibration	Weather Data
Model #: LD 820	Model #: CAL200	Model #: —
Serial #: 1651	Serial #: 5789	Serial #: —
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / **114**	Wind: Steady/Gusty/(Calm)
Response: **Slow** / Fast / Impl	Pre-Test All: 114.0 dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: ———
Topo: (Flat) / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): VAR RH (%): VAR
Terrain: Hard/Soft/Mixed/Snow	See Sketch	Bar Psr (Hg): VAR Cloud Cover (%): 0

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	10:25	10:26							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									

URS Acoustics and Noise Control Practice

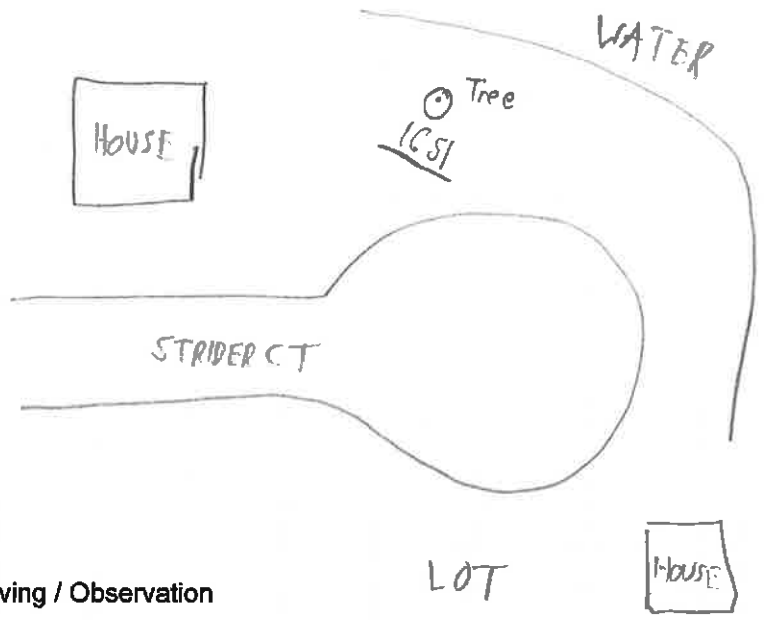
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	STRIDER CT.	
Speed (post/obs)*	20	
Number of Lanes	2	
Width (pave/row)	24'	
1- or 2- way	2	
Grade	—	
Bus Stops	—	
Stoplights	—	
Motorcycles	—	
Automobiles	—	
Medium Trucks	—	
Heavy Trucks	—	
Buses	—	
Count duration	—	

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? Yes/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 | Page 1 of 2

Monitoring Location: Long-Term 2: Empy Lot on Strider Ct. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 820
Serial #: 1651
Weighting: **A** / C / Flat
Response: **Slow** / Fast / Impl
Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200
Serial #: 5789
Calibration Level (dBA): 94 / **114**
Pre-Test 114.0 dBA
Post-Test 114.4 dBA

Weather Data

Model #: AccuWeather
Serial #: N/A
Wind: Steady/Gusty/**Calm**
Precipitation: Yes (explain) / **No**
Avg Wind Speed/Direction: N/A
Temp (°F): VAR RH (%): VAR
Bar Psr (Hg): VAR Cloud Cover (%): VAR

Topo: **Flat** / Hilly
Terrain: Hard/**Soft**/Mixed/Snow

GPS Coordinates (at SLM location)#
34°13'30.9"N 78°01'04.9"W

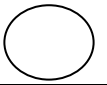
ID	Start Time	Stop Time	L_{eq}	L_{max}					Notes/Events
0									
1	10:20 AM	10:21 AM	53.3	61.3					
2	10:21 AM	10:22 AM	59	71.2					
3	10:22 AM	10:23 AM	53.1	56.5					
4	10:23 AM	10:24 AM	52.8	56.5					
5	10:24 AM	10:25 AM	51.3	61.5					
6	10:25 AM	10:26 AM	46.7	50					
7	10:26 AM	10:27 AM	48.7	54.1					
8	10:27 AM	10:28 AM	50	51.9					
9	10:28 AM	10:29 AM	49.3	52.5					
10	10:29 AM	10:30 AM	49.6	53.5					
11	10:30 AM	10:31 AM	48.5	51.5					
12	10:31 AM	10:32 AM	50	51.9					
13	10:32 AM	10:33 AM	50.8	53.3					
14	10:33 AM	10:34 AM	49.7	51.9					
15	10:34 AM	10:35 AM	50.9	52.7					
16	10:35 AM	10:36 AM	50.4	52.2					
17	10:36 AM	10:37 AM	51.7	54.2					
18	10:37 AM	10:38 AM	49.4	52.2					
19	10:38 AM	10:39 AM	48.2	50.6					
20	10:39 AM	10:40 AM	48.7	52.9					
21	10:40 AM	10:41 AM	49.5	53.2					
22	10:41 AM	10:42 AM	48.6	50.7					
23	10:42 AM	10:43 AM	49.4	53.7					
24	10:43 AM	10:44 AM	48.3	50.7					
25	10:44 AM	10:45 AM	51.5	54					
26	10:45 AM	10:46 AM	51.4	55.3					
27	10:46 AM	10:47 AM	48.5	52.4					
28	10:47 AM	10:48 AM	48.1	51					
29	10:48 AM	10:49 AM	47.5	51					
30	10:49 AM	10:50 AM	47.8	50.7					
31	10:50 AM	10:51 AM	48.7	51					

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Washington St.	
Speed (post/obs)*	20	
Number of Lanes	2	
Width (pave/row)	24	
1- or 2- way	2	
Grade	0	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter

Location

34°13'30.9"N 78°01'04.9"W

Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice

FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing Project #: 60401048 Date: 8/17/15 Page 1 of 2

Monitoring Location: LT4 - 1931 Washington St Analyst: Bell/Burris

Sound Level Meter	Field Calibration	Weather Data
Model #: LD 831	Model #: CAL200	Model #: –
Serial #: 2668	Serial #: 5789	Serial #: –
Weighting: **A** / C / Flat	Calibration Level (dBA): 94 / **114**	Wind: Steady/Gusty/Calm
Response: **Slow** / Fast / Impl	Pre-Test All: 114.0 dBA	Precipitation: Yes (explain) / **No**
Windscreen : **Yes** / No (explain)	Post-Test See Sketch dBA	Avg Wind Speed/Direction: VAR
Topo: Flat / Hilly	GPS Coordinates (at SLM location)#	Temp (°F): VAR RH (%): VAR
Terrain: Hard/Soft/Mixed/Snow	See Sketch	Bar Psr (Hg): VAR Cloud Cover (%): VAR

ID	Start Time	Stop Time	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}	Notes/Events
0									
1	9:50	9:51							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									

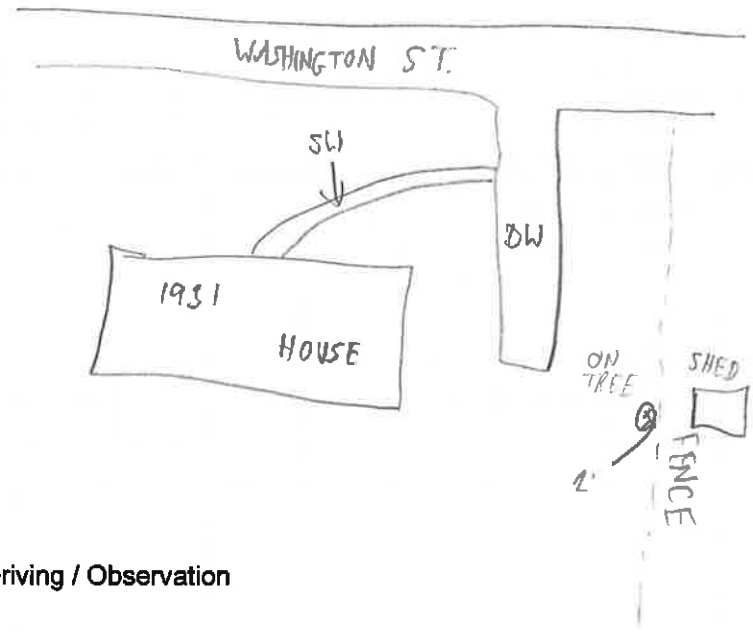
URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	WASHINGTON ST.	
Speed (post/obs)*		
Number of Lanes		
Width (pave/row)		
1- or 2- way		
Grade		
Bus Stops		
Stoplights		
Motorcycles		
Automobiles		
Medium Trucks		
Heavy Trucks		
Buses		
Count duration		

compass

Site Diagram:

Meter Location Post-Test



- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/insects

Additional Notes and Sketches on Reverse

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Project Name: U-4738 Cape Fear Crossing | Project #: 60401048 | Date: 8/17/2015 | Page 1 of 2

Monitoring Location: Long-Term 4: 1931 Washington St. | Analyst: Bell/Burris

Sound Level Meter

Model #: LD 831

Serial #:

Weighting: **A** / C / Flat

Response: **Slow** / Fast / Impl

Windscreen : **Yes** / No (explain)

Field Calibration

Model #: CAL200

Serial #: 11083

Calibration Level (dBA): 94 / **114**

Pre-Test 114.0 dBA

Post-Test 113.9 dBA

Weather Data

Model #: AccuWeather

Serial #: N/A

Wind: Steady/Gusty/**Calm**

Precipitation: Yes (explain) / **No**

Avg Wind Speed/Direction: N/A

Temp (°F): VAR RH (%): VAR

Bar Psr (Hg): VAR Cloud Cover (%): VAR

Topo: **Flat** / Hilly

Terrain: Hard/Soft/**Mixed**/Snow

GPS Coordinates (at SLM location)#

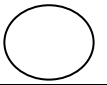
34°12'24.6"N 77°56'38.7"W

ID	Start Time	Stop Time	L_{eq}	L_{max}					Notes/Events
0									
1	9:50 AM	9:51 AM	58.9	80.1					
2	9:51 AM	9:52 AM	59.2	73.7					
3	9:52 AM	9:53 AM	58.7	74.2					
4	9:53 AM	9:54 AM	58.8	80.1					
5	9:54 AM	9:55 AM	56.4	73.9					
6	9:55 AM	9:56 AM	56.4	75.2					
7	9:56 AM	9:57 AM	56.7	74.0					
8	9:57 AM	9:58 AM	57.0	72.6					
9	9:58 AM	9:59 AM	56.0	70.5					
10	9:59 AM	10:00 AM	56.0	71.0					
11	10:00 AM	10:01 AM	58.5	73.3					
12	10:01 AM	10:02 AM	56.3	70.5					
13	10:02 AM	10:03 AM	58.9	75.7					
14	10:03 AM	10:04 AM	59.2	75.7					
15	10:04 AM	10:05 AM	58.6	73.9					
16	10:05 AM	10:06 AM	59.9	74.3					
17	10:06 AM	10:07 AM	58.8	73.4					
18	10:07 AM	10:08 AM	58.2	73.2					
19	10:08 AM	10:09 AM	56.7	71.7					
20	10:09 AM	10:10 AM	56.7	71.3					
21	10:10 AM	10:11 AM	56.3	74.9					
22	10:11 AM	10:12 AM	58.2	74.1					
23	10:12 AM	10:13 AM	59.7	74.0					
24	10:13 AM	10:14 AM	59.6	81.5					
25	10:14 AM	10:15 AM	61.2	76.2					
26	10:15 AM	10:16 AM	62.9	77.5					
27	10:16 AM	10:17 AM	63.4	78.0					
28	10:17 AM	10:18 AM	62.6	76.7					
29	10:18 AM	10:19 AM	61.5	76.2					
30	10:19 AM	10:20 AM	61.0	77.0					
31	10:20 AM	10:21 AM	58.1	73.5					

URS Acoustics and Noise Control Practice
FIELD NOISE MEASUREMENT DATA FORM

Roadway Name/Dir	Washington St.	
Speed (post/obs)*	25	
Number of Lanes	2	
Width (pave/row)	36	
1- or 2- way	2	
Grade	0	
Bus Stops	N/A	
Stoplights	N/A	
Motorcycles	N/A	
Automobiles	N/A	
Medium Trucks	N/A	
Heavy Trucks	N/A	
Buses	N/A	
Count duration	N/A	

compass



Site Diagram:

Meter

Location

34°12'24.6"N 77°56'38.7"W

Post-Test

- note coordinate system * - Speed estimated by Radar / Driving / Observation

Photos Taken? **Yes**/No

Additional Notes/Comments:

Other Noise Sources: distant: aircraft/roadway traffic/trains/landscaping/rustling leaves/children playing/dogs barking/birds vocalizing/Insects

Additional Notes and Sketches on Reverse

2018 Short Term Location 1, Meters 1, 2, and 3

2018 Short Term Location 2, Meters 1, 2, and 3

2018 Short Term Location 3, Meters 1, 2, and 3

2018 Short Term Location 4, Meters 1, 2, and 3

2018 Short Term Location 5, Meters 1 and 2

2018 Short Term Location 6, Meters 1, 2, and 3

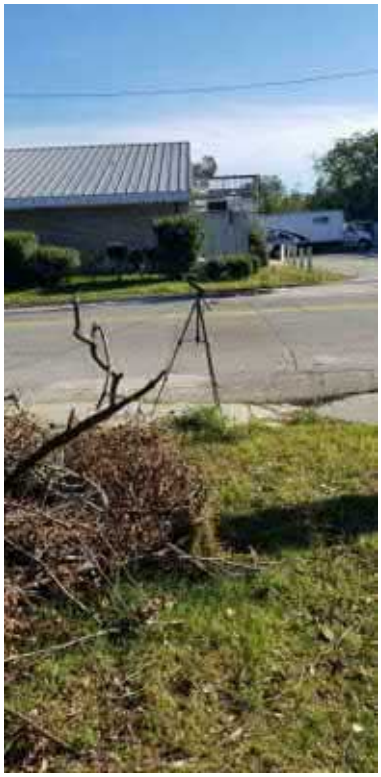
2018 Short Term Location 7, Meters 1, 2, and 3

2018 Short Term Location 8 (Ambient)

2018 Short Term Location 9, Meters 1, 2, and 3

2018 Short Term Location 10 (Ambient)

2018 Short Term Location 11, Meters 1, 2, and 3



2018 Short Term Location 12, Meters 1, 2, and 3

2018 Short Term Location 13, Meters 1, 2, and 3

2018 Long Term Location 1

2018 Long Term Location 2

2018 Long Term Location 3

2018 Long Term Location 4

2018 Long Term Location 5

2018 Long Term Location 6

2015 Short Term Location 5

(No pictures available)

2015 Short Term Location 7 (Ambient)

2015 Short Term Location 8, Meters 1 and 2

2015 Short Term Location 9, Meters 1 and 2

(No pictures available)

2015 Short Term Location 10, Meters 1 and 2

2015 Short Term Location 12 (Ambient)

2015 Short Term Location 13 (Ambient)

2015 Short Term Location 15, Meters 1, 2, and 3

2015 Short Term Location 16, Meters 1, 2, and 3

2015 Short Term Location 17, Meters 1, 2, and 3

2015 Short Term Location 18 (Ambient)

2015 Short Term Location 19, Meters 1, 2, and 3

2015 Short Term Location 20, Meters 1, 2, and 3

2015 Long Term Location 1

2015 Long Term Location 2

2015 Long Term Location 4

(No pictures available)

Table A.1A
2018 Ambient Noise Level Monitoring

ID	Location	Meter	Coordinates		Date	Time	Duration	Measured L_{eq}
Short Term 1	46 Sloan Road	ST 1.1	34.181002	-78.082857	10/30/2018	4:08-4:38 pm	20 minutes	65.8
		ST 1.2	34.180904	-78.082384	10/30/2018	4:08-4:38 pm	20 minutes	59.1
		ST 1.3	34.180439	-78.081681	10/30/2018	4:08-4:38 pm	20 minutes	57.1
Short Term 2	112 Maco Road	ST 2.1	34.185986	-78.083372	10/30/2018	5:19-5:49 pm	30 minutes	62.3
		ST 2.2	34.186082	-78.083556	10/30/2018	5:19-5:49 pm	30 minutes	61.4
		ST 2.3	34.186116	-78.083882	10/30/2018	5:19-5:49 pm	30 minutes	68.9
Short Term 3	3 Stoney Creek Lane	ST 3.1	34.187257	-78.079027	10/30/2018	6:07-6:30 pm	20 minutes	65.3
		ST 3.2	34.187196	-78.078872	10/30/2018	6:07-6:30 pm	20 minutes	61.9
		ST 3.3	34.187002	-78.078545	10/30/2018	6:07-6:30 pm	20 minutes	61.1
Short Term 4	7 Bridle Way SE	ST 4.1	34.189698	-78.077005	10/31/2018	11:01-11:15am	15 minutes	60.8
		ST 4.2	34.189615	-78.076872	10/31/2018	11:01-11:15am	15 minutes	N/A
		ST 4.3	34.189422	-78.076576	10/31/2018	11:01-11:15am	15 minutes	55.1
Short Term 5	71 Goodman Road	ST 5.1	34.193914	-78.071781	10/31/2018	12:11-12:37pm	20 minutes	62.9
		ST 5.2	34.194361	-78.071691	10/31/2018	12:11-12:37pm	20 minutes	56.8
Short Term 6	163 Goodman Road	ST 6.1	34.200710	-78.082880	10/31/2018	9:07-9:37 am	30 minutes	64.1
		ST 6.2	34.200590	-78.0825400	10/31/2018	9:07-9:37 am	30 minutes	61.3
		ST 6.3	34.200390	-78.081930	10/31/2018	9:07-9:37 am	30 minutes	58.2
Short Term 7	105 Tillington Court	ST 7.1	34.213830	-78.051850	10/31/2018	10:46-11:16am	30 minutes	43.1
		ST 7.2	34.214110	-78.051610	10/31/2018	10:46-11:16am	30 minutes	45.3
		ST 7.3	34.214430	-78.051380	10/31/2018	10:46-11:16am	30 minutes	44.3
Short Term Ambient 8	2184 Springstone Drive	ST 8	34.214037	-78.058977	10/31/2018	1:20-1:50 pm	30 minutes	42.2
Short Term 9	101 Riverview Drive	ST 9.1	34.234110	-77.990340	10/30/2018	5:48-6:18 pm	30 minutes	62.2
		ST 9.2	34.234390	-77.990480	10/30/2018	5:48-6:18 pm	30 minutes	61.7
		ST 9.3	34.234630	-77.990580	10/30/2018	5:48-6:18 pm	30 minutes	60.4
Short Term Ambient 10	3014 Smeades Drive	ST 10	34.178635	-78.00718	10/30/2018	3:05-3:35 pm	30 minutes	47.0
Short Term 11	405 Southern Boulevard	ST 11.1	34.200695	-77.939999	10/31/2018	3:31-4:00 pm	30 minutes	66.4
		ST 11.2	34.200559	-77.940368	10/31/2018	3:31-4:00 pm	30 minutes	62.9
		ST 11.3	34.200370	-77.940878	10/31/2018	3:31-4:00 pm	30 minutes	61.3
Short Term 12	817 Holbrook Road	ST 12.1	34.191410	-77.928890	10/31/2018	11:47-12:17pm	30 minutes	64.7
		ST 12.2	34.191106	-77.928870	10/31/2018	11:47-12:17pm	30 minutes	61.0
		ST 12.3	34.190580	-77.928830	10/31/2018	11:47-12:17pm	30 minutes	58.1
Short Term 13	448 Cape Fear Boulevard	ST 13.1	34.193130	-77.935620	10/30/2018	4:17-4:47 pm	30 minutes	63.6
		ST 13.2	34.193090	-77.936120	10/30/2018	4:17-4:47 pm	30 minutes	60.1
		ST 13.3	34.193040	-77.936720	10/30/2018	4:17-4:47 pm	30 minutes	55.9
Long Term 1[a]	7372 Ruby Stone Court	LT 1	34.180440	-78.076450	10/30/2018	11:16am-2:40pm	26 hours	54.5
Long Term 2[b]	8639 Orchard Loop Road	LT 2	34.217892	-78.057403	10/30/2018	12:14-2:07 pm	26 hours	50.4
Long Term 3[c]	USS North Carolina	LT 3	34.235470	-77.954690	10/30/2018	8:34pm-2:54pm	16 hours	76.9
Long Term 4[d]	1252 S. Brook Road	LT 4	34.181794	-78.005283	10/30/2018	2:33-1:18 am	12 hours	44.6
Long Term 5[e]	215 Hollins Road	LT 5	34.175230	-77.928870	10/30/2018	2:51-7:45 pm	6 hours	48.4
Long Term 6[f]	312 Williamson Drive	LT 6	34.190690	-77.939190	10/30/2018	3:31-12:38 pm	22 hours	58.6

a) Loudest hour 7:51-8:51 am
b) Loudest hour 7:18-8:18 am
c) Loudest hour 8:30-9:30 am
d) Loudest hour 16:43-17:58 pm
e) Loudest hour 17:18-18:35 pm
f) Loudest hour 7:15-8:21 am

Table A.1B
2015 Ambient Noise Level Monitoring

ID	Location	Meter	Coordinates		Date	Time	Duration	Measured L_{max}
Short Term 5	7909 US 17 South	ST 5.1	34.196830	78.065110	8/17/2015	4:38-4:59 pm	20 minutes	71.7
		ST 5.2	34.197140	78.065220	8/17/2015	4:38-4:59 pm	20 minutes	60.2
Short Term Ambient 7	Cloudbreak Court	ST 7	34.225690	78.015250	8/18/2015	8:28-8:48 am	20 minutes	51.8
Short Term 8	Across from 1018 Sun Skipper Lane	ST 8.1	34.229170	78.018830	8/18/2015	8:56-9:16 am	15 minutes	54.9
		ST 8.2	34.229140	78.019140	8/18/2015	8:56-9:16 am	15 minutes	53.3
Short Term 9	9621 Blackwell Road	ST 9.1	34.218640	78.014140	8/18/2015	9:44-10:04 am	15 minutes	57.1
		ST 9.2	34.218560	78.014060	8/18/2015	9:44-10:04 am	15 minutes	55.5
Short Term 10	2422 Red Maple Court	ST 10.1	34.228170	78.004140	8/18/2015	12:28-12:48 pm	20 minutes	60.7
		ST 10.2	34.228220	78.004250	8/18/2015	12:28-12:48 pm	20 minutes	59.1
Short Term Ambient 12	Lot on Sandy Grove Road	ST 12	34.180970	78.014530	8/17/2015	11:20-11:40 am	20 minutes	39.3
Short Term Ambient 13	1245 S. Brook Road	ST 13	34.182140	78.004280	8/17/2015	12:48-1:08 pm	20 minutes	39.0
Short Term 15	1602 Burnett Boulevard	ST 15.1	34.215220	77.944280	5/6/2015	2:07-2:27 pm	20 minutes	71.7
		ST 15.2	34.215170	77.944440	5/6/2015	2:07-2:27 pm	20 minutes	61.0
		ST 15.3	34.215140	77.944690	5/6/2015	2:07-2:27 pm	20 minutes	60.6
Short Term 16	1931 Washington Street	ST 16.1	34.206810	77.944060	5/6/2015	2:40-3:00 pm	20 minutes	57.1
		ST 16.2	34.206750	77.944220	5/6/2015	2:40-3:00 pm	20 minutes	56.5
		ST 16.3	34.206640	77.944280	5/6/2015	2:40-3:00 pm	20 minutes	53.4
Short Term 17	Apostolic Tabernacle	ST 17.1	34.194750	77.932890	5/6/2015	4:52-5:12 pm	20 minutes	66.7
		ST 17.2	34.194640	77.932810	5/6/2015	4:52-5:12 pm	20 minutes	60.5
		ST 17.3	34.19450	77.932640	5/6/2015	4:52-5:12 pm	20 minutes	56.0
Short Term Ambient 18	309 Davie Street	ST 18	34.190060	77.939560	5/6/2015	3:15-3:35 pm	20 minutes	49.3
Short Term 19	Oak Grove Presbyterian Church	ST 19.1	34.176860	77.926170	5/6/2015	3:45-3:05 pm	20 minutes	75.1
		ST 19.2	34.176810	77.926250	5/6/2015	3:45-3:05 pm	20 minutes	68.5
		ST 19.3	34.176670	77.926670	5/6/2015	3:45-3:05 pm	20 minutes	56.2
Short Term 20	Breezewood Apartments	ST 20.1	34.168890	77.921000	5/6/2015	4:15-4:35 pm	20 minutes	69.2
		ST 20.2	34.168920	77.920780	5/6/2015	4:15-4:35 pm	20 minutes	63.1
		ST 20.3	34.169000	77.920560	5/6/2015	4:15-4:35 pm	20 minutes	57.3
Long Term 1	Traffic Circle on Cole Court	LT 1	34.185500	78.075920	8/17/2015	10:51-10:51 am	24 hours	54.6
Long Term 2	Empty Lot on Strider Court	LT 2	34.225250	78.018030	8/17/2015	10:20-10:20 am	24 hours	53.9
Long Term 4	1931 Washington Street	LT 4	34.206830	77.944080	8/17/2015	9:50-9:50 am	24 hours	56.3

Table A.2A
2018 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 1	US 17 (NB/SB)	20	Auto	524	**1572**	**60**	420	**1260**	**60**
			Med Truck	16	**48**	**60**	4	**12**	**60**
			Hvy Truck	7	**21**	**60**	19	**57**	**60**
			Bus	1	**3**	**60**	1	**3**	**60**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 1	Hazels Branch Road (NB/SB)	20	Auto	12	**36**	**50**	12	**36**	**50**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	1	**3**	**50**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 1	Sloan Road (EB/WB)	20	Auto	3	**9**	**50**	2	**6**	**50**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 2	US 17 (NB/SB)	20	Auto	426	**1278**	**60**	544	**1632**	**60**
			Med Truck	8	**24**	**60**	58	**174**	**60**
			Hvy Truck	4	**12**	**60**	18	**54**	**60**
			Bus	0	**0**	**0**	2	**6**	**60**
			Motorcycle	0	**0**	**0**	1	**3**	**60**
Short Term 2	Maco Road (NB/SB)	20	Auto	93	**279**	**60**	72	**216**	**60**
			Med Truck	2	**6**	**60**	1	**3**	**60**
			Hvy Truck	1	**3**	**60**	0	**0**	**0**
			Bus	0	**0**	**0**	2	**6**	**60**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 3	I-140 Ramp from US 17 (NB)	20	Auto	81	**243**	**50**	0	**0**	**0**
			Med Truck	4	**12**	**50**	0	**0**	**0**
			Hvy Truck	2	**6**	**50**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 3	Hazels Branch Road (NB/SB)	20	Auto	11	**33**	**50**	21	**63**	**50**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**

Table A.2A
2018 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 3	Stoney Creek Lane (EB/WB)	20	Auto	15	**45**	**30**	13	**39**	**30**
			Med Truck	0	**0**	**0**	1	**3**	**30**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 4	US 17 (NB/SB)	20	Auto	331	**993**	**60**	188	**564**	**60**
			Med Truck	11	**33**	**60**	8	**24**	**60**
			Hvy Truck	9	**27**	**60**	5	**15**	**60**
			Bus	0	**0**	**0**	2	**6**	**60**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 4	I-140 Ramp from US 17 (NB)	20	Auto	62	**186**	**50**	0	**0**	**0**
			Med Truck	17	**51**	**50**	0	**0**	**0**
			Hvy Truck	5	**15**	**50**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 4	Hazels Branch Road (NB/SB)	20	Auto	20	**60**	**50**	16	**48**	**50**
			Med Truck	1	**3**	**50**	2	**6**	**50**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 4	Bridle Way SE (EB/WB)	20	Auto	5	**15**	**45**	6	**18**	**45**
			Med Truck	0	**0**	**0**	1	**3**	**45**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 5	US 17 (NB/SB)	20	Auto	332	**996**	**60**	312	**936**	**60**
			Med Truck	16	**48**	**60**	12	**36**	**60**
			Hvy Truck	8	**24**	**60**	4	**12**	**60**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 5	Hazels Branch Road (NB/SB)	20	Auto	8	**24**	**50**	11	**33**	**50**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**

Table A.2A
2018 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 6	I-140 (EB/WB)	20	Auto	88	**264**	**75**	84	**252**	**75**
			Med Truck	2	**6**	**75**	8	**24**	**75**
			Hvy Truck	12	**36**	**75**	9	**27**	**75**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 7	Lanvale Road (NB/SB)	20	Auto	61	**183**	**45**	59	**177**	**45**
			Med Truck	1	**3**	**45**	2	**6**	**45**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	2	**6**	**45**	1	**3**	**45**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 9	US 17 (NB/SB)	20	Auto	831	**2493**	**60**	1047	**3141**	**60**
			Med Truck	14	**42**	**60**	6	**18**	**60**
			Hvy Truck	11	**33**	**60**	14	**42**	**60**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	1	**3**	**60**	5	**15**	**60**
Short Term 11	US 421 (NB/SB)	20	Auto	386	**1158**	**60**	394	**1182**	**60**
			Med Truck	23	**69**	**60**	22	**66**	**60**
			Hvy Truck	24	**72**	**60**	23	**69**	**60**
			Bus	2	**6**	**60**	2	**6**	**60**
			Motorcycle	5	**15**	**60**	4	**12**	**60**
Short Term 11	Southern Boulevard (EB/WB)	20	Auto	20	**60**	**30**	20	**60**	**30**
			Med Truck	2	**6**	**30**	2	**6**	**30**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 12	US 117/Shipyard Boulevard (EB/WB)	20	Auto	220	**660**	**45**	256	**768**	**45**
			Med Truck	3	**9**	**45**	6	**18**	**45**
			Hvy Truck	2	**6**	**45**	8	**24**	**45**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	1	**3**	**45**	1	**3**	**45**
Short Term 12	Holbrook Avenue (NB/SB)	20	Auto	8	**24**	**35**	18	**54**	**35**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**

Table A.2A
2018 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 13	US 421/Carolina Beach Road (NB/SB)	20	Auto	426	**1278**	**60**	472	**1416**	**60**
			Med Truck	14	**42**	**60**	11	**33**	**60**
			Hvy Truck	26	**78**	**60**	18	**54**	**60**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 13	Cape Fear Boulevard (EB/WB)	20	Auto	3	**9**	**35**	9	**27**	**35**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**

Table A.2B
2015 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 5	US 17 (NB/SB)	15	Auto	264	**1056**	**55**	330	**1320**	**55**
			Med Truck	7	**28**	**55**	6	**24**	**55**
			Hvy Truck	5	**20**	**55**	5	**20**	**55**
			Bus	0	**0**	**0**	1	**4**	**55**
			Motorcycle	2	**8**	**55**	2	**8**	**55**
Short Term 8	US 74/76 (NB/SB)	15	Auto	289	**1156**	**60**	236	**944**	**60**
			Med Truck	13	**52**	**60**	11	**44**	**60**
			Hvy Truck	16	**64**	**60**	13	**52**	**60**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 9	US 17 (NB/SB)	15	Auto	330	**1320**	**55**	295	**1180**	**55**
			Med Truck	6	**24**	**55**	3	**12**	**55**
			Hvy Truck	6	**24**	**55**	11	**44**	**55**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 9	Blackwell Road (EB/WB)	15	Auto	20	**80**	**45**	6	**24**	**45**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 10	US 17/74/76 (EB/WB)	15	Auto	826	**3304**	**60**	258	**1032**	**60**
			Med Truck	36	**144**	**60**	11	**44**	**60**
			Hvy Truck	45	**180**	**60**	11	**44**	**60**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 10	US 17/74/76 Ramp to US 17 (WB)	15	Auto	0	**0**	**0**	418	**1672**	**55**
			Med Truck	0	**0**	**0**	18	**72**	**55**
			Hvy Truck	0	**0**	**0**	23	**92**	**55**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 15	Burnett Blvd (NB/SB)	15	Auto	185	**740**	**35**	152	**608**	**35**
			Med Truck	3	**12**	**35**	3	**12**	**35**
			Hvy Truck	0	**0**	**0**	2	**8**	**35**
			Bus	0	**0**	**0**	2	**8**	**35**
			Motorcycle	2	**8**	**35**	0	**0**	**0**

Table A.2B
2015 Ambient Noise Level Monitoring - Traffic Counts

ID	Road Counted	Duration (min)	Veh Type	Northbound / Eastbound			Southbound / Westbound		
				Count	1 Hour eq	Speed (mph)	Count	1 Hour eq	Speed (mph)
Short Term 16	US 421 (NB/SB)	15	Auto	215	**860**	**45**	176	**704**	**45**
			Med Truck	7	**28**	**45**	9	**36**	**45**
			Hvy Truck	24	**96**	**45**	45	**180**	**45**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	6	**24**	**45**
Short Term 16	Washington Street (NB/SB)	15	Auto	3	**12**	**25**	3	**12**	**25**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	0	**0**	**0**	0	**0**	**0**
			Bus	1	**4**	**25**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 17	Wellington Avenue (NB/SB)	15	Auto	48	**192**	**35**	37	**148**	**35**
			Med Truck	0	**0**	**0**	0	**0**	**0**
			Hvy Truck	2	**8**	**35**	0	**0**	**0**
			Bus	0	**0**	**0**	0	**0**	**0**
			Motorcycle	0	**0**	**0**	0	**0**	**0**
Short Term 19	US 421 (NB/SB)	15	Auto	241	**964**	**45**	257	**1028**	**45**
			Med Truck	12	**48**	**45**	8	**32**	**45**
			Hvy Truck	29	**116**	**45**	20	**80**	**45**
			Bus	5	**20**	**45**	4	**16**	**45**
			Motorcycle	0	**0**	**0**	3	**12**	**45**
Short Term 20	US 421 (NB/SB)	15	Auto	223	**892**	**45**	337	**1348**	**45**
			Med Truck	5	**20**	**45**	9	**36**	**45**
			Hvy Truck	8	**32**	**45**	32	**128**	**45**
			Bus	7	**28**	**45**	10	**40**	**45**
			Motorcycle	0	**0**	**0**	4	**16**	**45**

Table A.3: Project Noise Monitoring Sessions Weather Data[1]								
Year	**Setup Location**	**Temperature (°F)**	**Relative Humidity (%)**	**Pressure (Hg)**	**Cloud Cover (%)**	**Wind Direction**	**Wind Speed (mph)**	**Precipitation (in)**
2018	Short Term 1	76	22.9	30.08	0%	WSW	4.3	0.00
2018	Short Term 2	68	27.7	30.08	0%	NW	0.6	0.00
2018	Short Term 3	64	42.3	30.12	0%	N/A	0	0.00
2018	Short Term 4	70	42.8	30.16	0%	SW	0.9	0.00
2018	Short Term 5	77	34	30.13	0%	SSW	0.4	0.00
2018	Short Term 6	54	70	30.24	0%	N/A	0	0.00
2018	Short Term 7	69	41	30.22	0%	N/A	0	0.00
2018	Short Term Ambient 8	82	28	30.06	0%	SW	2	0.00
2018	Short Term 9	62	41	30.18	0%	SW	1	0.00
2018	Short Term Ambient 10	73	20.8	30.09	0%	NNW	2	0.00
2018	Short Term 11	83	27.1	30.03	0%	SW	1.5	0.00
2018	Short Term 12	74	37.1	30.13	3%	W	1.1	0.00
2018	Short Term 13	76	28.7	30.11	<5%	S	1.4	0.00
2015	Short Term 5	90	53	30.1	60%	N/A	0	0.00
2015	Short Term 7	75	92	30.07	100%	N/A	0	0.00
2015	Short Term 8	79	80	30.07	100%	N/A	0	0.00
2015	Short Term 9	79	80	30.08	100%	N/A	0	0.00
2015	Short Term 10	85	65	30.07	100%	N/A	0	0.00
2015	Short Term Ambient 12	86	53	30	0%	N/A	0	0.00
2015	Short Term Ambient 13	89	50	30.15	20%	N/A	0	0.00
2015	Short Term 14	81	47	30.08	90%	SW	2.5	0.00
2015	Short Term 15	81	50	30.08	90%	W	4	0.00
2015	Short Term 16	81	50	30.07	100%	E	4	0.00
2015	Short Term 17	78	51	30.04	100%	W	6	0.00
2015	Short Term Ambient 18	81	48	30.05	100%	W	4	0.00
2015	Short Term 19	84	45	30.05	100%	W	4	0.00
2015	Short Term 20	76	51	30.05	100%	W	6	0.00

1. Source: 2018 - Ambient Weather, 2015 - Accu weather and Skymaster SM-28

Table A.4A
2018 TNM2.5 Model Validation

ID	Location	Meter	Measured L_{eq}	Modeled L_{eq}	Difference	Justification
Short Term 1	46 Sloan Road	ST 1.1	65.8	68.4	2.6	Within +/- 3.0 dB(A)
		ST 1.2	59.1	60.5	1.4	Within +/- 3.0 dB(A)
		ST 1.3	57.1	56.6	-0.5	Within +/- 3.0 dB(A)
Short Term 2	112 Maco Road	ST 2.1	62.3	62.1	-0.2	Within +/- 3.0 dB(A)
		ST 2.2	61.4	62.8	1.4	Within +/- 3.0 dB(A)
		ST 2.3	68.9	70.9	2.0	Within +/- 3.0 dB(A)
Short Term 3	3 Stoney Creek Lane	ST 3.1	65.3	63.4	-1.9	Within +/- 3.0 dB(A)
		ST 3.2	61.9	62.6	0.7	Within +/- 3.0 dB(A)
		ST 3.3	61.1	60.9	-0.2	Within +/- 3.0 dB(A)
Short Term 4	7 Bridle Way SE	ST 4.1	60.8	63.4	2.6	Within +/- 3.0 dB(A)
		ST 4.2	N/A			
		ST 4.3	55.1	55.4	0.3	Within +/- 3.0 dB(A)
Short Term 5	71 Goodman Road	ST 5.1	62.9	62.9	0.0	Within +/- 3.0 dB(A)
		ST 5.2	56.8	58.4	1.6	Within +/- 3.0 dB(A)
Short Term 6	163 Goodman Road	ST 6.1	64.1	N/A	N/A	Not within project limits
		ST 6.2	61.3	N/A	N/A	Not within project limits
		ST 6.3	58.2	N/A	N/A	Not within project limits
Short Term 7	105 Tillington Court	ST 7.1	43.1	45.3	2.2	Within +/- 3.0 dB(A)
		ST 7.2	45.3	44.3	-1.0	Within +/- 3.0 dB(A)
		ST 7.3	44.3	43.2	-1.1	Within +/- 3.0 dB(A)
Short Term 9	101 Riverview Drive	ST 9.1	62.2	60.1	-2.1	Within +/- 3.0 dB(A)
		ST 9.2	61.7	61.1	-0.6	Within +/- 3.0 dB(A)
		ST 9.3	60.4	60.1	-0.3	Within +/- 3.0 dB(A)
Short Term 11	405 Southern Boulevard	ST 11.1	66.4	68.6	2.2	Within +/- 3.0 dB(A)
		ST 11.2	62.9	63.6	0.7	Within +/- 3.0 dB(A)
		ST 11.3	61.3	61.0	-0.3	Within +/- 3.0 dB(A)
Short Term 12	817 Holbrook Road	ST 12.1	64.7	65.6	0.9	Within +/- 3.0 dB(A)
		ST 12.2	61.0	61.1	0.1	Within +/- 3.0 dB(A)
		ST 12.3	58.1	57.1	-1.0	Within +/- 3.0 dB(A)
Short Term 13	448 Cape Fear Boulevard	ST 13.1	63.6	64.7	1.1	Within +/- 3.0 dB(A)
		ST 13.2	60.1	60.6	0.5	Within +/- 3.0 dB(A)
		ST 13.3	55.9	56.0	0.1	Within +/- 3.0 dB(A)

Table A.4B
2015 TNM2.5 Model Validation

ID	Location	Meter	Measured L_{eq}	Modeled L_{eq}	Difference	Justification
Short Term 5	7909 US 17 South	ST 5.1	71.7	72.3	0.6	Within +/- 3.0 dB(A)
		ST 5.2	60.2	62.1	1.9	Within +/- 3.0 dB(A)
Short Term 8	Across from 1018 Sun Skipper Lane	ST 8.1	54.9	57.8	2.9	Within +/- 3.0 dB(A)
		ST 8.2	53.3	55.1	1.8	Within +/- 3.0 dB(A)
Short Term 9	9621 Blackwell Road	ST 9.1	57.1	57.9	0.8	Within +/- 3.0 dB(A)
		ST 9.2	55.5	57.2	1.7	Within +/- 3.0 dB(A)
Short Term 10	2422 Red Maple Court	ST 10.1	60.7	59.0	-1.7	Within +/- 3.0 dB(A)
		ST 10.2	59.1	60.7	1.6	Within +/- 3.0 dB(A)
Short Term 15	1602 Burnett Boulevard	ST 15.1	71.7	69.3	-2.4	Within +/- 3.0 dB(A)
		ST 15.2	61.0	61.5	0.5	Within +/- 3.0 dB(A)
		ST 15.3	60.6	59.0	-1.6	Within +/- 3.0 dB(A)
Short Term 16	1931 Washington Street	ST 16.1	57.1	54.4	-2.7	Within +/- 3.0 dB(A)
		ST 16.2	56.5	51.5	-5.0	SLM Cal issue
		ST 16.3	53.4	51.3	-2.1	Within +/- 3.0 dB(A)
Short Term 17	712 Wellington Avenue	ST 17.1	66.7	65.2	-1.5	Within +/- 3.0 dB(A)
		ST 17.2	60.5	57.8	-2.7	Within +/- 3.0 dB(A)
		ST 17.3	56.0	48.9	-7.1	SLM Cal issue
Short Term 19	3736 Carolina Beach Road	ST 19.1	75.1	73.6	-1.5	Within +/- 3.0 dB(A)
		ST 19.2	68.5	71.2	2.7	Within +/- 3.0 dB(A)
		ST 19.3	56.2	61.8	5.6	SLM Cal issue
Short Term 20	4156 Breezewood Drive	ST 20.1	69.2	69.8	0.6	Within +/- 3.0 dB(A)
		ST 20.2	63.1	66.5	3.4	SLM Cal issue
		ST 20.3	57.3	58.5	1.2	Within +/- 3.0 dB(A)

* SLM Cal Issue = post-test calibration value was less than the pre-test value for meter used at this location

Appendix B

Hourly Equivalent Traffic Noise Level Tables

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1	000247 LANSAN LN	1	B	42	42	42	66	24	YES	YES																				
2	000248 SAVANNA BRANCH RD	1	B	42	42	42	R/W	N/A	N/A	NO																				
3	000285 QUAIL COVEY RD	1	B	42	42	42	R/W	N/A	N/A	NO																				
4	000269 LANSAN LN	1	B	42	42	42	67	25	YES	YES																				
5	000269 LANSAN LN	1	B	42	42	42	68	26	YES	YES																				
6	000375 LANSAN LN	1	B	42	42	46	R/W	N/A	N/A	NO																				
7	000375 LANSAN LN	1	B	42	43	46	R/W	N/A	N/A	NO																				
8	000375 LANSAN LN	1	B	42	43	47	R/W	N/A	N/A	NO																				
9	000375 LANSAN LN	1	B	42	44	48	R/W	N/A	N/A	NO																				
10	000375 LANSAN LN	1	B	42	46	50	R/W	N/A	N/A	NO																				
11	000375 LANSAN LN	1	B	42	46	50	R/W	N/A	N/A	NO																				
12	000375 LANSAN LN	1	B	42	47	51	R/W	N/A	N/A	NO																				
13	000375 LANSAN LN	1	B	42	50	54	R/W	N/A	N/A	NO																				
14	000381 LANSAN LN	1	B	42	54	58	R/W	N/A	N/A	NO																				
15	000440 LANVALE RD	1	B	42	57	60	R/W	N/A	N/A	NO																				
16	000450 LANVALE RD	1	B	42	62	65	R/W	N/A	N/A	NO																				
17	001004 SLATER WAY	1	B	42	42	42	62	20	NO	YES																				
18	001000 SLATER WAY	1	B	42	42	42	65	23	NO	YES																				
19	001001 SLATER WAY	1	B	42	42	44	68	26	YES	YES																				
20	001005 SLATER WAY	1	B	42	42	46	66	24	YES	YES																				
21	001008 SLATER WAY	1	B	42	42	44	61	19	NO	YES																				
22	001012 SLATER WAY	1	B	42	42	44	61	19	NO	YES																				
23	000169 WATERSFIELD RD	1	B	42	42	42	63	21	NO	YES																				
24	000165 WATERSFIELD RD	1	B	42	42	45	64	22	NO	YES																				
25	000161 WATERSFIELD RD	1	B	42	42	45	65	23	NO	YES																				
26	000157 WATERSFIELD RD	1	B	42	43	46	65	22	NO	YES																				
27	000153 WATERSFIELD RD	1	B	42	45	49	67	22	YES	YES																				
28	000149 WATERSFIELD RD	1	B	42	47	51	68	21	YES	YES																				
29	000147 WATERSFIELD RD	1	B	42	48	51	67	19	YES	YES																				
30	000102 TILLINGTON CT	1	B	42	44	48	65	21	NO	YES																				
31	000104 TILLINGTON CT	1	B	42	50	54	68	18	YES	YES																				
32	000106 TILLINGTON CT	1	B	42	56	60	69	13	YES	YES																				
33	000107 TILLINGTON CT	1	B	42	63	66	70	7	YES	NO																				
34	000105 TILLINGTON CT	1	B	42	65	68	70	5	YES	NO																				
35	000103 TILLINGTON CT	1	B	42	64	67	69	5	YES	NO																				
36	000101 TILLINGTON CT	1	B	42	49	53	64	15	NO	YES																				
37	000139 WATERSFIELD RD	1	B	42	62	66	68	6	YES	NO																				
38	000137 WATERSFIELD RD	1	B	42	63	67	68	5	YES	NO																				
39	000135 WATERSFIELD RD	1	B	42	63	67	68	5	YES	NO																				
40	000133 WATERSFIELD RD	1	B	42	63	66	67	4	YES	NO																				
41	000131 WATERSFIELD RD	1	B	42	63	67	68	5	YES	NO																				
42	000134 WATERSFIELD RD	1	B	42	47	50	59	12	NO	YES																				
43	000136 WATERSFIELD RD	1	B	42	47	50	59	12	NO	YES																				
44	000138 WATERSFIELD RD	1	B	42	48	52	61	13	NO	YES																				
45	000140 WATERSFIELD RD	1	B	42	49	53	63	14	NO	YES																				
46	000146 WATERSFIELD RD	1	B	42	48	51	63	15	NO	YES																				
47	000148 WATERSFIELD RD	1	B	42	45	49	63	18	NO	YES																				
48	000156 WATERSFIELD RD	1	B	42	43	46	63	20	NO	YES																				
49	000160 WATERSFIELD RD	1	B	42	42	44	62	20	NO	YES																				
50	000164 WATERSFIELD RD	1	B	42	42	45	61	19	NO	YES																				
51	001033 SLATER WAY	1	B	42	44	48	61	17	NO	YES																				
52	001037 SLATER WAY	1	B	42	44	48	62	18	NO	YES																				
53	001041 SLATER WAY	1	B	42	44	47	61	17	NO	YES																				
54	001040 SLATER WAY	1	B	42	42	44	61	19	NO	YES																				
55	001032 SLATER WAY	1	B	42	42	44	62	20	NO	YES																				
56	001028 SLATER WAY	1	B	42	42	45	61	19	NO	YES																				
57	001024 SLATER WAY	1	B	42	42	45	62	20	NO	YES																				
58	001020 SLATER WAY	1	B	42	42	46	61	19	NO	YES																				
59	008655 ORCHARD LOOP RD	1	B	42	42	43	59	17	NO	YES																				
60	008653 ORCHARD LOOP RD	1	B	42	42	42	60	18	NO	YES																				
61	008715 ORCHARD LOOP RD	1	B	42	42	42	60	18	NO	YES																				
62	008713 ORCHARD LOOP RD	1	B	42	42	42	60	18	NO	YES																				
63	008711 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
64	008709 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
65	008707 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
66	008705 ORCHARD LOOP RD	1	B	42	42	42	62	20	NO	YES																				
67	008703 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
68	008701 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
69	008641 ORCHARD LOOP RD	1	B	42	42	42	61	19	NO	YES																				
70	008639 ORCHARD LOOP RD	1	B	42	42	42	59	17	NO	YES																				
71	000423 LANVALE RD	1	B	42	57	61	70	13	YES	YES																				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
72	000423 LANVALE RD	1	B	42	66	69	R/W	N/A	N/A	NO																				
73	000395 LANVALE RD	1	B	42	63	67	69	6	YES	NO																				
74	000424 LANVALE RD	1	B	42	66	69	R/W	N/A	N/A	NO																				
75	000436 LANVALE RD	1	B	42	60	64	R/W	N/A	N/A	NO																				
76	000440 LANVALE RD	1	B	42	53	56	R/W	N/A	N/A	NO																				
77	000404 LANVALE RD	1	B	42	56	60	68	12	YES	YES																				
78	000396 LANVALE RD	1	B	42	49	53	68	19	YES	YES																				
79	000398 LANVALE RD	1	B	42	52	56	67	15	YES	YES																				
80	000398 LANVALE RD	1	B	42	63	67	69	6	YES	NO																				
81	000398 LANVALE RD	1	B	42	63	67	68	5	YES	NO																				
82	000398 LANVALE RD	1	B	42	49	53	64	15	NO	YES																				
83	000398 LANVALE RD	1	B	42	49	52	66	17	YES	YES																				
84	000398 LANVALE RD	1	B	42	46	50	65	19	NO	YES																				
85	000310 LANSAN LN	1	B	42	42	43	R/W	N/A	N/A	NO																				
86	000422 LANVALE RD	1	B	42	42	42	66	24	YES	YES																				
87	000280 LANSAN LN	1	B	42	42	42	72	30	YES	YES																				
88	000311 SAVANNA BRANCH RD	1	B	42	42	42	60	18	NO	YES																				
89	000301 SAVANNA BRANCH RD	1	B	42	42	42	61	19	NO	YES																				
90	000291 SAVANNA BRANCH RD	1	B	42	42	42	61	19	NO	YES																				
91	000275 QUAIL COVEY RD	1	B	42	42	42	R/W	N/A	N/A	NO																				
92	000265 QUAIL COVEY RD	1	B	42	42	42	69	27	YES	YES																				
93	000271 SAVANNA BRANCH RD	1	B	42	42	42	60	18	NO	YES																				
94	000271 SAVANNA BRANCH RD	1	B	42	42	42	62	20	NO	YES																				
95	000264 QUAIL COVEY RD	1	B	42	42	42	70	28	YES	YES																				
96	000276 QUAIL COVEY RD	1	B	42	42	42	R/W	N/A	N/A	NO																				
97	002436 TARA FOREST DR	1	B	42	42	42	60	18	NO	YES																				
98	002440 TARA FOREST DR	1	B	42	42	42	61	19	NO	YES																				
99	002444 TARA FOREST DR	1	B	42	42	42	62	20	NO	YES																				
100	002448 TARA FOREST DR	1	B	42	42	42	63	21	NO	YES																				
111	002445 TARA FOREST DR	1	B	42	42	42	62	20	NO	YES																				
112	002441 TARA FOREST DR	1	B	42	42	42	60	18	NO	YES																				
115	002175 SPRINGSTONE DR	1	B	42	42	42	61	19	NO	YES																				
118	002187 SPRINGSTONE DR	1	B	42	42	42	64	22	NO	YES																				
133	004530 COMBS FOREST CT	1	B	42	42	42	63	21	NO	YES																				
134	004534 COMBS FOREST CT	1	B	42	42	42	63	21	NO	YES																				
138	004529 COMBS FOREST CT	1	B	42	42	42	60	18	NO	YES																				
139	006970 ZION CHURCH RD	1	B	42	58	62					58	0	NO	NO	58	0	NO	NO												
140	006990 ZION CHURCH RD	1	B	42	60	61					62	2	NO	NO	62	2	NO	NO												
141	007014 ZION CHURCH RD	1	B	42	61	62					63	2	NO	NO	63	2	NO	NO												
142	007014 ZION CHURCH RD	1	B	42	59	62					62	3	NO	NO	62	3	NO	NO												
143	007021 ZION CHURCH RD	1	B	42	59	65					59	0	NO	NO	59	0	NO	NO												
144	000027 OLD TOWN CREEK RD	1	D	22	43	46					45	2	NO	NO	45	2	NO	NO	46	3	NO	NO	45	2	NO	NO				
145	007139 OCEAN HWY	1	B	42	70	73					72	2	YES	NO	72	2	YES	NO	73	3	YES	NO	72	2	YES	NO				
146	007139 OCEAN HWY	1	B	42	70	73					73	3	YES	NO	73	3	YES	NO	74	4	YES	NO	73	3	YES	NO				
147	007139 OCEAN HWY	1	B	42	70	73					73	3	YES	NO	73	3	YES	NO	74	4	YES	NO	73	3	YES	NO				
148	000033 MACO RD	1	B	42	63	66					66	3	YES	NO	66	3	YES	NO	66	3	YES	NO	66	3	YES	NO				
149	000028 MACO RD	1	B	42	66	69					70	4	YES	NO	70	4	YES	NO	71	5	YES	NO	71	5	YES	NO				
150	000032 MACO RD	1	B	42	66	68					69	3	YES	NO	69	3	YES	NO	70	4	YES	NO	70	4	YES	NO				
151	000076 MACO RD	1	B	42	65	67					69	4	YES	NO	69	4	YES	NO	69	4	YES	NO	69	4	YES	NO				
152	000083 MACO RD	1	B	42	70	73					73	3	YES	NO	73	3	YES	NO	73	3	YES	NO	73	3	YES	NO				
153	000112 MACO RD	1	B	42	63	66					67	4	YES	NO	67	4	YES	NO	67	4	YES	NO	67	4	YES	NO				
154	000126 MACO RD	1	B	42	63	66					67	4	YES	NO	67	4	YES	NO	67	4	YES	NO	66	3	YES	NO				
155	000105 MACO RD	1	B	42	67	70					70	3	YES	NO	70	3	YES	NO	70	3	YES	NO	70	3	YES	NO				
156	000320 SUNNYBROOK WAY	1	B	42	48	49					51	3	NO	NO	51	3	NO	NO												
157	000310 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
158	000306 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
159	000302 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
160	000300 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
161	000298 SUNNYBROOK WAY	1	B	42	47	49					52	5	NO	NO	52	5	NO	NO												
162	000293 SUNNYBROOK WAY	1	B	42	49	50					53	4	NO	NO	53	4	NO	NO												
163	000175 NEW HOPE LN	1	B	42	51	51					55	4	NO	NO	55	4	NO	NO												
164	000175 NEW HOPE LN	1	B	42	53	54					59	6	NO	NO	59	6	NO	NO												
165	000296 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
166	000265 SUNNYBROOK WAY	1	B	42	50	51					54	4	NO	NO	54	4	NO	NO												
167	000174 NEW HOPE LN	1	B	42	53	53					59	6	NO	NO	59	6	NO	NO												
168	000174 NEW HOPE LN	1	B	42	51	52					56	5	NO	NO	56	5	NO	NO												
169	000263 SUNNYBROOK WAY	1	B	42	50	51					55	5	NO	NO	55	5	NO	NO												
170	000268 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
171	000252 SUNNYBROOK WAY	1	B	42	48	49					51	3	NO	NO	51	3	NO	NO												
172	000240 SUNNYBROOK WAY	1	B	42	48	50					52	4	NO	NO	52	4	NO	NO												
173	000238 SUNNYBROOK WAY	1	B	42	47	49					51	4	NO	NO	51	4	NO	NO												

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
174	000218 SUNNYBROOK WAY	1	B	42	48	49					52	4	NO	NO	52	4	NO	NO												
175	000218 SUNNYBROOK WAY	1	B	42	49	50					53	4	NO	NO	53	4	NO	NO												
176	000207 SNOWFIELD RD	1	B	42	50	52					54	4	NO	NO	54	4	NO	NO												
177	000197 SNOWFIELD RD	1	B	42	49	50					53	4	NO	NO	53	4	NO	NO												
178	000215 SUNNYBROOK WAY (Town Creek Park)	1	C	42	51	52					55	4	NO	NO	55	4	NO	NO												
179	000215 SUNNYBROOK WAY	---	C	42	50	52					55	5	NO	NO	55	5	NO	NO												
180	000215 SUNNYBROOK WAY	---	C	42	50	52					55	5	NO	NO	55	5	NO	NO												
181	000215 SUNNYBROOK WAY	---	C	42	51	53					56	5	NO	NO	56	5	NO	NO												
182	000215 SUNNYBROOK WAY	---	C	42	51	53					56	5	NO	NO	56	5	NO	NO												
183	000215 SUNNYBROOK WAY	---	C	42	52	53					56	4	NO	NO	56	4	NO	NO												
184	000215 SUNNYBROOK WAY	---	C	42	52	54					57	5	NO	NO	57	5	NO	NO												
185	000215 SUNNYBROOK WAY	---	C	42	52	53					56	4	NO	NO	56	4	NO	NO												
186	000215 SUNNYBROOK WAY	---	C	42	51	53					56	5	NO	NO	56	5	NO	NO												
187	000065 HARRISON ESTATE LN	1	B	42	55	56					62	7	NO	NO	62	7	NO	NO												
188	007090 ANNIE M BRYANT DR	1	B	42	68	68					71	3	YES	NO	71	3	YES	NO												
189	007090 ANNIE M BRYANT DR	1	B	42	68	69					71	3	YES	NO	71	3	YES	NO												
190	000126 SNOWFIELD RD	1	B	42	50	52					56	6	NO	NO	56	6	NO	NO	52	2	NO	NO	51	1	NO	NO				
191	000126 SNOWFIELD RD	1	B	42	50	52					55	5	NO	NO	55	5	NO	NO	51	1	NO	NO	51	1	NO	NO				
192	000112 SNOWFIELD RD	1	B	42	51	53					56	5	NO	NO	56	5	NO	NO	53	2	NO	NO	53	2	NO	NO				
193	000100 SNOWFIELD RD	1	B	42	53	56					58	5	NO	NO	58	5	NO	NO	56	3	NO	NO	56	3	NO	NO				
194	000088 SNOWFIELD RD	0	D	17	30	32					34	4	NO	NO	34	4	NO	NO	33	3	NO	NO	33	3	NO	NO				
195	007132 DAVE WAY	1	B	42	69	73					74	5	YES	NO	74	5	YES	NO	74	5	YES	NO	72	3	YES	NO				
196	007132 DAVE WAY	1	B	42	70	75					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	75	5	YES	NO	73	3	YES	NO				
197	007120 DAVE WAY	1	B	42	65	69					73	8	YES	NO	73	8	YES	NO	71	6	YES	NO	69	4	YES	NO				
198	007150 DAVE WAY	1	B	42	69	74					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	75	6	YES	NO	73	4	YES	NO				
199	000035 SLOAN RD	1	B	42	60	64					71	11	YES	YES	71	11	YES	YES	65	5	NO	NO	64	4	NO	NO				
200	000046 SLOAN RD	1	B	42	58	61					68	10	YES	YES	68	10	YES	YES	62	4	NO	NO	61	3	NO	NO				
201	000045 SLOAN RD	1	B	42	57	60					67	10	YES	YES	67	10	YES	YES	61	4	NO	NO	60	3	NO	NO				
202	000063 SLOAN RD	1	B	42	55	58					61	6	NO	NO	61	6	NO	NO	58	3	NO	NO	57	2	NO	NO				
203	000061 SLOAN RD	1	B	42	54	58					62	8	NO	NO	62	8	NO	NO	58	4	NO	NO	57	3	NO	NO				
204	000058 SLOAN RD	1	B	42	55	58					66	11	YES	YES	66	11	YES	YES	59	4	NO	NO	59	4	NO	NO				
205	000067 SLOAN RD	1	B	42	52	55					61	9	NO	NO	61	9	NO	NO	55	3	NO	NO	55	3	NO	NO				
206	000068 SLOAN RD	1	B	42	54	57					63	9	NO	NO	63	9	NO	NO	58	4	NO	NO	57	3	NO	NO				
207	000068 SLOAN RD	1	B	42	54	57					63	9	NO	NO	63	9	NO	NO	57	3	NO	NO	57	3	NO	NO				
208	000088 SLOAN RD	1	B	42	51	54					66	15	YES	YES	66	15	YES	YES	54	3	NO	NO	54	3	NO	NO				
209	000088 SLOAN RD	1	B	42	50	53					62	12	NO	YES	62	12	NO	YES	54	4	NO	NO	53	3	NO	NO				
210	000080 SLOAN RD	1	B	42	49	52					65	16	NO	YES	65	16	NO	YES	53	4	NO	NO	52	3	NO	NO				
211	000080 SLOAN RD	1	B	42	52	55					62	10	NO	YES	62	10	NO	YES	55	3	NO	NO	55	3	NO	NO				
212	000081 SLOAN RD	1	B	42	50	53					64	14	NO	YES	64	14	NO	YES	53	3	NO	NO	52	2	NO	NO				
213	000081 SLOAN RD	1	B	42	52	55					62	10	NO	YES	62	10	NO	YES	55	3	NO	NO	54	2	NO	NO				
214	000081 SLOAN RD	1	B	42	49	52					62	13	NO	YES	62	13	NO	YES	52	3	NO	NO	51	2	NO	NO				
215	000081 SLOAN RD	1	B	42	51	54					61	10	NO	YES	61	10	NO	YES	54	3	NO	NO	54	3	NO	NO				
216	000067 BISHOP BRANCH LN	1	B	42	49	52					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	53	4	NO	NO	52	3	NO	NO				
217	000067 BISHOP BRANCH LN	1	B	42	49	52					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	52	3	NO	NO	52	3	NO	NO				
218	000067 BISHOP BRANCH LN	1	B	42	47	49					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	49	2	NO	NO	49	2	NO	NO				
219	000080 BISHOP BRANCH LN	1	B	42	45	47					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	48	3	NO	NO	48	3	NO	NO				
220	000080 BISHOP BRANCH LN	1	B	42	48	50					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	50	2	NO	NO	50	2	NO	NO				
221	007017 WHITE BRIDGE LN	1	B	42	50	52					63	13	NO	YES	63	13	NO	YES	51	1	NO	NO	51	1	NO	NO				
222	007028 WHITE BRIDGE LN	1	B	42	44	47					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	48	4	NO	NO	47	3	NO	NO				
223	007036 WHITE BRIDGE LN	1	B	42	45	48					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	47	2	NO	NO	47	2	NO	NO				
224	007036 WHITE BRIDGE LN	1	B	42	42	45					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	46	4	NO	NO	45	3	NO	NO				
225	007048 WHITE BRIDGE LN	1	B	42	44	46					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	46	2	NO	NO	46	2	NO	NO				
226	007037 WHITE BRIDGE LN	1	B	42	45	47					67	22	YES	YES	67	22	YES	YES	47	2	NO	NO	46	1	NO	NO				
227	007049 WHITE BRIDGE LN	1	B	42	43	45					70	27	YES	YES	70	27	YES	YES	45	2	NO	NO	44	1	NO	NO				
228	007057 WHITE BRIDGE LN	1	B	42	42	45					70	28	YES	YES	70	28	YES	YES	44	2	NO	NO	44	2	NO	NO				
229	007056 WHITE BRIDGE LN	1	B	42	43	45					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	45	2	NO	NO	44	1	NO	NO				
230	007068 WHITE BRIDGE LN	1	B	42	42	44					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	44	2	NO	NO	44	2	NO	NO				
231	000114 STONEY CREEK LN	1	B	42	42	43					57	15	NO	YES	57	15	NO	YES	45	3	NO	NO	44	2	NO	NO				
232	000116 STONEY CREEK LN	1	B	42	42	42					59	17	NO	YES	59	17	NO	YES	42	0	NO	NO	42	0	NO	NO				
233	000118 STONEY CREEK LN	1	B	42	42	42					63	21	NO	YES	63	21	NO	YES	42	0	NO	NO	42	0	NO	NO				
234	000117 STONEY CREEK LN	1	B	42	42	42					64	22	NO	YES	64	22	NO	YES	42	0	NO	NO	42	0	NO	NO				
235	000115 STONEY CREEK LN	1	B	42	42	44					64	22	NO	YES	64	22	NO	YES	43	1	NO	NO	43	1	NO	NO				
236	007398 RUBY STONE CT	1	B	42	42	42					60	18	NO	YES	60	18	NO	YES	42	0	NO	NO	42	0	NO	NO				
237	007396 RUBY STONE CT	1	B	42	42	42					62	20	NO	YES	62	20	NO	YES	42	0	NO	NO	42	0	NO	NO				
238	007397 RUBY STONE CT	1	B	42	42	42					56	14	NO	YES	56	14	NO	YES	45	3	NO	NO	45	3	NO	NO				
239	007395 RUBY STONE CT	1	B	42	42	42					58	16	NO	YES	58	16	NO	YES	45	3	NO	NO	45	3	NO	NO				
240	007394 RUBY STONE CT	1	B	42	42	42					63	21	NO	YES	63	21	NO	YES	42	0	NO	NO	42	0	NO	NO				
241	007392 RUBY STONE CT	1	B	42	42	43					65	23	NO	YES	65	23	NO	YES	42	0	NO	NO	42	0	NO	NO				
242	007391 RUBY STONE CT	1	B	42	42	43					60	18	NO	YES	60	18	NO	YES	45	3	NO	NO	45	3	NO	NO				
243	007390 RUBY STONE CT	1	B	42	42	44					65	23	NO	YES	65	23	NO	YES	43	1	NO	NO	42	0	NO	NO				
244	007388 RUBY STONE CT	1	B	42	43	45					66	23	YES	YES	66	23	YES	YES	45	2	NO	NO	44	1	NO	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
245	007386 RUBY STONE CT	1	B	42	43	45					66	23	YES	YES	66	23	YES	YES	45	2	NO	NO	44	1	NO	NO				
246	007387 RUBY STONE CT	1	B	42	42	44					60	18	NO	YES	60	18	NO	YES	46	4	NO	NO	46	4	NO	NO				
247	007384 RUBY STONE CT	1	B	42	43	45					65	22	NO	YES	65	22	NO	YES	46	3	NO	NO	46	3	NO	NO				
248	007382 RUBY STONE CT	1	B	42	43	45					65	22	NO	YES	65	22	NO	YES	45	2	NO	NO	44	1	NO	NO				
249	007383 RUBY STONE CT	1	B	42	42	45					61	19	NO	YES	61	19	NO	YES	46	4	NO	NO	46	4	NO	NO				
250	007381 RUBY STONE CT	1	B	42	43	45					62	19	NO	YES	62	19	NO	YES	47	4	NO	NO	46	3	NO	NO				
251	007380 RUBY STONE CT	1	B	42	44	46					66	22	YES	YES	66	22	YES	YES	45	1	NO	NO	45	1	NO	NO				
252	007379 RUBY STONE CT	1	B	42	43	45					62	19	NO	YES	62	19	NO	YES	47	4	NO	NO	47	4	NO	NO				
253	007378 RUBY STONE CT	1	B	42	44	46					66	22	YES	YES	66	22	YES	YES	45	1	NO	NO	45	1	NO	NO				
254	007376 RUBY STONE CT	1	B	42	46	49					67	21	YES	YES	67	21	YES	YES	48	2	NO	NO	47	1	NO	NO				
255	007372 RUBY STONE CT	1	B	42	46	49					67	21	YES	YES	67	21	YES	YES	49	3	NO	NO	48	2	NO	NO				
256	007377 RUBY STONE CT	1	B	42	43	45					62	19	NO	YES	62	19	NO	YES	46	3	NO	NO	46	3	NO	NO				
257	007373 RUBY STONE CT	1	B	42	45	47					63	18	NO	YES	63	18	NO	YES	48	3	NO	NO	48	3	NO	NO				
258	007382 HAZELSTONE LN	1	B	42	44	46					62	18	NO	YES	62	18	NO	YES	47	3	NO	NO	46	2	NO	NO				
259	007378 HAZELSTONE LN	1	B	42	44	46					63	19	NO	YES	63	19	NO	YES	47	3	NO	NO	46	2	NO	NO				
260	007372 HAZELSTONE LN	1	B	42	46	49					66	20	YES	YES	66	20	YES	YES	48	2	NO	NO	48	2	NO	NO				
261	007368 HAZELSTONE LN	1	B	42	47	49					67	20	YES	YES	67	20	YES	YES	49	2	NO	NO	49	2	NO	NO				
262	007367 HAZELSTONE LN	1	B	42	47	50					68	21	YES	YES	68	21	YES	YES	50	3	NO	NO	50	3	NO	NO				
263	007371 HAZELSTONE LN	1	B	42	48	51					68	20	YES	YES	68	20	YES	YES	51	3	NO	NO	51	3	NO	NO				
264	007375 HAZELSTONE LN	1	B	42	46	48					64	18	NO	YES	64	18	NO	YES	49	3	NO	NO	48	2	NO	NO				
265	007379 HAZELSTONE LN	1	B	42	42	45					61	19	NO	YES	61	19	NO	YES	44	2	NO	NO	44	2	NO	NO				
266	007390 BRICKSTONE CT	1	B	42	42	44					59	17	NO	YES	59	17	NO	YES	44	2	NO	NO	44	2	NO	NO				
267	007386 BRICKSTONE CT	1	B	42	43	46					62	19	NO	YES	62	19	NO	YES	46	3	NO	NO	45	2	NO	NO				
268	007382 BRICKSTONE CT	1	B	42	44	47					64	20	NO	YES	64	20	NO	YES	47	3	NO	NO	47	3	NO	NO				
269	007380 BRICKSTONE CT	1	B	42	49	51					67	18	YES	YES	67	18	YES	YES	52	3	NO	NO	52	3	NO	NO				
270	007378 BRICKSTONE CT	1	B	42	49	52					67	18	YES	YES	67	18	YES	YES	52	3	NO	NO	52	3	NO	NO				
271	007381 BRICKSTONE CT	1	B	42	49	52					66	17	YES	YES	66	17	YES	YES	52	3	NO	NO	52	3	NO	NO				
272	007383 BRICKSTONE CT	1	B	42	49	52					64	15	NO	YES	64	15	NO	YES	52	3	NO	NO	52	3	NO	NO				
273	007387 BRICKSTONE CT	1	B	42	44	47					60	16	NO	YES	60	16	NO	YES	47	3	NO	NO	47	3	NO	NO				
274	007391 BRICKSTONE CT	1	B	42	43	46					58	15	NO	YES	58	15	NO	YES	46	3	NO	NO	46	3	NO	NO				
275	007394 OPAL STONE CT	1	B	42	46	49					59	13	NO	YES	59	13	NO	YES	49	3	NO	NO	49	3	NO	NO				
276	007390 OPAL STONE CT	1	B	42	48	51					62	14	NO	YES	62	14	NO	YES	51	3	NO	NO	51	3	NO	NO				
277	007399 OPAL STONE CT	1	B	42	46	48					59	13	NO	YES	59	13	NO	YES	49	3	NO	NO	49	3	NO	NO				
278	007391 OPAL STONE CT	1	B	42	48	51					63	15	NO	YES	63	15	NO	YES	51	3	NO	NO	51	3	NO	NO				
279	007398 RED STONE CT	1	B	42	47	50					60	13	NO	YES	60	13	NO	YES	50	3	NO	NO	50	3	NO	NO				
280	007394 RED STONE CT	1	B	42	46	48					60	14	NO	YES	60	14	NO	YES	49	3	NO	NO	49	3	NO	NO				
281	007390 RED STONE CT	1	B	42	49	52					64	15	NO	YES	64	15	NO	YES	52	3	NO	NO	51	2	NO	NO				
282	007387 RED STONE CT	1	B	42	50	53					65	15	NO	YES	65	15	NO	YES	53	3	NO	NO	53	3	NO	NO				
283	007391 RED STONE CT	1	B	42	50	53					65	15	NO	YES	65	15	NO	YES	54	4	NO	NO	53	3	NO	NO				
284	007395 RED STONE CT	1	B	42	50	52					63	13	NO	YES	63	13	NO	YES	53	3	NO	NO	53	3	NO	NO				
285	000053 STONEY CREEK LN	1	B	42	47	50					61	14	NO	YES	61	14	NO	YES	51	4	NO	NO	51	4	NO	NO				
286	000049 STONEY CREEK LN	1	B	42	48	51					62	14	NO	YES	62	14	NO	YES	52	4	NO	NO	51	3	NO	NO				
287	000046 STONEY CREEK LN	1	B	42	47	50					60	13	NO	YES	60	13	NO	YES	50	3	NO	NO	50	3	NO	NO				
288	000042 STONEY CREEK LN	1	B	42	47	50					59	12	NO	YES	59	12	NO	YES	50	3	NO	NO	50	3	NO	NO				
289	000043 STONEY CREEK LN	1	B	42	47	50					61	14	NO	YES	61	14	NO	YES	50	3	NO	NO	50	3	NO	NO				
290	007394 DIAMOND CT	1	B	42	46	49					63	17	NO	YES	63	17	NO	YES	49	3	NO	NO	48	2	NO	NO				
291	007392 DIAMOND CT	1	B	42	52	54					65	13	NO	YES	65	13	NO	YES	54	2	NO	NO	54	2	NO	NO				
292	007387 DIAMOND CT	1	B	42	52	55					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	55	3	NO	NO	55	3	NO	NO				
293	007300 HAZELS BRANCH RD	1	B	42	63	66					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	68	5	YES	NO	68	5	YES	NO				
294	007318 HAZELS BRANCH RD	1	B	42	61	64					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	65	4	NO	NO	65	4	NO	NO				
295	007350 HAZELS BRANCH RD	1	B	42	63	66					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	67	4	YES	NO	67	4	YES	NO				
296	007391 DIAMOND CT	1	B	42	54	56					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	57	3	NO	NO	56	2	NO	NO				
297	000035 STONEY CREEK LN	1	B	42	48	51					62	14	NO	YES	62	14	NO	YES	51	3	NO	NO	51	3	NO	NO				
298	000038 STONEY CREEK LN	1	B	42	48	51					61	13	NO	YES	61	13	NO	YES	52	4	NO	NO	52	4	NO	NO				
299	000034 STONEY CREEK LN	1	B	42	48	51					61	13	NO	YES	61	13	NO	YES	51	3	NO	NO	51	3	NO	NO				
300	000029 STONEY CREEK LN	1	B	42	49	52					63	14	NO	YES	63	14	NO	YES	53	4	NO	NO	53	4	NO	NO				
301	007395 DIAMOND CT	1	B	42	53	56					66	13	YES	YES	66	13	YES	YES	56	3	NO	NO	56	3	NO	NO				
302	000025 STONEY CREEK LN	1	B	42	52	54					65	13	NO	YES	65	13	NO	YES	55	3	NO	NO	55	3	NO	NO				
303	000030 STONEY CREEK LN	1	B	42	49	52					61	12	NO	YES	61	12	NO	YES	52	3	NO	NO	52	3	NO	NO				
304	000026 STONEY CREEK LN	1	B	42	50	53					62	12	NO	YES	62	12	NO	YES	54	4	NO	NO	54	4	NO	NO				
305	000022 STONEY CREEK LN	1	B	42	51	54					63	12	NO	YES	63	12	NO	YES	55	4	NO	NO	54	3	NO	NO				
306	000018 STONEY CREEK LN	1	B	42	51	55					64	13	NO	YES	64	13	NO	YES	55	4	NO	NO	55	4	NO	NO				
307	007398 YELLOW STONE CT	1	B	42	53	56					67	14	YES	YES	67	14	YES	YES	57	4	NO	NO	57	4	NO	NO				
308	007396 YELLOW STONE CT	1	B	42	52	55					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	56	4	NO	NO	55	3	NO	NO				
309	007392 YELLOW STONE CT	1	B	42	56	60					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	60	4	NO	NO	60	4	NO	NO				
310	007391 YELLOW STONE CT	1	B	42	58	61					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	62	4	NO	NO	62	4	NO	NO				
311	007395 YELLOW STONE CT	1	B	42	59	62					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	64	5	NO	NO	64	5	NO	NO				
312	000011 STONEY CREEK LN	1	B	42	56	60					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	61	5	NO	NO	61	5	NO	NO				
313	000014 STONEY CREEK LN	1	B	42	55	58					66	11	YES	YES	66	11	YES	YES	59	4	NO	NO	59	4	NO	NO				
314	000010 STONEY CREEK LN	1	B	42	56	59					67	11	YES	YES	67	11	YES	YES	60	4	NO	NO	59	3	NO	NO	59	3	NO	NO
315	000006 STONEY CREEK LN	1	B	42	57	60					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	61	4	NO	NO	61	4	NO	NO	60	3	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
316	000003 STONEY CREEK LN	1	B	42	61	65					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	67	6	YES	NO	67	6	YES	NO	66	5	YES	NO
317	000002 STONEY CREEK LN	1	B	42	62	65					R/W	N/A	N/A	NO	R/W	N/A	N/A	NO	67	5	YES	NO	67	5	YES	NO	66	4	YES	NO
318	007445 COLE CT	1	B	42	46	48					56	10	NO	YES	56	10	NO	YES	49	3	NO	NO	49	3	NO	NO				
319	007447 COLE CT	1	B	42	46	49					58	12	NO	YES	58	12	NO	YES	50	4	NO	NO	49	3	NO	NO				
320	000090 COMBINE LN	1	B	42	44	47					55	11	NO	YES	55	11	NO	YES	49	5	NO	NO	48	4	NO	NO				
321	000086 COMBINE LN	1	B	42	46	48					56	10	NO	YES	56	10	NO	YES	49	3	NO	NO	49	3	NO	NO				
322	000083 COMBINE LN	1	B	42	48	51					59	11	NO	YES	59	11	NO	YES	52	4	NO	NO	51	3	NO	NO				
323	000082 COMBINE LN	1	B	42	46	49					55	9	NO	NO	55	9	NO	NO	49	3	NO	NO	49	3	NO	NO				
324	000079 COMBINE LN	1	B	42	48	51					61	13	NO	YES	61	13	NO	YES	52	4	NO	NO	52	4	NO	NO				
325	000078 COMBINE LN	1	B	42	46	49					57	11	NO	YES	57	11	NO	YES	50	4	NO	NO	50	4	NO	NO				
326	000074 COMBINE LN	1	B	42	46	49					55	9	NO	NO	55	9	NO	NO	50	4	NO	NO	50	4	NO	NO				
327	007468 RYE LN	1	B	42	46	48					56	10	NO	YES	56	10	NO	YES	50	4	NO	NO	50	4	NO	NO				
328	000075 COMBINE LN	1	B	42	51	54					62	11	NO	YES	62	11	NO	YES	55	4	NO	NO	55	4	NO	NO				
329	000074 COMBINE LN	1	B	42	46	49					58	12	NO	YES	58	12	NO	YES	49	3	NO	NO	49	3	NO	NO				
330	000071 COMBINE LN	1	B	42	52	55					63	11	NO	YES	63	11	NO	YES	56	4	NO	NO	56	4	NO	NO				
331	007464 RYE LN	1	B	42	43	46					51	8	NO	NO	51	8	NO	NO	47	4	NO	NO	46	3	NO	NO				
332	007460 RYE LN	1	B	42	49	52					56	7	NO	NO	56	7	NO	NO	53	4	NO	NO	52	3	NO	NO				
333	000068 COMBINE LN	1	B	42	48	51					58	10	NO	YES	58	10	NO	YES	52	4	NO	NO	52	4	NO	NO				
334	000067 COMBINE LN	1	B	42	55	58					64	9	NO	NO	64	9	NO	NO	59	4	NO	NO	59	4	NO	NO				
335	000063 COMBINE LN	1	B	42	57	60					65	8	NO	NO	65	8	NO	NO	61	4	NO	NO	60	3	NO	NO				
336	007456 RYE LN	1	B	42	50	53					58	8	NO	NO	58	8	NO	NO	54	4	NO	NO	54	4	NO	NO				
337	007452 RYE LN	1	B	42	51	54					58	7	NO	NO	58	7	NO	NO	55	4	NO	NO	54	3	NO	NO				
338	000059 COMBINE LN	1	B	42	58	61					65	7	NO	NO	65	7	NO	NO	62	4	NO	NO	62	4	NO	NO				
339	000055 COMBINE LN	1	B	42	58	62					65	7	NO	NO	65	7	NO	NO	63	5	NO	NO	63	5	NO	NO	62	4	NO	NO
340	000051 COMBINE LN	1	B	42	58	62					64	6	NO	NO	64	6	NO	NO	64	6	NO	NO	63	5	NO	NO	63	5	NO	NO
341	000047 COMBINE LN	1	B	42	58	61					63	5	NO	NO	63	5	NO	NO	63	5	NO	NO	63	5	NO	NO	63	5	NO	NO
342	000044 COMBINE LN	1	B	42	55	58					62	7	NO	NO	62	7	NO	NO	59	4	NO	NO	58	3	NO	NO	58	3	NO	NO
343	000057 BRIDLE WAY	1	B	42	48	51					56	8	NO	NO	56	8	NO	NO	52	4	NO	NO	51	3	NO	NO				
344	000047 BRIDLE WAY	1	B	42	50	52					57	7	NO	NO	57	7	NO	NO	54	4	NO	NO	53	3	NO	NO				
345	000027 BRIDLE WAY	1	B	42	49	52					55	6	NO	NO	55	6	NO	NO	53	4	NO	NO	53	4	NO	NO				
346	000027 BRIDLE WAY	1	B	42	54	57					60	6	NO	NO	60	6	NO	NO	58	4	NO	NO	58	4	NO	NO	58	4	NO	NO
347	000043 COMBINE LN	1	B	42	58	62					63	5	NO	NO	63	5	NO	NO	64	6	NO	NO	64	6	NO	NO	63	5	NO	NO
348	000007 BRIDLE WAY	1	B	42	60	64					63	3	NO	NO	63	3	NO	NO	66	6	YES	NO	66	6	YES	NO	66	6	YES	NO
349	000029 COMBINE LN	1	B	42	61	64					63	2	NO	NO	63	2	NO	NO	67	6	YES	NO	66	5	YES	NO	66	5	YES	NO
350	000026 COMBINE LN	1	B	42	57	60					61	4	NO	NO	61	4	NO	NO	62	5	NO	NO	61	4	NO	NO	61	4	NO	NO
351	000030 COMBINE LN	1	B	42	56	58					60	4	NO	NO	60	4	NO	NO	60	4	NO	NO	59	3	NO	NO	59	3	NO	NO
352	000040 BRIDLE WAY	1	B	42	54	56					59	5	NO	NO	59	5	NO	NO	57	3	NO	NO	57	3	NO	NO	57	3	NO	NO
353	000050 BRIDLE WAY	1	B	42	51	53					56	5	NO	NO	56	5	NO	NO	54	3	NO	NO	53	2	NO	NO				
354	000135 HEWETT-BURTON RD	1	B	42	61	66													66	5	YES	NO	66	5	YES	NO	66	5	YES	NO
355	000125 HEWETT-BURTON RD	1	B	42	61	65													65	4	NO	NO	65	4	NO	NO	66	5	YES	NO
356	000098 STONE FURROW TRL	1	B	42	50	53													53	3	NO	NO	53	3	NO	NO	53	3	NO	NO
357	000094 STONE FURROW TRL	1	B	42	51	54													54	3	NO	NO	54	3	NO	NO	54	3	NO	NO
358	000115 HEWETT-BURTON RD	1	B	42	61	66													66	5	YES	NO	66	5	YES	NO	66	5	YES	NO
359	000095 HEWETT-BURTON RD	1	B	42	61	65													65	4	NO	NO	65	4	NO	NO	65	4	NO	NO
360	007797 MORGAN CREEK RD	1	B	42	68	73													73	5	YES	NO	73	5	YES	NO	73	5	YES	NO
361	007793 MORGAN CREEK RD	1	B	42	53	57													58	5	NO	NO	58	5	NO	NO	58	5	NO	NO
362	007789 MORGAN CREEK RD	1	B	42	53	55													57	4	NO	NO	56	3	NO	NO	57	4	NO	NO
363	007781 MORGAN CREEK RD	1	B	42	51	53													55	4	NO	NO	55	4	NO	NO	55	4	NO	NO
364	007775 MORGAN CREEK RD	1	B	42	52	53													55	3	NO	NO	54	2	NO	NO	55	3	NO	NO
365	007766 MORGAN CREEK RD	1	B	42	56	57													58	2	NO	NO	57	1	NO	NO	57	1	NO	NO
366	007770 MORGAN CREEK RD	1	B	42	57	58													59	2	NO	NO	59	2	NO	NO	59	2	NO	NO
367	007774 MORGAN CREEK RD	1	B	42	58	58													60	2	NO	NO	60	2	NO	NO	60	2	NO	NO
368	007778 MORGAN CREEK RD	1	B	42	57	58													59	2	NO	NO	59	2	NO	NO	59	2	NO	NO
369	007782 MORGAN CREEK RD	1	B	42	55	57													59	4	NO	NO	58	3	NO	NO	59	4	NO	NO
370	007786 MORGAN CREEK RD	1	B	42	55	57													59	4	NO	NO	59	4	NO	NO	59	4	NO	NO
371	007790 MORGAN CREEK RD	1	B	42	56	58													61	5	NO	NO	62	6	NO	NO	61	5	NO	NO
372	007794 MORGAN CREEK RD	1	B	42	58	60													64	6	NO	NO	65	7	NO	NO	64	6	NO	NO
373	000065 HEWETT-BURTON RD	1	B	42	63	67													69	6	YES	NO	69	6	YES	NO	69	6	YES	NO
374	000051 MIMOSA TRL	1	B	42	62	64					66	4	YES	NO	66	4	YES	NO	66	4	YES	NO	65	3	NO	NO	65	3	NO	NO
375	000051 MIMOSA TRL	1	B	42	61	62					64	3	NO	NO	64	3	NO	NO	65	4	NO	NO	64	3	NO	NO	64	3	NO	NO
376	000067 GOODMAN RD	1	B	42	71	72					73	2	YES	NO	73	2	YES	NO	73	2	YES	NO	73	2	YES	NO	73	2	YES	NO
377	000028 MIMOSA TRL	1	B	42	63	64					65	2	NO	NO	65	2	NO	NO	67	4	YES	NO	67	4	YES	NO	67	4	YES	NO
378	000067 GOODMAN RD	1	B	42	61	63					64	3	NO	NO	64	3	NO	NO	65	4	NO	NO	65	4	NO	NO	65	4	NO	NO
379	000067 GOODMAN RD	1	B	42	62	66					66	4	YES	NO	66	4	YES	NO	67	5	YES	NO	67	5	YES	NO	67	5	YES	NO
380	000067 GOODMAN RD	1	B	42	63	67					67	4	YES	NO	67	4	YES	NO	68	5	YES	NO	68	5	YES	NO	68	5	YES	NO
381	000050 GOODMAN RD	1	B	42	61	66	65	4	NO	NO	66	5	YES	NO	66	5	YES	NO	67	6	YES	NO	67	6	YES	NO	67	6	YES	NO
382	007883 OCEAN HWY	1	B	42	72	74	73	1	YES	NO									75	3	YES	NO	75	3	YES	NO	75	3	YES	NO
383	007901 OCEAN HWY	1	B	42	71	72	73	2	YES	NO									74	3	YES	NO	74	3	YES	NO	74	3	YES	NO
384	007909 OCEAN HWY	1	B	42	72	73	73	1	YES	NO									74	2	YES	NO	74	2	YES	NO	74	2	YES	NO
385	007917 OCEAN HWY	1	B	42	72	74	74	2	YES	NO									75	3	YES	NO	75	3	YES	NO	75	3	YES	NO
386	007941 OCEAN HWY	1	B	42	63	65	65	2	NO	NO									66	3	YES	NO	66	3	YES	NO	66	3	YES	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
387	008001 OCEAN HWY	1	B	42	70	71	71	1	YES	NO									72	2	YES	NO	73	3	YES	NO	73	3	YES	NO
388	008001 OCEAN HWY	1	B	42	69	71	71	2	YES	NO									71	2	YES	NO	72	3	YES	NO	73	4	YES	NO
389	000049 CAROL-LYNN DR	1	B	42	57	59	58	1	NO	NO									59	2	NO	NO	59	2	NO	NO	67	10	YES	YES
390	000061 CAROL-LYNN DR	1	B	42	54	56	56	2	NO	NO									57	3	NO	NO	57	3	NO	NO	60	6	NO	NO
391	000071 CAROL-LYNN DR	1	B	42	53	55	54	1	NO	NO									56	3	NO	NO	56	3	NO	NO	60	7	NO	NO
392	000070 CAROL-LYNN DR	1	B	42	53	55	55	2	NO	NO									56	3	NO	NO	56	3	NO	NO	67	14	YES	YES
393	000082 CAROL-LYNN DR	1	B	42	51	54	53	2	NO	NO									54	3	NO	NO	54	3	NO	NO	59	8	NO	NO
394	008122 RACHEL WYND	1	B	42	52	54	54	2	NO	NO									55	3	NO	NO	55	3	NO	NO	57	5	NO	NO
395	008130 RACHEL WYND	1	B	42	53	55	54	1	NO	NO									55	2	NO	NO	55	2	NO	NO	57	4	NO	NO
396	008136 RACHEL WYND	1	B	42	52	55	54	2	NO	NO									55	3	NO	NO	55	3	NO	NO	57	5	NO	NO
397	000050 CAROL-LYNN DR	1	B	42	54	56	56	2	NO	NO									57	3	NO	NO	57	3	NO	NO	57	3	NO	NO
398	008010 OCEAN HWY	1	B	42	68	71	71	3	YES	NO									71	3	YES	NO	71	3	YES	NO	71	3	YES	NO
399	008030 OCEAN HWY	1	B	42	65	68	69	4	YES	NO									68	3	YES	NO	69	4	YES	NO	69	4	YES	NO
400	008030 OCEAN HWY	1	B	42	70	73	74	4	YES	NO									74	4	YES	NO	74	4	YES	NO	74	4	YES	NO
401	008030 OCEAN HWY	1	B	42	63	66	67	4	YES	NO									66	3	YES	NO	66	3	YES	NO	67	4	YES	NO
402	008036 OCEAN HWY	1	B	42	70	73	73	3	YES	NO									73	3	YES	NO	73	3	YES	NO	73	3	YES	NO
403	001115 ELDORA CT	1	B	42	45	48	50	5	NO	NO									50	5	NO	NO	50	5	NO	NO				
404	001113 ELDORA CT	1	B	42	42	42	44	2	NO	NO									44	2	NO	NO	44	2	NO	NO				
405	001111 ELDORA CT	1	B	42	43	46	47	4	NO	NO									47	4	NO	NO	47	4	NO	NO				
406	001109 ELDORA CT	1	B	42	44	47	49	5	NO	NO									49	5	NO	NO	49	5	NO	NO				
407	001107 ELDORA CT	1	B	42	43	46	48	5	NO	NO									48	5	NO	NO	48	5	NO	NO				
408	001105 ELDORA CT	1	B	42	42	43	44	2	NO	NO									44	2	NO	NO	44	2	NO	NO				
409	001108 ELDORA CT	1	B	42	46	48	50	4	NO	NO									50	4	NO	NO	50	4	NO	NO				
410	001055 EVANGELINE DR	1	B	42	46	48	49	3	NO	NO									49	3	NO	NO	49	3	NO	NO				
411	001057 EVANGELINE DR	1	B	42	42	42	42	0	NO	NO									42	0	NO	NO	42	0	NO	NO				
412	001059 EVANGELINE DR	1	B	42	42	42	42	0	NO	NO									42	0	NO	NO	42	0	NO	NO				
413	001058 EVANGELINE DR	1	B	42	42	42	43	1	NO	NO									42	0	NO	NO	42	0	NO	NO				
414	001060 EVANGELINE DR	1	B	42	42	43	43	1	NO	NO									43	1	NO	NO	43	1	NO	NO				
415	001061 EVANGELINE DR	1	B	42	44	45	44	0	NO	NO									44	0	NO	NO	45	1	NO	NO				
416	002501 BRUNSWICK FOREST PKWY	1	B	42	62	62	59	-3	NO	NO									52	-10	NO	NO	59	-3	NO	NO				
416.1	001007 EVANGELINE DRIVE	1	C	42	51	52	57	6	NO	NO									57	6	NO	NO	57	6	NO	NO				
417	000029 OLD LANVALE RD	1	B	42	61	63	63	2	NO	NO									64	3	NO	NO	64	3	NO	NO	64	3	NO	NO
418	000029 OLD LANVALE RD	1	B	42	58	60	61	3	NO	NO									61	3	NO	NO	61	3	NO	NO	62	4	NO	NO
419	000111 BUCKEYE RD	1	B	42	53	55	55	2	NO	NO									56	3	NO	NO	56	3	NO	NO	56	3	NO	NO
420	000083 OLD LANVALE RD	1	B	42	54	56	56	2	NO	NO									57	3	NO	NO	56	2	NO	NO	57	3	NO	NO
421	OLD LANVALE RD	1	B	42	54	57	57	3	NO	NO									57	3	NO	NO	57	3	NO	NO	57	3	NO	NO
422	000094 OLD LANVALE RD	1	B	42	52	55	54	2	NO	NO									54	2	NO	NO	54	2	NO	NO	54	2	NO	NO
423	000094 OLD LANVALE RD	1	B	42	50	53	52	2	NO	NO									53	3	NO	NO	53	3	NO	NO	53	3	NO	NO
424	000121 LANVALE RD	1	B	42	59	63	63	4	NO	NO									64	5	NO	NO	63	4	NO	NO	63	4	NO	NO
425	000121 LANVALE RD	1	B	42	58	62	62	4	NO	NO									62	4	NO	NO	62	4	NO	NO	62	4	NO	NO
426	000119 LANVALE RD	1	B	42	64	67	67	3	YES	NO									68	4	YES	NO	67	3	YES	NO	67	3	YES	NO
427	008310 DOVE WAY	1	B	42	60	64	64	4	NO	NO									65	5	NO	NO	64	4	NO	NO	64	4	NO	NO
428	008327 CLAY RD	1	B	42	56	60	61	5	NO	NO									61	5	NO	NO	61	5	NO	NO	61	5	NO	NO
429	008330 DOVE WAY	1	B	42	55	58	59	4	NO	NO									59	4	NO	NO	59	4	NO	NO	59	4	NO	NO
430	008335 CLAY RD	1	B	42	55	58	59	4	NO	NO									59	4	NO	NO	58	3	NO	NO	59	4	NO	NO
431	008343 CLAY RD	1	B	42	52	55	56	4	NO	NO									56	4	NO	NO	56	4	NO	NO	56	4	NO	NO
432	008350 DOVE WAY	1	B	42	51	55	55	4	NO	NO									55	4	NO	NO	55	4	NO	NO	55	4	NO	NO
433	008350 DOVE WAY	1	B	42	52	55	55	3	NO	NO									56	4	NO	NO	55	3	NO	NO	55	3	NO	NO
434	008351 CLAY RD	1	B	42	52	55	55	3	NO	NO									55	3	NO	NO	55	3	NO	NO	55	3	NO	NO
435	008367 CLAY RD	1	B	42	54	58	57	3	NO	NO									56	2	NO	NO	56	2	NO	NO	57	3	NO	NO
436	008367 CLAY RD	1	B	42	52	55	56	4	NO	NO									55	3	NO	NO	55	3	NO	NO	56	4	NO	NO
437	008367 CLAY RD	1	B	42	51	55	55	4	NO	NO									55	4	NO	NO	55	4	NO	NO	55	4	NO	NO
438	008372 DOVE WAY	1	B	42	50	53	53	3	NO	NO									54	4	NO	NO	54	4	NO	NO	54	4	NO	NO
438.1	001144 E. CUTLAR CROSSING	1	E	42	61	64	65	4	NO	NO									66	5	NO	NO	66	5	NO	NO	68	7	NO	NO
438.2	001112 E. CUTLAR CROSSING	1	E	42	60	62	61	1	NO	NO									61	1	NO	NO	60	0	NO	NO	64	4	NO	NO
438.3	001174 TURLINGTON AVE	1	E	42	54	58	59	5	NO	NO									57	3	NO	NO	57	3	NO	NO	59	5	NO	NO
438.4	001175 TURLINGTON AVE	1	E	42	55	58	60	5	NO	NO									58	3	NO	NO	58	3	NO	NO	60	5	NO	NO
439	006768 CAMPBELLS RIDGE DR	1	B	42	47	49					61	14	NO	YES	61	14	NO	YES	48	1	NO	NO	48	1	NO	NO				
440	006772 CAMPBELLS RIDGE DR	1	B	42	47	49					61	14	NO	YES	61	14	NO	YES	48	1	NO	NO	47	0	NO	NO				
441	006776 CAMPBELLS RIDGE DR	1	B	42	46	48					60	14	NO	YES	60	14	NO	YES	47	1	NO	NO	47	1	NO	NO				
442	006780 CAMPBELLS RIDGE DR	1	B	42	46	48					59	13	NO	YES	59	13	NO	YES	47	1	NO	NO	46	0	NO	NO				
443	000025 COLLINS WAY	1	B	52	57	58	61	4	NO	NO									59	2	NO	NO	59	2	NO	NO	60	3	NO	NO
444	000035 COLLINS WAY	1	B	52	58	58	61	3	NO	NO									59	1	NO	NO	60	2	NO	NO	61	3	NO	NO
444.1	008951 OCEAN HWY E	1	E	52	71	72	73	2	YES	NO									72	1	YES	NO	72	1	YES	NO	74	3	YES	NO
445	001005 CUMBERTREE CT	1	B	52	54	56	57	3	NO	NO									56	2	NO	NO	57	3	NO	NO	58	4	NO	NO
446	001004 CUMBERTREE CT	1	B	52	52	53	54	2	NO	NO									54	2	NO	NO	54	2	NO	NO	54	2	NO	NO
447	001001 CUMBERTREE CT	1	B	52	58	60	61	3	NO	NO									61	3	NO	NO	61	3	NO	NO	61	3	NO	NO
448	001002 CUMBERTREE CT	1	B	52	57	61	61	4	NO	NO									61	4	NO	NO	61	4	NO	NO	61	4	NO	NO
449	001103 GRANDIFLORA DR	1	B	52	62	65	65	3	NO	NO									65	3	NO	NO	65	3	NO	NO	66	4	YES	NO
450	001105 GRANDIFLORA DR	1	B	52	55	58	58	3	NO	NO									58	3	NO	NO	58	3	NO	NO	58	3	NO	NO
451	001001 KOBUS CT	1	B	52	58	62	62	4	NO	NO									62	4	NO	NO	62	4	NO	NO	62	4	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
452	001003 KOBUS CT	1	B	52	53	56	56	3	NO	NO									56	3	NO	NO	57	4	NO	NO	56	3	NO	NO
453	001005 KOBUS CT	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
454	001107 GRANDIFLORA DR	1	B	52	54	57	57	3	NO	NO									57	3	NO	NO	57	3	NO	NO	58	4	NO	NO
455	001109 GRANDIFLORA DR	1	B	52	54	57	57	3	NO	NO									57	3	NO	NO	57	3	NO	NO	58	4	NO	NO
456	001002 KOBUS CT	1	B	52	60	63	63	3	NO	NO									63	3	NO	NO	63	3	NO	NO	63	3	NO	NO
457	001004 KOBUS CT	1	B	52	52	55	55	3	NO	NO									55	3	NO	NO	55	3	NO	NO	55	3	NO	NO
458	001111 GRANDIFLORA DR	1	B	52	54	57	57	3	NO	NO									57	3	NO	NO	57	3	NO	NO	58	4	NO	NO
459	001122 GRANDIFLORA DR	1	B	52	56	60	60	4	NO	NO									60	4	NO	NO	60	4	NO	NO	60	4	NO	NO
460	001113 GRANDIFLORA DR	1	B	52	52	54	54	2	NO	NO									54	2	NO	NO	54	2	NO	NO	56	4	NO	NO
461	001124 GRANDIFLORA DR	1	B	52	54	58	58	4	NO	NO									58	4	NO	NO	58	4	NO	NO	58	4	NO	NO
462	001115 GRANDIFLORA DR	1	B	52	55	58	58	3	NO	NO									57	2	NO	NO	58	3	NO	NO	58	3	NO	NO
463	001117 GRANDIFLORA DR	1	B	52	52	54	54	2	NO	NO									54	2	NO	NO	54	2	NO	NO	55	3	NO	NO
464	001117 GRANDIFLORA DR	1	B	52	52	55	55	3	NO	NO									55	3	NO	NO	55	3	NO	NO	55	3	NO	NO
465	001108 NEW POINTE BLVD	1	E	52	66	67	66	0	NO	NO									66	0	NO	NO	67	1	NO	NO	69	3	NO	NO
465.1	001120 TOWNE LAKE DR	1	E	52	68	68	69	1	NO	NO									70	2	NO	NO	70	2	NO	NO	71	3	YES	NO
466	001035 GRANDIFLORA DR	1	E	52	61	63	63	2	NO	NO									63	2	NO	NO	63	2	NO	NO	65	4	NO	NO
467	001212 MAGNOLIA VILLAGE WAY	1	D	27	31	32	31	0	NO	NO									31	0	NO	NO	32	1	NO	NO	34	3	NO	NO
468	000035 BENTON BROWN WAY	1	B	52	58	60	59	1	NO	NO									58	0	NO	NO	60	2	NO	NO	62	4	NO	NO
469	000485 OLDE WATERFORD WAY	1	D	17	33	33	34	1	NO	NO									34	1	NO	NO	34	1	NO	NO	26	-7	NO	NO
469.1	002310 OLDE REGENT WAY	1	E	52	58	59																					61	3	NO	NO
470	001008 HUNTERSTONE DR	1	B	52	60	60	60	0	NO	NO									60	0	NO	NO	60	0	NO	NO	61	1	NO	NO
471	001008 HUNTERSTONE DR	1	B	52	62	62	62	0	NO	NO									62	0	NO	NO	62	0	NO	NO	63	1	NO	NO
472	001008 HUNTERSTONE DR	1	B	52	66	66	66	0	YES	NO									66	0	YES	NO	66	0	YES	NO	66	0	YES	NO
473	001008 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
474	001008 HUNTERSTONE DR	1	B	52	57	57	57	0	NO	NO									57	0	NO	NO	57	0	NO	NO	57	0	NO	NO
475	001008 HUNTERSTONE DR	1	B	52	54	54	54	0	NO	NO									54	0	NO	NO	54	0	NO	NO	54	0	NO	NO
476	001008 HUNTERSTONE DR	1	B	52	54	55	55	1	NO	NO									55	1	NO	NO	55	1	NO	NO	55	1	NO	NO
477	001008 HUNTERSTONE DR	1	B	52	55	55	55	0	NO	NO									55	0	NO	NO	56	1	NO	NO	56	1	NO	NO
478	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	54	2	NO	NO
479	001010 HUNTERSTONE DR	1	B	52	53	53	53	0	NO	NO									53	0	NO	NO	54	1	NO	NO	55	2	NO	NO
480	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
481	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
482	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
483	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
484	001010 HUNTERSTONE DR	1	B	52	53	53	53	0	NO	NO									53	0	NO	NO	53	0	NO	NO	54	1	NO	NO
485	001010 HUNTERSTONE DR	1	B	52	53	53	53	0	NO	NO									53	0	NO	NO	53	0	NO	NO	54	1	NO	NO
486	001006 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
487	001006 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
488	001006 HUNTERSTONE DR	1	B	52	57	57	57	0	NO	NO									57	0	NO	NO	57	0	NO	NO	57	0	NO	NO
489	001006 HUNTERSTONE DR	1	B	52	59	59	59	0	NO	NO									59	0	NO	NO	59	0	NO	NO	59	0	NO	NO
490	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
491	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
492	001006 HUNTERSTONE DR	1	B	52	62	62	62	0	NO	NO									62	0	NO	NO	62	0	NO	NO	62	0	NO	NO
493	001006 HUNTERSTONE DR	1	B	52	59	60	60	1	NO	NO									60	1	NO	NO	60	1	NO	NO	60	1	NO	NO
494	001008 HUNTERSTONE DR	1	B	52	62	62	62	0	NO	NO									62	0	NO	NO	62	0	NO	NO	63	1	NO	NO
495	001008 HUNTERSTONE DR	1	B	52	63	64	63	0	NO	NO									63	0	NO	NO	64	1	NO	NO	64	1	NO	NO
496	001008 HUNTERSTONE DR	1	B	52	66	66	66	0	YES	NO									66	0	YES	NO	66	0	YES	NO	66	0	YES	NO
497	001008 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	66	1	YES	NO
498	001008 HUNTERSTONE DR	1	B	52	59	59	59	0	NO	NO									59	0	NO	NO	59	0	NO	NO	59	0	NO	NO
499	001008 HUNTERSTONE DR	1	B	52	56	56	56	0	NO	NO									56	0	NO	NO	56	0	NO	NO	56	0	NO	NO
500	001008 HUNTERSTONE DR	1	B	52	56	57	57	1	NO	NO									57	1	NO	NO	57	1	NO	NO	58	2	NO	NO
501	001008 HUNTERSTONE DR	1	B	52	57	58	58	1	NO	NO									58	1	NO	NO	58	1	NO	NO	58	1	NO	NO
502	001010 HUNTERSTONE DR	1	B	52	53	54	54	1	NO	NO									54	1	NO	NO	55	2	NO	NO	56	3	NO	NO
503	001010 HUNTERSTONE DR	1	B	52	55	55	56	1	NO	NO									56	1	NO	NO	56	1	NO	NO	57	2	NO	NO
504	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
505	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
506	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
507	001010 HUNTERSTONE DR	1	B	52	53	53	52	-1	NO	NO									52	-1	NO	NO	52	-1	NO	NO	53	0	NO	NO
508	001010 HUNTERSTONE DR	1	B	52	55	55	55	0	NO	NO									55	0	NO	NO	55	0	NO	NO	56	1	NO	NO
509	001010 HUNTERSTONE DR	1	B	52	55	55	55	0	NO	NO									55	0	NO	NO	55	0	NO	NO	56	1	NO	NO
510	001006 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
511	001006 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
512	001006 HUNTERSTONE DR	1	B	52	59	59	59	0	NO	NO									59	0	NO	NO	59	0	NO	NO	59	0	NO	NO
513	001006 HUNTERSTONE DR	1	B	52	60	60	60	0	NO	NO									60	0	NO	NO	60	0	NO	NO	61	1	NO	NO
514	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	66	1	YES	NO
515	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
516	001006 HUNTERSTONE DR	1	B	52	63	63	63	0	NO	NO									63	0	NO	NO	63	0	NO	NO	63	0	NO	NO
517	001006 HUNTERSTONE DR	1	B	52	61	61	61	0	NO	NO									61	0	NO	NO	61	0	NO	NO	62	1	NO	NO
518	001008 HUNTERSTONE DR	1	B	52	62	63	63	1	NO	NO									63	1	NO	NO	63	1	NO	NO	63	1	NO	NO
519	001008 HUNTERSTONE DR	1	B	52	63	64	64	1	NO	NO									63	0	NO	NO	64	1	NO	NO	64	1	NO	NO
520	001008 HUNTERSTONE DR	1	B	52	66	66	66	0	YES	NO									66	0	YES	NO	66	0	YES	NO	66	0	YES	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
521	001008 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
522	001008 HUNTERSTONE DR	1	B	52	59	59	59	0	NO	NO									59	0	NO	NO	60	1	NO	NO	60	1	NO	NO
523	001008 HUNTERSTONE DR	1	B	52	57	57	57	0	NO	NO									57	0	NO	NO	57	0	NO	NO	58	1	NO	NO
524	001008 HUNTERSTONE DR	1	B	52	57	58	58	1	NO	NO									58	1	NO	NO	58	1	NO	NO	59	2	NO	NO
525	001008 HUNTERSTONE DR	1	B	52	58	58	59	1	NO	NO									58	0	NO	NO	59	1	NO	NO	59	1	NO	NO
526	001010 HUNTERSTONE DR	1	B	52	55	55	56	1	NO	NO									56	1	NO	NO	56	1	NO	NO	57	2	NO	NO
527	001010 HUNTERSTONE DR	1	B	52	56	57	57	1	NO	NO									57	1	NO	NO	57	1	NO	NO	58	2	NO	NO
528	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
529	001010 HUNTERSTONE DR	1	B	52	52	52	52	0	NO	NO									52	0	NO	NO	52	0	NO	NO	52	0	NO	NO
530	001010 HUNTERSTONE DR	1	B	52	53	53	53	0	NO	NO									53	0	NO	NO	53	0	NO	NO	54	1	NO	NO
531	001010 HUNTERSTONE DR	1	B	52	54	54	54	0	NO	NO									53	-1	NO	NO	54	0	NO	NO	54	0	NO	NO
532	001010 HUNTERSTONE DR	1	B	52	56	56	56	0	NO	NO									56	0	NO	NO	56	0	NO	NO	57	1	NO	NO
533	001010 HUNTERSTONE DR	1	B	52	56	56	56	0	NO	NO									56	0	NO	NO	56	0	NO	NO	57	1	NO	NO
534	001006 HUNTERSTONE DR	1	B	52	52	52	53	1	NO	NO									53	1	NO	NO	53	1	NO	NO	54	2	NO	NO
535	001006 HUNTERSTONE DR	1	B	52	52	52	53	1	NO	NO									53	1	NO	NO	53	1	NO	NO	54	2	NO	NO
536	001006 HUNTERSTONE DR	1	B	52	59	59	59	0	NO	NO									59	0	NO	NO	59	0	NO	NO	59	0	NO	NO
537	001006 HUNTERSTONE DR	1	B	52	60	60	60	0	NO	NO									60	0	NO	NO	60	0	NO	NO	61	1	NO	NO
538	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
539	001006 HUNTERSTONE DR	1	B	52	65	65	65	0	NO	NO									65	0	NO	NO	65	0	NO	NO	65	0	NO	NO
540	001006 HUNTERSTONE DR	1	B	52	63	63	63	0	NO	NO									63	0	NO	NO	63	0	NO	NO	63	0	NO	NO
541	001006 HUNTERSTONE DR	1	B	52	61	61	61	0	NO	NO									61	0	NO	NO	61	0	NO	NO	62	1	NO	NO
542	000412 HAWTHORNE LOOP RD	1	B	52	62	63																					66	4	YES	NO
543	000412 HAWTHORNE LOOP RD	1	B	52	61	62																					65	4	NO	NO
544	000412 HAWTHORNE LOOP RD	1	B	52	60	60																					63	3	NO	NO
545	000412 HAWTHORNE LOOP RD	1	B	52	59	60																					63	4	NO	NO
546	000412 HAWTHORNE LOOP RD	1	B	52	55	57																					60	5	NO	NO
547	000412 HAWTHORNE LOOP RD	1	B	52	55	57																					61	6	NO	NO
548	000412 HAWTHORNE LOOP RD	1	B	52	58	60																					64	6	NO	NO
549	000412 HAWTHORNE LOOP RD	1	B	52	60	61																					65	5	NO	NO
550	000411 HAWTHORNE LOOP RD	1	B	52	61	62																					66	5	YES	NO
551	000411 HAWTHORNE LOOP RD	1	B	52	60	61																					65	5	NO	NO
552	000411 HAWTHORNE LOOP RD	1	B	52	58	59																					62	4	NO	NO
553	000411 HAWTHORNE LOOP RD	1	B	52	57	58																					61	4	NO	NO
554	000411 HAWTHORNE LOOP RD	1	B	52	55	57																					60	5	NO	NO
555	000411 HAWTHORNE LOOP RD	1	B	52	56	58																					61	5	NO	NO
556	000411 HAWTHORNE LOOP RD	1	B	52	58	60																					64	6	NO	NO
557	000411 HAWTHORNE LOOP RD	1	B	52	59	61																					65	6	NO	NO
558	000431 HAWTHORNE LOOP RD	1	B	52	53	54																					56	3	NO	NO
559	000404 HAWTHORNE LOOP RD	1	B	52	52	53																					55	3	NO	NO
560	000404 HAWTHORNE LOOP RD	1	B	52	52	53																					54	2	NO	NO
561	000404 HAWTHORNE LOOP RD	1	B	52	52	54																					55	3	NO	NO
562	000404 HAWTHORNE LOOP RD	1	B	52	52	52																					52	0	NO	NO
563	000404 HAWTHORNE LOOP RD	1	B	52	52	52																					52	0	NO	NO
564	000404 HAWTHORNE LOOP RD	1	B	52	52	52																					53	1	NO	NO
565	000404 HAWTHORNE LOOP RD	1	B	52	52	53																					53	1	NO	NO
566	000435 HAWTHORNE LOOP RD	1	B	52	53	54																					56	3	NO	NO
567	000435 HAWTHORNE LOOP RD	1	B	52	52	52																					55	3	NO	NO
568	000435 HAWTHORNE LOOP RD	1	B	52	52	52																					54	2	NO	NO
569	000435 HAWTHORNE LOOP RD	1	B	52	52	52																					54	2	NO	NO
570	000435 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
571	000435 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
572	000435 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
573	000435 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
573.1	000436 HAWTHORNE LOOP RD	2	B	52	58	60																					60	2	NO	NO
574	000430 HAWTHORNE LOOP RD	1	B	52	54	55																					55	1	NO	NO
575	000430 HAWTHORNE LOOP RD	1	B	52	54	55																					55	1	NO	NO
576	000430 HAWTHORNE LOOP RD	1	B	52	54	55																					55	1	NO	NO
577	000430 HAWTHORNE LOOP RD	1	B	52	54	55																					55	1	NO	NO
578	000430 HAWTHORNE LOOP RD	1	B	52	54	55																					57	3	NO	NO
579	000430 HAWTHORNE LOOP RD	1	B	52	53	54																					56	3	NO	NO
580	000430 HAWTHORNE LOOP RD	1	B	52	52	53																					54	2	NO	NO
581	000430 HAWTHORNE LOOP RD	1	B	52	52	52																					54	2	NO	NO
582	000424 HAWTHORNE LOOP RD	1	B	52	52	53																					55	3	NO	NO
583	000424 HAWTHORNE LOOP RD	1	B	52	52	52																					55	3	NO	NO
584	000424 HAWTHORNE LOOP RD	1	B	52	53	55																					56	3	NO	NO
585	000424 HAWTHORNE LOOP RD	1	B	52	53	55																					56	3	NO	NO
586	000424 HAWTHORNE LOOP RD	1	B	52	55	57																					57	2	NO	NO
587	000424 HAWTHORNE LOOP RD	1	B	52	55	57																					58	3	NO	NO
588	000424 HAWTHORNE LOOP RD	1	B	52	53	55																					57	4	NO	NO
589	000424 HAWTHORNE LOOP RD	1	B	52	53	54																					56	3	NO	NO
590	000415 HAWTHORNE LOOP RD	1	B	52	52	52																					53	1	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.

^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
591	000415 HAWTHORNE LOOP RD	1	B	52	52	53																					54	2	NO	NO
592	000415 HAWTHORNE LOOP RD	1	B	52	54	55																					57	3	NO	NO
593	000415 HAWTHORNE LOOP RD	1	B	52	56	57																					59	3	NO	NO
594	000415 HAWTHORNE LOOP RD	1	B	52	61	62																					65	4	NO	NO
595	000415 HAWTHORNE LOOP RD	1	B	52	61	62																					65	4	NO	NO
596	000415 HAWTHORNE LOOP RD	1	B	52	60	62																					65	5	NO	NO
597	000415 HAWTHORNE LOOP RD	1	B	52	60	62																					65	5	NO	NO
598	000423 HAWTHORNE LOOP RD	1	B	52	58	59																					63	5	NO	NO
599	000423 HAWTHORNE LOOP RD	1	B	52	58	59																					63	5	NO	NO
600	000423 HAWTHORNE LOOP RD	1	B	52	55	57																					60	5	NO	NO
601	000423 HAWTHORNE LOOP RD	1	B	52	55	56																					59	4	NO	NO
602	000423 HAWTHORNE LOOP RD	1	B	52	53	54																					57	4	NO	NO
603	000423 HAWTHORNE LOOP RD	1	B	52	53	55																					58	5	NO	NO
604	000423 HAWTHORNE LOOP RD	1	B	52	56	57																					60	4	NO	NO
605	000423 HAWTHORNE LOOP RD	1	B	52	58	59																					63	5	NO	NO
606	000420 HAWTHORNE LOOP RD	1	B	52	60	61																					66	6	YES	NO
607	000420 HAWTHORNE LOOP RD	1	B	52	59	60																					65	6	NO	NO
608	000420 HAWTHORNE LOOP RD	1	B	52	57	59																					63	6	NO	NO
609	000420 HAWTHORNE LOOP RD	1	B	52	57	59																					63	6	NO	NO
610	000420 HAWTHORNE LOOP RD	1	B	52	58	60																					61	3	NO	NO
611	000420 HAWTHORNE LOOP RD	1	B	52	58	61																					61	3	NO	NO
612	000420 HAWTHORNE LOOP RD	1	B	52	60	62																					63	3	NO	NO
613	000420 HAWTHORNE LOOP RD	1	B	52	60	62																					63	3	NO	NO
614	000412 HAWTHORNE LOOP RD	1	B	52	66	67																					69	3	YES	NO
615	000412 HAWTHORNE LOOP RD	1	B	52	65	65																					68	3	YES	NO
616	000412 HAWTHORNE LOOP RD	1	B	52	64	64																					66	2	YES	NO
617	000412 HAWTHORNE LOOP RD	1	B	52	64	64																					66	2	YES	NO
618	000412 HAWTHORNE LOOP RD	1	B	52	58	60																					64	6	NO	NO
619	000412 HAWTHORNE LOOP RD	1	B	52	60	61																					64	4	NO	NO
620	000412 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
621	000412 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
622	000411 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
623	000411 HAWTHORNE LOOP RD	1	B	52	65	65																					67	2	YES	NO
624	000411 HAWTHORNE LOOP RD	1	B	52	62	63																					65	3	NO	NO
625	000411 HAWTHORNE LOOP RD	1	B	52	61	62																					65	4	NO	NO
626	000411 HAWTHORNE LOOP RD	1	B	52	60	62																					64	4	NO	NO
627	000411 HAWTHORNE LOOP RD	1	B	52	62	63																					65	3	NO	NO
628	000411 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
629	000411 HAWTHORNE LOOP RD	1	B	52	65	67																					68	3	YES	NO
630	000404 HAWTHORNE LOOP RD	1	B	52	57	58																					61	4	NO	NO
631	000404 HAWTHORNE LOOP RD	1	B	52	56	57																					61	5	NO	NO
632	000404 HAWTHORNE LOOP RD	1	B	52	57	58																					60	3	NO	NO
633	000404 HAWTHORNE LOOP RD	1	B	52	57	59																					61	4	NO	NO
634	000404 HAWTHORNE LOOP RD	1	B	52	54	55																					55	1	NO	NO
635	000404 HAWTHORNE LOOP RD	1	B	52	53	55																					55	2	NO	NO
636	000404 HAWTHORNE LOOP RD	1	B	52	54	56																					56	2	NO	NO
637	000404 HAWTHORNE LOOP RD	1	B	52	55	57																					57	2	NO	NO
638	000435 HAWTHORNE LOOP RD	1	B	52	56	57																					60	4	NO	NO
639	000435 HAWTHORNE LOOP RD	1	B	52	54	55																					58	4	NO	NO
640	000435 HAWTHORNE LOOP RD	1	B	52	56	57																					58	2	NO	NO
641	000435 HAWTHORNE LOOP RD	1	B	52	55	57																					58	3	NO	NO
642	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
643	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
644	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
645	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
646	000430 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
647	000430 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
648	000430 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
649	000430 HAWTHORNE LOOP RD	1	B	52	58	60																					60	2	NO	NO
650	000430 HAWTHORNE LOOP RD	1	B	52	57	59																					60	3	NO	NO
651	000430 HAWTHORNE LOOP RD	1	B	52	57	58																					60	3	NO	NO
652	000430 HAWTHORNE LOOP RD	1	B	52	55	57																					59	4	NO	NO
653	000430 HAWTHORNE LOOP RD	1	B	52	55	57																					59	4	NO	NO
654	000424 HAWTHORNE LOOP RD	1	B	52	55	57																					59	4	NO	NO
655	000424 HAWTHORNE LOOP RD	1	B	52	55	56																					59	4	NO	NO
656	000424 HAWTHORNE LOOP RD	1	B	52	58	60																					61	3	NO	NO
657	000424 HAWTHORNE LOOP RD	1	B	52	59	60																					61	2	NO	NO
658	000424 HAWTHORNE LOOP RD	1	B	52	60	62																					62	2	NO	NO
659	000424 HAWTHORNE LOOP RD	1	B	52	61	62																					63	2	NO	NO
660	000424 HAWTHORNE LOOP RD	1	B	52	58	59																					61	3	NO	NO
661	000424 HAWTHORNE LOOP RD	1	B	52	56	58																					60	4	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
662	000415 HAWTHORNE LOOP RD	1	B	52	53	54																					56	3	NO	NO
663	000415 HAWTHORNE LOOP RD	1	B	52	54	55																					56	2	NO	NO
664	000415 HAWTHORNE LOOP RD	1	B	52	57	57																					60	3	NO	NO
665	000415 HAWTHORNE LOOP RD	1	B	52	60	60																					62	2	NO	NO
666	000415 HAWTHORNE LOOP RD	1	B	52	67	68																					70	3	YES	NO
667	000415 HAWTHORNE LOOP RD	1	B	52	67	68																					70	3	YES	NO
668	000415 HAWTHORNE LOOP RD	1	B	52	67	68																					70	3	YES	NO
669	000415 HAWTHORNE LOOP RD	1	B	52	67	68																					69	2	YES	NO
670	000423 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
671	000423 HAWTHORNE LOOP RD	1	B	52	64	64																					67	3	YES	NO
672	000423 HAWTHORNE LOOP RD	1	B	52	60	62																					64	4	NO	NO
673	000423 HAWTHORNE LOOP RD	1	B	52	59	61																					64	5	NO	NO
674	000423 HAWTHORNE LOOP RD	1	B	52	57	59																					61	4	NO	NO
675	000423 HAWTHORNE LOOP RD	1	B	52	58	59																					62	4	NO	NO
676	000423 HAWTHORNE LOOP RD	1	B	52	62	63																					64	2	NO	NO
677	000423 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
678	000420 HAWTHORNE LOOP RD	1	B	52	66	67																					68	2	YES	NO
679	000420 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
680	000420 HAWTHORNE LOOP RD	1	B	52	63	64																					66	3	YES	NO
681	000420 HAWTHORNE LOOP RD	1	B	52	63	64																					66	3	YES	NO
682	000420 HAWTHORNE LOOP RD	1	B	52	64	66																					67	3	YES	NO
683	000420 HAWTHORNE LOOP RD	1	B	52	65	66																					67	2	YES	NO
684	000420 HAWTHORNE LOOP RD	1	B	52	66	68																					68	2	YES	NO
685	000420 HAWTHORNE LOOP RD	1	B	52	67	69																					69	2	YES	NO
686	000412 HAWTHORNE LOOP RD	1	B	52	66	67																					69	3	YES	NO
687	000412 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
688	000412 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
689	000412 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
690	000412 HAWTHORNE LOOP RD	1	B	52	62	63																					64	2	NO	NO
691	000412 HAWTHORNE LOOP RD	1	B	52	62	64																					65	3	NO	NO
692	000412 HAWTHORNE LOOP RD	1	B	52	65	66																					67	2	YES	NO
693	000412 HAWTHORNE LOOP RD	1	B	52	66	67																					68	2	YES	NO
694	000411 HAWTHORNE LOOP RD	1	B	52	66	67																					68	2	YES	NO
695	000411 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
696	000411 HAWTHORNE LOOP RD	1	B	52	64	64																					66	2	YES	NO
697	000411 HAWTHORNE LOOP RD	1	B	52	63	64																					65	2	NO	NO
698	000411 HAWTHORNE LOOP RD	1	B	52	63	64																					65	2	NO	NO
699	000411 HAWTHORNE LOOP RD	1	B	52	64	65																					66	2	YES	NO
700	000411 HAWTHORNE LOOP RD	1	B	52	65	67																					67	2	YES	NO
701	000411 HAWTHORNE LOOP RD	1	B	52	66	67																					68	2	YES	NO
702	000404 HAWTHORNE LOOP RD	1	B	52	60	61																					63	3	NO	NO
703	000404 HAWTHORNE LOOP RD	1	B	52	60	61																					63	3	NO	NO
704	000404 HAWTHORNE LOOP RD	1	B	52	59	60																					63	4	NO	NO
705	000404 HAWTHORNE LOOP RD	1	B	52	60	61																					63	3	NO	NO
706	000404 HAWTHORNE LOOP RD	1	B	52	56	58																					58	2	NO	NO
707	000404 HAWTHORNE LOOP RD	1	B	52	56	58																					58	2	NO	NO
708	000404 HAWTHORNE LOOP RD	1	B	52	57	59																					59	2	NO	NO
709	000404 HAWTHORNE LOOP RD	1	B	52	58	59																					60	2	NO	NO
710	000435 HAWTHORNE LOOP RD	1	B	52	59	60																					61	2	NO	NO
711	000435 HAWTHORNE LOOP RD	1	B	52	57	58																					60	3	NO	NO
712	000435 HAWTHORNE LOOP RD	1	B	52	57	59																					60	3	NO	NO
713	000435 HAWTHORNE LOOP RD	1	B	52	57	58																					59	2	NO	NO
714	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
715	000435 HAWTHORNE LOOP RD	1	B	52	62	64																					64	2	NO	NO
716	000435 HAWTHORNE LOOP RD	1	B	52	63	64																					64	1	NO	NO
717	000435 HAWTHORNE LOOP RD	1	B	52	63	64																					64	1	NO	NO
718	000430 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
719	000430 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
720	000430 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
721	000430 HAWTHORNE LOOP RD	1	B	52	59	61																					61	2	NO	NO
722	000430 HAWTHORNE LOOP RD	1	B	52	60	61																					62	2	NO	NO
723	000430 HAWTHORNE LOOP RD	1	B	52	59	60																					62	3	NO	NO
724	000430 HAWTHORNE LOOP RD	1	B	52	58	60																					61	3	NO	NO
725	000430 HAWTHORNE LOOP RD	1	B	52	59	60																					61	2	NO	NO
726	000424 HAWTHORNE LOOP RD	1	B	52	59	60																					61	2	NO	NO
727	000424 HAWTHORNE LOOP RD	1	B	52	58	59																					61	3	NO	NO
728	000424 HAWTHORNE LOOP RD	1	B	52	61	63																					62	1	NO	NO
729	000424 HAWTHORNE LOOP RD	1	B	52	61	63																					63	2	NO	NO
730	000424 HAWTHORNE LOOP RD	1	B	52	62	64																					63	1	NO	NO
731	000424 HAWTHORNE LOOP RD	1	B	52	63	65																					64	1	NO	NO
732	000424 HAWTHORNE LOOP RD	1	B	52	61	62																					63	2	NO	NO

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* 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
733	000424 HAWTHORNE LOOP RD	1	B	52	60	61																					62	2	NO	NO
734	000415 HAWTHORNE LOOP RD	1	B	52	57	58																					59	2	NO	NO
735	000415 HAWTHORNE LOOP RD	1	B	52	57	58																					59	2	NO	NO
736	000415 HAWTHORNE LOOP RD	1	B	52	59	59																					61	2	NO	NO
737	000415 HAWTHORNE LOOP RD	1	B	52	61	61																					63	2	NO	NO
738	000415 HAWTHORNE LOOP RD	1	B	52	68	69																					70	2	YES	NO
739	000415 HAWTHORNE LOOP RD	1	B	52	68	69																					70	2	YES	NO
740	000415 HAWTHORNE LOOP RD	1	B	52	68	69																					70	2	YES	NO
741	000415 HAWTHORNE LOOP RD	1	B	52	68	69																					70	2	YES	NO
742	000423 HAWTHORNE LOOP RD	1	B	52	65	66																					67	2	YES	NO
743	000423 HAWTHORNE LOOP RD	1	B	52	65	66																					67	2	YES	NO
744	000423 HAWTHORNE LOOP RD	1	B	52	63	64																					65	2	NO	NO
745	000423 HAWTHORNE LOOP RD	1	B	52	62	63																					65	3	NO	NO
746	000423 HAWTHORNE LOOP RD	1	B	52	60	62																					62	2	NO	NO
747	000423 HAWTHORNE LOOP RD	1	B	52	60	62																					63	3	NO	NO
748	000423 HAWTHORNE LOOP RD	1	B	52	63	64																					65	2	NO	NO
749	000423 HAWTHORNE LOOP RD	1	B	52	65	66																					67	2	YES	NO
750	000420 HAWTHORNE LOOP RD	1	B	52	66	67																					69	3	YES	NO
751	000420 HAWTHORNE LOOP RD	1	B	52	65	66																					68	3	YES	NO
752	000420 HAWTHORNE LOOP RD	1	B	52	64	65																					67	3	YES	NO
753	000420 HAWTHORNE LOOP RD	1	B	52	64	65																					66	2	YES	NO
754	000420 HAWTHORNE LOOP RD	1	B	52	65	67																					67	2	YES	NO
755	000420 HAWTHORNE LOOP RD	1	B	52	66	68																					67	1	YES	NO
756	000420 HAWTHORNE LOOP RD	1	B	52	67	69																					69	2	YES	NO
757	000420 HAWTHORNE LOOP RD	1	B	52	67	69																					69	2	YES	NO
758	9633 BLACKWELL RD SE	1	B	52	63	69																					69	6	YES	NO
759	9629 BLACKWELL ROAD	1	B	52	57	60																					61	4	NO	NO
760	9633 BLACKWELL ROAD SE	1	B	52	60	65																					65	5	NO	NO
761	009729 CHAPPELL LOOP RD	1	B	52	60	65																					66	6	YES	NO
762	009729 CHAPPELL LOOP RD	1	B	52	57	62																					62	5	NO	NO
763	009661 BLACKWELL RD	1	B	52	58	63																					64	6	NO	NO
764	002041 WIND LAKE WAY	1	B	52	57	60																					59	2	NO	NO
765	002037 WIND LAKE WAY	1	B	52	57	59																					58	1	NO	NO
766	002033 WIND LAKE WAY	1	B	52	57	59																					58	1	NO	NO
767	002029 WIND LAKE WAY	1	B	52	52	52																					52	0	NO	NO
768	002025 WIND LAKE WAY	1	B	52	52	54																					54	2	NO	NO
769	002051 WIND LAKE WAY	1	B	52	58	60																					59	1	NO	NO
770	001005 LAYNE CT	1	B	52	58	60																					59	1	NO	NO
771	001009 LAYNE CT	1	B	52	56	58																					57	1	NO	NO
772	001010 SWELL CT	1	B	52	54	56																					56	2	NO	NO
773	001014 SWELL CT	1	B	52	55	57																					56	1	NO	NO
774	001002 LAYNE CT	1	B	52	59	61																					60	1	NO	NO
775	001006 LAYNE CT	1	B	52	59	61																					60	1	NO	NO
776	001010 LAYNE CT	1	B	52	53	55																					55	2	NO	NO
777	001018 SWELL CT	1	B	52	56	58																					57	1	NO	NO
778	001001 CLOUDBREAK CT	1	B	52	59	61																					61	2	NO	NO
779	001005 CLOUDBREAK CT	1	B	52	60	62																					61	1	NO	NO
780	001009 CLOUDBREAK CT	1	B	52	58	60																					59	1	NO	NO
781	001013 CLOUDBREAK CT	1	B	52	57	59																					57	0	NO	NO
782	001002 CLOUDBREAK CT	1	B	52	59	62																					62	3	NO	NO
783	001006 CLOUDBREAK CT	1	B	52	60	62																					62	2	NO	NO
784	001010 CLOUDBREAK CT	1	B	52	60	62																					61	1	NO	NO
785	001014 CLOUDBREAK CT	1	B	52	59	61																					60	1	NO	NO
786	001021 DAYBREAK CT	1	B	52	57	58																					58	1	NO	NO
787	002071 WIND LAKE WAY	1	B	52	61	64																					64	3	NO	NO
788	002075 WIND LAKE WAY	1	B	52	61	63																					64	3	NO	NO
789	001017 DAYBREAK CT	1	B	52	57	59																					59	2	NO	NO
790	002079 WIND LAKE WAY	1	B	52	60	62																					62	2	NO	NO
791	001009 DAYBREAK CT	1	B	52	60	61																					60	0	NO	NO
792	001009 DAYBREAK CT	1	B	52	60	61																					61	1	NO	NO
793	002085 WIND LAKE WAY	1	B	52	61	62																					62	1	NO	NO
794	001002 DAYBREAK CT	1	B	52	62	63																					63	1	NO	NO
795	001006 DAYBREAK CT	1	B	52	61	62																					61	0	NO	NO
796	001010 DAYBREAK CT	1	B	52	59	60																					60	1	NO	NO
797	001014 DAYBREAK CT	1	B	52	58	59																					59	1	NO	NO
798	001018 DAYBREAK CT	1	B	52	57	58																					58	1	NO	NO
799	000963 WOODWIND DR	1	B	52	64	64																					65	1	NO	NO
800	000965 WOODWIND DR	1	B	52	60	61																					61	1	NO	NO
801	000967 WOODWIND DR	1	B	52	60	61																					61	1	NO	NO
802	000969 WOODWIND DR	1	B	52	59	59																					59	0	NO	NO
803	000971 WOODWIND DR	1	B	52	55	56																					57	2	NO	NO

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
804	000973 WOODWIND DR	1	B	52	56	57																					57	1	NO	NO
805	000962 WOODWIND DR	1	B	52	64	64																					65	1	NO	NO
806	000964 WOODWIND DR	1	B	52	59	60																					60	1	NO	NO
807	000966 WOODWIND DR	1	B	52	57	57																					58	1	NO	NO
808	000968 WOODWIND DR	1	B	52	54	54																					55	1	NO	NO
809	000970 WOODWIND DR	1	B	52	54	55																					56	2	NO	NO
810	001043 SUN SKIPPER LN	1	B	52	56	57																					58	2	NO	NO
811	001039 SUN SKIPPER LN	1	B	52	58	58																					60	2	NO	NO
812	001035 SUN SKIPPER LN	1	B	52	59	59																					61	2	NO	NO
813	001031 SUN SKIPPER LN	1	B	52	59	59																					61	2	NO	NO
814	001027 SUN SKIPPER LN	1	B	52	61	61																					63	2	NO	NO
815	001023 SUN SKIPPER LN	1	B	52	62	62																					64	2	NO	NO
816	001015 SUN SKIPPER LN	1	B	52	63	63																					64	1	NO	NO
817	001011 SUN SKIPPER LN	1	B	52	63	63																					65	2	NO	NO
818	001040 SUN SKIPPER LN	1	B	52	53	53																					55	2	NO	NO
819	001034 SUN SKIPPER LN	1	B	52	56	56																					58	2	NO	NO
820	001026 SUN SKIPPER LN	1	B	52	56	57																					58	2	NO	NO
821	001022 SUN SKIPPER LN	1	B	52	58	58																					60	2	NO	NO
822	001018 SUN SKIPPER LN	1	B	52	59	59																					61	2	NO	NO
823	001014 SUN SKIPPER LN	1	B	52	58	59																					61	3	NO	NO
824	001010 SUN SKIPPER LN	1	B	52	57	58																					60	3	NO	NO
825	001006 SUN SKIPPER LN	1	B	52	58	58																					60	2	NO	NO
826	001002 SUN SKIPPER LN	1	B	52	65	65																					66	1	YES	NO
827	001051 NATURAL SPRINGS WAY	1	B	52	55	55																					57	2	NO	NO
828	001049 NATURAL SPRINGS WAY	1	B	52	55	55																					57	2	NO	NO
829	001045 NATURAL SPRINGS WAY	1	B	52	57	57																					59	2	NO	NO
830	001043 NATURAL SPRINGS WAY	1	B	52	57	57																					60	3	NO	NO
831	001041 NATURAL SPRINGS WAY	1	B	52	59	59																					61	2	NO	NO
832	001039 NATURAL SPRINGS WAY	1	B	52	63	63																					66	3	YES	NO
833	001037 NATURAL SPRINGS WAY	1	B	52	67	67																					70	3	YES	NO
834	1035 NATURAL SPRINGS WAY	1	B	52	68	68																					71	3	YES	NO
835	001044 NATURAL SPRINGS WAY	1	B	52	52	52																					55	3	NO	NO
836	001042 NATURAL SPRINGS WAY	1	B	52	53	53																					56	3	NO	NO
837	001040 NATURAL SPRINGS WAY	1	B	52	55	55																					57	2	NO	NO
838	001038 NATURAL SPRINGS WAY	1	B	52	57	57																					60	3	NO	NO
839	001036 NATURAL SPRINGS WAY	1	B	52	61	61																					64	3	NO	NO
840	001033 NATURAL SPRINGS WAY	1	B	52	67	67																					70	3	YES	NO
841	001099 WATER LILY WAY	1	B	52	67	67																					70	3	YES	NO
842	001031 NATURAL SPRINGS WAY	1	B	52	64	64																					67	3	YES	NO
843	001101 WATER LILY WAY	1	B	52	64	64																					67	3	YES	NO
844	001029 NATURAL SPRINGS WAY	1	B	52	59	59																					62	3	NO	NO
845	000201 SAND PEBBLE DR	1	B	52	66	67																					67	1	YES	NO
846	000205 SAND PEBBLE DR	1	B	52	61	63																					63	2	NO	NO
847	000207 SAND PEBBLE DR	1	B	52	58	59																					60	2	NO	NO
848	000209 SAND PEBBLE DR	1	B	52	52	52																					54	2	NO	NO
849	000211 SAND PEBBLE DR	1	B	52	55	56																					57	2	NO	NO
850	000213 SAND PEBBLE DR	1	B	52	54	55																					56	2	NO	NO
851	000215 SAND PEBBLE DR	1	B	52	53	54																					56	3	NO	NO
852	000219 SAND PEBBLE DR	1	B	52	52	53																					55	3	NO	NO
853	000218 SAND PEBBLE DR	1	B	52	52	52																					52	0	NO	NO
854	000216 SAND PEBBLE DR	1	B	52	52	52																					52	0	NO	NO
855	000214 SAND PEBBLE DR	1	B	52	52	52																					52	0	NO	NO
856	000212 SAND PEBBLE DR	1	B	52	52	52																					52	0	NO	NO
857	000210 SAND PEBBLE DR	1	B	52	53	55																					56	3	NO	NO
858	000208 SAND PEBBLE DR	1	B	52	54	55																					56	2	NO	NO
859	000206 SAND PEBBLE DR	1	B	52	57	59																					59	2	NO	NO
860	000204 SAND PEBBLE DR	1	B	52	63	64																					64	1	NO	NO
861	000203 BIRCH CREEK DR	1	B	52	67	69																					68	1	YES	NO
862	000205 BIRCH CREEK DR	1	B	52	58	59																					60	2	NO	NO
863	000209 BIRCH CREEK DR	1	B	52	53	55																					56	3	NO	NO
864	000213 BIRCH CREEK DR	1	B	52	52	52																					53	1	NO	NO
865	000217 BIRCH CREEK DR	1	B	52	52	52																					52	0	NO	NO
866	000221 BIRCH CREEK DR	1	B	52	52	52																					52	0	NO	NO
867	000220 BIRCH CREEK DR	1	B	52	52	52																					53	1	NO	NO
868	000216 BIRCH CREEK DR	1	B	52	52	53																					54	2	NO	NO
869	000212 BIRCH CREEK DR	1	B	52	54	55																					56	2	NO	NO
870	000208 BIRCH CREEK DR	1	B	52	57	59																					59	2	NO	NO
871	000204 BIRCH CREEK DR	1	B	52	67	68																					68	1	YES	NO
872	002368 COTTAGEFIELD LN	1	B	52	69	70																					65	-4	NO	NO
873	002369 COTTAGEFIELD LN	1	B	52	71	72																					66	-5	YES	NO
874	002365 COTTAGEFIELD LN	1	B	52	73	73																					67	-6	YES	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
875	002361 COTTAGEFIELD LN	1	B	52	70	70																					64	-6	NO	NO
876	002357 COTTAGEFIELD LN	1	B	52	67	68																					62	-5	NO	NO
877	002353 COTTAGEFIELD LN	1	B	52	66	66																					61	-5	NO	NO
878	002349 COTTAGEFIELD LN	1	B	52	65	65																					60	-5	NO	NO
879	002345 COTTAGEFIELD LN	1	B	52	64	65																					59	-5	NO	NO
880	002341 COTTAGEFIELD LN	1	B	52	64	65																					58	-6	NO	NO
881	002337 COTTAGEFIELD LN	1	B	52	64	65																					58	-6	NO	NO
882	002333 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
883	002329 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
884	002325 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
885	002321 COTTAGEFIELD LN	1	B	52	65	65																					57	-8	NO	NO
886	002317 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
887	002313 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
888	002309 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
889	002305 COTTAGEFIELD LN	1	B	52	64	65																					57	-7	NO	NO
890	002301 COTTAGEFIELD LN	1	B	52	63	63																					55	-8	NO	NO
891	002297 COTTAGEFIELD LN	1	B	52	60	61																					53	-7	NO	NO
892	002297 COTTAGEFIELD LN	1	B	52	61	61																					55	-6	NO	NO
893	002293 COTTAGEFIELD LN	1	B	52	58	59																					53	-5	NO	NO
894	002364 COTTAGEFIELD LN	1	B	52	64	65																					63	-1	NO	NO
895	002356 COTTAGEFIELD LN	1	B	52	63	64																					60	-3	NO	NO
896	002352 COTTAGEFIELD LN	1	B	52	62	63																					59	-3	NO	NO
897	001501 SPRING CT	1	B	52	62	62																					58	-4	NO	NO
898	001505 SPRING CT	1	B	52	60	61																					58	-2	NO	NO
899	001509 SPRING CT	1	B	52	60	61																					55	-5	NO	NO
900	001510 SPRING CT	1	B	52	59	60																					57	-2	NO	NO
901	001506 SPRING CT	1	B	52	59	60																					57	-2	NO	NO
902	001502 SPRING CT	1	B	52	62	63																					57	-5	NO	NO
903	002328 COTTAGEFIELD LN	1	B	52	62	63																					57	-5	NO	NO
904	002310 COTTAGEFIELD LN	1	B	52	61	62																					56	-5	NO	NO
905	002306 COTTAGEFIELD LN	1	B	52	61	61																					56	-5	NO	NO
906	002302 COTTAGEFIELD LN	1	B	52	58	59																					53	-5	NO	NO
907	002302 COTTAGEFIELD LN	1	B	52	56	57																					52	-4	NO	NO
908	002298 COTTAGEFIELD LN	1	B	52	57	58																					53	-4	NO	NO
909	002290 COTTAGEFIELD LN	1	B	52	55	56																					52	-3	NO	NO
910	002290 COTTAGEFIELD LN	1	B	52	57	57																					54	-3	NO	NO
911	002606 SOUTH SNOWBELL CT	1	B	52	62	63																					55	-7	NO	NO
912	002610 SOUTH SNOWBELL CT	1	B	52	52	52																					53	1	NO	NO
913	002614 SOUTH SNOWBELL CT	1	B	52	67	68																					58	-9	NO	NO
914	002618 SOUTH SNOWBELL CT	1	B	52	67	67																					58	-9	NO	NO
915	002617 SOUTH SNOWBELL CT	1	B	52	65	66																					58	-7	NO	NO
916	002609 SOUTH SNOWBELL CT	1	B	52	63	63																					58	-5	NO	NO
917	002605 SOUTH SNOWBELL CT	1	B	52	59	60																					54	-5	NO	NO
918	002505 NORTH SNOWBELL CT	1	B	52	55	56																					54	-1	NO	NO
919	002506 NORTH SNOWBELL CT	1	B	52	53	54																					52	-1	NO	NO
920	002278 COTTAGEFIELD LN	1	B	52	54	55																					53	-1	NO	NO
921	002273 COTTAGEFIELD LN	1	B	52	58	58																					54	-4	NO	NO
922	002269 COTTAGEFIELD LN	1	B	52	58	58																					54	-4	NO	NO
923	002265 COTTAGEFIELD LN	1	B	52	58	58																					55	-3	NO	NO
924	002261 COTTAGEFIELD LN	1	B	52	59	59																					56	-3	NO	NO
925	002270 COTTAGEFIELD LN	1	B	52	54	55																					54	0	NO	NO
926	002262 COTTAGEFIELD LN	1	B	52	52	53																					52	0	NO	NO
927	002252 COTTAGEFIELD LN	1	B	52	53	54																					53	0	NO	NO
928	002240 COTTAGEFIELD LN	1	B	52	53	54																					54	1	NO	NO
929	002153 WILLOW CREEK LN	1	B	52	69	69																					61	-8	NO	NO
930	002149 WILLOW CREEK LN	1	B	52	71	71																					63	-8	NO	NO
931	002145 WILLOW CREEK LN	1	B	52	72	72																					64	-8	NO	NO
932	002141 WILLOW CREEK LN	1	B	52	72	72																					65	-7	NO	NO
933	002137 WILLOW CREEK LN	1	B	52	72	72																					66	-6	YES	NO
934	002133 WILLOW CREEK LN	1	B	52	71	72																					65	-6	NO	NO
935	002129 WILLOW CREEK LN	1	B	52	71	71																					66	-5	YES	NO
936	002125 WILLOW CREEK LN	1	B	52	69	69																					65	-4	NO	NO
937	002408 RED MAPLE CIR	1	B	52	61	61																					59	-2	NO	NO
938	002412 RED MAPLE CIR	1	B	52	71	71																					66	-5	YES	NO
939	002416 RED MAPLE CIR	1	B	52	72	73																					68	-4	YES	NO
940	002422 RED MAPLE CIR	1	B	52	73	73																					68	-5	YES	NO
941	002424 RED MAPLE CIR	1	B	52	70	70																					68	-2	YES	NO
942	002423 RED MAPLE CIR	1	B	52	66	66																					65	-1	NO	NO
943	002419 RED MAPLE CIR	1	B	52	59	59																					58	-1	NO	NO
944	002415 RED MAPLE CIR	1	B	52	60	60																					60	0	NO	NO
945	002113 WILLOW CREEK LN	1	B	52	58	59																					59	1	NO	NO

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
946	002109 WILLOW CREEK LN	1	B	52	55	55																					57	2	NO	NO
947	002105 WILLOW CREEK LN	1	B	52	56	57																					59	3	NO	NO
948	002097 WILLOW CREEK LN	1	B	52	58	58																					60	2	NO	NO
949	002093 WILLOW CREEK LN	1	B	52	55	55																					58	3	NO	NO
950	002085 WILLOW CREEK LN	1	B	52	57	57																					59	2	NO	NO
951	002081 WILLOW CREEK LN	1	B	52	57	57																					58	1	NO	NO
952	002170 WILLOW CREEK LN	1	B	52	56	57																					54	-2	NO	NO
953	002166 WILLOW CREEK LN	1	B	52	57	58																					55	-2	NO	NO
954	002162 WILLOW CREEK LN	1	B	52	58	58																					55	-3	NO	NO
955	002158 WILLOW CREEK LN	1	B	52	58	58																					55	-3	NO	NO
956	002154 WILLOW CREEK LN	1	B	52	58	59																					56	-2	NO	NO
957	002150 WILLOW CREEK LN	1	B	52	60	60																					57	-3	NO	NO
958	002142 WILLOW CREEK LN	1	B	52	61	61																					59	-2	NO	NO
959	002134 WILLOW CREEK LN	1	B	52	60	60																					58	-2	NO	NO
960	002122 WILLOW CREEK LN	1	B	52	58	58																					58	0	NO	NO
961	002311 CURRAN CT	1	B	52	53	53																					56	3	NO	NO
962	002327 CURRAN CT	1	B	52	57	57																					58	1	NO	NO
963	002331 CURRAN CT	1	B	52	58	58																					60	2	NO	NO
964	002332 CURRAN CT	1	B	52	55	55																					54	-1	NO	NO
965	002328 CURRAN CT	1	B	52	52	53																					52	0	NO	NO
966	002324 CURRAN CT	1	B	52	52	52																					54	2	NO	NO
967	002320 CURRAN CT	1	B	52	54	54																					56	2	NO	NO
968	002316 CURRAN CT	1	B	52	53	53																					55	2	NO	NO
969	002312 CURRAN CT	1	B	52	53	53																					55	2	NO	NO
970	002094 WILLOW CREEK LN	1	B	52	55	55																					57	2	NO	NO
971	002086 WILLOW CREEK LN	1	B	52	52	53																					53	1	NO	NO
972	002243 COTTAGEFIELD LN	1	B	52	52	52																					52	0	NO	NO
973	002231 COTTAGEFIELD LN	1	B	52	52	53																					52	0	NO	NO
974	001007 SWEET BAY CIR	1	B	52	57	57																					59	2	NO	NO
975	001011 SWEET BAY CIR	1	B	52	58	58																					60	2	NO	NO
976	001012 SWEET BAY CIR	1	B	52	58	58																					60	2	NO	NO
977	001002 SWEET BAY CIR	1	B	52	56	56																					60	4	NO	NO
978	001031 STONY WOODS LN	1	B	52	54	55																					55	1	NO	NO
979	001033 STONY WOODS LN	1	B	52	54	55																					56	2	NO	NO
980	001035 STONY WOODS LN	1	B	52	52	52																					54	2	NO	NO
981	001039 STONY WOODS LN	1	B	52	62	62																					64	2	NO	NO
982	001041 STONY WOODS LN	1	B	52	63	64																					67	4	YES	NO
983	001042 STONY WOODS LN	1	B	52	64	64																					68	4	YES	NO
984	001040 STONY WOODS LN	1	B	52	63	64																					68	5	YES	NO
985	001038 STONY WOODS LN	1	B	52	60	60																					65	5	NO	NO
986	001047 MACKLIN ST	1	B	52	62	62																					67	5	YES	NO
987	001044 MACKLIN ST	1	B	52	61	61																					67	6	YES	NO
988	000107 VILLAGE RD	---	F	52	65	65																					71	6	NO	NO
989	000107 VILLAGE RD	---	F	52	72	72																					76	4	NO	NO
990	000107 VILLAGE RD	---	F	52	58	58																					61	3	NO	NO
991	000117 VILLAGE RD	1	D	17	26	27																					28	2	NO	NO
992	000117 VILLAGE RD	---	F	52	63	64																					65	2	NO	NO
993	000105 VILLAGE RD	---	F	52	67	67																					70	3	NO	NO
994	000103 VILLAGE RD	---	F	52	66	66																					67	1	NO	NO
995	000103 VILLAGE RD	---	F	52	66	66																					68	2	NO	NO
996	000113 VILLAGE RD	---	F	52	69	70																					70	1	NO	NO
997	000111 VILLAGE RD	---	F	52	69	70																					70	1	NO	NO
998	000109 VILLAGE RD	---	F	52	70	70																					71	1	NO	NO
999	000101 VILLAGE RD	---	F	52	68	68																					69	1	NO	NO
1000	009991 BLACKWELL RD	1	B	52	60	65																					65	5	NO	NO
1001	010003 BLACKWELL RD	1	B	52	58	61																					62	4	NO	NO
1002	010003 BLACKWELL RD	1	B	52	59	64																					64	5	NO	NO
1003	010051 BLACKWELL RD	1	D	27	37	43																					43	6	NO	NO
1004	010099 BLACKWELL RD	1	B	52	59	63																					64	5	NO	NO
1005	010125 BLACKWELL RD	1	B	52	58	60																					63	5	NO	NO
1006	010183 BLACKWELL RD	1	B	52	61	66																					67	6	YES	NO
1007	010499 CHAPPELL LOOP RD	1	D	27	64	72																					47	-17	NO	NO
1008	010481 CHAPPELL LOOP RD	1	B	52	59	61																					63	4	NO	NO
1009	010241 BLACKWELL RD	---	F	52	62	68																					69	7	NO	NO
1010	010240 BLACKWELL RD	---	F	52	66	66																					72	6	NO	NO
1011	010240 BLACKWELL RD	---	F	52	66	67																					70	4	NO	NO
1012	010242-010276 BLACKWELL RD	1	B	52	68	68																					68	0	YES	NO
1013	010242-010276 BLACKWELL RD	1	B	52	60	61																					63	3	NO	NO
1014	010258 BLACKWELL RD	1	B	52	60	63																					64	4	NO	NO
1015	010278 BLACKWELL RD	---	F	52	65	66																					68	3	NO	NO
1016	010242-010276 BLACKWELL RD	1	B	52	62	62																					63	1	NO	NO

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1017	010274 BLACKWELL RD	1	B	52	61	65																					66	5	YES	NO
1018	000051 RIVER RD	---	F	52	66	68																					68	2	NO	NO
1019	000110 VILLAGE RD	---	F	52	73	74																					74	1	NO	NO
1020	000108 VILLAGE RD	---	F	52	71	72																					72	1	NO	NO
1021	000104 VILLAGE RD	---	F	52	71	72																					72	1	NO	NO
1022	000101 THOMAS GARST LN	---	F	52	68	69																					70	2	NO	NO
1023	000109 THOMAS GARST LN	1	B	52	66	66																					67	1	YES	NO
1024	000111 THOMAS GARST LN (Excel Preschool)	3	C	52	65	66																					67	2	YES	NO
1025	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	64	64																					66	2	YES	NO
1026	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	64	64																					65	1	NO	NO
1027	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	62	63																					64	2	NO	NO
1028	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	66	66																					67	1	YES	NO
1029	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	66	66																					67	1	YES	NO
1030	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	65	65																					66	1	YES	NO
1031	000111 THOMAS GARST LN (Excel Preschool)	---	C	52	60	61																					62	2	NO	NO
1032	000130 DIXIE DR	1	B	52	58	59																					61	3	NO	NO
1033	000132 DIXIE DR	1	B	52	56	56																					59	3	NO	NO
1034	000134 DIXIE DR	1	B	52	58	58																					61	3	NO	NO
1035	000136 DIXIE DR	1	B	52	61	62																					64	3	NO	NO
1036	000101 RIVERVIEW DR	1	B	52	62	63																					65	3	NO	NO
1037	000109 RIVERVIEW DR	1	B	52	59	59																					62	3	NO	NO
1038	000110 RIVERVIEW DR	1	B	52	60	61																					64	4	NO	NO
1039	000102 RIVERVIEW DR	1	B	52	67	67																					70	3	YES	NO
1040	000102 RIVERVIEW DR	1	B	52	70	70																					71	1	YES	NO
1041	000036 RIVER RD	---	F	52	69	72																					71	2	NO	NO
1042	000152 MAIN ST	---	F	52	66	67																					69	3	NO	NO
1043	000186 MAIN ST	---	F	52	66	66																					68	2	NO	NO
1044	000015 OLD RIVER RD	1	D	27	40	40																					43	3	NO	NO
1045	000015 OLD RIVER RD	1	B	52	65	65																					67	2	YES	NO
1046	000015 OLD RIVER RD	1	B	52	65	65																					67	2	YES	NO
1047	000015 OLD RIVER RD	1	B	52	64	64																					66	2	YES	NO
1048	000012 OLD RIVER RD	1	B	52	64	65																					68	4	YES	NO
1049	000015 OLD RIVER RD	1	B	52	65	65																					68	3	YES	NO
1050	2831 CAROLINA BEACH RD	1	D	29	48	49	50	2	NO	NO					50	2	NO	NO					50	2	NO	NO	48	0	NO	NO
1051	579 PARKWAY BLV	1	B	49	58	59	60	2	NO	NO					60	2	NO	NO					60	2	NO	NO	57	-1	NO	NO
1052	584 NINA PL	1	B	49	58	59	59	1	NO	NO					59	1	NO	NO					59	1	NO	NO	57	-1	NO	NO
1053	576 NINA PL	1	B	49	62	63	62	0	NO	NO					62	0	NO	NO					62	0	NO	NO	64	2	NO	NO
1054	577 PARKWAY BLV	1	B	49	60	62	63	3	NO	NO					63	3	NO	NO					63	3	NO	NO	60	0	NO	NO
1055	585 NINA PL	1	B	49	53	54	56	3	NO	NO					56	3	NO	NO					56	3	NO	NO	55	2	NO	NO
1056	575 NINA PL	1	B	49	58	59	59	1	NO	NO					59	1	NO	NO					59	1	NO	NO	60	2	NO	NO
1057	581 NINA PL	1	B	49	55	56	58	3	NO	NO					58	3	NO	NO					58	3	NO	NO	56	1	NO	NO
1058	428 DAVIE DR	1	B	49	56	57	61	5	NO	NO					61	5	NO	NO					61	5	NO	NO	56	0	NO	NO
1059	418 DAVIE DR	1	B	49	54	56	62	8	NO	NO					62	8	NO	NO					62	8	NO	NO	56	2	NO	NO
1060	412 DAVIE DR	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO	56	2	NO	NO
1061	404 DAVIE DR	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	2	NO	NO
1062	404 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	1	NO	NO
1063	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	3	NO	NO
1064	604 HOLBROOKE AVE	1	B	49	56	57	59	3	NO	NO					59	3	NO	NO					59	3	NO	NO	57	1	NO	NO
1065	510 HOLBROOKE AVE	1	B	49	66	67	68	2	YES	NO					68	2	YES	NO					68	2	YES	NO	66	0	YES	NO
1066	514 HOLBROOKE AVE	1	B	49	59	60	61	2	NO	NO					61	2	NO	NO					61	2	NO	NO	59	0	NO	NO
1067	509 HOLBROOKE AVE	1	B	49	59	60	61	2	NO	NO					61	2	NO	NO					61	2	NO	NO	58	-1	NO	NO
1068	515 HOLBROOKE AVE	1	B	49	56	57	57	1	NO	NO					57	1	NO	NO					57	1	NO	NO	56	0	NO	NO
1069	603 HOLBROOKE AVE	1	B	49	55	56	59	4	NO	NO					59	4	NO	NO					59	4	NO	NO	57	2	NO	NO
1070	817 HOLBROOKE AVE	1	B	49	53	53	68	15	YES	YES					68	15	YES	YES					68	15	YES	YES				
1071	809 HOLBROOKE AVE	1	B	49	55	56	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES				
1072	801 HOLBROOKE AVE	1	B	49	54	54	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO				
1073	805 HOLBROOKE AVE	1	B	49	54	54	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO				
1074	721 HOLBROOKE AVE	1	B	49	53	54	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO				
1075	717 HOLBROOKE AVE	1	B	49	53	53	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO				
1076	713 HOLBROOKE AVE	1	B	49	53	53	60	7	NO	NO					60	7	NO	NO					60	7	NO	NO				
1077	722 HOLBROOKE AVE	1	B	49	52	52	58	6	NO	NO					58	6	NO	NO					58	6	NO	NO				
1078	802 HOLBROOKE AVE	1	B	49	51	51	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
1079	806 HOLBROOKE AVE	1	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
1080	806 HOLBROOKE AVE	1	B	49	52	53	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO				
1081	810 HOLBROOKE AVE	1	B	49	53	54	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO				
1082	814 HOLBROOKE AVE	1	B	49	55	55	64	9	NO	NO					64	9	NO	NO					64	9	NO	NO				
1083	818 HOLBROOKE AVE	1	B	49	56	56	66	10	YES	YES					66	10	YES	YES					66	10	YES	YES				
1084	822 HOLBROOKE AVE	1	B	49	58	59	70	12	YES	YES					70	12	YES	YES					70	12	YES	YES				
1085	912 SHIPYARD BLV	1	B	49	73	73	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
1086	902 SHIPYARD BLV	1	B	49	74	74	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
1087	906 SHIPYARD BLV	1	B	49	74	74	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1088	2601 CONSTITUTION BLV	1	B	49	59	59	70	11	YES	YES					70	11	YES	YES					70	11	YES	YES				
1089	1102 FRANCIS MARION DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
1091	2513 TROY DR	1	B	49	53	53	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO				
1092	2513 TROY DR	1	B	49	51	51	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
1093	2517 TROY DR	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
1094	1150 HARBOUR DR	1	B	49	56	56	62	6	NO	NO					62	6	NO	NO					62	6	NO	NO				
1095	2509 TROY DR	1	B	49	51	51	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
1096	820 WELLINGTON AVE (Accordius Health)	3	B	49	51	52	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
1097	2520 TROY DR	1	D	24	26	26	35	9	NO	NO					35	9	NO	NO					35	9	NO	NO				
1098	2525 WONDER WAY (Cape Fear School Playground)	1	C	49	52	52	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO				
1099	478 BUCKINGHAM AVE (Apostolic Church)	1	D	14	17	17	24	7	NO	NO					24	7	NO	NO					24	7	NO	NO				
1100	479 BUCKINGHAM AVE (Apostolic Church)	---	D	14	18	19	25	7	NO	NO					25	7	NO	NO					25	7	NO	NO				
1101	480 BUCKINGHAM AVE (Apostolic Church)	---	D	14	17	18	25	8	NO	NO					25	8	NO	NO					25	8	NO	NO				
1102	2525 WONDER WAY (Cape Fear School Playground)	---	C	49	55	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	60	5	NO	NO
1103	2525 WONDER WAY (Cape Fear School)	1	D	24	30	30	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	34	4	NO	NO
1104	621 SHIPYARD BLV	1	B	49	71	71	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	73	2	YES	NO
1105	703 SHIPYARD BLV	1	B	49	69	69	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	71	2	YES	NO
1106	705 SHIPYARD BLV	1	B	49	71	71	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	74	3	YES	NO
1107	713 SHIPYARD BLV	1	B	49	70	70	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	74	4	YES	NO
1108	713 SHIPYARD BLV	1	B	49	68	68	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	71	3	YES	NO
1109	820 WELLINGTON AVE (Accordius Health)	---	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
1110	405 SHIPYARD BLV	1	D	14	43	44	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	44	1	NO	NO
1111	317 SHIPYARD BLV (Long Leaf Baptist Church)	---	D	14	36	37	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	37	1	NO	NO
1111.1	318 SHIPYARD BLV (Long Leaf Baptist Church)	1	C	49	72	73	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	72	0	YES	NO
1112	215 SHIPYARD BLV (E.P.Godwin Stadium)	1	C	49	64	66	67	3	YES	NO					67	3	YES	NO					67	3	YES	NO	63	-1	NO	NO
1113	216 SHIPYARD BLV (E.P.Godwin Stadium)	---	C	49	63	65	67	4	YES	NO					67	4	YES	NO					67	4	YES	NO	63	0	NO	NO
1114	317 SHIPYARD BLV (Long Leaf Baptist Church playground)	1	D	14	74	75	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	40	-34	NO	NO
1115	2605 VANCE ST	1	B	49	61	63	69	8	YES	NO					69	8	YES	NO					69	8	YES	NO	63	2	NO	NO
1116	306 WILLIAMSON DR	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1117	310 WILLIAMSON DR	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1118	314 WILLIAMSON DR	1	B	49	60	62	68	8	YES	NO					68	8	YES	NO					68	8	YES	NO	62	2	NO	NO
1119	318 WILLIAMSON DR	1	B	49	60	62	68	8	YES	NO					68	8	YES	NO					68	8	YES	NO	63	3	NO	NO
1120	324 WILLIAMSON DR	1	B	49	61	63	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	64	3	NO	NO
1121	326 WILLIAMSON DR	1	B	49	62	64	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	64	2	NO	NO
1122	330 WILLIAMSON DR	1	B	49	62	64	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	64	2	NO	NO
1123	429 RUTLEDGE DR	1	B	49	61	63	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	64	3	NO	NO
1124	350 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	66	3	YES	NO
1125	348 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
1126	342 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
1127	338 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
1128	330 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
1129	334 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
1130	349 DAVIE DR	1	B	49	55	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	4	NO	NO
1131	345 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	3	NO	NO
1132	343 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
1133	337 DAVIE DR	1	B	49	57	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
1134	333 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
1135	329 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
1136	329 DAVIE DR	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	2	NO	NO
1137	325 DAVIE DR	1	B	49	58	59	66	8	YES	NO					66	8	YES	NO					66	8	YES	NO	59	1	NO	NO
1138	323 DAVIE DR	1	B	49	56	57	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO	57	1	NO	NO
1139	317 DAVIE DR	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO	56	2	NO	NO
1140	313 DAVIE DR	1	B	49	52	54	63	11	NO	YES					63	11	NO	YES					63	11	NO	YES	55	3	NO	NO
1141	309 DAVIE DR	1	B	49	56	59	66	10	YES	YES					66	10	YES	YES					66	10	YES	YES	50	-6	NO	NO
1142	305 DAVIE DR	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO	57	3	NO	NO
1143	2605 VANCE ST	1	B	49	49	50	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO	50	1	NO	NO
1144	350 DAVIE DR	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	3	NO	NO
1145	409 CALHOUN DR	1	B	49	53	54	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	54	1	NO	NO
1146	406 CALHOUN DR	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES	52	1	NO	NO
1147	418 RUTLEDGE DR	1	B	49	52	54	62	10	NO	YES					62	10	NO	YES					62	10	NO	YES	54	2	NO	NO
1148	420 RUTLEDGE DR	1	B	49	54	56	65	11	NO	YES					65	11	NO	YES					65	11	NO	YES	56	2	NO	NO
1149	421 RUTLEDGE DR	1	B	49	52	54	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	54	2	NO	NO
1150	419 RUTLEDGE DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	54	3	NO	NO
1151	415 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO	50	1	NO	NO
1152	409 RUTLEDGE DR	1	B	49	49	51	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO	51	2	NO	NO
1153	414 RUTLEDGE DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	53	3	NO	NO
1154	408 RUTLEDGE DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	52	2	NO	NO
1155	410 CALHOUN DR	1	B	49	50	52	60	10	NO	YES					60	10	NO	YES					60	10	NO	YES	52	2	NO	NO
1156	422 DAVIE DR	1	B	49	54	55	60	6	NO	NO					60	6	NO	NO					60	6	NO	NO	55	1	NO	NO
1157	346 DAVIE DR	1	B	49	54	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	3	NO	NO
1158	340 DAVIE DR	1	B	49	54	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	3	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1159	338 DAVIE DR	1	B	49	54	55	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	56	2	NO	NO
1160	336 DAVIE DR	1	B	49	53	55	65	12	NO	YES					65	12	NO	YES					65	12	NO	YES	55	2	NO	NO
1161	330 DAVIE DR	1	B	49	53	55	64	11	NO	YES					64	11	NO	YES					64	11	NO	YES	55	2	NO	NO
1162	326 DAVIE DR	1	B	49	53	55	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	55	2	NO	NO
1163	326 DAVIE DR	1	B	49	52	54	62	10	NO	YES					62	10	NO	YES					62	10	NO	YES	54	2	NO	NO
1164	322 DAVIE DR	1	B	49	53	55	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO	55	2	NO	NO
1165	318 DAVIE DR	1	B	49	53	54	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO	54	1	NO	NO
1166	314 DAVIE DR	1	B	49	53	55	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO	54	1	NO	NO
1167	310 DAVIE DR	1	B	49	53	56	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	55	2	NO	NO
1168	306 DAVIE DR	1	B	49	53	54	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	54	1	NO	NO
1169	2707 VANCE ST	1	B	49	55	55	62	7	NO	NO					62	7	NO	NO					62	7	NO	NO	56	1	NO	NO
1170	309 CALHOUN DR	1	B	49	52	54	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO	54	2	NO	NO
1171	313 CALHOUN DR	1	B	49	52	54	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO	53	1	NO	NO
1172	317 CALHOUN DR	1	B	49	52	54	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO	54	2	NO	NO
1173	323 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	53	2	NO	NO
1174	325 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	53	2	NO	NO
1175	325 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	53	2	NO	NO
1176	329 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	52	2	NO	NO
1177	333 CALHOUN DR	1	B	49	52	54	61	9	NO	NO					61	9	NO	NO					61	9	NO	NO	55	3	NO	NO
1178	337 CALHOUN DR	1	B	49	53	55	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	56	3	NO	NO
1179	341 CALHOUN DR	1	B	49	54	56	64	10	NO	YES					64	10	NO	YES					64	10	NO	YES	56	2	NO	NO
1180	328 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	51	1	NO	NO
1181	330 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	53	3	NO	NO
1182	334 CALHOUN DR	1	B	49	50	52	60	10	NO	YES					60	10	NO	YES					60	10	NO	YES	52	2	NO	NO
1183	340 CALHOUN DR	1	B	49	50	52	60	10	NO	YES					60	10	NO	YES					60	10	NO	YES	52	2	NO	NO
1184	405 MARION DR	1	B	49	50	51	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO	51	1	NO	NO
1185	2513 ADAMS ST	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	63	0	NO	NO
1186	2509 ADAMS ST	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	1	NO	NO
1187	2505 ADAMS ST	1	B	49	57	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	1	NO	NO
1188	2501 ADAMS ST	1	B	49	56	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
1189	2439 ADAMS ST	1	B	49	55	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	56	1	NO	NO
1190	310 BELL ST	1	B	49	52	53	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	54	2	NO	NO
1191	316 BELLAMY ALY	1	B	49	54	55	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	55	1	NO	NO
1192	316 BELLAMY ALY	1	B	49	54	55	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	55	1	NO	NO
1193	319 CAPE FEAR BLV	1	B	49	58	60	72	14	YES	YES					72	14	YES	YES					72	14	YES	YES	59	1	NO	NO
1194	323 CAPE FEAR BLV	1	B	49	59	61	70	11	YES	YES					70	11	YES	YES					70	11	YES	YES	60	1	NO	NO
1195	327 CAPE FEAR BLV	1	B	49	59	61	68	9	YES	NO					68	9	YES	NO					68	9	YES	NO	60	1	NO	NO
1196	331 CAPE FEAR BLV	1	B	49	59	61	67	8	YES	NO					67	8	YES	NO					67	8	YES	NO	60	1	NO	NO
1197	339 CAPE FEAR BLV	1	B	49	58	60	67	9	YES	NO					67	9	YES	NO					67	9	YES	NO	59	1	NO	NO
1198	2414 CROSSOVER ST	1	B	49	53	53	73	20	YES	YES					73	20	YES	YES					73	20	YES	YES	55	2	NO	NO
1199	347 CAPE FEAR BLV	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES	57	2	NO	NO
1200	351 CAPE FEAR BLV	1	B	49	55	56	66	11	YES	YES					66	11	YES	YES					66	11	YES	YES	57	2	NO	NO
1201	355 CAPE FEAR BLV	1	B	49	56	58	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO	58	2	NO	NO
1202	359 CAPE FEAR BLV	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES	58	3	NO	NO
1203	401 CAPE FEAR BLV	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES	58	3	NO	NO
1204	405 CAPE FEAR BLV	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES	58	3	NO	NO
1205	409 CAPE FEAR BLV	1	B	49	54	56	65	11	NO	YES					65	11	NO	YES					65	11	NO	YES	58	4	NO	NO
1206	413 CAPE FEAR BLV	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES	58	3	NO	NO
1207	417 CAPE FEAR BLV	1	B	49	56	57	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO	58	2	NO	NO
1208	344 CAPE FEAR BLV	1	B	49	61	63	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	62	1	NO	NO
1209	348 CAPE FEAR BLV	1	B	49	58	59	68	10	YES	YES					68	10	YES	YES					68	10	YES	YES	59	1	NO	NO
1210	352 CAPE FEAR BLV	1	B	49	58	60	68	10	YES	YES					68	10	YES	YES					68	10	YES	YES	60	2	NO	NO
1211	356 CAPE FEAR BLV	1	B	49	60	62	68	8	YES	NO					68	8	YES	NO					68	8	YES	NO	62	2	NO	NO
1212	402 CAPE FEAR BLV	1	B	49	62	63	69	7	YES	NO					69	7	YES	NO					69	7	YES	NO	64	2	NO	NO
1213	406 CAPE FEAR BLV	1	B	49	61	63	69	8	YES	NO					69	8	YES	NO					69	8	YES	NO	63	2	NO	NO
1214	410 CAPE FEAR BLV	1	B	49	61	63	69	8	YES	NO					69	8	YES	NO					69	8	YES	NO	63	2	NO	NO
1215	414 CAPE FEAR BLV	1	B	49	61	63	69	8	YES	NO					69	8	YES	NO					69	8	YES	NO	63	2	NO	NO
1216	418 CAPE FEAR BLV	1	B	49	62	64	69	7	YES	NO					69	7	YES	NO					69	7	YES	NO	64	2	NO	NO
1217	422 CAPE FEAR BLV	1	B	49	61	63	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1218	426 CAPE FEAR BLV	1	B	49	61	63	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1219	434 CAPE FEAR BLV	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1220	442 CAPE FEAR BLV	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1221	448 CAPE FEAR BLV	1	B	49	60	62	67	7	YES	NO					67	7	YES	NO					67	7	YES	NO	63	3	NO	NO
1222	434 CAPE FEAR BLV	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
1223	441 CAPE FEAR BLV	1	B	49	59	60	66	7	YES	NO					66	7	YES	NO					66	7	YES	NO	63	4	NO	NO
1224	437 CAPE FEAR BLV	1	B	49	59	61	66	7	YES	NO					66	7	YES	NO					66	7	YES	NO	63	4	NO	NO
1225	433 CAPE FEAR BLV	1	B	49	58	60	66	8	YES	NO					66	8	YES	NO					66	8	YES	NO	62	4	NO	NO
1226	429 CAPE FEAR BLV	1	B	49	57	58	65	8	NO	NO					65	8	NO	NO					65	8	NO	NO	60	3	NO	NO
1227	425 CAPE FEAR BLV	1	B	49	56	58	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO	60	4	NO	NO
1228	421 CAPE FEAR BLV	1	B	49	56	58	66	10	YES	YES					66	10	YES	YES					66	10	YES	YES	59	3	NO	NO
1229	328 BELL ST	1	B	49	50	52	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	53	3	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1230	336 BELL ST	1	B	49	50	52	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	53	3	NO	NO
1231	340 BELL ST	1	B	49	51	52	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	54	3	NO	NO
1232	402 BELL ST	1	B	49	49	50	78	29	YES	YES					78	29	YES	YES					78	29	YES	YES	52	3	NO	NO
1233	418 BELL ST	1	B	49	51	53	76	25	YES	YES					76	25	YES	YES					76	25	YES	YES	54	3	NO	NO
1234	418 BELL ST	1	B	49	52	53	75	23	YES	YES					75	23	YES	YES					75	23	YES	YES	55	3	NO	NO
1235	418 BELL ST	1	B	49	52	53	75	23	YES	YES					75	23	YES	YES					75	23	YES	YES	56	4	NO	NO
1236	418 BELL ST	1	B	49	54	55	76	22	YES	YES					76	22	YES	YES					76	22	YES	YES	58	4	NO	NO
1237	418 BELL ST	1	B	49	54	55	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	4	NO	NO
1238	418 BELL ST	1	B	49	53	54	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	56	3	NO	NO
1239	418 BELL ST	1	B	49	53	54	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	56	3	NO	NO
1240	309 MARYLAND AVE	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO	51	2	NO	NO
1241	2359 ADAMS ST	1	B	49	50	51	60	10	NO	YES					60	10	NO	YES					60	10	NO	YES	52	2	NO	NO
1242	405 MARYLAND AVE	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES	53	3	NO	NO
1243	2421 ADAMS ST	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	51	1	NO	NO
1244	317 BELL ST	1	B	49	51	53	77	26	YES	YES					77	26	YES	YES					77	26	YES	YES	53	2	NO	NO
1245	2425 ADAMS ST	1	B	49	52	53	72	20	YES	YES					72	20	YES	YES					72	20	YES	YES	54	2	NO	NO
1246	321 BELL ST	1	B	49	52	53	77	25	YES	YES					77	25	YES	YES					77	25	YES	YES	53	1	NO	NO
1247	331 BELL ST	1	B	49	52	53	78	26	YES	YES					78	26	YES	YES					78	26	YES	YES	53	1	NO	NO
1248	331 BELL ST	1	B	49	51	53	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	53	2	NO	NO
1249	331 BELL ST	1	B	49	51	52	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	54	3	NO	NO
1250	331 BELL ST	1	B	49	49	50	74	25	YES	YES					74	25	YES	YES					74	25	YES	YES	51	2	NO	NO
1251	331 BELL ST	1	B	49	52	53	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	54	2	NO	NO
1252	331 BELL ST	1	B	49	52	53	76	24	YES	YES					76	24	YES	YES					76	24	YES	YES	54	2	NO	NO
1253	331 BELL ST	1	B	49	52	53	79	27	YES	YES					79	27	YES	YES					79	27	YES	YES	54	2	NO	NO
1254	331 BELL ST	1	B	49	52	53	78	26	YES	YES					78	26	YES	YES					78	26	YES	YES	54	2	NO	NO
1255	331 BELL ST	1	B	49	52	53	77	25	YES	YES					77	25	YES	YES					77	25	YES	YES	54	2	NO	NO
1256	331 BELL ST	1	B	49	51	53	77	26	YES	YES					77	26	YES	YES					77	26	YES	YES	54	3	NO	NO
1257	331 BELL ST	1	B	49	51	53	76	25	YES	YES					76	25	YES	YES					76	25	YES	YES	54	3	NO	NO
1258	331 BELL ST	1	B	49	51	53	76	25	YES	YES					76	25	YES	YES					76	25	YES	YES	53	2	NO	NO
1259	331 BELL ST	1	B	49	51	53	76	25	YES	YES					76	25	YES	YES					76	25	YES	YES	53	2	NO	NO
1260	331 BELL ST	1	B	49	52	54	77	25	YES	YES					77	25	YES	YES					77	25	YES	YES	55	3	NO	NO
1261	331 BELL ST	1	B	49	49	51	74	25	YES	YES					74	25	YES	YES					74	25	YES	YES	52	3	NO	NO
1262	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	50	1	NO	NO
1263	331 BELL ST	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	50	1	NO	NO
1264	331 BELL ST	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO	49	0	NO	NO
1265	331 BELL ST	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES	49	0	NO	NO
1266	331 BELL ST	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	50	1	NO	NO
1267	331 BELL ST	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	50	1	NO	NO
1268	331 BELL ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO	50	1	NO	NO
1269	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1270	331 BELL ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO	49	0	NO	NO
1271	331 BELL ST	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	50	1	NO	NO
1272	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1273	331 BELL ST	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	50	1	NO	NO
1274	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1275	331 BELL ST	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1276	331 BELL ST	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	51	2	NO	NO
1277	331 BELL ST	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	51	2	NO	NO
1278	331 BELL ST	1	B	49	50	52	63	13	NO	YES					63	13	NO	YES					63	13	NO	YES	53	3	NO	NO
1279	331 BELL ST	1	B	49	51	53	65	14	NO	YES					65	14	NO	YES					65	14	NO	YES	55	4	NO	NO
1280	331 BELL ST	1	B	49	51	53	64	13	NO	YES					64	13	NO	YES					64	13	NO	YES	53	2	NO	NO
1281	331 BELL ST	1	B	49	51	52	64	13	NO	YES					64	13	NO	YES					64	13	NO	YES	53	2	NO	NO
1282	331 BELL ST	1	B	49	51	52	64	13	NO	YES					64	13	NO	YES					64	13	NO	YES	53	2	NO	NO
1283	331 BELL ST	1	B	49	51	52	63	12	NO	YES					63	12	NO	YES					63	12	NO	YES	53	2	NO	NO
1284	331 BELL ST	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES	52	2	NO	NO
1285	331 BELL ST	1	B	49	50	51	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES	52	2	NO	NO
1286	331 BELL ST	1	B	49	50	51	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES	52	2	NO	NO
1287	331 BELL ST	1	B	49	50	51	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES	52	2	NO	NO
1288	331 BELL ST	1	B	49	50	51	61	11	NO	YES					61	11	NO	YES					61	11	NO	YES	52	2	NO	NO
1289	331 BELL ST	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1290	331 BELL ST	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1291	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1292	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	50	1	NO	NO
1293	331 BELL ST	1	B	49	49	50	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES	51	2	NO	NO
1294	331 BELL ST	1	B	49	49	50	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES	51	2	NO	NO
1295	331 BELL ST	1	B	49	49	50	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES	51	2	NO	NO
1296	331 BELL ST	1	B	49	49	50	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES	50	1	NO	NO
1297	331 BELL ST	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	51	2	NO	NO
1298	331 BELL ST	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	50	1	NO	NO
1299	331 BELL ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES	50	1	NO	NO
1300	715 MEDICAL CENTER DR	---	F	49	56	58																					61	5	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1301	2374 CAROLINA BEACH RD	1	B	49	58	59	62	4	NO	NO					62	4	NO	NO					62	4	NO	NO	61	3	NO	NO
1302	2370 CAROLINA BEACH RD	1	B	49	72	72	75	3	YES	NO					75	3	YES	NO					75	3	YES	NO	76	4	YES	NO
1303	2221 CAROLINA BEACH RD	---	F	49	71	72																					78	7	NO	NO
1304	2131 CAROLINA BEACH RD (Legion Football Stadium)	1	C	49	57	58																					61	4	NO	NO
1305	2131 CAROLINA BEACH RD (Legion Stadium-Pool)	1	C	49	61	61																					64	3	NO	NO
1306	2131 CAROLINA BEACH RD (Legion Stadium Tennis Court)	1	C	49	59	60																					64	5	NO	NO
1307	413 SHIPYARD BLV	1	B	49	77	78	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	78	1	YES	NO
1308	413 SHIPYARD BLV	1	B	49	77	78	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	78	1	YES	NO
1309	415 SHIPYARD BLV	1	B	49	77	78	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	78	1	YES	NO
1310	2340 W LAKE SHORE DR	1	B	49	57	57																					60	3	NO	NO
1311	2334 W LAKE SHORE DR	1	B	49	54	55																					57	3	NO	NO
1312	2324 W LAKE SHORE DR	1	B	49	55	56																					58	3	NO	NO
1313	2314 W LAKE SHORE DR	1	B	49	53	54																					57	4	NO	NO
1314	514 HART ST	1	B	49	55	56																					60	5	NO	NO
1315	514 HART ST	1	B	49	57	58																					62	5	NO	NO
1316	518 HART ST	1	B	49	56	57																					60	4	NO	NO
1317	351 SHIPYARD BLV	---	F	49	74	75	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	75	1	NO	NO
1318	2213 WASHINGTON ST	1	B	49	56	57																					60	4	NO	NO
1319	2217 WASHINGTON ST	1	B	49	53	54																					57	4	NO	NO
1320	402 SOUTHERN BLV	1	B	49	59	60																					63	4	NO	NO
1321	326 SOUTHERN BLV	1	B	49	55	56																					61	6	NO	NO
1322	322 SOUTHERN BLV	1	B	49	54	55																					60	6	NO	NO
1323	2214 WASHINGTON ST	1	B	49	53	54																					57	4	NO	NO
1324	2218 WASHINGTON ST	1	B	49	52	53																					56	4	NO	NO
1325	326 SOUTHERN BLV	1	B	49	52	53																					56	4	NO	NO
1326	2222 WASHINGTON ST	1	B	49	51	52																					56	5	NO	NO
1327	2226 WASHINGTON ST	1	B	49	51	52																					55	4	NO	NO
1328	2230 WASHINGTON ST	1	B	49	51	52																					56	5	NO	NO
1329	2234 WASHINGTON ST	1	B	49	51	51																					55	4	NO	NO
1330	2238 WASHINGTON ST	1	B	49	50	51																					55	5	NO	NO
1331	2246 WASHINGTON ST	1	B	49	52	53																					56	4	NO	NO
1332	2245 WASHINGTON ST	1	B	49	57	57																					61	4	NO	NO
1333	2241 WASHINGTON ST	1	B	49	54	55																					59	5	NO	NO
1334	2233 WASHINGTON ST	1	B	49	56	57																					60	4	NO	NO
1335	2221 WASHINGTON ST	1	B	49	53	54																					57	4	NO	NO
1336	521 HART ST	1	B	49	53	54																					57	4	NO	NO
1337	509 HART ST	1	B	49	57	58																					64	7	NO	NO
1338	2253 CAROLINA BEACH RD	1	B	49	60	61																					67	7	YES	NO
1338.1	1756 CAROLINA BEACH RD	1	E	49	64	65																					R/W	N/A	N/A	NO
1339	1826 CAROLINA BEACH RD	1	B	49	74	75																					R/W	N/A	N/A	NO
1340	1910 CAROLINA BEACH RD	1	B	49	73	74																					R/W	N/A	N/A	NO
1341	1910 CAROLINA BEACH RD	1	B	49	72	72																					R/W	N/A	N/A	NO
1342	1914 CAROLINA BEACH RD	1	B	49	73	74																					R/W	N/A	N/A	NO
1343	321 SOUTHERN BLV	1	B	49	55	56																					59	4	NO	NO
1344	2154 WASHINGTON ST	1	B	49	54	55																					57	3	NO	NO
1345	2150 WASHINGTON ST	1	B	49	52	53																					56	4	NO	NO
1346	2146 WASHINGTON ST	1	B	49	52	53																					56	4	NO	NO
1347	405 SOUTHERN BLV	1	B	49	54	55																					58	4	NO	NO
1348	405 SOUTHERN BLV	1	B	49	64	65																					67	3	YES	NO
1349	405 SOUTHERN BLV	1	B	49	60	61																					63	3	NO	NO
1350	2154 CAROLINA BEACH RD	1	B	49	74	74																					77	3	YES	NO
1351	2146 CAROLINA BEACH RD	1	B	49	72	73																					76	4	YES	NO
1352	2138 CAROLINA BEACH RD	1	B	49	73	73																					76	3	YES	NO
1353	2134 CAROLINA BEACH RD	1	B	49	73	74																					76	3	YES	NO
1354	2145 WASHINGTON ST	1	B	49	62	62																					65	3	NO	NO
1355	2150 CAROLINA BEACH RD	1	B	49	63	64																					66	3	YES	NO
1356	2145 WASHINGTON ST	1	B	49	56	57																					60	4	NO	NO
1357	2153 WASHINGTON ST	1	B	49	49	49																					50	1	NO	NO
1358	2142 WASHINGTON ST	1	B	49	53	54																					57	4	NO	NO
1359	2138 WASHINGTON ST	1	B	49	51	52																					55	4	NO	NO
1360	2137 WASHINGTON ST	1	B	49	57	58																					60	3	NO	NO
1361	2141 WASHINGTON ST	1	B	49	58	59																					62	4	NO	NO
1362	2133 WASHINGTON ST	1	B	49	57	58																					60	3	NO	NO
1363	2130 CAROLINA BEACH RD	1	B	49	73	74																					76	3	YES	NO
1364	2126 CAROLINA BEACH RD	1	B	49	53	53																					56	3	NO	NO
1365	2122 CAROLINA BEACH RD	1	B	49	74	75																					77	3	YES	NO
1366	416 CENTRAL BLV	1	B	49	73	74																					77	4	YES	NO
1367	416 CENTRAL BLV	1	B	49	75	76																					78	3	YES	NO
1368	416 CENTRAL BLV	1	B	49	64	65																					66	2	YES	NO
1369	406 CENTRAL BLV	1	B	49	61	62																					63	2	NO	NO
1370	412 CENTRAL BLV	1	B	49	58	59																					60	2	NO	NO

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Table B.1
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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1371	406 CENTRAL BLV	1	B	49	58	59																					60	2	NO	NO
1372	2117 WASHINGTON ST	1	B	49	59	60																					61	2	NO	NO
1373	2121 WASHINGTON ST	1	B	49	58	59																					61	3	NO	NO
1374	2125 WASHINGTON ST	1	B	49	58	59																					60	2	NO	NO
1375	2125 WASHINGTON ST	1	B	49	56	57																					59	3	NO	NO
1376	2134 WASHINGTON ST	1	B	49	51	52																					55	4	NO	NO
1377	2126 WASHINGTON ST	1	B	49	52	53																					56	4	NO	NO
1378	322 CENTRAL BLV	1	B	49	51	52																					55	4	NO	NO
1379	322 CENTRAL BLV	1	B	49	53	53																					57	4	NO	NO
1380	317 SOUTHERN BLV	1	B	49	54	55																					59	5	NO	NO
1381	1809 CAROLINA BEACH RD	1	B	49	73	74																					71	-2	YES	NO
1382	613 ALABAMA AVE	1	C/D	14/49	56	57																					26	-30	NO	NO
1383	515 ALABAMA AVE	1	B	49	61	62																					67	6	YES	NO
1384	509 TENNESSEE AVE	1	B	49	63	63																					68	5	YES	NO
1385	521 TENNESSEE AVE	1	B	49	59	60																					66	7	YES	NO
1386	517 TENNESSEE AVE	1	B	49	58	58																					65	7	NO	NO
1387	601 TENNESSEE AVE	1	B	49	55	56																					62	7	NO	NO
1388	611 TENNESSEE AVE	1	B	49	53	54																					59	6	NO	NO
1389	615 TENNESSEE AVE	1	B	49	51	52																					58	7	NO	NO
1390	1909 ELM ST	1	B	49	55	55																					61	6	NO	NO
1391	1907 ELM ST	1	B	49	54	55																					61	7	NO	NO
1392	521 TENNESSEE AVE	1	B	49	58	59																					66	8	YES	NO
1393	602 SOUTH CAROLINA AVE	1	B	49	53	54																					60	7	NO	NO
1394	601 SOUTH CAROLINA AVE	1	B	49	55	56																					61	6	NO	NO
1395	1828 W LAKE SHORE DR	1	B	49	55	57																					61	6	NO	NO
1396	1822 W LAKE SHORE DR	1	B	49	58	59																					63	5	NO	NO
1397	1818 E LAKE SHORE DR	1	B	49	60	61																					64	4	NO	NO
1398	1812 W LAKE SHORE DR	1	B	49	62	63																					66	4	YES	NO
1399	518 ALABAMA AVE	1	B	49	59	60																					64	5	NO	NO
1400	602 ALABAMA AVE	1	B	49	56	57																					61	5	NO	NO
1401	606 ALABAMA AVE	1	B	49	54	55																					60	6	NO	NO
1402	2015 ELM ST	1	B	49	54	55																					61	7	NO	NO
1403	2019 ELM ST	1	B	49	54	55																					60	6	NO	NO
1404	613 WOODLAWN AVE	1	B	49	53	54																					60	7	NO	NO
1405	613 WOODLAWN AVE	1	B	49	56	57																					62	6	NO	NO
1406	609 WOODLAWN AVE	1	B	49	55	56																					62	7	NO	NO
1407	605 WOODLAWN AVE	1	B	49	56	57																					63	7	NO	NO
1408	601 WOODLAWN AVE	1	B	49	56	57																					63	7	NO	NO
1409	605 WOODLAWN AVE	1	B	49	58	58																					64	6	NO	NO
1410	517 WOODLAWN AVE	1	B	49	56	57																					63	7	NO	NO
1411	513 WOODLAWN AVE	1	B	49	57	58																					63	6	NO	NO
1412	509 WOODLAWN AVE	1	B	49	61	62																					68	7	YES	NO
1413	505 WOODLAWN AVE	1	B	49	64	65																					71	7	YES	NO
1414	503 WOODLAWN AVE	1	B	49	67	68																					73	6	YES	NO
1415	504 WOODLAWN AVE	1	B	49	55	56																					62	7	NO	NO
1416	607 IVEY CIR	1	B	49	51	52																					58	7	NO	NO
1417	510 WOODLAWN AVE	1	B	49	53	54																					60	7	NO	NO
1418	516 WOODLAWN AVE	1	B	49	51	52																					58	7	NO	NO
1419	606 WOODLAWN AVE	1	B	49	51	52																					58	7	NO	NO
1420	2001 CAROLINA BEACH RD	---	F	49	71	72																					78	7	NO	NO
1420.1	2011 CAROLINA BEACH RD	2	D	24	47	48																					55	8	YES	NO
1421	2017 CAROLINA BEACH RD	1	B	49	60	61																					67	7	YES	NO
1422	510 MORNINGSIDE DR	1	B	49	59	60																					71	12	YES	YES
1423	514 MORNINGSIDE DR	1	B	49	56	57																					67	11	YES	YES
1424	518 MORNINGSIDE DR	1	B	49	56	57																					65	9	NO	NO
1425	522 MORNINGSIDE DR	1	B	49	53	54																					63	10	NO	YES
1426	602 MORNINGSIDE DR	1	B	49	54	55																					62	8	NO	NO
1427	606 MORNINGSIDE DR	1	B	49	53	54																					61	8	NO	NO
1428	605 MORNINGSIDE DR	1	B	49	54	55																					60	6	NO	NO
1429	601 MORNINGSIDE DR	1	B	49	53	54																					60	7	NO	NO
1430	521 MORNINGSIDE DR	1	B	49	54	55																					62	8	NO	NO
1431	517 MORNINGSIDE DR	1	B	49	56	57																					63	7	NO	NO
1432	513 MORNINGSIDE DR	1	B	49	58	59																					66	8	YES	NO
1433	509 MORNINGSIDE DR	1	B	49	57	58																					70	13	YES	YES
1434	510 IVEY CIR	1	B	49	59	60																					67	8	YES	NO
1435	514 IVEY CIR	1	B	49	57	57																					65	8	NO	NO
1436	518 IVEY CIR	1	B	49	55	56																					62	7	NO	NO
1437	518 IVEY CIR	1	B	49	54	55																					62	8	NO	NO
1438	602 IVEY CIR	1	B	49	52	53																					59	7	NO	NO
1439	522 IVEY CIR	1	B	49	52	53																					59	7	NO	NO
1440	320 NORTHERN BLV	1	B	49	54	55																					59	5	NO	NO

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1441	2018 WASHINGTON ST	1	B	49	50	51																					56	6	NO	NO
1442	2022 WASHINGTON ST	1	B	49	51	51																					56	5	NO	NO
1443	2026 WASHINGTON ST	1	B	49	52	53																					58	6	NO	NO
1444	2030 WASHINGTON ST	1	B	49	51	52																					57	6	NO	NO
1445	2038 WASHINGTON ST	1	B	49	52	53																					57	5	NO	NO
1446	2042 WASHINGTON ST	1	B	49	51	52																					57	6	NO	NO
1447	2046 WASHINGTON ST	1	B	49	52	53																					57	5	NO	NO
1448	2050 WASHINGTON ST	1	B	49	51	52																					57	6	NO	NO
1449	2054 WASHINGTON ST	1	B	49	52	53																					57	5	NO	NO
1450	2058 WASHINGTON ST	1	B	49	53	54																					58	5	NO	NO
1451	2062 WASHINGTON ST	1	B	49	53	54																					58	5	NO	NO
1452	2066 WASHINGTON ST	1	B	49	54	55																					59	5	NO	NO
1453	321 CENTRAL BLV	1	B	49	56	57																					60	4	NO	NO
1454	417 CENTRAL BLV	1	B	49	73	74																					77	4	YES	NO
1455	417 CENTRAL BLV	1	B	49	64	65																					67	3	YES	NO
1456	405 CENTRAL BLV	1	B	49	57	58																					60	3	NO	NO
1457	2059 WASHINGTON ST	1	B	49	60	61																					63	3	NO	NO
1458	2055 WASHINGTON ST	1	B	49	60	60																					63	3	NO	NO
1459	2051 WASHINGTON ST	1	B	49	59	60																					63	4	NO	NO
1460	2047 WASHINGTON ST	1	B	49	59	60																					63	4	NO	NO
1461	2043 WASHINGTON ST	1	B	49	59	60																					63	4	NO	NO
1462	2039 WASHINGTON ST	1	B	49	59	60																					63	4	NO	NO
1463	2035 WASHINGTON ST	1	B	49	58	59																					62	4	NO	NO
1464	2031 WASHINGTON ST	1	B	49	59	60																					62	3	NO	NO
1465	2027 WASHINGTON ST	1	B	49	59	59																					62	3	NO	NO
1466	2019 WASHINGTON ST	1	B	49	59	60																					62	3	NO	NO
1467	2015 WASHINGTON ST	1	B	49	58	59																					62	4	NO	NO
1468	2011 WASHINGTON ST	1	B	49	59	59																					62	3	NO	NO
1469	404 NORTHERN BLV	1	B	49	59	59																					62	3	NO	NO
1470	414 NORTHERN BLV	1	B	49	62	63																					65	3	NO	NO
1471	414 NORTHERN BLV	1	B	49	67	68																					69	2	YES	NO
1472	2012 CAROLINA BEACH RD	1	B	49	75	76																					78	3	YES	NO
1473	2018 CAROLINA BEACH RD	1	B	49	73	73																					76	3	YES	NO
1474	2030 CAROLINA BEACH RD	1	B	49	73	74																					77	4	YES	NO
1475	2038 CAROLINA BEACH RD	1	B	49	72	73																					75	3	YES	NO
1476	2046 CAROLINA BEACH RD	1	B	49	73	73																					76	3	YES	NO
1477	2050 CAROLINA BEACH RD	1	B	49	73	74																					76	3	YES	NO
1478	1926 WASHINGTON ST	1	B	49	51	52																					59	8	NO	NO
1479	1930 WASHINGTON ST	1	B	49	49	49																					58	9	NO	NO
1480	1934 WASHINGTON ST	1	B	49	49	49																					58	9	NO	NO
1481	1942 WASHINGTON ST	1	B	49	49	50																					58	9	NO	NO
1482	1946 WASHINGTON ST	1	B	49	49	49																					57	8	NO	NO
1483	1956 WASHINGTON ST	1	B	49	50	51																					57	7	NO	NO
1484	321 NORTHERN BLV	1	B	49	51	52																					57	6	NO	NO
1485	401 NORTHERN BLV	1	B	49	58	59																					61	3	NO	NO
1486	405 NORTHERN BLV	1	B	49	61	62																					63	2	NO	NO
1487	409 NORTHERN BLV	1	B	49	63	64																					65	2	NO	NO
1488	413 NORTHERN BLV	1	B	49	65	66																					67	2	YES	NO
1489	417 NORTHERN BLV	1	B	49	69	70																					73	4	YES	NO
1490	421 NORTHERN BLV	1	B	49	76	77																					R/W	N/A	N/A	NO
1491	1960 CAROLINA BEACH RD	---	F	49	75	76																					R/W	N/A	N/A	NO
1492	1964 CAROLINA BEACH RD	---	F	49	76	77																					R/W	N/A	N/A	NO
1493	1951 WASHINGTON ST	1	B	49	57	58																					63	6	NO	NO
1494	1947 WASHINGTON ST	1	B	49	55	56																					63	8	NO	NO
1495	1943 WASHINGTON ST	1	B	49	55	56																					64	9	NO	NO
1496	1952 CAROLINA BEACH RD	1	B	49	75	76																					R/W	N/A	N/A	NO
1497	1948 CAROLINA BEACH RD	1	B	49	75	75																					R/W	N/A	N/A	NO
1498	1940 CAROLINA BEACH RD	1	B	49	60	60																					67	7	YES	NO
1499	404 TENNESSEE AVE	1	B	49	56	57																					62	6	NO	NO
1500	402 TENNESSEE AVE	1	B	49	54	55																					61	7	NO	NO
1501	1931 WASHINGTON ST	1	B	49	52	53																					62	10	NO	YES
1502	1935 WASHINGTON ST	1	B	49	54	55																					62	8	NO	NO
1503	405 NORTHERN BLV	1	B	49	57	58																					63	6	NO	NO
1504	1956 WASHINGTON ST	1	B	49	51	52																					59	8	NO	NO
1505	314 SOUTH CAROLINA AVE (Beit Hallel Church)	1	D	14	17	20																					29	12	NO	YES
1506	315 SOUTH CAROLINA AVE (Beit Hallel Church)	---	D	14	17	20																					R/W	N/A	N/A	NO
1507	1842 CAROLINA BEACH RD	1	B	49	74	75																					R/W	N/A	N/A	NO
1508	1839 WASHINGTON ST	1	B	49	55	56																					R/W	N/A	N/A	NO
1509	1837 WASHINGTON ST	1	B	49	54	55																					67	13	YES	YES
1510	1833 WASHINGTON ST	1	B	49	53	54																					67	14	YES	YES
1511	1829 WASHINGTON ST	1	B	49	54	55																					69	15	YES	YES

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Table B.1
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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1512	1850 WASHINGTON ST	1	B	49	49	49																					R/W	N/A	N/A	NO
1513	321 NORTH CAROLINA AVE	1	B	49	50	51																					R/W	N/A	N/A	NO
1514	321 NORTH CAROLINA AVE	1	B	49	50	52																					R/W	N/A	N/A	NO
1515	317 NORTH CAROLINA AVE	1	B	49	49	50																					70	21	YES	YES
1516	313 NORTH CAROLINA AVE	1	B	49	49	50																					68	19	YES	YES
1517	309 NORTH CAROLINA AVE	1	B	49	49	51																					66	17	YES	YES
1518	305 NORTH CAROLINA AVE	1	B	49	49	51																					65	16	NO	YES
1519	301 NORTH CAROLINA AVE	1	B	49	49	51																					63	14	NO	YES
1520	401 NORTH CAROLINA AVE	1	B	49	56	57																					R/W	N/A	N/A	NO
1521	302 KENTUCKY AVE	1	B	49	63	67																					73	10	YES	YES
1522	302 KENTUCKY AVE	1	B	49	58	62																					R/W	N/A	N/A	NO
1523	1918 CAROLINA BEACH RD	1	B	49	73	73																					77	4	YES	NO
1524	1926 CAROLINA BEACH RD	1	B	49	72	73																					76	4	YES	NO
1525	401 TENNESSEE AVE	1	B	49	57	58																					64	7	NO	NO
1526	1909 WASHINGTON ST	1	B	49	56	57																					67	11	YES	YES
1527	402 NORTH CAROLINA AVE	1	B	49	56	57																					R/W	N/A	N/A	NO
1528	1922 CAROLINA BEACH RD	1	B	49	73	74																					77	4	YES	NO
1529	1904 WASHINGTON ST	1	B	49	51	52																					66	15	YES	YES
1530	1908 WASHINGTON ST	1	B	49	51	52																					63	12	NO	YES
1531	1912 WASHINGTON ST	1	B	49	52	53																					62	10	NO	YES
1532	1916 WASHINGTON ST	1	B	49	51	52																					60	9	NO	NO
1533	1920 WASHINGTON ST	1	B	49	50	51																					60	10	NO	YES
1534	313 TENNESSEE AVE	1	B	49	49	49																					54	5	NO	NO
1535	309 TENNESSEE AVE	1	B	49	49	49																					56	7	NO	NO
1536	307 TENNESSEE AVE	1	B	49	49	49																					56	7	NO	NO
1537	301 TENNESSEE AVE	1	B	49	49	49																					57	8	NO	NO
1538	232 NORTH CAROLINA AVE	1	B	49	49	52																					60	11	NO	YES
1539	238 NORTH CAROLINA AVE	1	B	49	49	52																					60	11	NO	YES
1540	242 NORTH CAROLINA AVE	1	B	49	49	51																					60	11	NO	YES
1541	246 NORTH CAROLINA AVE	1	B	49	49	51																					60	11	NO	YES
1542	250 NORTH CAROLINA AVE	1	B	49	49	51																					60	11	NO	YES
1543	302 NORTH CAROLINA AVE	1	B	49	49	50																					61	12	NO	YES
1544	306 NORTH CAROLINA AVE	1	B	49	49	50																					62	13	NO	YES
1545	308 NORTH CAROLINA AVE	1	B	49	49	50																					63	14	NO	YES
1546	312 NORTH CAROLINA AVE	1	B	49	49	49																					62	13	NO	YES
1547	249 NORTH CAROLINA AVE	1	B	49	49	52																					63	14	NO	YES
1548	249 NORTH CAROLINA AVE	1	B	49	50	53																					62	12	NO	YES
1549	241 NORTH CAROLINA AVE	1	B	49	50	53																					62	12	NO	YES
1550	237 NORTH CAROLINA AVE	1	B	49	51	54																					61	10	NO	YES
1551	229 NORTH CAROLINA AVE	1	B	49	51	54																					61	10	NO	YES
1552	225 NORTH CAROLINA AVE	1	B	49	50	53																					60	10	NO	YES
1553	221 NORTH CAROLINA AVE	1	B	49	51	54																					60	9	NO	NO
1554	213 NORTH CAROLINA AVE	1	B	49	51	54																					59	8	NO	NO
1555	213 NORTH CAROLINA AVE	1	B	49	50	54																					58	8	NO	NO
1556	201 NORTH CAROLINA AVE	1	B	49	50	54																					58	8	NO	NO
1557	1813 PINE ST	1	B	49	52	56																					59	7	NO	NO
1558	1895 BURNETT BLV	1	B	49	58	62																					63	5	NO	NO
1559	151 NORTH CAROLINA AVE	1	B	49	55	60																					61	6	NO	NO
1560	151 NORTH CAROLINA AVE	1	B	49	53	56																					59	6	NO	NO
1561	151 NORTH CAROLINA AVE	1	B	49	50	54																					57	7	NO	NO
1562	151 NORTH CAROLINA AVE	1	B	49	50	54																					57	7	NO	NO
1563	151 NORTH CAROLINA AVE	1	B	49	52	56																					59	7	NO	NO
1564	151 NORTH CAROLINA AVE	1	B	49	54	57																					60	6	NO	NO
1565	1602 BURNETT BLV	1	B	49	70	73																					74	4	YES	NO
1566	1602 BURNETT BLV	1	B	49	62	65																					66	4	YES	NO
1567	1602 S FRONT ST (Optimist Park)	1	C	49	52	54																					60	8	NO	NO
1568	1603 S FRONT ST (Optimist Park)	---	C	49	55	57																					64	9	NO	NO
1569	1604 S FRONT ST (Optimist Park)	---	C	49	53	55																					64	11	NO	YES
1570	1605 S FRONT ST (Optimist Park)	---	C	49	55	57																					66	11	YES	YES
1571	1506 S 3RD ST	1	B	49	74	76																					R/W	N/A	N/A	NO
1572	1504 S 3RD ST	1	B	49	74	77																					R/W	N/A	N/A	NO
1573	1502 S 3RD ST	1	B	49	75	77																					R/W	N/A	N/A	NO
1574	1739 BURNETT BLV (Greenfield Park)	2	C	49	60	63																					65	5	NO	NO
1575	1740 BURNETT BLV (Greenfield Park)	---	C	49	54	57																					60	6	NO	NO
1576	1741 BURNETT BLV (Greenfield Park)	---	C	49	56	59																					61	5	NO	NO
1577	1742 BURNETT BLV (Greenfield Park)	---	C	49	52	54																					58	6	NO	NO
1578	1743 BURNETT BLV (Greenfield Park)	---	C	49	59	61																					64	5	NO	NO
1579	218 WILLARD ST	1	B	49	70	73																					76	6	YES	NO
1580	220 WILLARD ST	1	B	49	69	72																					74	5	YES	NO
1581	302 WILLARD ST	1	B	49	61	64																					64	3	NO	NO
1582	312 WILLARD ST	1	B	49	54	57																					59	5	NO	NO

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1583	316 WILLARD ST	1	B	49	52	55																					56	4	NO	NO
1584	1602 S 4TH ST	1	B	49	51	54																					55	4	NO	NO
1585	1601 S 4TH ST	1	B	49	49	51																					55	6	NO	NO
1586	404 WILLARD ST	1	B	49	49	50																					55	6	NO	NO
1587	406 WILLARD ST	1	B	49	49	50																					55	6	NO	NO
1588	408 WILLARD ST	0	D	14	14	14																					20	6	NO	NO
1589	1507 S 3RD ST	1	B	49	70	73																					75	5	YES	NO
1590	1511 S 3RD ST	1	B	49	68	71																					71	3	YES	NO
1591	301 WILLARD ST	1	B	49	66	69																					69	3	YES	NO
1592	303 WILLARD ST	1	B	49	57	60																					61	4	NO	NO
1593	305 WILLARD ST	1	B	49	55	58																					60	5	NO	NO
1594	307 WILLARD ST	1	B	49	54	57																					59	5	NO	NO
1595	309 WILLARD ST	1	B	49	53	56																					58	5	NO	NO
1596	1514 S 4TH ST	1	B	49	50	53																					55	5	NO	NO
1597	301 WILLARD ST	1	B	49	68	71																					72	4	YES	NO
1598	1501 S 4TH ST	1	B	49	59	64																					66	7	YES	NO
1599	401 WILLARD ST	1	B	49	49	51																					54	5	NO	NO
1600	405 WILLARD ST	1	B	49	49	50																					54	5	NO	NO
1601	409 WILLARD ST	1	B	49	49	51																					55	6	NO	NO
1602	411 WILLARD ST	1	B	49	49	49																					54	5	NO	NO
1603	1516 E LAKE SHORE DR	1	B	49	49	49																					54	5	NO	NO
1604	1510 E LAKE SHORE DR	1	B	49	49	50																					52	3	NO	NO
1605	1513 S 4TH ST	1	B	49	49	51																					52	3	NO	NO
1606	1511 S 4TH ST	1	B	49	49	52																					54	5	NO	NO
1607	1509 S 4TH ST	1	B	49	49	53																					55	6	NO	NO
1608	1507 S 4TH ST	1	B	49	50	55																					56	6	NO	NO
1609	1505 S 4TH ST	1	B	49	55	60																					61	6	NO	NO
1610	1502 E LAKE SHORE DR	1	B	49	49	50																					53	4	NO	NO
1611	1511 HOOPER ST	1	B	49	49	52																					54	5	NO	NO
1612	1510 S 4TH ST	1	B	49	49	51																					55	6	NO	NO
1613	1508 S 4TH ST	1	B	49	57	59																					59	2	NO	NO
1614	1506 S 4TH ST	1	B	49	56	59																					59	3	NO	NO
1615	1504 S 4TH ST	1	B	49	52	57																					60	8	NO	NO
1616	1502 S 4TH ST	1	B	49	61	67																					R/W	N/A	N/A	NO
1617	312 GREENFIELD ST	1	B	49	62	67																					69	7	YES	NO
1618	310 GREENFIELD ST	1	B	49	63	68																					70	7	YES	NO
1624	210 RIVER ROCK WAY	1	B	49	57	59																					61	4	NO	NO
1625	1408 S 3RD ST	1	B	49	71	74																					73	2	YES	NO
1626	208 MARTIN ST	1	B	49	59	61																					62	3	NO	NO
1627	210 RIVER ROCK WAY	1	B	49	63	67																					66	3	YES	NO
1628	210 RIVER ROCK WAY	1	B	49	55	58																					60	5	NO	NO
1629	1415 S 2ND ST	1	B	49	61	66																					64	3	NO	NO
1630	1414 S 2ND ST	1	B	49	51	55																					55	4	NO	NO
1631	100 RIVER ROCK WAY	1	B	49	49	54																					58	9	NO	NO
1632	1400 S 2ND ST	1	B	49	49	49																					54	5	NO	NO
1633	204 MARTIN ST	1	B	49	49	50																					50	1	NO	NO
1634	1401 S 2ND ST	1	B	49	51	53																					55	4	NO	NO
1635	1315 S 2ND ST	1	B	49	49	52																					54	5	NO	NO
1636	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
1637	1302 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1638	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1639	1302 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1640	101 LAUGHING OAK LN	1	B	49	49	49																					52	3	NO	NO
1641	102 LAUGHING OAK LN	1	B	49	49	49																					55	6	NO	NO
1642	106 LAUGHING OAK LN	1	B	49	49	49																					55	6	NO	NO
1643	110 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1644	1314 S 2ND ST	1	B	49	49	51																					53	4	NO	NO
1645	1216 S 3RD ST	1	B	49	73	75																					75	2	YES	NO
1646	1218 S 3RD ST	1	B	49	72	74																					74	2	YES	NO
1647	1220 S 3RD ST	1	B	49	72	74																					74	2	YES	NO
1648	1222 S 3RD ST	1	B	49	72	74																					74	2	YES	NO
1649	211 KIDDER ST	1	B	49	58	61																					61	3	NO	NO
1650	205 KIDDER ST	1	B	49	56	58																					59	3	NO	NO
1651	203 KIDDER ST	1	B	49	54	57																					58	4	NO	NO
1652	0 KIDDER ST	1	B	49	52	54																					57	5	NO	NO
1653	1215 S 2ND ST	1	B	49	52	54																					56	4	NO	NO
1654	1209 S 2ND ST	1	B	49	53	56																					57	4	NO	NO
1655	1207 S 2ND ST	1	B	49	54	56																					57	3	NO	NO
1656	1219 S 2ND ST	1	B	49	52	54																					55	3	NO	NO
1657	1419 S 4TH ST	1	B	49	62	66																					65	3	NO	NO
1658	1417 S 4TH ST	1	B	49	55	60																					60	5	NO	NO

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1659	1415 S 4TH ST	1	B	49	53	58																					58	5	NO	NO
1660	1413 S 4TH ST	1	B	49	53	57																					56	3	NO	NO
1661	1411 S 4TH ST	1	B	49	53	56																					56	3	NO	NO
1662	1409 S 4TH ST	1	B	49	53	57																					55	2	NO	NO
1663	1407 S 4TH ST	1	B	49	53	56																					55	2	NO	NO
1664	1407 S 4TH ST	1	B	49	52	54																					54	2	NO	NO
1665	1403 S 4TH ST	1	B	49	50	53																					53	3	NO	NO
1666	1401 S 3RD ST	1	B	49	63	66																					68	5	YES	NO
1666.1	1423 S 3RD ST	1	E	49	70	73																					73	3	YES	NO
1667	310 MARTIN ST	1	B	49	56	58																					58	2	NO	NO
1668	309 GREENFIELD ST	1	B	49	66	70																					69	3	YES	NO
1669	311 GREENFIELD ST	1	B	49	64	69																					68	4	YES	NO
1670	313 GREENFIELD ST	1	B	49	65	69																					68	3	YES	NO
1671	319 GREENFIELD ST	1	B	49	63	68																					67	4	YES	NO
1672	310 MARTIN ST	1	B	49	55	58																					58	3	NO	NO
1673	1414 S 4TH ST	1	B	49	58	61																					61	3	NO	NO
1674	1416 S 4TH ST	1	B	49	59	62																					61	2	NO	NO
1675	1401 S 3RD ST	1	D	24	44	47																					49	5	NO	NO
1676	1303 S 3RD ST	1	B	49	70	73																					73	3	YES	NO
1677	1305 S 3RD ST	1	B	49	71	73																					73	2	YES	NO
1678	1307 S 3RD ST	1	B	49	71	73																					73	2	YES	NO
1679	1309 S 3RD ST	1	B	49	71	73																					74	3	YES	NO
1680	304 KIDDER ST	1	B	49	61	63																					63	2	NO	NO
1681	306 KIDDER ST	1	B	49	59	61																					61	2	NO	NO
1682	308 KIDDER ST	1	B	49	57	59																					59	2	NO	NO
1683	1302 S 4TH ST	1	B	49	54	56																					57	3	NO	NO
1684	1305 SIMON ST	1	B	49	53	55																					55	2	NO	NO
1685	1306 S 4TH ST	1	B	49	52	54																					55	3	NO	NO
1686	1308 S 4TH ST	1	B	49	51	54																					55	4	NO	NO
1687	1310 S 4TH ST	1	B	49	52	54																					55	3	NO	NO
1688	1312 S 4TH ST	1	B	49	56	59																					59	3	NO	NO
1689	1310 SIMON ST	1	B	49	59	61																					62	3	NO	NO
1690	1301 S 4TH ST	1	B	49	50	52																					53	3	NO	NO
1691	1303 S 4TH ST	1	B	49	50	52																					53	3	NO	NO
1692	1305 S 4TH ST	1	B	49	49	51																					52	3	NO	NO
1693	1223 S 4TH ST	1	B	49	50	52																					53	3	NO	NO
1694	1221 S 4TH ST	1	B	49	49	51																					53	4	NO	NO
1695	1219 S 4TH ST	1	B	49	49	52																					53	4	NO	NO
1696	1217 S 4TH ST	1	B	49	49	52																					53	4	NO	NO
1697	1220 S 4TH ST	1	B	49	56	58																					58	2	NO	NO
1698	1218 S 4TH ST	1	B	49	56	58																					58	2	NO	NO
1699	1214 S 4TH ST	1	B	49	55	58																					58	3	NO	NO
1700	1212 S 4TH ST	1	B	49	56	58																					58	2	NO	NO
1701	1210 S 4TH ST	1	B	49	55	58																					58	3	NO	NO
1702	304 MARSTELLAR ST	1	B	49	63	65																					65	2	NO	NO
1703	306 MARSTELLAR ST	1	B	49	59	61																					62	3	NO	NO
1704	308 MARSTELLAR ST	1	B	49	55	57																					58	3	NO	NO
1705	1209 S 3RD ST	1	B	49	71	73																					73	2	YES	NO
1706	1203 S 3RD ST	1	B	49	70	73																					73	3	YES	NO
1707	300 MARSTELLAR ST	1	B	49	70	72																					72	2	YES	NO
1708	2131 CAROLINA BEACH RD (Legion Football Stadium)	---	C	49	58	59																					62	4	NO	NO
1709	2131 CAROLINA BEACH RD (Legion Football Stadium)	---	C	49	58	58																					62	4	NO	NO
1710	2235 CAROLINA BEACH RD	---	F	49	69	70																					75	6	NO	NO
1711	2239 CAROLINA BEACH RD	1	B	49	61	61																					65	4	NO	NO
1712	521 HART ST	1	B	49	53	54																					59	6	NO	NO
1713	2239 CAROLINA BEACH RD	1	B	49	57	58																					63	6	NO	NO
1714	580 NINA PL	1	B	49	59	60	60	1	NO	NO					60	1	NO	NO					60	1	NO	NO	59	0	NO	NO
1715	1512 S 4TH ST	1	B	49	54	57																					57	3	NO	NO
1716	1515 E HOOPER ST	1	B	49	49	49																					51	2	NO	NO
1717	1513 HOOPER ST	1	B	49	49	50																					52	3	NO	NO
1718	1512 LAKESHORE DR	1	B	49	49	49																					50	1	NO	NO
1719	2233 WASHINGTON ST	1	B	49	55	56																					59	4	NO	NO
1720	1509 S 3RD ST	1	B	49	69	72																					73	4	YES	NO
1721	324 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	52	2	NO	NO
1722	320 CALHOUN DR	1	B	49	50	52	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO	52	2	NO	NO
1723	316 CALHOUN DR	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO	51	2	NO	NO
1724	310 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	51	1	NO	NO
1725	306 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	52	2	NO	NO
1726	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1727	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1728	105 LAUGHING OAK LN	1	B	49	49	49																					51	2	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1729	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1730	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
1731	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
1732	1315 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
1733	1315 S 2ND ST	1	B	49	53	56																					56	3	NO	NO
1734	205 MARTIN ST	1	B	49	54	57																					56	2	NO	NO
1735	205 MARTIN ST	1	B	49	56	58																					58	2	NO	NO
1736	205 MARTIN ST	1	B	49	58	60																					60	2	NO	NO
1737	209 MARTIN STT	1	B	49	60	63																					62	2	NO	NO
1738	209 MARTIN STT	1	B	49	65	67																					66	1	YES	NO
1739	209 MARTIN STT	1	B	49	69	71																					71	2	YES	NO
1740	1408 S 3RD ST	1	B	49	50	52																					52	2	NO	NO
1741	1408 S 3RD ST	1	B	49	63	65																					66	3	YES	NO
1742	208 MARTIN ST	1	B	49	54	57																					56	2	NO	NO
1743	208 MARTIN ST	1	B	49	59	61																					62	3	NO	NO
1744	204 MARTIN ST	1	B	49	49	49																					49	0	NO	NO
1745	204 MARTIN ST	1	B	49	52	55																					56	4	NO	NO
1746	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1747	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1748	1314 S 2ND ST	1	B	49	49	49																					52	3	NO	NO
1749	1314 S 2ND ST	1	B	49	49	51																					51	2	NO	NO
1750	110 LAUGHING OAK LN	1	B	49	49	49																					51	2	NO	NO
1751	110 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1752	1302 S 2ND ST	1	B	49	50	52																					53	3	NO	NO
1753	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1754	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1755	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1756	106 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1757	106 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1758	102 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1759	102 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1760	206 RIVER ROCK WAY	1	B	49	53	57																					57	4	NO	NO
1761	206 RIVER ROCK WAY	1	B	49	49	51																					53	4	NO	NO
1762	206 RIVER ROCK WAY	1	B	49	60	65																					64	4	NO	NO
1763	1415 S 2ND ST	1	B	49	51	56																					55	4	NO	NO
1764	1415 S 2ND ST	1	B	49	51	54																					55	4	NO	NO
1765	1422 S 3RD ST	1	B	49	54	57																					58	4	NO	NO
1766	1422 S 3RD ST	1	B	49	71	74																					73	2	YES	NO
1767	1414 S 2ND ST	1	B	49	49	49																					51	2	NO	NO
1768	1414 S 2ND ST	1	B	49	59	65																					64	5	NO	NO
1769	112 RIVER ROCK WAY	1	B	49	49	50																					51	2	NO	NO
1770	112 RIVER ROCK WAY	1	B	49	49	53																					54	5	NO	NO
1771	112 RIVER ROCK WAY	1	B	49	60	65																					64	4	NO	NO
1772	1422 S 3RD ST	1	B	49	73	76																					73	0	YES	NO
1773	1739 BURNETT BLV (Greenfield Park)	---	C	49	69	71																					74	5	YES	NO
1774	1740 BURNETT BLV (Greenfield Park)	---	C	49	68	71																					73	5	YES	NO
1775	1741 BURNETT BLV (Greenfield Park)	---	C	49	69	72																					75	6	YES	NO
1776	1742 BURNETT BLV (Greenfield Park)	---	C	49	70	73																					75	5	YES	NO
1777	1739 BURNETT BLV (Greenfield Park)	---	C	49	71	74																					77	6	YES	NO
1778	218 WILLARD ST	1	B	49	71	74																					77	6	YES	NO
1779	1739 BURNETT BLV (Greenfield Park)	---	C	49	58	61																					64	6	NO	NO
1780	1740 BURNETT BLV (Greenfield Park)	---	C	49	57	59																					62	5	NO	NO
1781	1741 BURNETT BLV (Greenfield Park)	---	C	49	57	59																					62	5	NO	NO
1782	1742 BURNETT BLV (Greenfield Park)	---	C	49	57	59																					62	5	NO	NO
1783	1743 BURNETT BLV (Greenfield Park)	---	C	49	57	60																					62	5	NO	NO
1784	302 WILLARD ST	1	B	49	60	63																					64	4	NO	NO
1785	302 WILLARD ST	1	B	49	57	59																					60	3	NO	NO
1786	302 WILLARD ST	1	B	49	55	58																					60	5	NO	NO
1787	1739 BURNETT BLV (Greenfield Park)	---	C	49	55	58																					61	6	NO	NO
1788	1740 BURNETT BLV (Greenfield Park)	---	C	49	55	58																					61	6	NO	NO
1789	1741 BURNETT BLV (Greenfield Park)	---	C	49	54	56																					60	6	NO	NO
1790	1742 BURNETT BLV (Greenfield Park)	---	C	49	53	55																					59	6	NO	NO
1791	1743 BURNETT BLV (Greenfield Park)	---	C	49	54	57																					60	6	NO	NO
1792	1744 BURNETT BLV (Greenfield Park)	---	C	49	53	55																					59	6	NO	NO
1793	1745 BURNETT BLV (Greenfield Park)	---	C	49	51	54																					58	7	NO	NO
1794	1602 S 4TH ST	1	B	49	50	53																					57	7	NO	NO
1795	1739 BURNETT BLV (Greenfield Park)	---	C	49	63	66																					67	4	YES	NO
1796	1739 BURNETT BLV (Greenfield Park)	---	C	49	65	68																					69	4	YES	NO
1797	1650 S FRONT ST (Optimist Park)	---	C	49	56	58																					67	11	YES	YES
1798	1650 S FRONT ST (Optimist Park)	---	C	49	58	60																					67	9	YES	NO
1799	1650 S FRONT ST (Optimist Park)	---	C	49	61	63																					66	5	YES	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.

^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1800	1651 S FRONT ST (Optimist Park)	---	C	49	62	65																					67	5	YES	NO
1801	1652 S FRONT ST (Optimist Park)	---	C	49	61	63																					66	5	YES	NO
1802	1653 S FRONT ST (Optimist Park)	---	C	49	59	61																					66	7	YES	NO
1803	1654 S FRONT ST (Optimist Park)	---	C	49	58	59																					66	8	YES	NO
1804	1655 S FRONT ST (Optimist Park)	---	C	49	56	58																					67	11	YES	YES
1805	1656 S FRONT ST (Optimist Park)	---	C	49	57	59																					65	8	NO	NO
1806	1657 S FRONT ST (Optimist Park)	---	C	49	58	60																					65	7	NO	NO
1807	1658 S FRONT ST (Optimist Park)	---	C	49	59	62																					65	6	NO	NO
1808	1659 S FRONT ST (Optimist Park)	---	C	49	58	60																					64	6	NO	NO
1809	1660 S FRONT ST (Optimist Park)	---	C	49	57	59																					64	7	NO	NO
1810	1661 S FRONT ST (Optimist Park)	---	C	49	55	57																					65	10	NO	YES
1811	1662 S FRONT ST (Optimist Park)	---	C	49	54	56																					66	12	YES	YES
1812	1663 S FRONT ST (Optimist Park)	---	C	49	55	58																					64	9	NO	NO
1813	1664 S FRONT ST (Optimist Park)	---	C	49	56	59																					63	7	NO	NO
1814	1665 S FRONT ST (Optimist Park)	---	C	49	55	58																					63	8	NO	NO
1815	1666 S FRONT ST (Optimist Park)	---	C	49	54	57																					63	9	NO	NO
1816	1667 S FRONT ST (Optimist Park)	---	C	49	54	56																					63	9	NO	NO
1817	1668 S FRONT ST (Optimist Park)	---	C	49	53	55																					64	11	NO	YES
1818	1669 S FRONT ST (Optimist Park)	---	C	49	52	54																					63	11	NO	YES
1819	1670 S FRONT ST (Optimist Park)	---	C	49	53	55																					63	10	NO	YES
1820	1671 S FRONT ST (Optimist Park)	---	C	49	54	56																					62	8	NO	NO
1821	1672 S FRONT ST (Optimist Park)	---	C	49	54	56																					62	8	NO	NO
1822	1673 S FRONT ST (Optimist Park)	---	C	49	53	56																					61	8	NO	NO
1823	1674 S FRONT ST (Optimist Park)	---	C	49	53	55																					62	9	NO	NO
1824	1675 S FRONT ST (Optimist Park)	---	C	49	52	54																					62	10	NO	YES
1825	1676 S FRONT ST (Optimist Park)	---	C	49	52	54																					62	10	NO	YES
1826	1677 S FRONT ST (Optimist Park)	---	C	49	52	54																					61	9	NO	NO
1827	1678 S FRONT ST (Optimist Park)	---	C	49	53	55																					61	8	NO	NO
1828	1679 S FRONT ST (Optimist Park)	---	C	49	51	53																					62	11	NO	YES
1829	1680 S FRONT ST (Optimist Park)	---	C	49	51	54																					61	10	NO	YES
1830	1681 S FRONT ST (Optimist Park)	---	C	49	51	53																					61	10	NO	YES
1831	1682 S FRONT ST (Optimist Park)	---	C	49	51	53																					60	9	NO	NO
1832	320 MARYLAND AVE	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	52	3	NO	NO
1833	316 MARYLAND AVE	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES	51	2	NO	NO
1834	312 MARYLAND AVE	1	B	49	50	50	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	51	1	NO	NO
1835	308 MARYLAND AVE	1	B	49	49	50	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO	51	2	NO	NO
1836	304 MARYLAND AVE	1	B	49	49	50	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES	51	2	NO	NO
1837	300 MARYLAND AVE	1	B	49	49	51	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO	51	2	NO	NO
1838	2421 JEFFERSON ST	1	B	49	51	55	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES	53	2	NO	NO
1839	2429 JEFFERSON ST	1	B	49	52	54	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO	53	1	NO	NO
1840	2437 JEFFERSON ST	1	B	49	53	55	60	7	NO	NO					60	7	NO	NO					60	7	NO	NO	54	1	NO	NO
1841	2441 JEFFERSON ST	1	B	49	54	57	61	7	NO	NO					61	7	NO	NO					61	7	NO	NO	55	1	NO	NO
1842	2445 JEFFERSON ST	1	B	49	55	58	62	7	NO	NO					62	7	NO	NO					62	7	NO	NO	56	1	NO	NO
1843	2449 JEFFERSON ST	1	B	49	57	60	65	8	NO	NO					65	8	NO	NO					65	8	NO	NO	57	0	NO	NO
1844	2420 ADAMS ST	1	B	49	51	53	63	12	NO	YES					63	12	NO	YES					63	12	NO	YES	52	1	NO	NO
1845	2422 ADAMS ST	1	B	49	50	52	63	13	NO	YES					63	13	NO	YES					63	13	NO	YES	52	2	NO	NO
1846	2426 ADAMS ST	1	B	49	51	53	65	14	NO	YES					65	14	NO	YES					65	14	NO	YES	53	2	NO	NO
1847	2430 ADAMS ST	1	B	49	52	54	66	14	YES	YES					66	14	YES	YES					66	14	YES	YES	53	1	NO	NO
1848	2434 ADAMS ST	1	B	49	52	54	67	15	YES	YES					67	15	YES	YES					67	15	YES	YES	53	1	NO	NO
1849	2436 ADAMS ST	1	B	49	56	57	69	13	YES	YES					69	13	YES	YES					69	13	YES	YES	58	2	NO	NO
1850	1414 S 2ND ST	1	B	49	57	61																					60	3	NO	NO
1851	1414 S 2ND ST	1	B	49	53	58																					57	4	NO	NO
1852	1414 S 2ND ST	1	B	49	50	54																					54	4	NO	NO
1853	1414 S 2ND ST	1	B	49	49	53																					53	4	NO	NO
1854	1414 S 2ND ST	1	B	49	51	54																					55	4	NO	NO
1855	1414 S 2ND ST	1	B	49	52	56																					56	4	NO	NO
1856	112 RIVER ROCK WAY	1	B	49	56	61																					60	4	NO	NO
1857	112 RIVER ROCK WAY	1	B	49	53	57																					58	5	NO	NO
1858	112 RIVER ROCK WAY	1	B	49	50	55																					56	6	NO	NO
1859	112 RIVER ROCK WAY	1	B	49	49	52																					54	5	NO	NO
1860	112 RIVER ROCK WAY	1	B	49	49	51																					52	3	NO	NO
1861	1408 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1862	1408 S 3RD ST	1	B	49	71	74																					74	3	YES	NO
1863	1408 S 3RD ST	1	B	49	71	73																					73	2	YES	NO
1864	1408 S 3RD ST	1	B	49	71	73																					73	2	YES	NO
1865	1408 S 3RD ST	1	B	49	71	74																					73	2	YES	NO
1866	1408 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1867	1408 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1868	208 MARTIN ST	1	B	49	58	60																					61	3	NO	NO
1869	208 MARTIN ST	1	B	49	56	59																					59	3	NO	NO
1870	208 MARTIN ST	1	B	49	55	57																					57	2	NO	NO

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1871	208 MARTIN ST	1	B	49	55	58																					57	2	NO	NO
1872	208 MARTIN ST	1	B	49	54	56																					56	2	NO	NO
1873	208 MARTIN ST	1	B	49	57	60																					60	3	NO	NO
1874	208 MARTIN ST	1	B	49	54	56																					56	2	NO	NO
1875	208 MARTIN ST	1	B	49	56	58																					59	3	NO	NO
1876	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1877	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1878	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1879	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1880	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1881	1401 S 2ND ST	1	B	49	50	53																					54	4	NO	NO
1882	1401 S 2ND ST	1	B	49	52	55																					56	4	NO	NO
1883	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1884	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1885	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1886	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1887	1401 S 2ND ST	1	B	49	49	50																					50	1	NO	NO
1888	1401 S 2ND ST	1	B	49	49	50																					51	2	NO	NO
1889	1401 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1890	1401 S 2ND ST	1	B	49	49	49																					50	1	NO	NO
1891	1401 S 2ND ST	1	B	49	49	50																					51	2	NO	NO
1892	204 MARTIN ST	1	B	49	49	51																					51	2	NO	NO
1893	204 MARTIN ST	1	B	49	49	50																					50	1	NO	NO
1894	204 MARTIN ST	1	B	49	49	50																					51	2	NO	NO
1895	204 MARTIN ST	1	B	49	51	54																					54	3	NO	NO
1896	204 MARTIN ST	1	B	49	49	50																					50	1	NO	NO
1897	204 MARTIN ST	1	B	49	51	53																					53	2	NO	NO
1898	204 MARTIN ST	1	B	49	49	52																					52	3	NO	NO
1899	204 MARTIN ST	1	B	49	53	56																					56	3	NO	NO
1900	204 MARTIN ST	1	B	49	53	56																					57	4	NO	NO
1901	204 MARTIN ST	1	B	49	49	51																					51	2	NO	NO
1902	204 MARTIN ST	1	B	49	49	52																					52	3	NO	NO
1903	204 MARTIN ST	1	B	49	49	51																					52	3	NO	NO
1904	204 MARTIN ST	1	B	49	49	51																					52	3	NO	NO
1905	204 MARTIN ST	1	B	49	49	51																					52	3	NO	NO
1906	204 MARTIN ST	1	B	49	53	55																					56	3	NO	NO
1907	204 MARTIN ST	1	B	49	56	59																					60	4	NO	NO
1908	1415 S 2ND ST	1	B	49	51	55																					55	4	NO	NO
1909	210 RIVER ROCK WAY	1	B	49	55	58																					60	5	NO	NO
1910	1415 S 2ND ST	1	B	49	57	62																					61	4	NO	NO
1911	1415 S 2ND ST	1	B	49	52	56																					56	4	NO	NO
1912	206 RIVER ROCK WAY	1	B	49	59	64																					63	4	NO	NO
1913	206 RIVER ROCK WAY	1	B	49	51	55																					55	4	NO	NO
1914	210 RIVER ROCK WAY	1	B	49	56	60																					61	5	NO	NO
1915	1415 S 2ND ST	1	B	49	59	64																					63	4	NO	NO
1916	206 RIVER ROCK WAY	1	B	49	52	56																					56	4	NO	NO
1917	1415 S 2ND ST	1	B	49	53	58																					57	4	NO	NO
1918	1415 S 2ND ST	1	B	49	49	52																					53	4	NO	NO
1919	206 RIVER ROCK WAY	1	B	49	52	55																					56	4	NO	NO
1920	1415 S 2ND ST	1	B	49	55	60																					59	4	NO	NO
1921	206 RIVER ROCK WAY	1	B	49	56	61																					60	4	NO	NO
1922	210 RIVER ROCK WAY	1	B	49	61	64																					64	3	NO	NO
1923	1415 S 2ND ST	1	B	49	50	53																					54	4	NO	NO
1924	210 RIVER ROCK WAY	1	B	49	58	62																					63	5	NO	NO
1925	1415 S 2ND ST	1	B	49	60	65																					63	3	NO	NO
1926	206 RIVER ROCK WAY	1	B	49	62	66																					65	3	NO	NO
1927	206 RIVER ROCK WAY	1	B	49	53	57																					57	4	NO	NO
1928	210 RIVER ROCK WAY	1	B	49	63	67																					66	3	YES	NO
1929	206 RIVER ROCK WAY	1	B	49	61	65																					65	4	NO	NO
1930	1415 S 2ND ST	1	B	49	53	58																					57	4	NO	NO
1931	210 RIVER ROCK WAY	1	B	49	56	59																					61	5	NO	NO
1932	1415 S 2ND ST	1	B	49	51	55																					55	4	NO	NO
1933	206 RIVER ROCK WAY	1	B	49	55	58																					59	4	NO	NO
1934	1415 S 2ND ST	1	B	49	55	59																					59	4	NO	NO
1935	206 RIVER ROCK WAY	1	B	49	54	58																					58	4	NO	NO
1936	206 RIVER ROCK WAY	1	B	49	55	59																					59	4	NO	NO
1937	206 RIVER ROCK WAY	1	B	49	57	61																					62	5	NO	NO
1938	1415 S 2ND ST	1	B	49	57	62																					62	5	NO	NO
1939	1415 S 2ND ST	1	B	49	52	56																					56	4	NO	NO
1940	210 RIVER ROCK WAY	1	B	49	55	58																					60	5	NO	NO
1941	206 RIVER ROCK WAY	1	B	49	56	60																					60	4	NO	NO

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
1942	1415 S 2ND ST	1	B	49	62	66																					65	3	NO	NO
1943	206 RIVER ROCK WAY	1	B	49	55	59																					59	4	NO	NO
1944	1415 S 2ND ST	1	B	49	56	60																					60	4	NO	NO
1945	206 RIVER ROCK WAY	1	B	49	59	63																					63	4	NO	NO
1946	210 RIVER ROCK WAY	1	B	49	55	58																					60	5	NO	NO
1947	206 RIVER ROCK WAY	1	B	49	64	68																					67	3	YES	NO
1948	1422 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1949	1422 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1950	1422 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1951	1422 S 3RD ST	1	B	49	72	74																					73	1	YES	NO
1952	1422 S 3RD ST	1	B	49	72	75																					73	1	YES	NO
1953	1422 S 3RD ST	1	B	49	73	75																					73	0	YES	NO
1954	1422 S 3RD ST	1	B	49	73	75																					73	0	YES	NO
1955	1422 S 3RD ST	1	B	49	73	76																					73	0	YES	NO
1956	102 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1957	102 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1958	102 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1959	102 LAUGHING OAK LN	1	B	49	49	49																					51	2	NO	NO
1960	102 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1961	102 LAUGHING OAK LN	1	B	49	49	49																					55	6	NO	NO
1962	106 LAUGHING OAK LN	1	B	49	49	49																					55	6	NO	NO
1963	106 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1964	106 LAUGHING OAK LN	1	B	49	49	49																					52	3	NO	NO
1965	106 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1966	106 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1967	106 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1968	110 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1969	110 LAUGHING OAK LN	1	B	49	49	49																					52	3	NO	NO
1970	110 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1971	110 LAUGHING OAK LN	1	B	49	49	49																					52	3	NO	NO
1972	110 LAUGHING OAK LN	1	B	49	49	49																					51	2	NO	NO
1973	110 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1974	1314 S 2ND ST	1	B	49	49	50																					50	1	NO	NO
1975	1314 S 2ND ST	1	B	49	49	51																					51	2	NO	NO
1976	1314 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1977	1314 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1978	1314 S 2ND ST	1	B	49	49	50																					52	3	NO	NO
1979	1314 S 2ND ST	1	B	49	49	49																					49	0	NO	NO
1980	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1981	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1982	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1983	101 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1984	101 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1985	101 LAUGHING OAK LN	1	B	49	49	49																					53	4	NO	NO
1986	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1987	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1988	105 LAUGHING OAK LN	1	B	49	49	49																					51	2	NO	NO
1989	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1990	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1991	105 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1992	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1993	109 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1994	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1995	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1996	109 LAUGHING OAK LN	1	B	49	49	49																					50	1	NO	NO
1997	109 LAUGHING OAK LN	1	B	49	49	49																					49	0	NO	NO
1998	1302 S 2ND ST	1	B	49	49	51																					53	4	NO	NO
1999	1302 S 2ND ST	1	B	49	50	52																					53	3	NO	NO
2000	1302 S 2ND ST	1	B	49	51	53																					54	3	NO	NO
2001	1302 S 2ND ST	1	B	49	49	49																					51	2	NO	NO
2002	1302 S 2ND ST	1	B	49	51	53																					54	3	NO	NO
2003	1302 S 2ND ST	1	B	49	51	53																					54	3	NO	NO
2004	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
2005	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
2006	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
2007	1309 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
2008	1315 S 2ND ST	1	B	49	54	56																					56	2	NO	NO
2009	1315 S 2ND ST	1	B	49	53	56																					55	2	NO	NO
2010	1315 S 2ND ST	1	B	49	49	50																					51	2	NO	NO
2011	1315 S 2ND ST	1	B	49	49	51																					54	5	NO	NO
2012	205 MARTIN ST	1	B	49	54	56																					56	2	NO	NO

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Table B.1
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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2013	205 MARTIN ST	1	B	49	55	57																					57	2	NO	NO
2014	205 MARTIN ST	1	B	49	56	58																					58	2	NO	NO
2015	205 MARTIN ST	1	B	49	57	60																					59	2	NO	NO
2016	209 MARTIN ST	1	B	49	60	62																					62	2	NO	NO
2017	209 MARTIN ST	1	B	49	63	65																					65	2	NO	NO
2018	209 MARTIN ST	1	B	49	65	67																					67	2	YES	NO
2019	209 MARTIN ST	1	B	49	68	70																					70	2	YES	NO
2020	1002 MAYFLOWER DR	1	B	49	56	56	71	15	YES	YES					71	15	YES	YES					71	15	YES	YES				
2021	1002 MAYFLOWER DR	1	B	49	53	53	69	16	YES	YES					69	16	YES	YES					69	16	YES	YES				
2022	1002 MAYFLOWER DR	1	B	49	53	53	69	16	YES	YES					69	16	YES	YES					69	16	YES	YES				
2023	1002 MAYFLOWER DR	1	B	49	53	53	67	14	YES	YES					67	14	YES	YES					67	14	YES	YES				
2024	2603 CONSTITUTION BLV	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2025	2603 CONSTITUTION BLV	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2026	2603 CONSTITUTION BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2027	2603 CONSTITUTION BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2028	2605 CONSTITUTION BLV	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2029	2605 CONSTITUTION BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2030	2605 CONSTITUTION BLV	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2031	2605 CONSTITUTION BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2032	2607 CONSTITUTION BLV	1	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
2033	2607 CONSTITUTION BLV	1	B	49	51	51	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
2034	1001 MONITOR DR	1	B	49	49	49	51	2	NO	NO					51	2	NO	NO					51	2	NO	NO				
2035	1001 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2036	1001 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2037	2601 CONSTITUTION BLV	1	B	49	58	59	69	11	YES	YES					69	11	YES	YES					69	11	YES	YES				
2038	2601 CONSTITUTION BLV	1	B	49	57	57	68	11	YES	YES					68	11	YES	YES					68	11	YES	YES				
2039	2601 CONSTITUTION BLV	1	B	49	56	57	67	11	YES	YES					67	11	YES	YES					67	11	YES	YES				
2040	2601 CONSTITUTION BLV	1	B	49	55	55	66	11	YES	YES					66	11	YES	YES					66	11	YES	YES				
2041	1004 MAYFLOWER DR	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2042	1004 MAYFLOWER DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2043	1004 MAYFLOWER DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2044	1004 MAYFLOWER DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2045	1004 MAYFLOWER DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2046	1004 MAYFLOWER DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2047	1004 MAYFLOWER DR	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2048	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2049	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2050	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2051	1003 MONITOR DR	1	B	49	49	49	51	2	NO	NO					51	2	NO	NO					51	2	NO	NO				
2052	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2053	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2054	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2055	1003 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2056	2607 CONSTITUTION BLV	1	B	49	51	51	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
2057	2607 CONSTITUTION BLV	1	B	49	51	51	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
2058	2607 CONSTITUTION BLV	1	B	49	51	51	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
2059	2607 CONSTITUTION BLV	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2060	2607 CONSTITUTION BLV	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2061	2607 CONSTITUTION BLV	1	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
2062	2607 CONSTITUTION BLV	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2063	2607 CONSTITUTION BLV	1	B	49	50	50	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
2064	1001 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2065	1001 MONITOR DR	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2066	1001 MONITOR DR	1	B	49	49	49	51	2	NO	NO					51	2	NO	NO					51	2	NO	NO				
2067	1004 MAYFLOWER DR	1	B	49	49	50	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2068	306 WILLIAMSON DR	1	B	49	61	63	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
2069	310 WILLIAMSON DR	1	B	49	61	62	68	7	YES	NO					68	7	YES	NO					68	7	YES	NO	63	2	NO	NO
2070	314 WILLIAMSON DR	1	B	49	60	62	68	8	YES	NO					68	8	YES	NO					68	8	YES	NO	62	2	NO	NO
2071	318 WILLIAMSON DR	1	B	49	60	62	68	8	YES	NO					68	8	YES	NO					68	8	YES	NO	62	2	NO	NO
2072	324 WILLIAMSON DR	1	B	49	62	64	68	6	YES	NO					68	6	YES	NO					68	6	YES	NO	63	1	NO	NO
2073	334 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
2074	338 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
2075	342 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
2076	348 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	65	2	NO	NO
2077	350 WILLIAMSON DR	1	B	49	63	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	66	3	YES	NO
2078	349 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	3	NO	NO
2079	345 DAVIE DR	1	B	49	56	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
2080	343 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
2081	337 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
2082	333 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
2083	323 DAVIE DR	1	B	49	54	56	64	10	NO	YES					64	10	NO	YES					64	10	NO	YES	56	2	NO	NO

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2084	325 DAVIE DR	1	B	49	56	58	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO	58	2	NO	NO
2085	317 DAVIE DR	1	B	49	55	57	63	8	NO	NO					63	8	NO	NO					63	8	NO	NO	57	2	NO	NO
2086	313 DAVIE DR	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO	55	1	NO	NO
2087	309 DAVIE DR	1	B	49	51	52	66	15	YES	YES					66	15	YES	YES					66	15	YES	YES	52	1	NO	NO
2088	305 DAVIE DR	1	B	49	55	57	62	7	NO	NO					62	7	NO	NO					62	7	NO	NO	57	2	NO	NO
2089	306 DAVIE DR	1	B	49	52	55	61	9	NO	NO					61	9	NO	NO					61	9	NO	NO	55	3	NO	NO
2090	310 DAVIE DR	1	B	49	53	55	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO	54	1	NO	NO
2091	314 DAVIE DR	1	B	49	52	54	61	9	NO	NO					61	9	NO	NO					61	9	NO	NO	54	2	NO	NO
2092	318 DAVIE DR	1	B	49	52	54	61	9	NO	NO					61	9	NO	NO					61	9	NO	NO	54	2	NO	NO
2093	322 DAVIE DR	1	B	49	52	54	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO	54	2	NO	NO
2094	336 DAVIE DR	1	B	49	54	56	65	11	NO	YES					65	11	NO	YES					65	11	NO	YES	56	2	NO	NO
2095	338 DAVIE DR	1	B	49	55	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	2	NO	NO
2096	340 DAVIE DR	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	2	NO	NO
2097	346 DAVIE DR	1	B	49	54	56	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	3	NO	NO
2098	421 RUTLEDGE DR	1	B	49	51	52	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	53	2	NO	NO
2099	341 CALHOUN DR	1	B	49	54	55	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO	56	2	NO	NO
2100	337 CALHOUN DR	1	B	49	53	55	63	10	NO	YES					63	10	NO	YES					63	10	NO	YES	56	3	NO	NO
2101	333 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	54	3	NO	NO
2102	325 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	52	2	NO	NO
2103	323 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO	53	2	NO	NO
2104	317 CALHOUN DR	1	B	49	51	53	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO	53	2	NO	NO
2105	328 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	52	2	NO	NO
2106	324 CALHOUN DR	1	B	49	50	52	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO	52	2	NO	NO
2107	320 CALHOUN DR	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO	51	2	NO	NO
2108	316 CALHOUN DR	1	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	51	1	NO	NO
2109	310 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	52	2	NO	NO
2110	330 CALHOUN DR	1	B	49	50	52	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO	52	2	NO	NO
2111	340 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO	53	3	NO	NO
2112	334 CALHOUN DR	1	B	49	51	52	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO	53	2	NO	NO
2113	404 DAVIE DR	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	2	NO	NO
2114	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	57	1	NO	NO
2115	404 DAVIE DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	2	NO	NO
2116	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
2117	404 DAVIE DR	1	B	49	61	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	63	2	NO	NO
2118	404 DAVIE DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	2	NO	NO
2119	404 DAVIE DR	1	B	49	61	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	63	2	NO	NO
2120	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	3	NO	NO
2121	404 DAVIE DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	2	NO	NO
2122	404 DAVIE DR	1	B	49	59	61	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	3	NO	NO
2123	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	58	2	NO	NO
2124	404 DAVIE DR	1	B	49	59	61	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	3	NO	NO
2125	404 DAVIE DR	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	3	NO	NO
2126	404 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
2127	404 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
2128	404 DAVIE DR	1	B	49	61	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	63	2	NO	NO
2129	404 DAVIE DR	1	B	49	57	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	59	2	NO	NO
2130	404 DAVIE DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	2	NO	NO
2131	404 DAVIE DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO	62	2	NO	NO
2156	002321 JASPER FOREST TRL	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO	R/W	N/A	N/A	NO				
2161	005225 NATIONAL GARDEN TRL	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO	R/W	N/A	N/A	NO				
2162	005229 NATIONAL GARDEN TRL	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO	70	21	YES	YES				
2163	005233 NATIONAL GARDEN TRL	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO	68	19	YES	YES				
2165	005226 NATIONAL GARDEN TRL	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES	R/W	N/A	N/A	NO				
2166	005222 NATIONAL GARDEN TRL	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO	R/W	N/A	N/A	NO				
2167	005218 NATIONAL GARDEN TRL	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO	R/W	N/A	N/A	NO				
2168	005210 NATIONAL GARDEN TRL	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO	R/W	N/A	N/A	NO				
2171	004217 WHISPERING WILLOW COVE	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES	R/W	N/A	N/A	NO				
2172	004216 WHISPERING WILLOW COVE	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES	R/W	N/A	N/A	NO				
2174	001513 EAST GANTRY CT	1	B	49	49	49																	66	17	YES	YES				
2175	001510 EAST GANTRY CT	1	B	49	49	49																	66	17	YES	YES				
2176	001508 EAST GANTRY CT	1	B	49	49	49																	63	14	NO	YES				
2176.01	001215 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
2176.02	001217 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
2176.03	001221 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
2176.04	001223 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
2176.05	001231 LILLIBRIDGE DR	1	B	49	49	49																	56	7	NO	NO				
2176.06	001233 LILLIBRIDGE DR	1	B	49	49	49																	56	7	NO	NO				
2176.07	001235 LILLIBRIDGE DR	1	B	49	49	49																	55	6	NO	NO				
2176.08	001237 LILLIBRIDGE DR	1	B	49	49	49																	54	5	NO	NO				
2176.09	001507 EAST GANTRY CT	1	B	49	49	49																	56	7	NO	NO				
2176.10	001509 EAST GANTRY CT	1	B	49	49	49																	59	10	NO	YES				

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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2176.11	001511 EAST GANTRY CT	1	B	49	49	49																	62	13	NO	YES				
2176.12	001506 EAST GANTRY CT	1	B	49	49	49																	60	11	NO	YES				
2176.13	001504 EAST GANTRY CT	1	B	49	49	49																	55	6	NO	NO				
2176.14	001245 LILLIBRIDGE DR	1	B	49	49	49																	52	3	NO	NO				
2176.15	001247 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.16	001251 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.17	001255 LILLIBRIDGE DR	1	B	49	49	49																	62	13	NO	YES				
2176.18	001257 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.19	001259 LILLIBRIDGE DR	1	B	49	49	49																	62	13	NO	YES				
2176.20	001261 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.21	001265 LILLIBRIDGE DR	1	B	49	49	49																	60	11	NO	YES				
2176.22	001267 LILLIBRIDGE DR	1	B	49	49	49																	62	13	NO	YES				
2176.23	001271 LILLIBRIDGE DR	1	B	49	49	49																	63	14	NO	YES				
2176.24	001273 LILLIBRIDGE DR	1	B	49	49	49																	63	14	NO	YES				
2176.25	001275 LILLIBRIDGE DR	1	B	49	49	49																	63	14	NO	YES				
2176.26	001277 LILLIBRIDGE DR	1	B	49	49	49																	62	13	NO	YES				
2176.27	001279 LILLIBRIDGE DR	1	B	49	49	49																	62	13	NO	YES				
2176.28	001281 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.29	001285 LILLIBRIDGE DR	1	B	49	49	49																	61	12	NO	YES				
2176.30	001287 LILLIBRIDGE DR	1	B	49	49	49																	60	11	NO	YES				
2177	002125 SIMMERMAN WAY	1	B	49	49	49																	54	5	NO	NO				
2178	002121 SIMMERMAN WAY	1	B	49	49	49																	56	7	NO	NO				
2179	002117 SIMMERMAN WAY	1	B	49	49	49																	58	9	NO	NO				
2180	002113 SIMMERMAN WAY	1	B	49	49	49																	60	11	NO	YES				
2181	001004 SALTER PATH	1	B	49	49	49																	61	12	NO	YES				
2182	002105 SIMMERMAN WAY	1	B	49	49	49																	64	15	NO	YES				
2183	002101 SIMMERMAN WAY	1	B	49	49	49																	66	17	YES	YES				
2184	002097 SIMMERMAN WAY	1	B	49	49	49																	67	18	YES	YES				
2185	002093 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2186	002089 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2187	002085 SIMMERMAN WAY	1	B	49	49	49																	72	23	YES	YES				
2188	002081 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2189	002077 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2190	002029 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2191	002025 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2192	002021 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2193	002017 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2194	002013 SIMMERMAN WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2195	001073 SANDY GROVE PL	1	B	49	49	49																	57	8	NO	NO				
2196	001065 SANDY GROVE PL	1	B	49	49	49																	56	7	NO	NO				
2197	001061 SANDY GROVE PL	1	B	49	49	49																	58	9	NO	NO				
2198	001057 SANDY GROVE PL	1	B	49	49	49																	58	9	NO	NO				
2199	001053 SANDY GROVE PL	1	B	49	49	49																	60	11	NO	YES				
2200	001049 SANDY GROVE PL	1	B	49	49	49																	62	13	NO	YES				
2201	001045 SANDY GROVE PL	1	B	49	49	49																	61	12	NO	YES				
2202	002012 SIMMERMAN WAY	1	B	49	49	49																	68	19	YES	YES				
2203	002016 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2204	002020 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2205	002024 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2206	002028 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2207	002030-002034 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2208	002044 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2209	001387 STILL BLUFF LN	1	B	49	49	49																	69	20	YES	YES				
2210	001383 STILL BLUFF LN	1	B	49	49	49																	63	14	NO	YES				
2211	001379 STILL BLUFF LN	1	B	49	49	49																	62	13	NO	YES				
2212	001375 STILL BLUFF LN	1	B	49	49	49																	61	12	NO	YES				
2213	001371 STILL BLUFF LN	1	B	49	49	49																	60	11	NO	YES				
2214	001363 STILL BLUFF LN	1	B	49	49	49																	60	11	NO	YES				
2215	001359 STILL BLUFF LN	1	B	49	49	49																	60	11	NO	YES				
2216	001355 STILL BLUFF LN	1	B	49	49	49																	59	10	NO	YES				
2217	001351 STILL BLUFF LN	1	B	49	49	49																	59	10	NO	YES				
2218	001347 STILL BLUFF LN	1	B	49	49	49																	59	10	NO	YES				
2219	002168 SIMMERMAN WAY	1	B	49	49	49																	55	6	NO	NO				
2220	001356 STILL BLUFF LN	1	B	49	49	49																	55	6	NO	NO				
2221	001360 STILL BLUFF LN	1	B	49	49	49																	56	7	NO	NO				
2222	001364 STILL BLUFF LN	1	B	49	49	49																	57	8	NO	NO				
2223	001368 STILL BLUFF LN	1	B	49	49	49																	58	9	NO	NO				
2224	001372 STILL BLUFF LN	1	B	49	49	49																	60	11	NO	YES				
2225	001376 STILL BLUFF LN	1	B	49	49	49																	61	12	NO	YES				
2226	001380 STILL BLUFF LN	1	B	49	49	49																	63	14	NO	YES				
2227	001384 STILL BLUFF LN	1	B	49	49	49																	65	16	NO	YES				

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2228	001388 STILL BLUFF LN	1	B	49	49	49																	68	19	YES	YES				
2229	002056 SIMMERMAN WAY	1	B	49	49	49																	69	20	YES	YES				
2230	002066 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2231	002072 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2232	002076 SIMMERMAN WAY	1	B	49	49	49																	70	21	YES	YES				
2233	002084 SIMMERMAN WAY	1	B	49	49	49																	68	19	YES	YES				
2234	002092 SIMMERMAN WAY	1	B	49	49	49																	66	17	YES	YES				
2235	002100 SIMMERMAN WAY	1	B	49	49	49																	62	13	NO	YES				
2236	002104 SIMMERMAN WAY	1	B	49	49	49																	60	11	NO	YES				
2237	002108 SIMMERMAN WAY	1	B	49	49	49																	58	9	NO	NO				
2238	002116 SIMMERMAN WAY	1	B	49	49	49																	56	7	NO	NO				
2239	002122 SIMMERMAN WAY	1	B	49	49	49																	57	8	NO	NO				
2240	002130 SIMMERMAN WAY	1	B	49	49	49																	57	8	NO	NO				
2241	002138 SIMMERMAN WAY	1	B	49	49	49																	57	8	NO	NO				
2242	002146 SIMMERMAN WAY	1	B	49	49	49																	57	8	NO	NO				
2243	002129 SIMMERMAN WAY	1	B	49	49	49																	55	6	NO	NO				
2244	001072 SANDY GROVE PL	1	B	49	49	49																	55	6	NO	NO				
2245	001068 SANDY GROVE PL	1	B	49	49	49																	56	7	NO	NO				
2246	001064 SANDY GROVE PL	1	B	49	49	49																	57	8	NO	NO				
2247	001060 SANDY GROVE PL	1	B	49	49	49																	58	9	NO	NO				
2248	001056 SANDY GROVE PL	1	B	49	49	49																	59	10	NO	YES				
2249	001052 SANDY GROVE PL	1	B	49	49	49																	60	11	NO	YES				
2250	001048 SANDY GROVE PL	1	B	49	49	49																	62	13	NO	YES				
2251	001044 SANDY GROVE PL	1	B	49	49	49																	63	14	NO	YES				
2252	001040 SANDY GROVE PL	1	B	49	49	49																	64	15	NO	YES				
2253	001036 SANDY GROVE PL	1	B	49	49	49																	66	17	YES	YES				
2254	001032 SANDY GROVE PL	1	B	49	49	49																	69	20	YES	YES				
2255	001028 SANDY GROVE PL	1	B	49	49	49																	R/W	N/A	N/A	NO				
2256	001024 SANDY GROVE PL	1	B	49	49	49																	R/W	N/A	N/A	NO				
2257	002009 SHELMORE WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2258	002013 SHELMORE WAY	1	B	49	49	49																	R/W	N/A	N/A	NO				
2259	002017 SHELMORE WAY	1	B	49	49	49																	66	17	YES	YES				
2260	002021 SHELMORE WAY	1	B	49	49	49																	65	16	NO	YES				
2261	002025 SHELMORE WAY	1	B	49	49	49																	65	16	NO	YES				
2262	002029 SHELMORE WAY	1	B	49	49	49																	64	15	NO	YES				
2263	002033 SHELMORE WAY	1	B	49	49	49																	63	14	NO	YES				
2264	002037 SHELMORE WAY	1	B	49	49	49																	61	12	NO	YES				
2265	002041 SHELMORE WAY	1	B	49	49	49																	61	12	NO	YES				
2266	002045 SHELMORE WAY	1	B	49	49	49																	60	11	NO	YES				
2267	002049 SHELMORE WAY	1	B	49	49	49																	59	10	NO	YES				
2268	002053 SHELMORE WAY	1	B	49	49	49																	59	10	NO	YES				
2269	002057 SHELMORE WAY	1	B	49	49	49																	58	9	NO	NO				
2270	006053 SHORE PARK DR	1	B	49	49	49																	57	8	NO	NO				
2271	006045 SHORE PARK DR	1	B	49	49	49																	59	10	NO	YES				
2272	006041 SHORE PARK DR	1	B	49	49	49																	59	10	NO	YES				
2273	006035 SHORE PARK DR	1	B	49	49	49																	59	10	NO	YES				
2274	006031 SHORE PARK DR	1	B	49	49	49																	60	11	NO	YES				
2275	006027 SHORE PARK DR	1	B	49	49	49																	61	12	NO	YES				
2276	006023 SHORE PARK DR	1	B	49	49	49																	62	13	NO	YES				
2277	006017 SHORE PARK DR	1	B	49	49	49																	64	15	NO	YES				
2278	006013 SHORE PARK DR	1	B	49	49	49																	65	16	NO	YES				
2279	006004 SHORE PARK DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2280	006008 SHORE PARK DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2281	006012 SHORE PARK DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2282	006016 SHORE PARK DR	1	B	49	49	49																	70	21	YES	YES				
2283	006020 SHORE PARK DR	1	B	49	49	49																	69	20	YES	YES				
2284	006024 SHORE PARK DR	1	B	49	49	49																	68	19	YES	YES				
2285	006028 SHORE PARK DR	1	B	49	49	49																	67	18	YES	YES				
2286	006032 SHORE PARK DR	1	B	49	49	49																	66	17	YES	YES				
2287	006036 SHORE PARK DR	1	B	49	49	49																	64	15	NO	YES				
2288	006042 SHORE PARK DR	1	B	49	49	49																	61	12	NO	YES				
2289	006046 SHORE PARK DR	1	B	49	49	49																	59	10	NO	YES				
2290	006050 SHORE PARK DR	1	B	49	49	49																	57	8	NO	NO				
2291	006054 SHORE PARK DR	1	B	49	49	49																	56	7	NO	NO				
2292	006058 SHORE PARK DR	1	B	49	49	49																	54	5	NO	NO				
2293	005093 STONEY POINT DR	1	B	49	49	49																	54	5	NO	NO				
2294	005089 STONEY POINT DR	1	B	49	49	49																	55	6	NO	NO				
2295	005085 STONEY POINT DR	1	B	49	49	49																	56	7	NO	NO				
2296	005081 STONEY POINT DR	1	B	49	49	49																	59	10	NO	YES				
2297	005077 STONEY POINT DR	1	B	49	49	49																	60	11	NO	YES				
2298	005073 STONEY POINT DR	1	B	49	49	49																	62	13	NO	YES				

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2299	005069 STONEY POINT DR	1	B	49	49	49																	63	14	NO	YES				
2300	005065 STONEY POINT DR	1	B	49	49	49																	65	16	NO	YES				
2301	005061 STONEY POINT DR	1	B	49	49	49																	67	18	YES	YES				
2302	005053 STONEY POINT DR	1	B	49	49	49																	67	18	YES	YES				
2303	005049 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2304	005043 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2305	005039 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2306	005035 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2307	005029 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2308	005027 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2309	005021 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2310	005013 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2311	005009 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2312	005022 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2313	005026 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2314	005034 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2315	005046 STONEY POINT DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2316	005062 STONEY POINT DR	1	B	49	49	49																	69	20	YES	YES				
2317	005066 STONEY POINT DR	1	B	49	49	49																	67	18	YES	YES				
2318	005070 STONEY POINT DR	1	B	49	49	49																	65	16	NO	YES				
2319	005074 STONEY POINT DR	1	B	49	49	49																	64	15	NO	YES				
2320	005078 STONEY POINT DR	1	B	49	49	49																	66	17	YES	YES				
2321	005082 STONEY POINT DR	1	B	49	49	49																	65	16	NO	YES				
2322	005086 STONEY POINT DR	1	B	49	49	49																	63	14	NO	YES				
2323	005090 STONEY POINT DR	1	B	49	49	49																	62	13	NO	YES				
2324	005094 STONEY POINT DR	1	B	49	49	49																	61	12	NO	YES				
2325	005098 STONEY POINT DR	1	B	49	49	49																	61	12	NO	YES				
2326	007000 SPALDING DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2327	FONTANA LAKE CT	1	B	49	49	49																	70	21	YES	YES				
2328	8444 FONTANA LAKE CT	1	B	49	49	49																	65	16	NO	YES				
2329	007008 SPALDING DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2330	007016 SPALDING DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2331	007020 SPALDING DR	1	B	49	49	49																	70	21	YES	YES				
2332	007024 SPALDING DR	1	B	49	49	49																	68	19	YES	YES				
2333	007028 SPALDING DR	1	B	49	49	49																	66	17	YES	YES				
2334	007032 SPALDING DR	1	B	49	49	49																	63	14	NO	YES				
2335	007036 SPALDING DR	1	B	49	49	49																	61	12	NO	YES				
2336	007029 SPALDING DR	1	B	49	49	49																	64	15	NO	YES				
2337	007025 SPALDING DR	1	B	49	49	49																	67	18	YES	YES				
2338	007021 SPALDING DR	1	B	49	49	49																	68	19	YES	YES				
2339	007017 SPALDING DR	1	B	49	49	49																	72	23	YES	YES				
2340	004341 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2341	004343 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2342	004329 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2343	004325 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2344	004321 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2345	004317 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2346	004313 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2347	SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2348	SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2349	004314 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2350	004318 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2351	004322 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2352	004326 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2353	004330 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2354	004334 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2355	004338 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2356	004342 SINGLETARY LAKE DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2357	007013 SPALDING DR	1	B	49	49	49																	R/W	N/A	N/A	NO				
2358	001374 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2359	001370 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2360	001366 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2361	001362 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2362	001358 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2363	001354 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2364	001350 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2365	001346 STAR GRASS WAY	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2366	001342 STAR GRASS WAY	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2367	001338 STAR GRASS WAY	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2368	001330 STAR GRASS WAY	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2369	001326 STAR GRASS WAY	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc					NAC	Sub Inc		
2370	005030 SNEADENS COVE	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2371	005026 SNEADENS COVE	1	B	49	49	49	65	16	NO	YES									65	16	NO	YES								
2372	005022 SNEADENS COVE	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES								
2373	005018 SNEADENS COVE	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES								
2374	SNEADENS COVE	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2375	005006 SNEADENS COVE	1	B	49	49	49	65	16	NO	YES									65	16	NO	YES								
2376	005002 SNEADENS COVE	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2377	002155 SHELMORE WAY	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2378	002159 SHELMORE WAY	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2379	000142 COVE LANDING	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2380	000148 COVE LANDING	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2381	000139 COVE LANDING	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2382	000135 COVE LANDING	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2383	001192 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2384	001196 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2385	001200 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2386	001204 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2387	001208 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2388	001212 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2389	001216 SOUTH BROOK RD	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2390	001220 SOUTH BROOK RD	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2391	001224 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2392	001228 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2393	001232 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2394	001236 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2395	001240 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2396	001244 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2397	001252 SOUTH BROOK RD	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES								
2398	001256 SOUTH BROOK RD	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES								
2399	001260 SOUTH BROOK RD	1	B	49	49	49	65	16	NO	YES									65	16	NO	YES								
2400	001264 SOUTH BROOK RD	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2401	001268 SOUTH BROOK RD	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2402	001272 SOUTH BROOK RD	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
2403	001265 SOUTH BROOK RD	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
2404	001261 SOUTH BROOK RD	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
2405	001257 SOUTH BROOK RD	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
2406	001245 SOUTH BROOK RD	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
2407	001241 SOUTH BROOK RD	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
2408	001312 WATERS END CT	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
2409	001233 SOUTH BROOK RD	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
2410	001229 SOUTH BROOK RD	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
2411	001225 SOUTH BROOK RD	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
2412	001221 SOUTH BROOK RD	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
2413	004005 STAFFORDALE DR	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2414	004009 STAFFORDALE DR	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES								
2415	004013 STAFFORDALE DR	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES								
2416	004017 STAFFORDALE DR	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES								
2417	004021 STAFFORDALE DR	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES								
2418	004025 STAFFORDALE DR	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES								
2419	004029 STAFFORDALE DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES								
2420	004041 STAFFORDALE DR	1	B	49	49	49	74	25	YES	YES									74	25	YES	YES								
2421	004045 STAFFORDALE DR	1	B	49	49	49	76	27	YES	YES									76	27	YES	YES								
2422	004049 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2423	004053 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2424	004057 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2425	004061 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2426	004065 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2427	004069 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2428	004073 STAFFORDALE DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES								
2429	003086 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2430	003078 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2431	003074 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2432	003070 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2433	003066 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2434	003054 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2435	003042 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2436	003034 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO								
2437	003026 SMEADES DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES								
2438	003022 SMEADES DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES								
2439	003018 SMEADES DR	1	B	49	49	49	74	25	YES	YES									74	25	YES	YES								
2440	003014 SMEADES DR	1	B	49	49	49	77	28	YES	YES									77	28	YES	YES								

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc					NAC	Sub Inc			NAC	Sub Inc
2441	003013 SMEADES DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2442	003017 SMEADES DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2443	003021 SMEADES DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2444	003025 SMEADES DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2445	003029 SMEADES DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2446	003033 SMEADES DR	1	B	49	49	49	69	20	YES	YES									69	20	YES	YES										
2447	003037 SMEADES DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2448	003041 SMEADES DR	1	B	49	49	49	70	21	YES	YES									70	21	YES	YES										
2449	003045 SMEADES DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES										
2450	003049 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2451	003053 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2452	003057 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2453	003061 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2454	003065 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2455	003069 SMEADES DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2456	003073 SMEADES DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES										
2457	003077 SMEADES DR	1	B	49	49	49	71	22	YES	YES									71	22	YES	YES										
2458	003081 SMEADES DR	1	B	49	49	49	70	21	YES	YES									70	21	YES	YES										
2459	003085 SMEADES DR	1	B	49	49	49	69	20	YES	YES									69	20	YES	YES										
2460	003089 SMEADES DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2461	003093 SMEADES DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2462	003101 SMEADES DR	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES										
2463	003103-003107 SMEADES DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2464	003109 SMEADES DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2465	003113 SMEADES DR	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES										
2466	006349 SAXON MEADOW DR	1	B	49	49	49	66	17	YES	YES									66	17	YES	YES										
2467	006353 SAXON MEADOW DR	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES										
2468	006357 SAXON MEADOW DR	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES										
2469	006361 SAXON MEADOW DR	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES										
2470	006365 SAXON MEADOW DR	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES										
2471	006369 SAXON MEADOW DR	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES										
2472	006370 SAXON MEADOW DR	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES										
2473	006366 SAXON MEADOW DR	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES										
2474	006362 SAXON MEADOW DR	1	B	49	49	49	61	12	NO	YES									61	12	NO	YES										
2475	006358 SAXON MEADOW DR	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES										
2476	006354 SAXON MEADOW DR	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES										
2477	006350 SAXON MEADOW DR	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES										
2478	006346 SAXON MEADOW DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2479	006342 SAXON MEADOW DR	1	B	49	49	49	70	21	YES	YES									70	21	YES	YES										
2480	006338 SAXON MEADOW DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES										
2488	006420 SAXON MEADOW DR	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2501	006313 SAXON MEADOW DR	1	B	49	49	49	71	22	YES	YES									71	22	YES	YES										
2502	006317 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2503	006321 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2504	006325 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2505	006329 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2506	006333 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2507	006337 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2508	006341 SAXON MEADOW DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2509	004050 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2510	004046 STAFFORDALE DR	1	B	49	49	49	R/W	N/A	N/A	NO									R/W	N/A	N/A	NO										
2511	004042 STAFFORDALE DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES										
2512	004038 STAFFORDALE DR	1	B	49	49	49	72	23	YES	YES									72	23	YES	YES										
2513	004034 STAFFORDALE DR	1	B	49	49	49	71	22	YES	YES									71	22	YES	YES										
2514	004030 STAFFORDALE DR	1	B	49	49	49	68	19	YES	YES									68	19	YES	YES										
2515	004026 STAFFORDALE DR	1	B	49	49	49	67	18	YES	YES									67	18	YES	YES										
2516	004022 STAFFORDALE DR	1	B	49	49	49	65	16	NO	YES									65	16	NO	YES										
2517	004018 STAFFORDALE DR	1	B	49	49	49	64	15	NO	YES									64	15	NO	YES										
2518	004014 STAFFORDALE DR	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2519	004010 STAFFORDALE DR	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES										
2520	002207 SHELMORE WAY	1	B	49	49	49	62	13	NO	YES									62	13	NO	YES										
2521	002211 SHELMORE WAY	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2522	002215 SHELMORE WAY	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2523	002219 SHELMORE WAY	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2524	002223 SHELMORE WAY	1	B	49	49	49	63	14	NO	YES									63	14	NO	YES										
2525	2606 NEWKIRK AVE (Cape Fear Church)	1	D	14	35	35	42	7	NO	NO					42	7	NO	NO					42	7	NO	NO						
2526	2607 NEWKIRK AVE (Cape Fear Church)	---	D	14	28	28	36	8	NO	NO					36	8	NO	NO					36	8	NO	NO						
2527	2608 NEWKIRK AVE (Cape Fear Church)	---	D	14	22	22	31	9	NO	NO					31	9	NO	NO					31	9	NO	NO						
2528	1312 SHIPYARD BLV	1	D	14	33	33	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO						
2529	2619 NEWKIRK AVE	1	C/D	14	58	58	63	5	NO	NO					28	-30	NO	NO					63	5	NO	NO						
2530	1272 SHIPYARD BLV	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO						

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.

^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2531	1272 SHIPYARD BLV	1	B	49	50	50	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO				
2532	1002 MAYFLOWER DR	1	B	49	55	55	71	16	YES	YES					71	16	YES	YES					71	16	YES	YES				
2533	1002 MAYFLOWER DR	1	B	49	53	53	67	14	YES	YES					67	14	YES	YES					67	14	YES	YES				
2534	2603 CONSTITUTION BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2535	2603 CONSTITUTION BLV	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2536	1004 MAYFLOWER DR	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2537	2605 CONSTITUTION BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2538	1003 MONITOR DR	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2539	1208 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2540	1206 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2541	1204 SHIPYARD BLV	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2542	1202 SHIPYARD BLV	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2543	1200 SHIPYARD BLV	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2544	1198 SHIPYARD BLV	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2545	1196 SHIPYARD BLV	1	B	49	51	51	62	11	NO	YES					62	11	NO	YES					62	11	NO	YES				
2546	1194 SHIPYARD BLV	1	B	49	52	52	64	12	NO	YES					64	12	NO	YES					64	12	NO	YES				
2547	2601 CONSTITUTION BLV	1	B	49	56	56	66	10	YES	YES					66	10	YES	YES					66	10	YES	YES				
2548	1218 SHIPYARD BLV	1	B	49	49	49	52	3	NO	NO					52	3	NO	NO					52	3	NO	NO				
2549	1220 SHIPYARD BLV	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2550	1222 SHIPYARD BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2551	1224 SHIPYARD BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2552	1226 SHIPYARD BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2553	1228 SHIPYARD BLV	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2554	1005 FRANCIS MARION DR	1	B	49	49	49	54	5	NO	NO					54	5	NO	NO					54	5	NO	NO				
2555	1009 FRANCIS MARION DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2556	1013 FRANCIS MARION DR	1	B	49	52	52	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO				
2557	1017 FRANCIS MARION DR	1	B	49	51	51	58	7	NO	NO					58	7	NO	NO					58	7	NO	NO				
2558	1014 FRANCIS MARION DR	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2559	1018 FRANCIS MARION DR	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2560	1106 FRANCIS MARION DR	1	B	49	51	51	57	6	NO	NO					57	6	NO	NO					57	6	NO	NO				
2561	1112 FRANCIS MARION DR	1	B	49	52	52	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO				
2562	1017 FRANCIS MARION DR	1	B	49	51	52	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
2563	1105 FRANCIS MARION DR	1	B	49	53	53	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO				
2564	1109 FRANCIS MARION DR	1	B	49	56	56	64	8	NO	NO					64	8	NO	NO					64	8	NO	NO				
2565	1113 FRANCIS MARION DR	1	B	49	57	57	65	8	NO	NO					65	8	NO	NO					65	8	NO	NO				
2566	1278 SHIPYARD BLV	1	B	49	71	71	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2567	1276 SHIPYARD BLV	1	B	49	63	63	72	9	YES	NO					72	9	YES	NO					72	9	YES	NO				
2568	1274 SHIPYARD BLV	1	B	49	60	60	69	9	YES	NO					69	9	YES	NO					69	9	YES	NO				
2569	1272 SHIPYARD BLV (Apartment Pool)	1	B	49	58	58	68	10	YES	YES					68	10	YES	YES					68	10	YES	YES				
2570	1270 SHIPYARD BLV	1	B	49	57	57	67	10	YES	YES					67	10	YES	YES					67	10	YES	YES				
2571	2700 S 17TH ST	1	B	49	57	57	61	4	NO	NO					61	4	NO	NO					61	4	NO	NO				
2572	2700 S 17TH ST	1	B	49	58	58	62	4	NO	NO					62	4	NO	NO					62	4	NO	NO				
2573	2700 S 17TH ST	1	B	49	58	58	61	3	NO	NO					61	3	NO	NO					61	3	NO	NO				
2574	2700 S 17TH ST	1	B	49	58	58	61	3	NO	NO					61	3	NO	NO					61	3	NO	NO				
2575	1616 SHIPYARD BLV	1	B	49	59	59	60	1	NO	NO					60	1	NO	NO					60	1	NO	NO				
2576	2700 S 17TH ST	1	B	49	58	58	60	2	NO	NO					60	2	NO	NO					60	2	NO	NO				
2577	1268 SHIPYARD BLV	1	B	49	55	55	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES				
2578	1264 SHIPYARD BLV	1	B	49	55	55	64	9	NO	NO					64	9	NO	NO					64	9	NO	NO				
2579	1260 SHIPYARD BLV	1	B	49	54	54	61	7	NO	NO					61	7	NO	NO					61	7	NO	NO				
2580	1256 SHIPYARD BLV	1	B	49	52	53	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO				
2581	1252 SHIPYARD BLV	1	B	49	52	52	59	7	NO	NO					59	7	NO	NO					59	7	NO	NO				
2582	1248 SHIPYARD BLV	1	B	49	50	50	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO				
2583	1244 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2584	1240 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2585	1236 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2586	1232 SHIPYARD BLV	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2587	1230 SHIPYARD BLV	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2588	1228 SHIPYARD BLV	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2589	1192 SHIPYARD BLV	1	B	49	53	54	66	13	YES	YES					66	13	YES	YES					66	13	YES	YES				
2590	1190 SHIPYARD BLV	1	B	49	54	55	67	13	YES	YES					67	13	YES	YES					67	13	YES	YES				
2591	1188 SHIPYARD BLV	1	B	49	56	56	69	13	YES	YES					69	13	YES	YES					69	13	YES	YES				
2592	1186 SHIPYARD BLV	1	B	49	59	59	71	12	YES	YES					71	12	YES	YES					71	12	YES	YES				
2593	1184 SHIPYARD BLV	1	B	49	61	61	71	10	YES	YES					71	10	YES	YES					71	10	YES	YES				
2594	1180 SHIPYARD BLV	1	B	49	63	64	73	10	YES	YES					73	10	YES	YES					73	10	YES	YES				
2595	2605 CONSTITUTION BLV	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2596	1176 SHIPYARD BLV	1	B	49	70	71	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2597	1172 SHIPYARD BLV	1	B	49	73	73	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2598	1168 SHIPYARD BLV	1	B	49	73	74	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2599	1166 SHIPYARD BLV	1	B	49	73	74	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2600	1164 SHIPYARD BLV	1	B	49	73	73	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2601	1160 SHIPYARD BLV	1	B	49	73	74	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2602	1162 SHIPYARD BLV	1	B	49	67	67	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2603	1266 SHIPYARD BLV	1	B	49	56	57	72	16	YES	YES					72	16	YES	YES					72	16	YES	YES				
2604	1170 SHIPYARD BLV	1	B	49	58	58	73	15	YES	YES					73	15	YES	YES					73	15	YES	YES				
2605	1174 SHIPYARD BLV	1	B	49	58	58	72	14	YES	YES					72	14	YES	YES					72	14	YES	YES				
2606	1178 SHIPYARD BLV	1	B	49	58	58	71	13	YES	YES					71	13	YES	YES					71	13	YES	YES				
2607	1182 SHIPYARD BLV	1	B	49	56	56	68	12	YES	YES					68	12	YES	YES					68	12	YES	YES				
2608	1262 SHIPYARD BLV	1	B	49	56	57	69	13	YES	YES					69	13	YES	YES					69	13	YES	YES				
2609	1258 SHIPYARD BLV	1	B	49	53	53	59	6	NO	NO					59	6	NO	NO					59	6	NO	NO				
2610	1254 SHIPYARD BLV	1	B	49	50	50	57	7	NO	NO					57	7	NO	NO					57	7	NO	NO				
2611	1250 SHIPYARD BLV	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2612	1246 SHIPYARD BLV	1	B	49	50	51	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2613	1242 SHIPYARD BLV	1	B	49	51	51	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2614	1238 SHIPYARD BLV	1	B	49	50	50	61	11	NO	YES					61	11	NO	YES					61	11	NO	YES				
2615	1234 SHIPYARD BLV	1	B	49	49	50	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2616	215 SHIPYARD BLV (E.P.Godwin Stadium)	---	C	49	75	76	75	0	YES	NO					75	0	YES	NO					75	0	YES	NO				
2617	216 SHIPYARD BLV (E.P.Godwin Stadium)	---	C	49	74	75	72	-2	YES	NO					72	-2	YES	NO					72	-2	YES	NO				
2618	217 SHIPYARD BLV (E.P.Godwin Stadium)	---	C	49	61	64	65	4	NO	NO					65	4	NO	NO					65	4	NO	NO				
2619	2713 WORTH DR	1	B	49	52	56	68	16	YES	YES					68	16	YES	YES					68	16	YES	YES				
2620	2718 DARE ST	1	B	49	49	52	66	17	YES	YES					66	17	YES	YES					66	17	YES	YES				
2621	2714 DARE ST	1	B	49	52	56	67	15	YES	YES					67	15	YES	YES					67	15	YES	YES				
2622	2710 DARE ST	1	B	49	53	56	66	13	YES	YES					66	13	YES	YES					66	13	YES	YES				
2623	2619 WORTH DR	1	B	49	56	60	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2624	2705 WORTH DR	1	B	49	54	59	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2625	2706 DARE ST	1	B	49	53	56	69	16	YES	YES					69	16	YES	YES					69	16	YES	YES				
2626	2702 DARE ST	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2627	2614 DARE ST	1	B	49	57	60	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2628	2610 DARE ST	1	B	49	58	61	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2629	2606 DARE ST	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2630	2602 DARE ST	1	B	49	62	65	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2631	202 CALHOUN DR	1	B	49	51	54	66	15	YES	YES					66	15	YES	YES					66	15	YES	YES				
2632	206 CALHOUN DR	1	B	49	50	53	65	15	NO	YES					65	15	NO	YES					65	15	NO	YES				
2633	210 CALHOUN DR	1	B	49	50	52	64	14	NO	YES					64	14	NO	YES					64	14	NO	YES				
2634	2711 DARE ST	1	B	49	51	53	66	15	YES	YES					66	15	YES	YES					66	15	YES	YES				
2635	2703 DARE ST	1	B	49	53	55	69	16	YES	YES					69	16	YES	YES					69	16	YES	YES				
2636	206 DAVIE DR	1	B	49	51	54	68	17	YES	YES					68	17	YES	YES					68	17	YES	YES				
2637	205 CALHOUN DR	1	B	49	52	54	65	13	NO	YES					65	13	NO	YES					65	13	NO	YES				
2638	209 CALHOUN DR	1	B	49	53	55	66	13	YES	YES					66	13	YES	YES					66	13	YES	YES				
2639	215 CALHOUN DR	1	B	49	52	54	65	13	NO	YES					65	13	NO	YES					65	13	NO	YES				
2640	210 DAVIE DR	1	B	49	53	55	67	14	YES	YES					67	14	YES	YES					67	14	YES	YES				
2641	214 DAVIE DR	1	B	49	53	56	66	13	YES	YES					66	13	YES	YES					66	13	YES	YES				
2642	218 DAVIE DR	1	B	49	55	57	66	11	YES	YES					66	11	YES	YES					66	11	YES	YES				
2643	218 DAVIE DR	1	B	49	55	57	66	11	YES	YES					66	11	YES	YES					66	11	YES	YES				
2644	224 DAVIE DR	1	B	49	54	56	65	11	NO	YES					65	11	NO	YES					65	11	NO	YES				
2645	226 DAVIE DR	1	B	49	51	53	62	11	NO	YES					62	11	NO	YES					62	11	NO	YES				
2646	230 DAVIE DR	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2647	236 DAVIE DR	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2648	2710 VANCE ST	1	B	49	55	56	62	7	NO	NO					62	7	NO	NO					62	7	NO	NO				
2649	233 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2650	229 CALHOUN DR	1	B	49	49	51	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2651	225 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2652	221 CALHOUN DR	1	B	49	53	55	62	9	NO	NO					62	9	NO	NO					62	9	NO	NO				
2653	219 CALHOUN DR	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2654	2605 DARE ST	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2655	206 WILLIAMSON DR	1	B	49	61	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2656	210 WILLIAMSON DR	1	B	49	61	63	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2657	214 WILLIAMSON DR	1	B	49	62	63	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2658	222 WILLIAMSON DR	1	B	49	61	63	73	12	YES	YES					73	12	YES	YES					73	12	YES	YES				
2659	226 WILLIAMSON DR	1	B	49	61	63	72	11	YES	YES					72	11	YES	YES					72	11	YES	YES				
2660	230 WILLIAMSON DR	1	B	49	59	61	71	12	YES	YES					71	12	YES	YES					71	12	YES	YES				
2661	234 WILLIAMSON DR	1	B	49	60	62	71	11	YES	YES					71	11	YES	YES					71	11	YES	YES				
2662	2606 VANCE ST	1	B	49	59	61	68	9	YES	NO					68	9	YES	NO					68	9	YES	NO				
2663	233 DAVIE DR	1	B	49	56	58	64	8	NO	NO					64	8	NO	NO					64	8	NO	NO				
2664	231 DAVIE DR	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES				
2665	225 DAVIE DR	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES				
2666	221 DAVIE DR	1	B	49	56	58	66	10	YES	YES					66	10	YES	YES					66	10	YES	YES				
2667	218 WILLIAMSON DR	1	B	49	61	63	73	12	YES	YES					73	12	YES	YES					73	12	YES	YES				
2668	217 DAVIE DR	1	B	49	56	58	68	12	YES	YES					68	12	YES	YES					68	12	YES	YES				
2669	215 DAVIE DR	1	B	49	55	57	69	14	YES	YES					69	14	YES	YES					69	14	YES	YES				
2670	209 DAVIE DR	1	B	49	55	57	71	16	YES	YES					71	16	YES	YES					71	16	YES	YES				
2671	205 DAVIE DR	1	B	49	56	58	71	15	YES	YES					71	15	YES	YES					71	15	YES	YES				
2672	2615 DARE ST	1	B	49	55	57	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2673	2615 DARE ST	1	B	49	53	55	71	18	YES	YES					71	18	YES	YES					71	18	YES	YES				
2674	2449 LOUISIANA AVE	1	B	49	57	62	64	7	NO	NO					64	7	NO	NO					64	7	NO	NO				
2675	2442 MONROE ST	1	B	49	57	61	63	6	NO	NO					63	6	NO	NO					63	6	NO	NO				
2676	2442 MONROE ST	1	B	49	57	61	63	6	NO	NO					63	6	NO	NO					63	6	NO	NO				
2677	2441 MONROE ST	1	B	49	57	59	63	6	NO	NO					63	6	NO	NO					63	6	NO	NO				
2678	2437 MONROE ST	1	B	49	53	55	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO				
2679	2433 MONROE ST	1	B	49	53	55	60	7	NO	NO					60	7	NO	NO					60	7	NO	NO				
2680	2429 MONROE ST	1	B	49	52	55	60	8	NO	NO					60	8	NO	NO					60	8	NO	NO				
2681	2425 MONROE ST	1	B	49	51	54	58	7	NO	NO					58	7	NO	NO					58	7	NO	NO				
2682	2421 MONROE ST	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2683	2417 MONROE ST	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2684	2450 JEFFERSON ST	1	B	49	57	60	65	8	NO	NO					65	8	NO	NO					65	8	NO	NO				
2685	2446 JEFFERSON ST	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO				
2686	2442 JEFFERSON ST	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2687	2438 MONROE ST	1	B	49	55	58	62	7	NO	NO					62	7	NO	NO					62	7	NO	NO				
2688	2434 MONROE ST	1	B	49	54	57	61	7	NO	NO					61	7	NO	NO					61	7	NO	NO				
2689	2436 JEFFERSON ST	1	B	49	53	55	61	8	NO	NO					61	8	NO	NO					61	8	NO	NO				
2690	2428 JEFFERSON ST	1	B	49	51	54	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
2691	2420 JEFFERSON ST	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
2692	2412 JEFFERSON ST	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2693	2406 JEFFERSON ST	1	B	49	49	52	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2694	2433 ADAMS ST	1	B	49	53	55	75	22	YES	YES					75	22	YES	YES					75	22	YES	YES				
2695	310 BELL ST	1	B	49	52	54	70	18	YES	YES					70	18	YES	YES					70	18	YES	YES				
2696	2353 JEFFERSON ST	1	B	49	49	50	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2697	305 MARYLAND AVE	1	B	49	49	50	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2698	313 MARYLAND AVE	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2699	317 MARYLAND AVE	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2700	2358 ADAMS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2701	2363 ADAMS ST	1	B	49	49	50	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2702	2403 ADAMS ST	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2703	2409 ADAMS ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2704	2413 ADAMS ST	1	B	49	49	50	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2705	2417 ADAMS ST	1	B	49	49	50	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2706	2425 ADAMS ST	1	B	49	51	53	68	17	YES	YES					68	17	YES	YES					68	17	YES	YES				
2707	SHIPYARD BLV	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2708	SHIPYARD BLV	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2709	214 CALHOUN DR	1	B	49	49	51	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2710	218 CALHOUN DR	1	B	49	49	52	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2711	222 CALHOUN DR	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES				
2712	226 CALHOUN DR	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES				
2713	230 CALHOUN DR	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES				
2714	2882 WORTH DR	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2715	2882 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2716	2878 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2717	2866 WORTH DR	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2718	2866 WORTH DR	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2719	2870 WORTH DR	1	B	49	49	49	53	4	NO	NO					53	4	NO	NO					53	4	NO	NO				
2720	2886 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2721	20 VIRGIL LN	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2722	2858 WORTH DR	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2723	2846 WORTH DR	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2724	2838 WORTH DR	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2725	2830 WORTH DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2726	2826 WORTH DR	1	B	49	49	49	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2727	2818 WORTH DR	1	B	49	49	50	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2728	2810 WORTH DR	1	B	49	49	51	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2729	2806 WORTH DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2730	2734 WORTH DR	1	B	49	49	51	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2733	2726 WORTH DR	1	B	49	50	55	67	17	YES	YES					67	17	YES	YES					67	17	YES	YES				
2734	2722 WORTH DR	1	B	49	51	56	68	17	YES	YES					68	17	YES	YES					68	17	YES	YES				
2735	2875 WORTH DR	1	D	24	24	24	32	8	NO	NO					32	8	NO	NO					32	8	NO	NO				
2736	2853 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2737	2845 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2738	2837 WORTH DR	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2739	116 DOBBS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2740	202 DOBBS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2741	202 DOBBS ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2742	222 DOBBS ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2743	226 DOBBS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2744	230 DOBBS ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2745	2823 WORTH DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2746	2817 WORTH DR	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2747	2824 CHAPPELL AVE	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2748	2812 CHAPPELL AVE	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2749	2825 CHAPPELL AVE	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2750	2819 CHAPPELL AVE	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2751	2825 CHAPPELL AVE	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2752	221 DOBBS ST	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2753	229 DOBBS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2754	2811 CHAPPELL AVE	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2755	210 RUTLEDGE DR	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2756	2803 CHAPPELL AVE	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2757	2802 CHAPPELL AVE	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2758	134 RUTLEDGE DR	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2759	134 RUTLEDGE DR	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2760	122 RUTLEDGE DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2761	122 RUTLEDGE DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2762	114 RUTLEDGE DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2763	110 RUTLEDGE DR	1	B	49	49	49	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2764	105 DOBBS ST	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2765	210 RUTLEDGE DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2766	133 RUTLEDGE DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2767	125 RUTLEDGE DR	1	B	49	49	49	62	13	NO	YES					62	13	NO	YES					62	13	NO	YES				
2768	125 RUTLEDGE DR	1	B	49	49	49	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2769	117 RUTLEDGE DR	1	B	49	49	50	63	14	NO	YES					63	14	NO	YES					63	14	NO	YES				
2770	113 RUTLEDGE DR	1	B	49	49	49	61	12	NO	YES					61	12	NO	YES					61	12	NO	YES				
2771	101 RUTLEDGE DR	1	B	49	49	50	64	15	NO	YES					64	15	NO	YES					64	15	NO	YES				
2772	109 RUTLEDGE DR	1	B	49	49	49	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2773	2723 WORTH DR	1	B	49	49	51	65	16	NO	YES					65	16	NO	YES					65	16	NO	YES				
2774	2719 WORTH DR	1	B	49	50	54	66	16	YES	YES					66	16	YES	YES					66	16	YES	YES				
2775	1717 SHIPYARD BLV	---	F	49	66	66	63	-3	NO	NO					63	-3	NO	NO					63	-3	NO	NO				
2830	313 CALHOUN DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
2831	2707 VANCE ST	1	B	49	52	53	58	6	NO	NO					58	6	NO	NO					58	6	NO	NO				
2832	233 CALHOUN DR	1	B	49	49	50	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2833	236 DAVIE DR	1	B	49	52	54	61	9	NO	NO					61	9	NO	NO					61	9	NO	NO				
2834	230 DAVIE DR	1	B	49	51	53	60	9	NO	NO					60	9	NO	NO					60	9	NO	NO				
2835	229 CALHOUN DR	1	B	49	49	51	60	11	NO	YES					60	11	NO	YES					60	11	NO	YES				
2836	225 CALHOUN DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2837	224 DAVIE DR	1	B	49	51	53	59	8	NO	NO					59	8	NO	NO					59	8	NO	NO				
2838	221 CALHOUN DR	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2839	218 DAVIE DR	1	B	49	53	55	64	11	NO	YES					64	11	NO	YES					64	11	NO	YES				
2840	214 DAVIE DR	1	B	49	53	56	66	13	YES	YES					66	13	YES	YES					66	13	YES	YES				
2841	210 DAVIE DR	1	B	49	53	55	67	14	YES	YES					67	14	YES	YES					67	14	YES	YES				
2842	209 CALHOUN DR	1	B	49	52	55	67	15	YES	YES					67	15	YES	YES					67	15	YES	YES				
2843	215 CALHOUN DR	1	B	49	51	53	64	13	NO	YES					64	13	NO	YES					64	13	NO	YES				
2844	205 CALHOUN DR	1	B	49	52	55	67	15	YES	YES					67	15	YES	YES					67	15	YES	YES				
2845	2711 DARE ST	1	B	49	50	52	62	12	NO	YES					62	12	NO	YES					62	12	NO	YES				
2846	2703 DARE ST	1	B	49	50	53	63	13	NO	YES					63	13	NO	YES					63	13	NO	YES				
2847	205 DAVIE DR	1	B	49	55	57	71	16	YES	YES					71	16	YES	YES					71	16	YES	YES				
2848	209 DAVIE DR	1	B	49	55	57	71	16	YES	YES					71	16	YES	YES					71	16	YES	YES				
2849	215 DAVIE DR	1	B	49	56	58	70	14	YES	YES					70	14	YES	YES					70	14	YES	YES				
2850	221 DAVIE DR	1	B	49	54	56	63	9	NO	NO					63	9	NO	NO					63	9	NO	NO				
2851	217 DAVIE DR	1	B	49	56	58	65	9	NO	NO					65	9	NO	NO					65	9	NO	NO				
2852	225 DAVIE DR	1	B	49	55	57	64	9	NO	NO					64	9	NO	NO					64	9	NO	NO				
2853	231 DAVIE DR	1	B	49	55	57	65	10	NO	YES					65	10	NO	YES					65	10	NO	YES				
2854	233 DAVIE DR	1	B	49	55	57	64	9	NO	NO					64	9	NO	NO					64	9	NO	NO				
2855	2606 VANCE ST	1	B	49	57	59	63	6	NO	NO					63	6	NO	NO					63	6	NO	NO				
2856	234 WILLIAMSON DR	1	B	49	60	62	71	11	YES	YES					71	11	YES	YES					71	11	YES	YES				
2857	230 WILLIAMSON DR	1	B	49	59	61	71	12	YES	YES					71	12	YES	YES					71	12	YES	YES				
2858	226 WILLIAMSON DR	1	B	49	60	62	72	12	YES	YES					72	12	YES	YES					72	12	YES	YES				
2859	222 WILLIAMSON DR	1	B	49	56	59	67	11	YES	YES					67	11	YES	YES					67	11	YES	YES				
2860	214 WILLIAMSON DR	1	B	49	61	63	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2861	210 WILLIAMSON DR	1	B	49	61	63	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2862	206 WILLIAMSON DR	1	B	49	60	62	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2863	2605 DARE ST	1	B	49	56	58	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2864	206 DAVIE DR	1	B	49	52	55	68	16	YES	YES					68	16	YES	YES					68	16	YES	YES				
2865	2722 DARE ST	1	B	49	50	52	65	15	NO	YES					65	15	NO	YES					65	15	NO	YES				
2866	2605 VANCE ST	1	B	49	58	60	65	7	NO	NO					65	7	NO	NO					65	7	NO	NO				
2867	429 RUTLEDGE DR	1	B	49	59	61	R/W	N/A	N/A	NO					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO				
2868	2725 VANCE ST	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2869	2725 VANCE ST	1	B	49	51	53	61	10	NO	YES					61	10	NO	YES					61	10	NO	YES				
2870	419 RUTLEDGE DR	1	B	49	49	51	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2871	415 RUTLEDGE DR	1	B	49	49	50	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2872	409 RUTLEDGE DR	1	B	49	49	51	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2873	407 RUTLEDGE DR	1	B	49	49	50	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2874	407 RUTLEDGE DR	1	B	49	49	49	55	6	NO	NO					55	6	NO	NO					55	6	NO	NO				
2875	403 RUTLEDGE DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2876	403 RUTLEDGE DR	1	B	49	49	50	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2877	331 RUTLEDGE DR	1	B	49	49	50	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2878	331 RUTLEDGE DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2879	327 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2880	327 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2881	2818 VANCE ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2882	2818 VANCE ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2883	2816 VANCE ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2884	2816 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2885	2810 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2886	2810 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2887	2806 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2888	2806 VANCE ST	1	B	49	49	50	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2889	2804 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2890	2804 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2891	304 RUTLEDGE DR	1	B	49	49	49	59	10	NO	YES					59	10	NO	YES					59	10	NO	YES				
2892	308 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2893	310 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2894	310 RUTLEDGE DR	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2895	314 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2896	314 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2897	2807 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2898	2807 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2899	2809 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2900	2809 VANCE ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2901	2806 GRAHAM ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2902	2806 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2903	2810 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2904	2810 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2905	2814 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2906	2809 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2907	2809 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2908	2805 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2909	2805 GRAHAM ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2910	2806 WARD ST	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2911	2806 WARD ST	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2912	2810 WARD ST	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2913	318 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2914	318 RUTLEDGE DR	1	B	49	49	50	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2915	324 RUTLEDGE DR	1	B	49	49	51	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2916	324 RUTLEDGE DR	1	B	49	49	49	56	7	NO	NO					56	7	NO	NO					56	7	NO	NO				
2917	328 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2918	328 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2919	420 MARION DR	1	B	49	50	52	56	6	NO	NO					56	6	NO	NO					56	6	NO	NO				
2920	420 MARION DR	1	B	49	49	50	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2921	420 MARION DR	1	B	49	49	50	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2922	420 MARION DR	1	B	49	49	51	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2923	420 MARION DR	1	B	49	50	51	58	8	NO	NO					58	8	NO	NO					58	8	NO	NO				
2924	420 MARION DR	1	B	49	49	50	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2925	408 RUTLEDGE DR	1	B	49	50	52	59	9	NO	NO					59	9	NO	NO					59	9	NO	NO				
2926	222 RUTLEDGE DR	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2927	206 DOBBS ST	1	B	49	49	49	58	9	NO	NO					58	9	NO	NO					58	9	NO	NO				
2928	323 RUTLEDGE DR	1	B	49	49	49	57	8	NO	NO					57	8	NO	NO					57	8	NO	NO				
2929	1121 MIDLAND DR	1	B	49	53	53	59	6	NO	NO					59	6	NO	NO					59	6	NO	NO				
2930	2702 NEWKIRK AVE	1	B	49	55	55	60	5	NO	NO					60	5	NO	NO					60	5	NO	NO				
2931	1118 FRANCIS MARION DR	1	B	49	53	53	60	7	NO	NO					60	7	NO	NO					60	7	NO	NO				
2932	1117 MIDLAND DR	1	B	49	52	52	58	6	NO	NO					58	6	NO	NO					58	6	NO	NO				
2933	1113 MIDLAND DR	1	B	49	50	51	56	6	NO	NO					56	6	NO	NO					56	6	NO	NO				
2934	2703 NEWKIRK AVE	1	B	49	56	56	61	5	NO	NO					61	5	NO	NO					61	5	NO	NO				
2937	3713 RIVER RD	1	B	49	65	65					69	4	YES	NO					69	4	YES	NO								
2938	3410 RIVER RD (Wilmington Marine Center)	1	C	49	57	57					63	6	NO	NO					63	6	NO	NO								
2939	122 BRYAN RD	1	B	49	59	59					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
2940	150 BRYAN RD	1	B	49	52	52					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
2941	158 BRYAN RD	1	D	29	35	35					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
2942	154 BRYAN RD	1	B	49	49	49					68	19	YES	YES					68	19	YES	YES								
2943	154 BRYAN RD	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
2944	155 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2945	145 BRYAN RD	1	B	49	49	49					67	18	YES	YES					67	18	YES	YES										
2946	135 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2947	131 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2948	123 BRYAN RD	1	B	49	50	50					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2949	121 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2950	119 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2951	837 SUNNYVALE DR	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2952	115 BRYAN RD	1	B	49	49	49					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2953	3410 RIVER RD (Wilmington Marine Center)	---	C	49	49	49					63	14	NO	YES					63	14	NO	YES										
2954	160 FLOYD DR	1	B	49	53	53					60	7	NO	NO					60	7	NO	NO										
2955	170 FLOYD DR	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES										
2956	180 FLOYD DR	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO										
2957	190 FLOYD DR	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES										
2958	3613 BEATTRICE ST	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES										
2959	5 HAZEL SMITH DR	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES										
2960	3621 BEATTRICE ST	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES										
2961	5 HAZEL SMITH DR	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO										
2962	409 MELTON RD	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES										
2963	413 MELTON RD	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES										
2964	403 MELTON RD	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO										
2965	205 MELTON RD	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO										
2966	5 HAZEL SMITH DR	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO										
2967	602 PARKWAY BLV	1	B	49	55	55					59	4	NO	NO					59	4	NO	NO										
2968	3525 CAROLINA BEACH RD	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO										
2969	3531 CAROLINA BEACH RD	1	B	49	72	72					75	3	YES	NO					75	3	YES	NO										
2970	3605 CAROLINA BEACH RD	1	B	49	57	57					61	4	NO	NO					61	4	NO	NO										
2971	3721 CAROLINA BEACH RD	1	B	49	56	56					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2972	16 REBECCA LN	1	B	49	60	60					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2973	3800 INDEPENDENCE BLV	1	D	24	31	31					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2974	3800 INDEPENDENCE BLV	1	D	24	32	32					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2975	3800 INDEPENDENCE BLV	1	D	24	34	34					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2976	3800 INDEPENDENCE BLV	1	D	24	36	36					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2977	3800 INDEPENDENCE BLV	1	D	24	32	32					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2978	3502 CAROLINA BEACH RD	1	B	49	57	57					61	4	NO	NO					61	4	NO	NO										
2979	3504 CAROLINA BEACH RD	1	D	29	48	48					51	3	YES	NO					51	3	YES	NO										
2980	3510 CAROLINA BEACH RD	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO										
2981	3516 CAROLINA BEACH RD	1	B	49	63	63					70	7	YES	NO					70	7	YES	NO										
2982	3516 CAROLINA BEACH RD	1	B	49	73	73					78	5	YES	NO					78	5	YES	NO										
2983	3510 CAROLINA BEACH RD	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO										
2984	3516 CAROLINA BEACH RD	1	B	49	59	59					64	5	NO	NO					64	5	NO	NO										
2985	3516 CAROLINA BEACH RD	1	B	49	61	61					66	5	YES	NO					66	5	YES	NO										
2986	3516 CAROLINA BEACH RD	1	B	49	58	58					63	5	NO	NO					63	5	NO	NO										
2987	3512 CAROLINA BEACH RD	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO										
2988	3512 CAROLINA BEACH RD	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO										
2989	14 SUNNYVALE DR	1	B	49	54	54					59	5	NO	NO					59	5	NO	NO										
2990	12 SUNNYVALE DR	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO										
2991	9 SUNNYVALE DR	1	B	49	60	60					65	5	NO	NO					65	5	NO	NO										
2992	15 SUNNYVALE DR	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO										
2993	17 SUNNYVALE DR	1	B	49	53	53					59	6	NO	NO					59	6	NO	NO										
2994	3626 CAROLINA BEACH RD	1	B	49	61	61					65	4	NO	NO					65	4	NO	NO										
2995	3626 CAROLINA BEACH RD	1	B	49	60	60					66	6	YES	NO					66	6	YES	NO										
2996	3706 CAROLINA BEACH RD	1	B	49	73	73					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2997	3706 CAROLINA BEACH RD	1	B	49	73	73					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO										
2998	3706 CAROLINA BEACH RD	1	B	49	61	61					67	6	YES	NO					67	6	YES	NO										
2999	3706 CAROLINA BEACH RD	1	B	49	58	58					64	6	NO	NO					64	6	NO	NO										
3000	3706 CAROLINA BEACH RD	1	B	49	55	55					61	6	NO	NO					61	6	NO	NO										
3001	3706 CAROLINA BEACH RD	1	B	49	53	53					60	7	NO	NO					60	7	NO	NO										
3002	3706 CAROLINA BEACH RD	1	B	49	52	52					57	5	NO	NO					57	5	NO	NO										
3003	3706 CAROLINA BEACH RD	1	B	49	51	51					58	7	NO	NO					58	7	NO	NO										
3004	3706 CAROLINA BEACH RD	1	B	49	50	50					59	9	NO	NO					59	9	NO	NO										
3005	3706 CAROLINA BEACH RD	1	B	49	50	50					59	9	NO	NO					59	9	NO	NO										
3006	3706 CAROLINA BEACH RD	1	B	49	52	52					60	8	NO	NO					60	8	NO	NO										
3007	3706 CAROLINA BEACH RD	1	B	49	54	54					61	7	NO	NO					61	7	NO	NO										
3008	3706 CAROLINA BEACH RD	1	B	49	55	55					62	7	NO	NO					62	7	NO	NO										
3009	3718 CAROLINA BEACH RD	---	F	49	67	67					72	5	NO	NO					72	5	NO	NO										
3010	209 SOLID HOLLOW LN	1	B	49	54	54					61	7	NO	NO					61	7	NO	NO										
3011	214 SOLID HOLLOW LN	1	B	49	56	56					62	6	NO	NO					62	6	NO	NO										
3012	210 SOLID HOLLOW LN	1	B	49	55	55					63	8	NO	NO					63	8	NO	NO										
3013	134 SOUTHGATE RD	1	B	49	51	51					61	10	NO	YES					61	10	NO	YES										
3014	130 SOUTHGATE RD	1	B	49	52	52					61	9	NO	NO					61	9	NO	NO										

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3015	3722 CAROLINA BEACH RD	1	B	49	57	57					64	7	NO	NO					64	7	NO	NO								
3016	3730 CAROLINA BEACH RD	1	B	49	72	72					77	5	YES	NO					77	5	YES	NO								
3017	3730 CAROLINA BEACH RD	1	B	49	61	61					67	6	YES	NO					67	6	YES	NO								
3018	125 SOUTHGATE RD	1	B	49	55	55					63	8	NO	NO					63	8	NO	NO								
3019	129 SOUTHGATE RD	1	B	49	53	53					61	8	NO	NO					61	8	NO	NO								
3020	131 SOUTHGATE RD	1	B	49	51	51					60	9	NO	NO					60	9	NO	NO								
3021	135 SOUTHGATE RD	1	B	49	50	50					58	8	NO	NO					58	8	NO	NO								
3022	141 SOUTHGATE RD	1	B	49	50	50					60	10	NO	YES					60	10	NO	YES								
3023	145 SOUTHGATE RD	1	B	49	50	50					59	9	NO	NO					59	9	NO	NO								
3024	201 HOLLINS RD	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3025	206 HOLLINS RD	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3026	205 HOLLINS RD	1	B	49	50	50					62	12	NO	YES					62	12	NO	YES								
3027	210 HOLLINS RD	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3028	235 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3029	231 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3030	227 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3031	223 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3032	223 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3033	217 HOLLINS RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3034	213 HOLLINS RD	1	B	49	50	50					63	13	NO	YES					63	13	NO	YES								
3035	209 HOLLINS RD	1	B	49	50	50					63	13	NO	YES					63	13	NO	YES								
3036	3736 CAROLINA BEACH RD (Oak Grove Church)	---	D	24	44	44					48	4	NO	NO					48	4	NO	NO								
3037	3737 CAROLINA BEACH RD (Oak Grove Church)	1	D	24	47	47					53	6	YES	NO					53	6	YES	NO								
3038	3738 CAROLINA BEACH RD (Oak Grove Church)	---	D	24	42	42					48	6	NO	NO					48	6	NO	NO								
3039	3739 CAROLINA BEACH RD (Oak Grove Church)	---	D	24	36	36					44	8	NO	NO					44	8	NO	NO								
3040	3804 CAROLINA BEACH RD	1	B	49	72	72					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3041	409 RIDGE RD	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3042	413 RIDGE RD	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3043	417 RIDGE RD	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3044	421 RIDGE RD	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3045	425 RIDGE RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3046	429 RIDGE RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3047	433 RIDGE RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3048	437 RIDGE RD	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3049	438 RIDGE RD	1	B	49	51	51					63	12	NO	YES					63	12	NO	YES								
3050	434 RIDGE RD	1	B	49	52	52					61	9	NO	NO					61	9	NO	NO								
3051	530 CRAB APPLE LN	1	B	49	51	51					59	8	NO	NO					59	8	NO	NO								
3052	426 RIDGE RD	1	B	49	50	50					57	7	NO	NO					57	7	NO	NO								
3053	422 RIDGE RD	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3054	418 RIDGE RD	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3055	414 RIDGE RD	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3056	410 RIDGE RD	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3057	3916 CAROLINA BEACH RD	1	B	49	52	52					60	8	NO	NO					60	8	NO	NO								
3058	3906 CAROLINA BEACH RD	1	B	49	74	74					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3059	3908 CAROLINA BEACH RD	1	B	49	70	70					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3060	535 CRAB APPLE LN	1	B	49	62	62					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3061	535 CRAB APPLE LN	1	B	49	58	58					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3062	3912 CAROLINA BEACH RD	1	B	49	73	73					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3063	3916 CAROLINA BEACH RD	1	B	49	73	73					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3064	530 CRAB APPLE LN	1	B	49	61	61					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3065	525 CRAB APPLE LN	1	B	49	55	55					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3066	505 CRAB APPLE LN	1	B	49	54	54					65	11	NO	YES					R/W	N/A	N/A	NO								
3067	3916 CAROLINA BEACH RD	1	B	49	61	61					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3068	3920 CAROLINA BEACH RD	1	B	49	72	72					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3069	3916 CAROLINA BEACH RD	1	B	49	57	57					70	13	YES	YES					70	13	YES	YES								
3070	3916 CAROLINA BEACH RD	1	B	49	54	54					64	10	NO	YES					64	10	NO	YES								
3071	4114 ECHO FARMS BLV (Golf Course)	1	C	49	57	57					58	1	NO	NO					58	1	NO	NO								
3072	4115 ECHO FARMS BLV (Golf Course)	---	C	49	57	57					58	1	NO	NO					58	1	NO	NO								
3073	4300 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3074	4200 TERRINGTON DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3075	4204 TERRINGTON DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3076	4208 TERRINGTON DR	1	B	49	56	56					58	2	NO	NO					58	2	NO	NO								
3077	4301 PEEBLE DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3078	4311 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3079	4300 PEEBLE DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3080	4321 PEEBLE DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3081	4322 PEEBLE DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3082	4331 PEEBLE DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3083	3903 CAROLINA BEACH RD	1	B	49	72	72					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3084	3903 CAROLINA BEACH RD	1	B	49	65	65					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3085	3907 CAROLINA BEACH RD	---	F	49	74	74					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3086	3907 CAROLINA BEACH RD	1	B	49	62	62					67	5	YES	NO					67	5	YES	NO								
3087	3913 CAROLINA BEACH RD	1	B	49	69	69					72	3	YES	NO					72	3	YES	NO								
3088	3913 CAROLINA BEACH RD	1	B	49	58	58					64	6	NO	NO					64	6	NO	NO								
3089	3913 CAROLINA BEACH RD	1	B	49	55	55					61	6	NO	NO					61	6	NO	NO								
3090	3917 CAROLINA BEACH RD	1	B	49	70	70					72	2	YES	NO					72	2	YES	NO								
3091	3919 CAROLINA BEACH RD	1	B	49	70	70					72	2	YES	NO					72	2	YES	NO								
3092	3921 CAROLINA BEACH RD	1	B	49	72	72					74	2	YES	NO					74	2	YES	NO								
3093	3923 CAROLINA BEACH RD	1	B	49	66	66					R/W	N/A	N/A	NO					R/W	N/A	N/A	NO								
3094	3925 CAROLINA BEACH RD	1	B	49	69	69					71	2	YES	NO					71	2	YES	NO								
3095	3925 CAROLINA BEACH RD	1	B	49	62	62					65	3	NO	NO					65	3	NO	NO								
3096	3925 CAROLINA BEACH RD	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO								
3097	3925 CAROLINA BEACH RD	1	B	49	59	59					62	3	NO	NO					62	3	NO	NO								
3098	3925 CAROLINA BEACH RD	1	B	49	54	54					58	4	NO	NO					58	4	NO	NO								
3099	3925 CAROLINA BEACH RD	1	B	49	54	54					59	5	NO	NO					59	5	NO	NO								
3100	3925 CAROLINA BEACH RD	1	B	49	51	51					55	4	NO	NO					55	4	NO	NO								
3101	3925 CAROLINA BEACH RD	1	B	49	52	52					55	3	NO	NO					55	3	NO	NO								
3102	3925 CAROLINA BEACH RD	1	B	49	51	51					58	7	NO	NO					58	7	NO	NO								
3103	3925 CAROLINA BEACH RD	1	B	49	51	51					56	5	NO	NO					56	5	NO	NO								
3104	4128 BREEZEWOOD DR	1	B	49	54	54					59	5	NO	NO					59	5	NO	NO								
3105	4126 BREEZEWOOD DR	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO								
3106	4126 BREEZEWOOD DR	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO								
3107	4126 BREEZEWOOD DR	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO								
3108	4124 BREEZEWOOD DR	1	B	49	55	55					60	5	NO	NO					60	5	NO	NO								
3109	3939 CAROLINA BEACH RD	---	F	49	70	70					72	2	NO	NO					72	2	NO	NO								
3110	4124 BREEZEWOOD DR	1	B	49	57	57					61	4	NO	NO					61	4	NO	NO								
3111	4124 BREEZEWOOD DR	1	B	49	57	57					61	4	NO	NO					61	4	NO	NO								
3112	4122 BREEZEWOOD DR	1	B	49	54	54					58	4	NO	NO					58	4	NO	NO								
3113	4130 BREEZEWOOD DR	1	B	49	51	51					55	4	NO	NO					55	4	NO	NO								
3114	4130 BREEZEWOOD DR	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO								
3115	4130 BREEZEWOOD DR	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO								
3116	4132 BREEZEWOOD DR	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3117	4132 BREEZEWOOD DR	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO								
3118	4132 BREEZEWOOD DR	1	B	49	67	67					67	0	YES	NO					67	0	YES	NO								
3119	4130 BREEZEWOOD DR	1	B	49	51	51					50	-1	NO	NO					50	-1	NO	NO								
3120	4120 BREEZEWOOD DR	1	B	49	53	53					57	4	NO	NO					57	4	NO	NO								
3121	4140 BREEZEWOOD DR	1	B	49	52	52					56	4	NO	NO					56	4	NO	NO								
3122	4134 BREEZEWOOD DR	1	B	49	62	62					61	-1	NO	NO					61	-1	NO	NO								
3123	4134 BREEZEWOOD DR	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3124	4136 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3125	4134 BREEZEWOOD DR	1	B	49	53	53					52	-1	NO	NO					52	-1	NO	NO								
3126	4134 BREEZEWOOD DR	1	B	49	60	60					59	-1	NO	NO					59	-1	NO	NO								
3127	4140 BREEZEWOOD DR	1	B	49	71	71					72	1	YES	NO					72	1	YES	NO								
3128	4140 BREEZEWOOD DR	1	B	49	59	59					57	-2	NO	NO					57	-2	NO	NO								
3129	4136 BREEZEWOOD DR	1	B	49	51	51					51	0	NO	NO					51	0	NO	NO								
3130	4140 BREEZEWOOD DR	1	B	49	53	53					52	-1	NO	NO					52	-1	NO	NO								
3131	4138 BREEZEWOOD DR	1	B	49	51	51					51	0	NO	NO					51	0	NO	NO								
3132	4148 BREEZEWOOD DR	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								
3133	4138 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3134	4140 BREEZEWOOD DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3135	4152 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3136	4152 BREEZEWOOD DR	1	B	49	53	53					55	2	NO	NO					55	2	NO	NO								
3137	4142 BREEZEWOOD DR	1	B	49	59	59					59	0	NO	NO					59	0	NO	NO								
3138	4183 BREEZEWOOD DR	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3139	4156 BREEZEWOOD DR	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3140	4142 BREEZEWOOD DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3141	4156 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3142	4142 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3143	4144 BREEZEWOOD DR	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3144	4150 BREEZEWOOD DR	1	B	49	50	50					51	1	NO	NO					51	1	NO	NO								
3145	4144 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3146	4156 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3147	4154 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3148	4156 BREEZEWOOD DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3149	4154 BREEZEWOOD DR	1	B	49	53	53					54	1	NO	NO					54	1	NO	NO								
3150	4164 BREEZEWOOD DR	1	B	49	53	53					54	1	NO	NO					54	1	NO	NO								
3151	4164 BREEZEWOOD DR	1	B	49	54	54					56	2	NO	NO					56	2	NO	NO								
3152	4164 BREEZEWOOD DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO								
3153	4158 BREEZEWOOD DR	1	B	49	69	69					70	1	YES	NO					70	1	YES	NO								
3154	4158 BREEZEWOOD DR	1	B	49	67	67					69	2	YES	NO					69	2	YES	NO								
3155	4158 BREEZEWOOD DR	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO								
3156	4162 BREEZEWOOD DR	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.

^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc					NAC	Sub Inc			NAC	Sub Inc
3157	4162 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO										
3158	4168 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO										
3159	4164 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3160	4164 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3161	4166 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3162	4166 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3163	4168 BREEZEWOOD DR	1	B	49	54	54					55	1	NO	NO					55	1	NO	NO										
3164	4166 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO										
3165	4321 CAROLINA BEACH RD (Codington School Playground)	---	C	49	61	61					62	1	NO	NO					62	1	NO	NO										
3166	4322 CAROLINA BEACH RD (Codington School Playground)	1	C	49	66	66					67	1	YES	NO					67	1	YES	NO										
3167	4323 CAROLINA BEACH RD (Codington School Playground)	---	C	49	66	66					67	1	YES	NO					67	1	YES	NO										
3168	4324 CAROLINA BEACH RD (Codington School Playground)	---	C	49	64	64					65	1	NO	NO					65	1	NO	NO										
3169	4325 CAROLINA BEACH RD (Codington School Playground)	---	C	49	66	66					67	1	YES	NO					67	1	YES	NO										
3170	4326 CAROLINA BEACH RD (Codington School Playground)	---	C	49	61	61					63	2	NO	NO					63	2	NO	NO										
3171	4327 CAROLINA BEACH RD (Codington School Playground)	---	C	49	66	66					68	2	YES	NO					68	2	YES	NO										
3172	4328 CAROLINA BEACH RD (Codington School Playground)	---	C	49	62	62					63	1	NO	NO					63	1	NO	NO										
3173	4142 BREEZEWOOD DR	1	B	49	63	63					63	0	NO	NO					63	0	NO	NO										
3174	4142 BREEZEWOOD DR	1	B	49	52	52					53	1	NO	NO					53	1	NO	NO										
3175	4156 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3176	4156 BREEZEWOOD DR	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO										
3177	4164 BREEZEWOOD DR	1	B	49	56	56					58	2	NO	NO					58	2	NO	NO										
3178	4164 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3179	4166 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO										
3180	4140 BREEZEWOOD DR	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO										
3181	4140 BREEZEWOOD DR	1	B	49	54	54					53	-1	NO	NO					53	-1	NO	NO										
3182	4134 BREEZEWOOD DR	1	B	49	55	55					55	0	NO	NO					55	0	NO	NO										
3183	4134 BREEZEWOOD DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO										
3184	4132 BREEZEWOOD DR	1	B	49	55	55					53	-2	NO	NO					53	-2	NO	NO										
3185	4132 BREEZEWOOD DR	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO										
3186	4150 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO										
3187	4152 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO										
3188	4202 TERRINGTON DR	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO										
3189	4206 TERRINGTON DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO										
3190	4210 TERRINGTON DR	1	B	49	55	55					57	2	NO	NO					57	2	NO	NO										
3191	4327 PEEBLE DR	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO										
3192	4325 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO										
3193	4323 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO										
3194	4317 PEEBLE DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO										
3195	4315 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO										
3196	4313 PEEBLE DR	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO										
3197	4307 PEEBLE DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO										
3198	4305 PEEBLE DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO										
3199	4303 PEEBLE DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO										
3200	4316 PEEBLE DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO										
3201	4318 PEEBLE DR	1	B	49	50	50					52	2	NO	NO					52	2	NO	NO										
3202	4320 PEEBLE DR	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO										
3203	4326 PEEBLE DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO										
3204	4326 PEEBLE DR	1	B	49	50	50					52	2	NO	NO					52	2	NO	NO										
3205	4328 PEEBLE DR	1	B	49	50	50					52	2	NO	NO					52	2	NO	NO										
3206	4128 BREEZEWOOD DR	1	B	49	60	60					63	3	NO	NO					63	3	NO	NO										
3207	4126 BREEZEWOOD DR	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO										
3208	4126 BREEZEWOOD DR	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO										
3209	4126 BREEZEWOOD DR	1	B	49	62	62					65	3	NO	NO					65	3	NO	NO										
3210	4124 BREEZEWOOD DR	1	B	49	60	60					63	3	NO	NO					63	3	NO	NO										
3211	4124 BREEZEWOOD DR	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO										
3212	4124 BREEZEWOOD DR	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO										
3213	4122 BREEZEWOOD DR	1	B	49	58	58					61	3	NO	NO					61	3	NO	NO										
3214	4130 BREEZEWOOD DR	1	B	49	54	54					59	5	NO	NO					59	5	NO	NO										
3215	4130 BREEZEWOOD DR	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO										
3216	4130 BREEZEWOOD DR	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO										
3217	4132 BREEZEWOOD DR	1	B	49	66	66					69	3	YES	NO					69	3	YES	NO										
3218	4132 BREEZEWOOD DR	1	B	49	72	72					74	2	YES	NO					74	2	YES	NO										
3219	4132 BREEZEWOOD DR	1	B	49	67	67					69	2	YES	NO					69	2	YES	NO										
3220	4130 BREEZEWOOD DR	1	B	49	55	55					56	1	NO	NO					56	1	NO	NO										
3221	4120 BREEZEWOOD DR	1	B	49	57	57					60	3	NO	NO					60	3	NO	NO										
3222	4134 BREEZEWOOD DR	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO										
3223	4134 BREEZEWOOD DR	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO										
3224	4136 BREEZEWOOD DR	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO										
3225	4134 BREEZEWOOD DR	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO										
3226	4134 BREEZEWOOD DR	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO										
3227	4140 BREEZEWOOD DR	1	B	49	71	71					72	1	YES	NO					72	1	YES	NO										

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3228	4140 BREEZEWOOD DR	1	B	49	60	60					62	2	NO	NO					62	2	NO	NO								
3229	4136 BREEZEWOOD DR	1	B	49	55	55					56	1	NO	NO					56	1	NO	NO								
3230	4140 BREEZEWOOD DR	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO								
3231	4138 BREEZEWOOD DR	1	B	49	55	55					56	1	NO	NO					56	1	NO	NO								
3232	4148 BREEZEWOOD DR	1	B	49	53	53					56	3	NO	NO					56	3	NO	NO								
3233	4138 BREEZEWOOD DR	1	B	49	53	53					55	2	NO	NO					55	2	NO	NO								
3234	4140 BREEZEWOOD DR	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO								
3235	4152 BREEZEWOOD DR	1	B	49	49	49					53	4	NO	NO					53	4	NO	NO								
3236	4152 BREEZEWOOD DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO								
3237	4142 BREEZEWOOD DR	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO								
3238	4183 BREEZEWOOD DR	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3239	4156 BREEZEWOOD DR	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3240	4142 BREEZEWOOD DR	1	B	49	60	60					62	2	NO	NO					62	2	NO	NO								
3241	4156 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3242	4142 BREEZEWOOD DR	1	B	49	52	52					54	2	NO	NO					54	2	NO	NO								
3243	4144 BREEZEWOOD DR	1	B	49	54	54					55	1	NO	NO					55	1	NO	NO								
3244	4150 BREEZEWOOD DR	1	B	49	53	53					54	1	NO	NO					54	1	NO	NO								
3245	4144 BREEZEWOOD DR	1	B	49	50	50					52	2	NO	NO					52	2	NO	NO								
3246	4156 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3247	4154 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3248	4156 BREEZEWOOD DR	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO								
3249	4154 BREEZEWOOD DR	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO								
3250	4164 BREEZEWOOD DR	1	B	49	55	55					56	1	NO	NO					56	1	NO	NO								
3251	4164 BREEZEWOOD DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO								
3252	4164 BREEZEWOOD DR	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO								
3253	4158 BREEZEWOOD DR	1	B	49	69	69					71	2	YES	NO					71	2	YES	NO								
3254	4158 BREEZEWOOD DR	1	B	49	68	68					70	2	YES	NO					70	2	YES	NO								
3255	4158 BREEZEWOOD DR	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3256	4162 BREEZEWOOD DR	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO								
3257	4162 BREEZEWOOD DR	1	B	49	53	53					55	2	NO	NO					55	2	NO	NO								
3258	4168 BREEZEWOOD DR	1	B	49	53	53					55	2	NO	NO					55	2	NO	NO								
3259	4164 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3260	4164 BREEZEWOOD DR	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3261	4166 BREEZEWOOD DR	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3262	4166 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3263	4168 BREEZEWOOD DR	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO								
3264	4166 BREEZEWOOD DR	1	B	49	50	50					53	3	NO	NO					53	3	NO	NO								
3265	4142 BREEZEWOOD DR	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3266	4142 BREEZEWOOD DR	1	B	49	54	54					56	2	NO	NO					56	2	NO	NO								
3267	4156 BREEZEWOOD DR	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3268	4156 BREEZEWOOD DR	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3269	4164 BREEZEWOOD DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3270	4164 BREEZEWOOD DR	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3271	4166 BREEZEWOOD DR	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3272	4140 BREEZEWOOD DR	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO								
3273	4140 BREEZEWOOD DR	1	B	49	56	56					58	2	NO	NO					58	2	NO	NO								
3274	4134 BREEZEWOOD DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3275	4134 BREEZEWOOD DR	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3276	4132 BREEZEWOOD DR	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3277	4132 BREEZEWOOD DR	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3278	4150 BREEZEWOOD DR	1	B	49	53	53					53	0	NO	NO					53	0	NO	NO								
3279	4152 BREEZEWOOD DR	1	B	49	49	49					53	4	NO	NO					53	4	NO	NO								
3280	2406 SALINGER CT	1	B	49	51	51					53	2	NO	NO					53	2	NO	NO								
3281	2406 SALINGER CT	1	B	49	51	51					53	2	NO	NO					53	2	NO	NO								
3282	2408 SALINGER CT	1	B	49	52	52					53	1	NO	NO					53	1	NO	NO								
3283	2408 SALINGER CT	1	B	49	52	52					53	1	NO	NO					53	1	NO	NO								
3284	2408 SALINGER CT	1	B	49	53	53					54	1	NO	NO					54	1	NO	NO								
3285	2408 SALINGER CT	1	B	49	53	53					54	1	NO	NO					54	1	NO	NO								
3286	2410 SALINGER CT	1	B	49	54	54					55	1	NO	NO					55	1	NO	NO								
3287	2410 SALINGER CT	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO								
3288	2410 SALINGER CT	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO								
3289	2410 SALINGER CT	1	B	49	56	56					59	3	NO	NO					59	3	NO	NO								
3290	2408 SALINGER CT	1	B	49	55	55					58	3	NO	NO					58	3	NO	NO								
3291	2408 SALINGER CT	1	B	49	55	55					58	3	NO	NO					58	3	NO	NO								
3292	2408 SALINGER CT	1	B	49	54	54					58	4	NO	NO					58	4	NO	NO								
3293	2408 SALINGER CT	1	B	49	54	54					57	3	NO	NO					57	3	NO	NO								
3294	2406 SALINGER CT	1	B	49	53	53					57	4	NO	NO					57	4	NO	NO								
3295	2406 SALINGER CT	1	B	49	53	53					57	4	NO	NO					57	4	NO	NO								
3296	2412 SALINGER CT	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO								
3297	2412 SALINGER CT	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO								
3298	2412 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3299	2412 SALINGER CT	1	B	49	65	65					65	0	NO	NO					65	0	NO	NO								
3300	2412 SALINGER CT	1	B	49	64	64					64	0	NO	NO					64	0	NO	NO								
3301	2412 SALINGER CT	1	B	49	62	62					62	0	NO	NO					62	0	NO	NO								
3302	2412 SALINGER CT	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3303	2412 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3304	2416 SALINGER CT	1	B	49	62	62					62	0	NO	NO					62	0	NO	NO								
3305	2416 SALINGER CT	1	B	49	64	64					64	0	NO	NO					64	0	NO	NO								
3306	2416 SALINGER CT	1	B	49	66	66					66	0	YES	NO					66	0	YES	NO								
3307	2416 SALINGER CT	1	B	49	68	68					69	1	YES	NO					69	1	YES	NO								
3308	2416 SALINGER CT	1	B	49	67	67					67	0	YES	NO					67	0	YES	NO								
3309	2416 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3310	2416 SALINGER CT	1	B	49	64	64					64	0	NO	NO					64	0	NO	NO								
3311	2416 SALINGER CT	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO								
3312	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3313	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3314	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3315	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3316	2424 SALINGER CT	1	B	49	60	60					65	5	NO	NO					65	5	NO	NO								
3317	2424 SALINGER CT	1	B	49	57	57					63	6	NO	NO					63	6	NO	NO								
3318	2424 SALINGER CT	1	B	49	58	58					63	5	NO	NO					63	5	NO	NO								
3319	2424 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3320	2436 SALINGER CT	1	B	49	54	54					57	3	NO	NO					57	3	NO	NO								
3321	2436 SALINGER CT	1	B	49	53	53					57	4	NO	NO					57	4	NO	NO								
3322	2436 SALINGER CT	1	B	49	53	53					57	4	NO	NO					57	4	NO	NO								
3323	2436 SALINGER CT	1	B	49	53	53					58	5	NO	NO					58	5	NO	NO								
3324	2432 SALINGER CT	1	B	49	49	49					55	6	NO	NO					55	6	NO	NO								
3325	2432 SALINGER CT	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3326	2432 SALINGER CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3327	2432 SALINGER CT	1	B	49	51	51					53	2	NO	NO					53	2	NO	NO								
3328	2432 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3329	2432 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3330	2432 SALINGER CT	1	B	49	58	58					63	5	NO	NO					63	5	NO	NO								
3331	2432 SALINGER CT	1	B	49	58	58					63	5	NO	NO					63	5	NO	NO								
3332	2428 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3333	2428 SALINGER CT	1	B	49	60	60					60	0	NO	NO					60	0	NO	NO								
3334	2428 SALINGER CT	1	B	49	63	63					63	0	NO	NO					63	0	NO	NO								
3335	2428 SALINGER CT	1	B	49	64	64					65	1	NO	NO					65	1	NO	NO								
3336	2428 SALINGER CT	1	B	49	63	63					68	5	YES	NO					68	5	YES	NO								
3337	2428 SALINGER CT	1	B	49	61	61					68	7	YES	NO					68	7	YES	NO								
3338	2428 SALINGER CT	1	B	49	59	59					66	7	YES	NO					66	7	YES	NO								
3339	2428 SALINGER CT	1	B	49	58	58					66	8	YES	NO					66	8	YES	NO								
3340	2406 SALINGER CT	1	B	49	55	55					57	2	NO	NO					57	2	NO	NO								
3341	2406 SALINGER CT	1	B	49	55	55					56	1	NO	NO					56	1	NO	NO								
3342	2408 SALINGER CT	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO								
3343	2408 SALINGER CT	1	B	49	57	57					57	0	NO	NO					57	0	NO	NO								
3344	2408 SALINGER CT	1	B	49	57	57					58	1	NO	NO					58	1	NO	NO								
3345	2408 SALINGER CT	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3346	2410 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3347	2410 SALINGER CT	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO								
3348	2410 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3349	2410 SALINGER CT	1	B	49	61	61					62	1	NO	NO					62	1	NO	NO								
3350	2408 SALINGER CT	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3351	2408 SALINGER CT	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3352	2408 SALINGER CT	1	B	49	59	59					61	2	NO	NO					61	2	NO	NO								
3353	2408 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3354	2406 SALINGER CT	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO								
3355	2406 SALINGER CT	1	B	49	58	58					60	2	NO	NO					60	2	NO	NO								
3356	2412 SALINGER CT	1	B	49	64	64					66	2	YES	NO					66	2	YES	NO								
3357	2412 SALINGER CT	1	B	49	64	64					66	2	YES	NO					66	2	YES	NO								
3358	2412 SALINGER CT	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3359	2412 SALINGER CT	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3360	2412 SALINGER CT	1	B	49	66	66					67	1	YES	NO					67	1	YES	NO								
3361	2412 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3362	2412 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3363	2412 SALINGER CT	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO								
3364	2416 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3365	2416 SALINGER CT	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3366	2416 SALINGER CT	1	B	49	67	67					68	1	YES	NO					68	1	YES	NO								
3367	2416 SALINGER CT	1	B	49	69	69					70	1	YES	NO					70	1	YES	NO								
3368	2416 SALINGER CT	1	B	49	67	67					69	2	YES	NO					69	2	YES	NO								
3369	2416 SALINGER CT	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3370	2416 SALINGER CT	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3371	2416 SALINGER CT	1	B	49	64	64					66	2	YES	NO					66	2	YES	NO								
3372	2424 SALINGER CT	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO								
3373	2424 SALINGER CT	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO								
3374	2424 SALINGER CT	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO								
3375	2424 SALINGER CT	1	B	49	72	72					73	1	YES	NO					73	1	YES	NO								
3376	2424 SALINGER CT	1	B	49	60	60					66	6	YES	NO					66	6	YES	NO								
3377	2424 SALINGER CT	1	B	49	58	58					65	7	NO	NO					65	7	NO	NO								
3378	2424 SALINGER CT	1	B	49	59	59					65	6	NO	NO					65	6	NO	NO								
3379	2424 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3380	2436 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3381	2436 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3382	2436 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3383	2436 SALINGER CT	1	B	49	58	58					62	4	NO	NO					62	4	NO	NO								
3384	2432 SALINGER CT	1	B	49	50	50					58	8	NO	NO					58	8	NO	NO								
3385	2432 SALINGER CT	1	B	49	50	50					56	6	NO	NO					56	6	NO	NO								
3386	2432 SALINGER CT	1	B	49	50	50					55	5	NO	NO					55	5	NO	NO								
3387	2432 SALINGER CT	1	B	49	56	56					57	1	NO	NO					57	1	NO	NO								
3388	2432 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3389	2432 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3390	2432 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3391	2432 SALINGER CT	1	B	49	62	62					66	4	YES	NO					66	4	YES	NO								
3392	2428 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3393	2428 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3394	2428 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3395	2428 SALINGER CT	1	B	49	66	66					67	1	YES	NO					67	1	YES	NO								
3396	2428 SALINGER CT	1	B	49	65	65					70	5	YES	NO					70	5	YES	NO								
3397	2428 SALINGER CT	1	B	49	64	64					69	5	YES	NO					69	5	YES	NO								
3398	2428 SALINGER CT	1	B	49	62	62					68	6	YES	NO					68	6	YES	NO								
3399	2428 SALINGER CT	1	B	49	62	62					68	6	YES	NO					68	6	YES	NO								
3400	2406 SALINGER CT	1	B	49	57	57					59	2	NO	NO					59	2	NO	NO								
3401	2406 SALINGER CT	1	B	49	57	57					59	2	NO	NO					59	2	NO	NO								
3402	2408 SALINGER CT	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3403	2408 SALINGER CT	1	B	49	58	58					59	1	NO	NO					59	1	NO	NO								
3404	2408 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3405	2408 SALINGER CT	1	B	49	59	59					60	1	NO	NO					60	1	NO	NO								
3406	2410 SALINGER CT	1	B	49	60	60					61	1	NO	NO					61	1	NO	NO								
3407	2410 SALINGER CT	1	B	49	62	62					63	1	NO	NO					63	1	NO	NO								
3408	2410 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3409	2410 SALINGER CT	1	B	49	62	62					64	2	NO	NO					64	2	NO	NO								
3410	2408 SALINGER CT	1	B	49	61	61					63	2	NO	NO					63	2	NO	NO								
3411	2408 SALINGER CT	1	B	49	61	61					63	2	NO	NO					63	2	NO	NO								
3412	2408 SALINGER CT	1	B	49	60	60					63	3	NO	NO					63	3	NO	NO								
3413	2408 SALINGER CT	1	B	49	60	60					63	3	NO	NO					63	3	NO	NO								
3414	2406 SALINGER CT	1	B	49	60	60					62	2	NO	NO					62	2	NO	NO								
3415	2406 SALINGER CT	1	B	49	59	59					62	3	NO	NO					62	3	NO	NO								
3416	2412 SALINGER CT	1	B	49	64	64					66	2	YES	NO					66	2	YES	NO								
3417	2412 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3418	2412 SALINGER CT	1	B	49	66	66					67	1	YES	NO					67	1	YES	NO								
3419	2412 SALINGER CT	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3420	2412 SALINGER CT	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3421	2412 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3422	2412 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3423	2412 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3424	2416 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3425	2416 SALINGER CT	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3426	2416 SALINGER CT	1	B	49	67	67					68	1	YES	NO					68	1	YES	NO								
3427	2416 SALINGER CT	1	B	49	69	69					70	1	YES	NO					70	1	YES	NO								
3428	2416 SALINGER CT	1	B	49	67	67					69	2	YES	NO					69	2	YES	NO								
3429	2416 SALINGER CT	1	B	49	66	66					68	2	YES	NO					68	2	YES	NO								
3430	2416 SALINGER CT	1	B	49	65	65					67	2	YES	NO					67	2	YES	NO								
3431	2416 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3432	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3433	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3434	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3435	2424 SALINGER CT	1	B	49	71	71					73	2	YES	NO					73	2	YES	NO								
3436	2424 SALINGER CT	1	B	49	61	61					67	6	YES	NO					67	6	YES	NO								
3437	2424 SALINGER CT	1	B	49	59	59					65	6	NO	NO					65	6	NO	NO								
3438	2424 SALINGER CT	1	B	49	60	60					65	5	NO	NO					65	5	NO	NO								
3439	2424 SALINGER CT	1	B	49	64	64					67	3	YES	NO					67	3	YES	NO								
3440	2436 SALINGER CT	1	B	49	60	60					64	4	NO	NO					64	4	NO	NO								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.

^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3441	2436 SALINGER CT	1	B	49	60	60					64	4	NO	NO					64	4	NO	NO								
3442	2436 SALINGER CT	1	B	49	60	60					64	4	NO	NO					64	4	NO	NO								
3443	2436 SALINGER CT	1	B	49	60	60					64	4	NO	NO					64	4	NO	NO								
3444	2432 SALINGER CT	1	B	49	52	52					61	9	NO	NO					61	9	NO	NO								
3445	2432 SALINGER CT	1	B	49	52	52					59	7	NO	NO					59	7	NO	NO								
3446	2432 SALINGER CT	1	B	49	52	52					58	6	NO	NO					58	6	NO	NO								
3447	2432 SALINGER CT	1	B	49	57	57					60	3	NO	NO					60	3	NO	NO								
3448	2432 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3449	2432 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3450	2432 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3451	2432 SALINGER CT	1	B	49	63	63					66	3	YES	NO					66	3	YES	NO								
3452	2428 SALINGER CT	1	B	49	63	63					64	1	NO	NO					64	1	NO	NO								
3453	2428 SALINGER CT	1	B	49	63	63					65	2	NO	NO					65	2	NO	NO								
3454	2428 SALINGER CT	1	B	49	65	65					66	1	YES	NO					66	1	YES	NO								
3455	2428 SALINGER CT	1	B	49	66	66					67	1	YES	NO					67	1	YES	NO								
3456	2428 SALINGER CT	1	B	49	65	65					70	5	YES	NO					70	5	YES	NO								
3457	2428 SALINGER CT	1	B	49	64	64					69	5	YES	NO					69	5	YES	NO								
3458	2428 SALINGER CT	1	B	49	63	63					68	5	YES	NO					68	5	YES	NO								
3459	2428 SALINGER CT	1	B	49	62	62					68	6	YES	NO					68	6	YES	NO								
3460	3801 PORTOFINO CT	1	B	49	61	61					73	12	YES	YES					73	12	YES	YES								
3461	3801 PORTOFINO CT	1	B	49	62	62					74	12	YES	YES					74	12	YES	YES								
3462	3801 PORTOFINO CT	1	B	49	58	58					72	14	YES	YES					72	14	YES	YES								
3463	3801 PORTOFINO CT	1	B	49	56	56					70	14	YES	YES					70	14	YES	YES								
3464	3801 PORTOFINO CT	1	B	49	54	54					69	15	YES	YES					69	15	YES	YES								
3465	3801 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3466	3803 PORTOFINO CT	1	B	49	50	50					65	15	NO	YES					65	15	NO	YES								
3467	3803 PORTOFINO CT	1	B	49	50	50					64	14	NO	YES					64	14	NO	YES								
3468	3803 PORTOFINO CT	1	B	49	50	50					65	15	NO	YES					65	15	NO	YES								
3469	3803 PORTOFINO CT	1	B	49	50	50					66	16	YES	YES					66	16	YES	YES								
3470	3803 PORTOFINO CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3471	3803 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3472	3805 PORTOFINO CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3473	3805 PORTOFINO CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3474	3805 PORTOFINO CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3475	3805 PORTOFINO CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3476	3805 PORTOFINO CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3477	3805 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3478	3910 CAPTIVA CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3479	3910 CAPTIVA CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3480	3910 CAPTIVA CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3481	3910 CAPTIVA CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3482	3910 CAPTIVA CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3483	3910 CAPTIVA CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3484	3908 CAPTIVA CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3485	3908 CAPTIVA CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3486	3908 CAPTIVA CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3487	3908 CAPTIVA CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3488	3908 CAPTIVA CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3489	3908 CAPTIVA CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3490	3906 CAPTIVA CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3491	3906 CAPTIVA CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3492	3906 CAPTIVA CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3493	3906 CAPTIVA CT	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3494	3906 CAPTIVA CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3495	3904 CAPTIVA CT	1	B	49	49	49					55	6	NO	NO					55	6	NO	NO								
3496	3904 CAPTIVA CT	1	B	49	49	49					55	6	NO	NO					55	6	NO	NO								
3497	3904 CAPTIVA CT	1	B	49	49	49					55	6	NO	NO					55	6	NO	NO								
3498	3811 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3499	3811 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3500	3811 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3501	3811 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3502	3811 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3503	3811 PORTOFINO CT	1	B	49	49	49					53	4	NO	NO					53	4	NO	NO								
3504	3809 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3505	3809 PORTOFINO CT	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								
3506	3809 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3507	3809 PORTOFINO CT	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3508	3809 PORTOFINO CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3509	3807 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3510	3807 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3511	3807 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3512	3807 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3513	3807 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3514	3807 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3515	3812 PORTOFINO CT	1	B	49	49	49					53	4	NO	NO					53	4	NO	NO								
3516	3812 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3517	3812 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3518	3812 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3519	3812 PORTOFINO CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3520	3812 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3521	3802 PORTOFINO CT	1	B	49	56	56					69	13	YES	YES					69	13	YES	YES								
3522	3802 PORTOFINO CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3523	3802 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3524	3802 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3525	3802 PORTOFINO CT	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3526	3802 PORTOFINO CT	1	B	49	54	54					65	11	NO	YES					65	11	NO	YES								
3527	3804 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3528	3804 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3529	3804 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3530	3804 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3531	3804 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3532	3806 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3533	3806 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3534	3806 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3535	3806 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3536	3806 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3537	3812 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3538	3808 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3539	3808 PORTOFINO CT	1	B	49	49	49					55	6	NO	NO					55	6	NO	NO								
3540	3808 PORTOFINO CT	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3541	3808 PORTOFINO CT	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3542	3808 PORTOFINO CT	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3543	3808 PORTOFINO CT	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3544	3801 PORTOFINO CT	1	B	49	63	63					74	11	YES	YES					74	11	YES	YES								
3545	3801 PORTOFINO CT	1	B	49	63	63					75	12	YES	YES					75	12	YES	YES								
3546	3801 PORTOFINO CT	1	B	49	61	61					74	13	YES	YES					74	13	YES	YES								
3547	3801 PORTOFINO CT	1	B	49	59	59					73	14	YES	YES					73	14	YES	YES								
3548	3801 PORTOFINO CT	1	B	49	59	59					72	13	YES	YES					72	13	YES	YES								
3549	3801 PORTOFINO CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3550	3803 PORTOFINO CT	1	B	49	53	53					68	15	YES	YES					68	15	YES	YES								
3551	3803 PORTOFINO CT	1	B	49	54	54					68	14	YES	YES					68	14	YES	YES								
3552	3803 PORTOFINO CT	1	B	49	54	54					69	15	YES	YES					69	15	YES	YES								
3553	3803 PORTOFINO CT	1	B	49	54	54					70	16	YES	YES					70	16	YES	YES								
3554	3803 PORTOFINO CT	1	B	49	53	53					69	16	YES	YES					69	16	YES	YES								
3555	3803 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3556	3805 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3557	3805 PORTOFINO CT	1	B	49	52	52					69	17	YES	YES					69	17	YES	YES								
3558	3805 PORTOFINO CT	1	B	49	51	51					69	18	YES	YES					69	18	YES	YES								
3559	3805 PORTOFINO CT	1	B	49	51	51					68	17	YES	YES					68	17	YES	YES								
3560	3805 PORTOFINO CT	1	B	49	51	51					68	17	YES	YES					68	17	YES	YES								
3561	3805 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3562	3910 CAPTIVA CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3563	3910 CAPTIVA CT	1	B	49	50	50					67	17	YES	YES					67	17	YES	YES								
3564	3910 CAPTIVA CT	1	B	49	49	49					66	17	YES	YES					66	17	YES	YES								
3565	3910 CAPTIVA CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3566	3910 CAPTIVA CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3567	3910 CAPTIVA CT	1	B	49	49	49					52	3	NO	NO					52	3	NO	NO								
3568	3908 CAPTIVA CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3569	3908 CAPTIVA CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3570	3908 CAPTIVA CT	1	B	49	49	49					64	15	NO	YES					64	15	NO	YES								
3571	3908 CAPTIVA CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3572	3908 CAPTIVA CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3573	3908 CAPTIVA CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3574	3906 CAPTIVA CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3575	3906 CAPTIVA CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3576	3906 CAPTIVA CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3577	3906 CAPTIVA CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3578	3906 CAPTIVA CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3579	3904 CAPTIVA CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3580	3904 CAPTIVA CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3581	3904 CAPTIVA CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3582	3811 PORTOFINO CT	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3583	3811 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3584	3811 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3585	3811 PORTOFINO CT	1	B	49	49	49					51	2	NO	NO					51	2	NO	NO								
3586	3811 PORTOFINO CT	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								
3587	3811 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3588	3809 PORTOFINO CT	1	B	49	49	49					49	0	NO	NO					49	0	NO	NO								
3589	3809 PORTOFINO CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3590	3809 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3591	3809 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3592	3809 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3593	3807 PORTOFINO CT	1	B	49	49	49					50	1	NO	NO					50	1	NO	NO								
3594	3807 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3595	3807 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3596	3807 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3597	3807 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3598	3807 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3599	3812 PORTOFINO CT	1	B	49	49	49					57	8	NO	NO					57	8	NO	NO								
3600	3812 PORTOFINO CT	1	B	49	49	49					65	16	NO	YES					65	16	NO	YES								
3601	3812 PORTOFINO CT	1	B	49	50	50					66	16	YES	YES					66	16	YES	YES								
3602	3812 PORTOFINO CT	1	B	49	51	51					67	16	YES	YES					67	16	YES	YES								
3603	3812 PORTOFINO CT	1	B	49	52	52					67	15	YES	YES					67	15	YES	YES								
3604	3812 PORTOFINO CT	1	B	49	52	52					67	15	YES	YES					67	15	YES	YES								
3605	3802 PORTOFINO CT	1	B	49	60	60					72	12	YES	YES					72	12	YES	YES								
3606	3802 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3607	3802 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3608	3802 PORTOFINO CT	1	B	49	49	49					60	11	NO	YES					60	11	NO	YES								
3609	3802 PORTOFINO CT	1	B	49	50	50					62	12	NO	YES					62	12	NO	YES								
3610	3802 PORTOFINO CT	1	B	49	59	59					69	10	YES	YES					69	10	YES	YES								
3611	3804 PORTOFINO CT	1	B	49	53	53					66	13	YES	YES					66	13	YES	YES								
3612	3804 PORTOFINO CT	1	B	49	53	53					65	12	NO	YES					65	12	NO	YES								
3613	3804 PORTOFINO CT	1	B	49	50	50					64	14	NO	YES					64	14	NO	YES								
3614	3804 PORTOFINO CT	1	B	49	49	49					63	14	NO	YES					63	14	NO	YES								
3615	3804 PORTOFINO CT	1	B	49	49	49					62	13	NO	YES					62	13	NO	YES								
3616	3806 PORTOFINO CT	1	B	49	49	49					61	12	NO	YES					61	12	NO	YES								
3617	3806 PORTOFINO CT	1	B	49	53	53					65	12	NO	YES					65	12	NO	YES								
3618	3806 PORTOFINO CT	1	B	49	53	53					65	12	NO	YES					65	12	NO	YES								
3619	3806 PORTOFINO CT	1	B	49	53	53					65	12	NO	YES					65	12	NO	YES								
3620	3806 PORTOFINO CT	1	B	49	52	52					66	14	YES	YES					66	14	YES	YES								
3621	3812 PORTOFINO CT	1	B	49	49	49					59	10	NO	YES					59	10	NO	YES								
3622	3808 PORTOFINO CT	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								
3623	3808 PORTOFINO CT	1	B	49	49	49					58	9	NO	NO					58	9	NO	NO								
3624	3808 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3625	3808 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3626	3808 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3627	3808 PORTOFINO CT	1	B	49	49	49					54	5	NO	NO					54	5	NO	NO								
3627.1	3810 PORTOFINO CT	1	B	49	49	49					56	7	NO	NO					56	7	NO	NO								
3628	001607 RIVER RD	1	B	47	68	71	R/W	N/A	N/A	NO	69	1	YES	NO	69	1	YES	NO	R/W	N/A	N/A	NO	R/W	N/A	N/A	NO				
3629	001639 RIVER RD	1	B	47	63	65	66	3	YES	NO	64	1	NO	NO	64	1	NO	NO	66	3	YES	NO	66	3	YES	NO				
3630	001647 RIVER RD	1	B	47	60	63	64	4	NO	NO	62	2	NO	NO	62	2	NO	NO	64	4	NO	NO	64	4	NO	NO				
3631	001649 RIVER RD	1	B	47	63	66	67	4	YES	NO	65	2	NO	NO	65	2	NO	NO	67	4	YES	NO	67	4	YES	NO				
3632	001649 RIVER RD	1	B	47	70	73	R/W	N/A	N/A	NO	72	2	YES	NO	72	2	YES	NO	R/W	N/A	N/A	NO	R/W	N/A	N/A	NO				
3633	8657 ORCHARD LOOP RD	1	B	42	42	44	59	17	NO	YES																				
3634	8659 ORCHARD LOOP RD	1	B	42	42	44	57	15	NO	YES																				
3635	8661 ORCHARD LOOP RD	1	B	42	42	44	55	13	NO	YES																				
3636	8663 ORCHARD LOOP RD	1	B	42	42	43	53	11	NO	YES																				
3637	8667 ORCHARD LOOP RD	1	B	42	42	42	52	10	NO	YES																				
3638	8669 ORCHARD LOOP RD	1	B	42	42	42	52	10	NO	YES																				
3639	8665 ORCHARD LOOP RD	1	B	42	42	43	53	11	NO	YES																				
3640	8671 ORCHARD LOOP RD	1	B	42	42	42	51	9	NO	NO																				
3641	4111 PINEBRUSH DR	1	B	42	42	42	52	10	NO	YES																				
3642	4115 PINEBRUSH DR	1	B	42	42	42	52	10	NO	YES																				
3643	4117 PINEBRUSH DR	1	B	42	42	42	52	10	NO	YES																				
3644	4113 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3645	4119 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3646	8668 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3647	8656 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3648	8652 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3649	8666 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3650	8650 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3651	4112 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3652	3123 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				

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^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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Receptors, Noise Levels, and Noise Impacts

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									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3653	4116 PINEBRUSH DR	1	B	42	42	42	50	8	NO	NO																				
3654	4118 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3655	3121 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3656	4114 PINEBRUSH DR	1	B	42	42	42	50	8	NO	NO																				
3657	4120 PINEBRUSH DR	1	B	42	42	42	50	8	NO	NO																				
3658	3111 THISTLEWOOD DR	1	B	42	42	42	47	5	NO	NO																				
3659	2125 HEATHWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3660	3115 THISTLEWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3661	3117 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3662	3128 THISTLEWOOD DR	1	B	42	42	42	50	8	NO	NO																				
3663	3113 THISTLEWOOD DR	1	B	42	42	42	47	5	NO	NO																				
3664	3119 THISTLEWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3665	8654 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3666	8648 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3667	8640 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3668	4121 PINEBRUSH DR	1	B	42	42	42	50	8	NO	NO																				
3669	8644 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3670	4125 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3671	2121 HEATHWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3672	2119 HEATHWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3673	2115 HEATHWOOD DR	1	B	42	42	42	47	5	NO	NO																				
3674	2113 HEATHWOOD DR	1	B	42	42	42	47	5	NO	NO																				
3675	2117 HEATHWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3676	2111 HEATHWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3677	3127 THISTLEWOOD DR	1	B	42	42	42	51	9	NO	NO																				
3678	3125 THISTLEWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3679	4126 PINEBRUSH DR	1	B	42	42	42	52	10	NO	YES																				
3680	4124 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3681	4128 PINEBRUSH DR	1	B	42	42	42	53	11	NO	YES																				
3682	4122 PINEBRUSH DR	1	B	42	42	42	51	9	NO	NO																				
3683	8637 ORCHARD LOOP RD	1	B	42	42	42	57	15	NO	YES																				
3684	8635 ORCHARD LOOP RD	1	B	42	42	42	56	14	NO	YES																				
3685	8625 ORCHARD LOOP RD	1	B	42	42	42	53	11	NO	YES																				
3686	8631 ORCHARD LOOP RD	1	B	42	42	42	55	13	NO	YES																				
3687	8629 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3688	8633 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3689	8627 ORCHARD LOOP RD	1	B	42	42	42	54	12	NO	YES																				
3690	3122 THISTLEWOOD DR	1	B	42	42	42	50	8	NO	NO																				
3691	3120 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3692	3116 THISTLEWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3693	3114 THISTLEWOOD DR	1	B	42	42	42	48	6	NO	NO																				
3694	3118 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3695	3112 THISTLEWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3696	2123 HEATHWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3697	3124 THISTLEWOOD DR	1	B	42	42	42	50	8	NO	NO																				
3698	2127 HEATHWOOD DR	1	B	42	42	42	49	7	NO	NO																				
3699	3128 THISTLEWOOD DR	1	B	42	42	42	50	8	NO	NO																				
3700	8623 ORCHARD LOOP RD	1	B	42	42	42	52	10	NO	YES																				
3701	132 WATERSFIELD RD	1	B	42	51	54	60	9	NO	NO																				
3702	130 WATERSFIELD RD	1	B	42	50	53	59	9	NO	NO																				
3703	128 WATERSFIELD RD	1	B	42	48	51	59	11	NO	YES																				
3704	209 WHITEHILL RD	1	B	42	42	44	54	12	NO	YES																				
3705	205 WHITEHILL RD	1	B	42	43	47	55	12	NO	YES																				
3706	207 WHITEHILL RD	1	B	42	42	45	55	13	NO	YES																				
3707	116 WATERSFIELD RD	1	B	42	45	48	55	10	NO	YES																				
3708	1053 SLATER WAY	1	B	42	43	47	59	16	NO	YES																				
3709	1057 SLATER WAY	1	B	42	42	45	56	14	NO	YES																				
3710	1061 SLATER WAY	1	B	42	42	45	56	14	NO	YES																				
3711	1073 SLATER WAY	1	B	42	42	46	53	11	NO	YES																				
3712	1081 SLATER WAY	1	B	42	42	45	52	10	NO	YES																				
3713	1065 SLATER WAY	1	B	42	42	46	54	12	NO	YES																				
3714	1089 SLATER WAY	1	B	42	42	42	53	11	NO	YES																				
3715	1044 SLATER WAY	1	B	42	42	42	55	13	NO	YES																				
3716	1048 SLATER WAY	1	B	42	42	42	54	12	NO	YES																				
3717	1052 SLATER WAY	1	B	42	42	42	54	12	NO	YES																				
3718	1064 SLATER WAY	1	B	42	42	42	53	11	NO	YES																				
3719	1072 SLATER WAY	1	B	42	42	42	53	11	NO	YES																				
3720	1056 SLATER WAY	1	B	42	42	42	53	11	NO	YES																				
3721	1045 SLATER WAY	1	B	42	46	49	61	15	NO	YES																				
3722	2032 LAPHAM DR	1	B	42	42	42	56	14	NO	YES																				
3723	2028 LAPHAM DR	1	B	42	42	42	56	14	NO	YES																				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3724	2005 LAPHAM DR	1	B	42	42	42	52	10	NO	YES																				
3725	2016 LAPHAM DR	1	B	42	42	42	55	13	NO	YES																				
3726	2008 LAPHAM DR	1	B	42	42	42	54	12	NO	YES																				
3727	2020 LAPHAM DR	1	B	42	42	42	56	14	NO	YES																				
3728	1076 SLATER WAY	1	B	42	42	42	53	11	NO	YES																				
3729	129 WATERSFIELD RD	1	B	42	61	65	66	5	YES	NO																				
3730	127 WATERSFIELD RD	1	B	42	59	63	64	5	NO	NO																				
3731	125 WATERSFIELD RD	1	B	42	61	65	66	5	YES	NO																				
3732	119 WATERSFIELD RD	1	B	42	61	65	66	5	YES	NO																				
3733	117 WATERSFIELD RD	1	B	42	61	64	65	4	NO	NO																				
3734	123 WATERSFIELD RD	1	B	42	62	66	66	4	YES	NO																				
3735	115 WATERSFIELD RD	1	B	42	58	62	63	5	NO	NO																				
3736	2009 LAPHAM DR	1	B	42	42	42	52	10	NO	YES																				
3737	1092 SLATER WAY	1	B	42	42	42	51	9	NO	NO																				
3738	386 SOUTHBEND CT	1	B	42	42	43	52	10	NO	YES																				
3739	394 SOUTHBEND CT	1	B	42	42	46	52	10	NO	YES																				
3740	286 LANVALE RD	1	B	42	42	44	55	13	NO	YES																				
3741	375 SAVANNA BRANCH RD	1	B	42	51	54	62	11	NO	YES																				
3742	331 SAVANNA BRANCH RD	1	B	42	42	43	60	18	NO	YES																				
3743	375 SAVANNA BRANCH RD	1	B	42	44	48	61	17	NO	YES																				
3744	368 SOUTHBEND CT	1	B	42	42	42	52	10	NO	YES																				
3745	372 SOUTHBEND CT	1	B	42	42	42	52	10	NO	YES																				
3746	280 LANVALE RD	1	B	42	42	43	56	14	NO	YES																				
3747	328 LANVALE RD	1	B	42	42	42	61	19	NO	YES																				
3748	316 LANVALE RD	1	B	42	50	54	59	9	NO	NO																				
3749	390 SOUTHBEND CT	1	B	42	42	44	52	10	NO	YES																				
3750	364 SOUTHBEND CT	1	B	42	42	42	53	11	NO	YES																				
3751	360 SOUTHBEND CT	1	B	42	42	42	53	11	NO	YES																				
3752	2409 TARA FOREST DR	1	B	42	42	42	50	8	NO	NO																				
3753	2417 TARA FOREST DR	1	B	42	42	42	51	9	NO	NO																				
3754	2425 TARA FOREST DR	1	B	42	42	42	51	9	NO	NO																				
3755	2421 TARA FOREST DR	1	B	42	42	42	52	10	NO	YES																				
3756	2424 TARA FOREST DR	1	B	42	42	42	57	15	NO	YES																				
3757	2416 TARA FOREST DR	1	B	42	42	42	56	14	NO	YES																				
3758	2412 TARA FOREST DR	1	B	42	42	42	56	14	NO	YES																				
3759	2408 TARA FOREST DR	1	B	42	42	42	55	13	NO	YES																				
3760	2400 TARA FOREST DR	1	B	42	42	42	52	10	NO	YES																				
3761	2404 TARA FOREST DR	1	B	42	42	42	53	11	NO	YES																				
3762	2420 TARA FOREST DR	1	B	42	42	42	57	15	NO	YES																				
3763	2405 TARA FOREST DR	1	B	42	42	42	50	8	NO	NO																				
3764	2429 TARA FOREST DR	1	B	42	42	42	53	11	NO	YES																				
3765	2437 TARA FOREST DR	1	B	42	42	42	54	12	NO	YES																				
3766	2433 TARA FOREST DR	1	B	42	42	42	54	12	NO	YES																				
3767	2432 TARA FOREST DR	1	B	42	42	42	59	17	NO	YES																				
3769	2152 SPRINGSTONE DR	1	B	42	42	42	54	12	NO	YES																				
3770	2148 SPRINGSTONE DR	1	B	42	42	42	54	12	NO	YES																				
3774	2132 SPRINGSTONE DR	1	B	42	42	42	52	10	NO	YES																				
3775	2128 SPRINGSTONE DR	1	B	42	42	42	52	10	NO	YES																				
3776	2144 SPRINGSTONE DR	1	B	42	42	42	53	11	NO	YES																				
3777	2136 SPRINGSTONE DR	1	B	42	42	42	52	10	NO	YES																				
3778	2163 SPRINGSTONE DR	1	B	42	42	42	55	13	NO	YES																				
3779	2171 SPRINGSTONE DR	1	B	42	42	42	56	14	NO	YES																				
3780	2167 SPRINGSTONE DR	1	B	42	42	42	55	13	NO	YES																				
3781	2140 SPRINGSTONE DR	1	B	42	42	42	53	11	NO	YES																				
3782	2159 SPRINGSTONE DR	1	B	42	42	42	54	12	NO	YES																				
3783	2155 SPRINGSTONE DR	1	B	42	42	42	52	10	NO	YES																				
3784	2143 SPRINGSTONE DR	1	B	42	42	42	49	7	NO	NO																				
3785	2151 SPRINGSTONE DR	1	B	42	42	42	51	9	NO	NO																				
3786	2147 SPRINGSTONE DR	1	B	42	42	42	50	8	NO	NO																				
3787	1232 SPRINGVALE TERRACE CT	1	B	42	44	47	55	11	NO	YES																				
3788	1036 SPARKLE STREAM CT	1	B	42	47	51	56	9	NO	NO																				
3789	1228 SPRINGVALE TERRACE CT	1	B	42	43	47	55	12	NO	YES																				
3790	1032 SPARKLE STREAM CT	1	B	42	50	54	57	7	NO	NO																				
3791	1233 SPRINGVALE TERRACE CT	1	B	42	42	46	55	13	NO	YES																				
3792	1033 SPARKLE STREAM CT	1	B	42	45	48	55	10	NO	YES																				
3793	1524 MISTY RUN CT	1	B	42	42	44	54	12	NO	YES																				
3794	1229 SPRINGVALE TERRACE CT	1	B	42	42	45	54	12	NO	YES																				
3795	1528 MISTY RUN CT	1	B	42	42	44	54	12	NO	YES																				
3796	1532 MISTY RUN CT	1	B	42	42	43	54	12	NO	YES																				
3797	1529 MISTY RUN CT	1	B	42	42	43	54	12	NO	YES																				
3811	8599 LANVALE FOREST DR	1	B	42	42	42	54	12	NO	YES																				

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Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3812	8595 LANVALE FOREST DR	1	B	42	42	42	54	12	NO	YES																				
3813	4505 COMBS FOREST CT	1	B	42	42	42	55	13	NO	YES																				
3817	4521 COMBS FOREST CT	1	B	42	42	42	58	16	NO	YES																				
3821	4506 COMBS FOREST CT	1	B	42	42	42	57	15	NO	YES																				
3836	2428 TARA FOREST DR	1	B	42	42	42	58	16	NO	YES																				
3837	67 BRIDLE WAY	1	B	42	49	51					56	7	NO	NO	56	7	NO	NO												
3838	85 BRIDLE WAY	1	B	42	49	51					56	7	NO	NO	56	7	NO	NO												
3839	103 BRIDLE WAY	1	B	42	45	48					54	9	NO	NO	54	9	NO	NO												
3840	105 BRIDLE WAY	1	B	42	44	46					54	10	NO	YES	54	10	NO	YES												
3841	94 COMBINE LN	1	B	42	44	47					55	11	NO	YES	55	11	NO	YES												
3842	98 COMBINE LN	1	B	42	44	46					54	10	NO	YES	54	10	NO	YES												
3843	102 COMBINE LN	1	B	42	44	46					54	10	NO	YES	54	10	NO	YES												
3844	106 COMBINE LN	1	B	42	44	47					54	10	NO	YES	54	10	NO	YES												
3845	110 COMBINE LN	1	B	42	44	46					53	9	NO	NO	53	9	NO	NO												
3846	114 COMBINE LN	1	B	42	44	46					54	10	NO	YES	54	10	NO	YES												
3847	7448 ANVIL CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3848	7444 ANVIL CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3849	7445 ANVIL CT	1	B	42	42	43					53	11	NO	YES	53	11	NO	YES												
3850	7447 ANVIL CT	1	B	42	42	45					54	12	NO	YES	54	12	NO	YES												
3851	7448 COLE CT	1	B	42	43	46					52	9	NO	NO	52	9	NO	NO												
3852	7444 COLE CT	1	B	42	43	46					55	12	NO	YES	55	12	NO	YES												
3853	50 STONEY CREEK LN	1	B	42	45	48					58	13	NO	YES	58	13	NO	YES												
3854	54 STONEY CREEK LN	1	B	42	46	49					59	13	NO	YES	59	13	NO	YES												
3855	7400 CREEK STONE CT	1	B	42	45	48					58	13	NO	YES	58	13	NO	YES												
3856	7404 CREEK STONE CT	1	B	42	42	45					55	13	NO	YES	55	13	NO	YES												
3857	7408 CREEK STONE CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3858	7407 CREEK STONE CT	1	B	42	43	46					56	13	NO	YES	56	13	NO	YES												
3859	7403 CREEK STONE CT	1	B	42	43	46					55	12	NO	YES	55	12	NO	YES												
3860	7401 CREEK STONE CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3861	7398 OPAL STONE CT	1	B	42	42	43					54	12	NO	YES	54	12	NO	YES												
3862	7400 RHINESTONE CT	1	B	42	43	46					55	12	NO	YES	55	12	NO	YES												
3863	7404 RHINESTONE CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3864	7408 RHINESTONE CT	1	B	42	42	45					54	12	NO	YES	54	12	NO	YES												
3865	7412 RHINESTONE CT	1	B	42	42	45					54	12	NO	YES	54	12	NO	YES												
3866	7416 RHINESTONE CT	1	B	42	43	45					53	10	NO	YES	53	10	NO	YES												
3867	7413 RHINESTONE CT	1	B	42	43	45					53	10	NO	YES	53	10	NO	YES												
3868	7409 RHINESTONE CT	1	B	42	42	45					52	10	NO	YES	52	10	NO	YES												
3869	7405 RHINESTONE CT	1	B	42	43	45					54	11	NO	YES	54	11	NO	YES												
3870	74 STONEY CREEK LN	1	B	42	43	46					56	13	NO	YES	56	13	NO	YES												
3871	78 STONEY CREEK LN	1	B	42	44	46					56	12	NO	YES	56	12	NO	YES												
3872	73 STONEY CREEK LN	1	B	42	45	47					56	11	NO	YES	56	11	NO	YES												
3873	7395 BRICKSTONE CT	1	B	42	44	47					57	13	NO	YES	57	13	NO	YES												
3874	7394 BRICKSTONE CT	1	B	42	42	45					58	16	NO	YES	58	16	NO	YES												
3875	7396 BRICKSTONE CT	1	B	42	42	43					55	13	NO	YES	55	13	NO	YES												
3876	7398 BRICKSTONE CT	1	B	42	43	46					56	13	NO	YES	56	13	NO	YES												
3877	79 STONEY CREEK LN	1	B	42	42	45					56	14	NO	YES	56	14	NO	YES												
3878	83 STONEY CREEK LN	1	B	42	42	45					56	14	NO	YES	56	14	NO	YES												
3879	87 STONEY CREEK LN	1	B	42	42	44					55	13	NO	YES	55	13	NO	YES												
3880	82 STONEY CREEK LN	1	B	42	42	45					54	12	NO	YES	54	12	NO	YES												
3881	86 STONEY CREEK LN	1	B	42	42	45					55	13	NO	YES	55	13	NO	YES												
3882	7383 HAZELSTONE LN	1	B	42	43	45					60	17	NO	YES	60	17	NO	YES												
3883	7387 HAZELSTONE LN	1	B	42	42	44					59	17	NO	YES	59	17	NO	YES												
3884	7391 HAZELSTONE LN	1	B	42	42	44					57	15	NO	YES	57	15	NO	YES												
3885	7395 HAZELSTONE LN	1	B	42	42	44					56	14	NO	YES	56	14	NO	YES												
3886	7398 HAZELSTONE LN	1	B	42	42	43					54	12	NO	YES	54	12	NO	YES												
3887	7396 HAZELSTONE LN	1	B	42	42	43					54	12	NO	YES	54	12	NO	YES												
3888	7394 HAZELSTONE LN	1	B	42	42	44					58	16	NO	YES	58	16	NO	YES												
3889	7392 HAZELSTONE LN	1	B	42	42	44					59	17	NO	YES	59	17	NO	YES												
3890	7390 HAZELSTONE LN	1	B	42	42	44					60	18	NO	YES	60	18	NO	YES												
3891	7386 HAZELSTONE LN	1	B	42	45	47					61	16	NO	YES	61	16	NO	YES												
3892	7401 HAZELSTONE LN	1	B	42	42	44					56	14	NO	YES	56	14	NO	YES												
3893	7401 BLUESTONE CT	1	B	42	42	44					55	13	NO	YES	55	13	NO	YES												
3894	7405 BLUESTONE CT	1	B	42	42	42					50	8	NO	NO	50	8	NO	NO												
3895	7406 BLUESTONE CT	1	B	42	42	43					51	9	NO	NO	51	9	NO	NO												
3896	7404 BLUESTONE CT	1	B	42	42	43					52	10	NO	YES	52	10	NO	YES												
3897	7402 BLUESTONE CT	1	B	42	42	44					54	12	NO	YES	54	12	NO	YES												
3898	95 STONEY CREEK LN	1	B	42	42	44					55	13	NO	YES	55	13	NO	YES												
3899	97 STONEY CREEK LN	1	B	42	42	42					54	12	NO	YES	54	12	NO	YES												
3900	99 STONEY CREEK LN	1	B	42	42	42					55	13	NO	YES	55	13	NO	YES												
3901	7393 CRYSTAL STONE CT	1	B	42	42	44					57	15	NO	YES	57	15	NO	YES												
3902	7389 CRYSTAL STONE CT	1	B	42	42	45					57	15	NO	YES	57	15	NO	YES												

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Table B.1
Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3903	7387 CRYSTAL STONE CT	1	B	42	43	46					59	16	NO	YES	59	16	NO	YES												
3904	7388 CRYSTAL STONE CT	1	B	42	43	46					59	16	NO	YES	59	16	NO	YES												
3905	7390 CRYSTAL STONE CT	1	B	42	42	44					59	17	NO	YES	59	17	NO	YES												
3906	7392 CRYSTAL STONE CT	1	B	42	42	44					58	16	NO	YES	58	16	NO	YES												
3907	7394 CRYSTAL STONE CT	1	B	42	42	44					58	16	NO	YES	58	16	NO	YES												
3908	7396 CRYSTAL STONE CT	1	B	42	42	42					56	14	NO	YES	56	14	NO	YES												
3909	7398 CRYSTAL STONE CT	1	B	42	42	42					55	13	NO	YES	55	13	NO	YES												
3910	102 STONEY CREEK LN	1	B	42	42	43					56	14	NO	YES	56	14	NO	YES												
3911	104 STONEY CREEK LN	1	B	42	42	42					56	14	NO	YES	56	14	NO	YES												
3912	106 STONEY CREEK LN	1	B	42	42	42					56	14	NO	YES	56	14	NO	YES												
3913	108 STONEY CREEK LN	1	B	42	42	42					58	16	NO	YES	58	16	NO	YES												
3914	112 STONEY CREEK LN	1	B	42	42	43					61	19	NO	YES	61	19	NO	YES												
3915	7399 RUBY STONE CT	1	B	42	42	42					55	13	NO	YES	55	13	NO	YES												
3916	1390 STAR GRASS WAY	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3917	1378 STAR GRASS WAY	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
3918	1382 STAR GRASS WAY	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3919	1383 STAR GRASS WAY	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3920	1387 STAR GRASS WAY	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3921	1375 STAR GRASS WAY	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3922	1363 STAR GRASS WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3923	1359 STAR GRASS WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3924	1355 STAR GRASS WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3925	1351 STAR GRASS WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3926	1347 STAR GRASS WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3927	1343 STAR GRASS WAY	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
3928	1331 STAR GRASS WAY	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
3929	1159 SANDY GROVE PL	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
3930	1155 SANDY GROVE PL	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3931	1151 SANDY GROVE PL	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3932	1147 SANDY GROVE PL	1	B	49	49	49	52	3	NO	NO									52	3	NO	NO								
3933	1143 SANDY GROVE PL	1	B	49	49	49	50	1	NO	NO									50	1	NO	NO								
3934	1139 SANDY GROVE PL	1	B	49	49	49	50	1	NO	NO									50	1	NO	NO								
3935	1135 SANDY GROVE PL	1	B	49	49	49	51	2	NO	NO									51	2	NO	NO								
3936	1140 SANDY GROVE PL	1	B	49	49	49	49	0	NO	NO									49	0	NO	NO								
3937	1144 SANDY GROVE PL	1	B	49	49	49	49	0	NO	NO									49	0	NO	NO								
3938	1148 SANDY GROVE PL	1	B	49	49	49	49	0	NO	NO									49	0	NO	NO								
3939	1152 SANDY GROVE PL	1	B	49	49	49	50	1	NO	NO									50	1	NO	NO								
3940	1156 SANDY GROVE PL	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3941	1323 STAR GRASS WAY	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
3942	1319 STAR GRASS WAY	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
3945	1307 STAR GRASS WAY	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3946	2127 SHELMORE WAY	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3947	2123 SHELMORE WAY	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
3948	2119 SHELMORE WAY	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3949	2115 SHELMORE WAY	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO								
3950	2111 SHELMORE WAY	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO								
3951	2107 SHELMORE WAY	1	B	49	49	49	51	2	NO	NO									51	2	NO	NO								
3955	138 COVE LANDING	1	B	49	49	49	59	10	NO	YES									58	9	NO	NO								
3956	134 COVE LANDING	1	B	49	49	49	55	6	NO	NO									59	10	NO	YES								
3957	1180 SOUTH BROOK RD	1	B	49	49	49	58	9	NO	NO									55	6	NO	NO								
3958	1176 SOUTH BROOK RD	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3959	1172 SOUTH BROOK RD	1	B	49	49	49	57	8	NO	NO									58	9	NO	NO								
3960	130 COVE LANDING	1	B	49	49	49	54	5	NO	NO									57	8	NO	NO								
3961	127 COVE LANDING	1	B	49	49	49	56	7	NO	NO									54	5	NO	NO								
3962	123 COVE LANDING	1	B	49	49	49	51	2	NO	NO									56	7	NO	NO								
3963	116 HILLSHIRE DR	1	B	49	49	49	52	3	NO	NO									51	2	NO	NO								
3964	1187 SOUTH BROOK RD	1	B	49	49	49	55	6	NO	NO									52	3	NO	NO								
3965	1191 SOUTH BROOK RD	1	B	49	49	49	56	7	NO	NO									55	6	NO	NO								
3966	1195 SOUTH BROOK RD	1	B	49	49	49	54	5	NO	NO									56	7	NO	NO								
3967	1201 SOUTH BROOK RD	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3968	1205 SOUTH BROOK RD	1	B	49	49	49	55	6	NO	NO									54	5	NO	NO								
3969	1209 SOUTH BROOK RD	1	B	49	49	49	56	7	NO	NO									55	6	NO	NO								
3970	1213 SOUTH BROOK RD	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3971	1217 SOUTH BROOK RD	1	B	49	49	49	55	6	NO	NO									56	7	NO	NO								
3972	1312 WATERS END CT	1	B	49	49	49	56	7	NO	NO									55	6	NO	NO								
3973	1316 WATERS END CT	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3974	1320 WATERS END CT	1	B	49	49	49	54	5	NO	NO									56	7	NO	NO								
3975	1324 WATERS END CT	1	B	49	49	49	55	6	NO	NO									54	5	NO	NO								
3976	1313 WATERS END CT	1	B	49	49	49	56	7	NO	NO									55	6	NO	NO								
3977	320 ARUBA CT	1	B	49	49	49	57	8	NO	NO									56	7	NO	NO								
3978	321 ARUBA CT	1	B	49	49	49	58	9	NO	NO									57	8	NO	NO								

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

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Receptors, Noise Levels, and Noise Impacts

Rec. No.	Address	ER	NAC Category	Ambient	2017 Existing dB(A)	2040 No-Build dB(A)	2040 Alt. B dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. MA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. NA dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. Q dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. T dB(A)	Increase (Build minus Existing) dB(A)	Impacts		2040 Alt. VA dB(A)	Increase (Build minus Existing) dB(A)	Impacts	
									NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc			NAC	Sub Inc
3979	319 ARUBA CT	1	B	49	49	49	57	8	NO	NO									58	9	NO	NO								
3980	254 BIMINI DR	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
3981	256 BIMINI DR	1	B	49	49	49	58	9	NO	NO									57	8	NO	NO								
3982	257 BIMINI DR	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3983	255 BIMINI DR	1	B	49	49	49	58	9	NO	NO									58	9	NO	NO								
3984	6097 SHORE PARK DR	1	B	49	49	49	57	8	NO	NO									58	9	NO	NO								
3985	6095 SHORE PARK DR	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3986	6091 SHORE PARK DR	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3987	6089 SHORE PARK DR	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
3988	6085 SHORE PARK DR	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3989	6083 SHORE PARK DR	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3990	6098 SHORE PARK DR	1	B	49	49	49	60	11	NO	YES									60	11	NO	YES								
3991	6094 SHORE PARK DR	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3992	6090 SHORE PARK DR	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3993	6086 SHORE PARK DR	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
3994	6082 SHORE PARK DR	1	B	49	49	49	52	3	NO	NO									52	3	NO	NO								
3995	2162 SHELMORE WAY	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
3996	6057 SHORE PARK DR	1	B	49	49	49																	56	7	NO	NO				
3997	6065 SHORE PARK DR	1	B	49	49	49																	55	6	NO	NO				
3998	6053 SHORE PARK DR	1	B	49	49	49																	57	8	NO	NO				
3999	6058 SHORE PARK DR	1	B	49	49	49																	51	2	NO	NO				
4000	5117 STONEY POINT DR	1	B	49	49	49	59	10	NO	YES									59	10	NO	YES								
4001	5113 STONEY POINT DR	1	B	49	49	49	56	7	NO	NO									56	7	NO	NO								
4002	5109 STONEY POINT DR	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO								
4003	5105 STONEY POINT DR	1	B	49	49	49	52	3	NO	NO									52	3	NO	NO								
4004	5097 STONEY POINT DR	1	B	49	49	49																	51	2	NO	NO				
4005	5102 STONEY POINT DR	1	B	49	49	49																	59	10	NO	YES				
4006	5106 STONEY POINT DR	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO	60	11	NO	YES				
4007	5110 STONEY POINT DR	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO	59	10	NO	YES				
4008	5114 STONEY POINT DR	1	B	49	49	49	52	3	NO	NO									52	3	NO	NO	59	10	NO	YES				
4009	6385 SAXON MEADOW DR	1	B	49	49	49	57	8	NO	NO									57	8	NO	NO								
4020	1244 N. SLEEPY OAK LN	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
4021	1236 N. SLEEPY OAK LN	1	B	49	49	49	55	6	NO	NO									55	6	NO	NO								
4022	1232 N. SLEEPY OAK LN	1	B	49	49	49	54	5	NO	NO									54	5	NO	NO								
4025	1210 S. SLEEPY OAK LN	1	B	49	49	49	53	4	NO	NO									53	4	NO	NO								
4027	1202 S. SLEEPY OAK LN	1	B	49	49	49	50	1	NO	NO									50	1	NO	NO								
4028	1343 STILL BLUFF LN	1	B	49	49	49																	58	9	NO	NO				
4029	1236 LILLIBRIDGE DR	1	B	49	49	49																	52	3	NO	NO				
4030	1238 LILLIBRIDGE DR	1	B	49	49	49																	53	4	NO	NO				
4031	1405 WEST GANTRY CT	1	B	49	49	49																	54	5	NO	NO				
4032	1246 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4033	1254 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4034	1266 LILLIBRIDGE DR	1	B	49	49	49																	56	7	NO	NO				
4035	1268 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4036	1272 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4037	1276 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4038	1278 LILLIBRIDGE DR	1	B	49	49	49																	57	8	NO	NO				
4039	1804 DUDLEY CT	1	B	49	49	49																	56	7	NO	NO				
4040	1288 LILLIBRIDGE DR	1	B	49	49	49																	56	7	NO	NO				
4041	1338 CROSS WATER CIR	1	B	49	49	49																	59	10	NO	YES				
4042	1334 CROSS WATER CIR	1	B	49	49	49																	59	10	NO	YES				
4043	1330 CROSS WATER CIR	1	B	49	49	49																	60	11	NO	YES				
4044	1326 CROSS WATER CIR	1	B	49	49	49																	59	10	NO	YES				
4045	1320 CROSS WATER CIR	1	B	49	49	49																	58	9	NO	NO				
4046	1316 CROSS WATER CIR	1	B	49	49	49																	57	8	NO	NO				
4047	1308 CROSS WATER CIR	1	B	49	49	49																	55	6	NO	NO				
4048	1319 CROSS WATER CIR	1	B	49	49	49																	53	4	NO	NO				
4049	1327 CROSS WATER CIR	1	B	49	49	49																	55	6	NO	NO				
4050	1335 CROSS WATER CIR	1	B	49	49	49																	55	6	NO	NO				
4058	8412 FONTANA LAKE CT	1	B	49	49	49																	58	9	NO	NO				
4059	3551 BIRDFIELD CT	1	B	49	49	49																	58	9	NO	NO				
4060	3548 BIRDFIELD CT	1	B	49	49	49																	57	8	NO	NO				
4061	8417 FONTANA LAKE CT	1	B	49	49	49																	61	12	NO	YES				

*Interior noise levels for Activity Category D were computed by subtracting the noise reduction factor from the predicted exterior level for the building in question.
^ 2017 Existing dB(A) noise levels (column J) reflect the highest noise levels between the ambient value (column I) and the 2017/No Build TNM predicted noise levels (column K). The ambient value (column I) represents the ambient value assigned to the receptor based on its proximity to measured locations.

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 144: St James AME Zion Church** A small place of worship with 100 users. The facility operates an average of four hours each day for four days per week year-round. The building is light frame with ordinary sash windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	100
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**83,200**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 178-186: Town Creek Park** A small community park used by an average of 50 people per day. Each visitor uses the park for an average of one hour per day. The park is open an average of 12 hours per day, 365 days per year. It is not likely to experience any impacts from the project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	50
H	Number of Park Staff	0
I	**Total Number of Occupants per Day = G + H**	**50**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	9
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.11**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 194: New Hope Freewill Baptist Church** A small place of worship with 100 users. The facility operates four hours each day forthree days a week year-round. The building is light frame with ordinary sash windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	100
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**0.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 416.1: Brunswick Forest Retirement Community** A small park that is part of Brunswick Forest development used by an average of 150 people per day. Each visitor uses the park for an average of one hour per day. Park is open an average of 12 hours per day year round. The park is not likely to experience any impacts from the project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	150
H	Number of Park Staff	0
I	**Total Number of Occupants per Day = G + H**	**150**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 438.1: Pizzetta's Pizzeria** A restaurant with exterior seating that averages approximately 75 visitors per day along with three staff available to use all around the year. Restaurant is open 6 days per week, 11 hours per day. Average usage is 1 hour per guest. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	75
H	Number of Staff	3
I	**Total Number of Occupants per Day = G + H**	**78**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	6
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 438.2: Port City Java** Coffee shop with exterior seating that averages 25 guests per day with 3 staff members available to use year round. Guests use this outdoor area for an average of 1 hour. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	25
H	Number of Staff	3
I	**Total Number of Occupants per Day = G + H**	**28**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 438.3: The Joyce Irish Pub** Restaurant and bar with exterior seating with estimated 150 visitors per day and five staff. Open 12 hours per day, 7 days per week, year round. Guests use this outdoor area for an average of two hours each. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	150
H	Number of Staff	5
I	**Total Number of Occupants per Day = G + H**	**155**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 438.4: Shuckin' Shack Oyster Bar** Restaurant with exterior seating used by an average of 50 guests per day with three staff. Open an average of 11.5 hours per day, seven days per week, year round. Average usage of one hour per guest. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	50
H	Number of Staff	3
I	**Total Number of Occupants per Day = G + H**	**53**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 444.1: Willoughby's Grill** Restaurant with exterior seating used by 15 visitors per day and 2 staff. According to the resturant owner, outdoor usage is about 2 hours per guest. Noise level predictions indicate that 100 percent of the exterior use area is impacted of which zero percent of the area is benefitted by a noise wall.	
Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	100%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**100%**
G	Average Number of Visitors per Day	15
H	Number of Staff	2
I	**Total Number of Occupants per Day = G + H**	**17**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**12,376**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 465: Locals Tavern** Restaurant with exterior seating. It is estimated that exterior area is used by an average of 50 visitors per day along with 3 staff. Usage averages 2 hours per guest, year round. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	50
H	Number of Staff	3
I	**Total Number of Occupants per Day = G + H**	**53**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 465.1: Best Western Plus Westgate Inn & Suites Pool** A 110-unit motel with has an average occupancy rate of 65% with an average of 1.5 people per room. It has a popular exterior area containing a pool used by all occupants during 6 months of the year. It is estimated that half of guests use this outdoor area for a period of one hour per day. Noise level predictions indicate that 100 percent of the exterior use area will be impacted by the project and that noise walls are not predicted to provide benefits to the exterior use area. Multiple phone calls to office were not returned, so usage was estimated for the purposes of the TNR. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Motel Outside Uses (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Exterior Area of Motel Being Evaluated	
D	Number of Motel Rooms	110
E	Average Number of People per Room	1.5
F	Occupany Rate (percent)	65%
G	Percent of Occupants Using Outside Facilities	50%
H	**Total Number of Users per Day = D x E x F x G**	**54**
I	Days per Month Available for Use	30
J	Months per Year Available for Use	6
K	**Person-hours per year of Use = H x I x J**	**9,653**
L	Percent of Outside Area Impacted by Project	100%
M	Percent of Outside Area Benefited by Project Abatement	0%
N	**Percentage of Building Use Value = Maximum of L and M**	**100%**
O	**EQUIVALENT RECEPTOR VALUE = (K/C) x N**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 466: PT's Olde Fashioned Grill** Restaurant with exterior seating. Estimated use is 50 guests per day for approximately 1 hour each with 0 staff (no table service outside). Area is available year round for 10 hours per day. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	50
H	Number of Staff	0
I	**Total Number of Occupants per Day = G + H**	**50**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 467: Leland Cultural Center** A multi-use public structure. it is estimated that the facility has an average usage of 100 people per day (the estimated current enrollment) and it is used for 12 hours each day for 52 weeks per year. The building is masonry with single-glazed windows and air conditioning. Noise level predictions indicate that the structure is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Public or Nonprofit Institutional Structure (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Facility Being Evaluated**	
J	Average Number of Users per Day	100
K	Daily Hours Used	12
L	Days per Week Open	7
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**364**
O	**Person-hours per Year Available for Use = J x K x N**	**436,800**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 469: Crosswinds Church** Place small place of worship with 50 users. It is estimated that the facility is available 6 hours per day, 7 days per week (per web site www.crosswindslive.com). The building is masonry with double glazed windows athat face the highway and air conditioning. It is not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	50
K	Daily Hours Used	6
L	Days per Week Open	7
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**364**
O	**Person-hours per Year Available for Use = J x K x N**	**109,200**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 469.1: Gusto Grille** Restaurant with exterior seating. It is estimated that an average 30 visitors per day use area for 1 hour along with 2 staff. Website (www.gustogrille.com) notes location is open 6 days per week, 7 hours 15 minutes per day. Noise level predictions indicate that the exterior use area is not impacted by the proposed project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	30
H	Number of Staff	2
I	**Total Number of Occupants per Day = G + H**	**32**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	6
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 573.1: Hawthorne at Leland Apartments** A 240-unit apartment complex with an outdoor pool area. According to the apartment manager, the pool is open 12 hours a day, 7 days a week for 12 months and has an average hourly use of 10 persons. The pool is located at ground level between the apartment building and the highway. The pool area is not predicted to have future noise levels exceeding the Activity Category B NAC.	
Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	10
E	Hours Per Day Recreation Area is Available for Use	12
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**43,200**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.6**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 991: Closer Walk United Methodist Church** A small place of worship with 50 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	50
K	Daily Hours Used	4
L	Days per Week Open	3
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**156**
O	**Person-hours per Year Available for Use = J x K x N**	**31,200**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1003: Blackwell Chapel AME Zion Church** A small place of worship with 60 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	60
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**49,920**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1007: Providence Missionary Baptist Church** A small place of worship with 70 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is light frame with storm windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	70
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**58,240**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CASE:	**Receptors 1024-1031: Excel PreSchool (SPEC)** A large pre-school with 200 children and 33 staff. According to the school staff, the school operates 8 hours each day for 5 days a week year-round. The school has large exterior playgrounds immediately adjacent to the building on the west, north and east sides. On average, each child uses the playgrounds for 2 hours each day. The playground is predicted to be impacted 80% by the proposed highway project and a noise wall is not predicted to benefit any percentage of the exterior area. The structure is a masonry building with single-glazed windows and air conditioning.

Day Care Facility (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	***For the Exterior Uses at the Day Care Facility Being Evaluated**	
D	Average Number of Children Plus Staff per Day Using Playground	233
E	Hours/day that Each Person Uses Playground	2.0
F	Days per Week Open	5
G	Weeks per Year Open	52
H	**Person-hours per Year Available for Use = D x E x F x G**	**121,160**
I	**EQUIVALENT RECEPTOR VALUE = H/C**	**4.6**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1044: The Church of God** A small place of worship. It is estimated there are with 20 users and the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with single glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	20
K	Daily Hours Used	3
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**12,480**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1050: Calvary Chapel Church** A small place of worship. It is estimated there are 20 users and the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with light frame ordinary sash windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	40
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**33,280**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1094: Sand Ridge Apartments** A 200-unit apartment complex with an outdoor use area. According to the apartment staff, the outdooor area has an average hourly use of 5 persons. The recreational area is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. According to the apartment staff, the area is open 12 hours a day, 7 days a week year round.The outdoor use area facing the highway is predicted to have no future noise levels exceeding the Activity Category B NAC.

Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	5
E	Hours Per Day Recreation Area is Available for Use	12
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**21,600**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1096,1109: Accordius Health of Wilmington** A 120-bed nursing care facility with an outdoor use area. It is estimated that the outdoor area has an average hourly use of 20 persons and is open 12 hours a day, 7 days a week for 12 months.. The recreational area is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. The outdoor use area facing the highway are predicted to not have future noise levels exceeding the Activity Category B NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	20
E	Hours Per Day Recreation Area is Available for Use	12
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**86,400**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**3.3**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1097: Wilmington Medical Center** A short-term medical treatment facility with an exterior use area. It is estimated that the outdoor area has an average hourly use of 10 persons and is open 12 hours a day, 7 days a week for 12 months. The outdoor area is is available for use by all apartment occupants and their guests and is located at ground level between the facility and a mini-storage facility to the south. The outdoor use area is not predicted to have future noise levels exceeding the Activity Category B NAC and is not estimated to receive benefits from a noise wall. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Medical Facility (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Facility Being Evaluated**	
J	Average Number of Users per Day	10
K	Daily Hours Used	12
L	Days per Week Open	7
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**364**
O	**Person-hours per Year Available for Use = J x K x N**	**43,680**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1098,1102: Cape Fear Center for Inquiry Playground** A school with 204 children and 42 staff, based on the school website (https://cfci.net/). It is estimated that the school operates 10 hours each day for five days a week for 180 days per year. The school has a large exterior playground immediately adjacent to the building on the highway side of the building that, on average, each child uses for one hour each day. The playground is not predicted to be impacted by the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	204
H	Number of Park Staff	42
I	**Total Number of Occupants per Day = G + H**	**246**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	5
L	Operational Weeks per Year	36
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	0
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1103: Cape Fear Center for Inquiry** A school with 204 children and 42 staff, based on the school website (https://cfci.net/). It is estimated that the school operates 10 hours each day for five days a week for 180 days per year. The school is a light frame structure with storm windows. Approximately 30 percent of the classrooms windows face the highway and are predicted to not experience interior noise levels above Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
School Interior (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the School Being Evaluated	
D	Capacity of School (maximum occupancy, including students and staff)	246
E	Current Enrollment at School (students and staff)	246
F	**Total Number of Occupants per Day = Maximum of D and E**	**246**
G	Daily Hours Used	10
H	Instructional Days per Week	5
I	Instructional Weeks per Year	36
J	**Instuctional Days per Year = H X I**	**180**
K	**Person-hours per Year Available for Use = F x G x J**	**442,800**
L	Percent of Building Use Areas Impacted by Project	0%
M	Percent of Building Use Areas Benefited by Project Abatement	0%
N	**Percentage of Building Use Value = Maximum of L and M**	**0%**
O	**EQUIVALENT RECEPTOR VALUE = (K/C) x N**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1099-1101: Apostolic Tabernacle Church** A place of worship with 100 users. It is assumed that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	100
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**83,200**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**
T	Multiple points to represent the impacted or benefited usage area.	1
U	**Equivalent Residence Value Assigned to Each Point = S/T**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1110: Faith Baptist Church** A place of worship with approximately 40 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with air conditioning and double glazed windows. It is not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Place of Worship (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	40
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**33,280**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1111,1111.1,1114: Long Leaf Baptist Church** A place of worship with 150 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The place of worship has an exterior outdoor use that, on average, 40 children use for 1 hour per day. The buildings are masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Line	**Place of Worship (Activity Category C/D)**	
	For an Average Single Family Residential Unit in North Carolina	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	***For the Exterior Uses at the Church Being Evaluated**	
D	Average Number of Children Plus Staff per Day Using Playground	40
E	Hours/day that Each Person Uses Playground	1.0
F	Days per Week Open	4
G	Weeks per Year Open	52
H	**Person-hours per Year Available for Use = D x E x F x G**	**8,320**
I	**EQUIVALENT RECEPTOR VALUE = H/C**	**1.0**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	150
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**124,800**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**
T	Multiple points to represent the impacted or benefited usage area.	1
U	**Equivalent Residence Value Assigned to Each Point = S/T**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1112,1113, 2616-2618: E.P. Godwin Stadium** A baseball park for which it is estimatd that there are 250 users and 5 staff members and the facility operates 3 hours each day for 5 days a week 6 months a year. It is estimated that the large exterior playground immediately adjacent to the building on the highway side of the building that, on average, used for one hour each day. Approximately 90 percent of the stadium is predicted to be impacted by the proposed highway project and a noise wall is predicted to not benefit the exterior area. Usage inquiry phone calls were not returned, so usage was estimated for the purposes of the TNR. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	90%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**90%**
G	Average Number of Visitors per Day	250
H	Number of Park Staff	5
I	**Total Number of Occupants per Day = G + H**	**255**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	5
L	Operational Weeks per Year	26
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**29,835**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.1**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	4
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.3**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1304,1708-1709: Legion Stadium-Football Stadium** A large park area with an estimated average of 150 users and five park staff operates 4 hours each day for 7 days a week for 6 months. It is further estimated that average usage is 4 hours per day. The stadium is not predicted to be impacted by the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	150
H	Number of Park Staff	5
I	**Total Number of Occupants per Day = G + H**	**155**
J	Average Hours per Day Used by Each Visitor	4
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	3
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.33**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1305: Legion Stadium-Pool** An exterior pool area with an estimated 200 users and five park staff that operates eight hours each day for 7 days a week 6 months per year. Estimated average usage is 2 hours per day. The pool is predicted to not be impacted by the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	200
H	Number of Park Staff	5
I	**Total Number of Occupants per Day = G + H**	**205**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	26
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1306: Legion Stadium-Tennis Court** A public tennis court for which it is estimated there are 100 users and no staff. It is further estimated that the site operates 12 hours each day for 7 days a week year-round and the average user time is 2 hours. The tennis court is predicted to not be impacted by the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	100
H	Number of Park Staff	0
I	**Total Number of Occupants per Day = G + H**	**100**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1338.1: The Dubliner Pub & Patio** A restaurant/bar with exterior seating. It is estimated that an average of 75 visitors per day and 3 staff members are present and average usage per guest is 2 hours. According to the receptor's website (https://www.facebook.com /pg/ thedublinerpub/about/?ref=page_internal) the site is open 12 hour per day year round. Noise level predictions indicate that the exterior use area will not be impacted. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Line	**Restaurant (Activity Category E)**	
	For an Average Single Family Residential Unit in North Carolina	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	0%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	70
H	Number of Staff	5
I	**Total Number of Occupants per Day = G + H**	**75**
J	Average Hours per Day Used by Each Visitor	3
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1382: Sunset Park Elementary School** An elementary (K-5th grade) school. Based on the school website (http://www.nhcs.net/sunset/.html) it is estimated there are 300 children and 65 staff. It is further estimated that the school operates eight hours each day for five days a week year-round. The school has a large exterior playground immediately adjacent to the highway side of the building and it is estimated that average daily use for each child is 1 hour. The playground is not predicted to receive impacts from the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Line	**Park / Recreation Area (Activity Category C)** **For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	300
H	Number of Park Staff	65
I	**Total Number of Occupants per Day = G + H**	**365**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	5
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1382: Sunset Park Elementary School** An elementary school with 300 students and 65 staff, per the school website (www.nhcs.net/sunset/). The facility operates 8 hours each day for five days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
School Interior (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the School Being Evaluated	
D	Capacity of School (maximum occupancy, including students and staff)	300
E	Current Enrollment at School (students and staff)	300
F	**Total Number of Occupants per Day = Maximum of D and E**	**300**
G	Daily Hours Used	8
H	Instructional Days per Week	5
I	Instructional Weeks per Year	52
J	**Instuctional Days per Year = H X I**	**260**
K	**Person-hours per Year Available for Use = F x G x J**	**624,000**
L	Percent of Building Use Areas Impacted by Project	0%
M	Percent of Building Use Areas Benefited by Project Abatement	0%
N	**Percentage of Building Use Value = Maximum of L and M**	**0%**
O	**EQUIVALENT RECEPTOR VALUE = (K/C) x N**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1420.1: Opera House Theatre** A non-profit theater company. It is estimated that average usage of 60 people per day. According to the site's website (http://www.operahousetheatrecompany.org/), plays occur offsite and only rehearsals and camps occur at this location. It is further estimated that the location is used for 6 hours each day, 5 days per week and 6 months per year. The building is masonry with single glazed windows. It is predicted that 100% of the institution's use areas will be impacted by noise from the project and that zero percent of its use areas will receive benefits from a noise wall. Attempts to contact the site by phone were not returned, so usage is estimated for the purposes of the TNR. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.	
Public or Nonprofit Institutional Structure (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Facility Being Evaluated**	
J	Average Number of Users per Day	60
K	Daily Hours Used	6
L	Days per Week Open	5
M	Weeks per Year Open	26
N	**Days per Year Open = L x M**	**130**
O	**Person-hours per Year Available for Use = J x K x N**	**46,800**
P	Percent of Building Use Areas Impacted by Project	100%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**100%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.8**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1505,1506: Beit Hallel Messianic Church/Church of St. Peter Fisherman** A place of worship with 50 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and 50 percent of the building is predicted to experience interior noise levels above the Activity Category D NAC. No one returned calls regarding usage, so usage was estimated for the purposes of the TNR. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.

Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	50
K	Daily Hours Used	3
L	Days per Week Open	3
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**156**
O	**Person-hours per Year Available for Use = J x K x N**	**23,400**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	50%
R	**Percentage of Building Use Value = Maximum of P and Q**	**50%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**
T	Multiple points to represent the impacted or benefited usage area.	1
U	**Equivalent Residence Value Assigned to Each Point = S/T**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1567-1570,1797-1831: Optimist Park** A park with baseball fields. It is estimated that an average of 50 people and 1 staff use the park an average of 2 hours daily, and it operates 8 hours each day for 7 days a week year-round. Approximately 51 percent of the park is predicted to be impacted by the proposed highway project. No one returned calls regarding usage, so usage was estimated for the purposes of the TNR. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	51%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**51%**
G	Average Number of Visitors per Day	50
H	Number of Park Staff	1
I	**Total Number of Occupants per Day = G + H**	**51**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**18,935**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	20
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.05**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 1574-1578, 1773-1777,1779-1783,1787-1793,1795-1796: Greenfield Park (Skateboard Park,Tennis Court, Kids Play Area and Boat Rental Area)** A large recreation park area with 250 users and eight staff. According to the park manager, the park operates 12 hours each day for seven days a week year-round. The large exterior recreation immediately adjacent to the building on the highway side of the building that, on average, used for two hours each day. Approximately 29 percent of the recreation area is predicted to be impacted by the proposed highway project.

Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	29%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**29%**
G	Average Number of Visitors per Day	250
H	Number of Park Staff	8
I	**Total Number of Occupants per Day = G + H**	**258**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**54,469**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**2.1**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	7
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.3**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1588: Epworth United Methodist Church** A place of worship with 50 users. It is estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.

Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	50
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**41,600**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1632: South Front Apartments** A 271-unit apartment complex has an outdoor pool area. According to the apartment staff, the pool has an average hourly use of ten persons. The pool is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. The pool is open 8 hours a day, 7 days a week for 12 months. All apartment units have balconies capable of seating up to three people. The pool area is predicted to not have future noise levels exceeding the Activity Category B NAC.	
Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	10
E	Hours Per Day Recreation Area is Available for Use	8
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**28,800**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.1**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1666.1: The Harp Bar** The restaurant with exterior seating available year round that has an aversge of 50 visitors daily, who visit for an avrage of 2 hours. There are usually 2 two staff members present. According to the restaurant staff, half of the guests use this outdoor area for a period of two hours per day. Noise level predictions indicate that 100 percent of the exterior use area is impacted of which zero percent of the area is benefitted by a noise wall.

Restaurant (Activity Category E)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Facility Being Evaluated	
D	Percent of Usable Area Impacted by Project Noise	100%
E	Percent of Usable Area Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**100%**
G	Average Number of Visitors per Day	25
H	Number of Staff	2
I	**Total Number of Occupants per Day = G + H**	**27**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	7
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**19,656**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 1675: Greenfield Baptist Church** A place of worship with 70 users. NCDOT assumes the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with light frame storm windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.

Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	70
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**58,240**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 2525-2527: Cape Fear Presbyterian Church** A small place of worship with 60 users. NCDOT assumes the facility operates 4 hours each day for 4 days a week year-round. The building is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.	
Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	60
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**49,920**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**
T	Multiple points to represent the impacted or benefited usage area.	0
U	**Equivalent Residence Value Assigned to Each Point = S/T**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2528: Orient Lodge 395 A.F & A.M** A Profit or Non-Profit Institutional structure has an average usage of 40 people per day. It is estimated that average daily usage is 20 people per day, 2 hours per preson and the availabilty is 7 days per week yearround. The building is masonry with single glazed windows. It is predicted that zero percent of the institution's use areas will be impacted by noise from the project. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.

Public or Nonprofit Institutional Structure (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Facility Being Evaluated**	
J	Average Number of Users per Day	20
K	Daily Hours Used	6
L	Days per Week Open	7
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**364**
O	**Person-hours per Year Available for Use = J x K x N**	**43,680**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2529: Kids & Company** A day-care facility, for which it is assumed there are 35 children and 5 staff. NCDOT assumes the school operates eight hours each day for five days a week year-round. The facility is masonry with double glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.

Day Care Facility (Activity Category C/D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	***For the Exterior Uses at the Day Care Facility Being Evaluated**	
D	Average Number of Children Plus Staff per Day Using Playground	35
E	Hours/day that Each Person Uses Playground	2.0
F	Days per Week Open	5
G	Weeks per Year Open	52
H	**Person-hours per Year Available for Use = D x E x F x G**	**18,200**
I	**EQUIVALENT RECEPTOR VALUE = H/C**	**0.7**
	****For the Interior Uses at the Day Care Facility Being Evaluated**	
J	Average Number of Users (Students and Staff) per Day	50
K	Daily Hours Used	10
L	Days per Week Open	5
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**260**
O	**Person-hours per Year Available for Use = J x K x N**	**130,000**
P	Percent of Building Use Areas Impacted by Project	0%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**0%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2530: Pines of Wilmington Apts Tennis Court** An outdoor tennis court for a 200-unit apartment complex. According to the apartment staff, the tennis court has an average hourly use of ten persons. The tennis court is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. The tennis court is open 8 hours a day, 7 days a week for 12 months. The tennis court is predicted to not have future noise levels exceeding the Activity Category B NAC.	
Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	10
E	Hours Per Day Recreation Area is Available for Use	8
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**28,800**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.1**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2569: Pines of Wilmington Apts Pool** An outdoor pool area for a 200-unit apartment complex. According to the apartment staff, the pool has an average hourly use of 8 persons. The pool is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. NCDOT assumes that the pool is open 8 hours a day, 7 days a week for 6 months. The pool area is predicted to have future noise levels exceeding the Activity Category B NAC. The pool area is predicted to not receive benefits from the noise wall.

Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	8
E	Hours Per Day Recreation Area is Available for Use	8
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	12
H	**Person-hours per Year Available for Use = D x E x F x G**	**23,040**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2735: J.C. Roe Center** A school with an estimated 60 students and 27 staff, per the website (https://roe.nhcs.net/faculty-staff). It is further estimated that it operates 8 hours each day for 5 days a week, 36 weeks per year. The building is masonry with single glazed windows that face the highway and are not predicted to experience interior noise levels above the Activity Category D NAC. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative.	
School Interior (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the School Being Evaluated	
D	Capacity of School (maximum occupancy, including students and staff)	100
E	Current Enrollment at School (students and staff)	90
F	**Total Number of Occupants per Day = Maximum of D and E**	**100**
G	Daily Hours Used	8
H	Instructional Days per Week	5
I	Instructional Weeks per Year	36
J	**Instuctional Days per Year = H X I**	**180**
K	**Person-hours per Year Available for Use = F x G x J**	**144,000**
L	Percent of Building Use Areas Impacted by Project	0%
M	Percent of Building Use Areas Benefited by Project Abatement	0%
N	**Percentage of Building Use Value = Maximum of L and M**	**0%**
O	**EQUIVALENT RECEPTOR VALUE = (K/C) x N**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 2938 & 2953: Wilmington Marine Center (Yacht and Board Walk)** A public marina with an estimated 75 daily visitors and 3 staff. According to the manager, the marina operates 8 hours each day for 5 days a week year-round. Approximately 50 percent of the recreation area is predicted to be impacted by the proposed highway project.	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	50%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**50%**
G	Average Number of Visitors per Day	50
H	Number of Park Staff	3
I	**Total Number of Occupants per Day = G + H**	**53**
J	Average Hours per Day Used by Each Visitor	2
K	Operational Days per Week	5
L	Operational Weeks per Year	52
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**13,780**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	Receptor points were developed to represent the impacted or benefited park usage area.	2
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.50**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 2979: River of Life Worship Center** A place of worship with an estimated average of 20 daily users. It is further estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is Light Frame with Ordinary Sash windows that face the highway and 50 percent of the building is predicted to experience interior noise levels above the Activity Category D NAC and it is not benefited by a noise wall. Multiple efforts to contact a site representative were unsuccessful. Definite usage data will be included in the DNR if this receptor is included in the preferred alternative	
Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	20
K	Daily Hours Used	3
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**12,480**
P	Percent of Building Use Areas Impacted by Project	100%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**100%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 3036-3039: Oak Grove Presbyterian Church** A place of worship with an estimated 50 daily users. It is further estimated that the facility operates 4 hours each day for 4 days a week year-round. The building is light frame with storm windows that face the highway. Approximately 25 percent of the buildings are predicted to experience interior noise levels above the Activity Category D NAC. Multiple attempts were made to contact a site representative with no response. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative.

Church (Activity Category D)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	****For the Interior Uses at the Church Being Evaluated**	
J	Average Number of Users per Day	50
K	Daily Hours Used	4
L	Days per Week Open	4
M	Weeks per Year Open	52
N	**Days per Year Open = L x M**	**208**
O	**Person-hours per Year Available for Use = J x K x N**	**41,600**
P	Percent of Building Use Areas Impacted by Project	25%
Q	Percent of Building Use Areas Benefited by Project Abatement	0%
R	**Percentage of Building Use Value = Maximum of P and Q**	**25%**
S	**EQUIVALENT RECEPTOR VALUE = (O/C) x R**	**1.0**
T	Multiple points to represent the impacted or benefited usage area.	1
U	**Equivalent Residence Value Assigned to Each Point = S/T**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 3071-3072: Golf Course at Echo Farms Blvd** A private golf course with an estimated 150 daily visitors and 5 staff. It is further estimated that the site operates 12 hours each day for 7 days a week year-round. The exterior area is predicted to not be impacted by the proposed highway project. Definite usage data will be included in the TNR Addendum if this receptor is included in the preferred alternative	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	0%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**0%**
G	Average Number of Visitors per Day	150
H	Number of Park Staff	5
I	**Total Number of Occupants per Day = G + H**	**155**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	5
L	Operational Weeks per Year	36
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**0**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	0
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**1.00**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 3121: Breezewood Condos Pool** An outdoor pool area for a 200-unit apartment complex. According to the apartment staff, the pool has an average hourly use of 8 persons and it is open 12 hours a day, 7 days a week for 6 months. The pool is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. The pool area is predicted to not have future noise levels exceeding the Activity Category B NAC.	
Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	8
E	Hours Per Day Recreation Area is Available for Use	8
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	6
H	**Person-hours per Year Available for Use = D x E x F x G**	**11,520**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.0**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptors 3165-3172: Codington Elementary School** An elementery school (K-5) with 550 students and 40 staff. According to the school staff, the school operates eight hours each day for five days a week year-round. The school has a large exterior playground immediately adjacent to the building on the highway side of the building that, on average, each child uses for 30 minutes each day. 50 percent of the playground is predicted to be impacted by the proposed highway project and a noise wall is predicted to not benefit the exterior area.	
Park / Recreation Area (Activity Category C)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3.0
B	Hours Available for Use per Year	8760
C	**Person-hours per Year Available for Use = A x B**	**26280**
	For the Park Area Being Evaluated	
D	Percent of Usable Area of Park Impacted by Project Noise	50%
E	Percent of Usable Area of Park Benefited by Proposed Noise Wall	0%
F	**Maximum of D and E**	**50%**
G	Average Number of Visitors per Day	550
H	Number of Park Staff	40
I	**Total Number of Occupants per Day = G + H**	**590**
J	Average Hours per Day Used by Each Visitor	1
K	Operational Days per Week	5
L	Operational Weeks per Year	36
M	**Person-hours per Year Available for Use = F x I x J x K x L**	**26,550**
N	**EQUIVALENT RESIDENCE VALUE = M/C**	**1.0**
O	A grid of receptor points at 100-foot spacing was developed to represent the impacted or benefited park usage area.	4
P	**Equivalent Residence Value Assigned to Each Grid Point = N/O**	**0.25**

CALCULATION OF EQUIVALENT RECEPTOR VALUE

CASE:	**Receptor 3627.1: Antiqua Apartments Pool** An outdoor pool area for a 200-unit apartment complex. According to the apartment staff, the pool has an average hourly use of 8 persons. The pool is located at ground level between the apartment building and the highway and is available for use by all apartment occupants and their guests. NCDOT assumes that the pool is open 12 hours a day, 7 days a week for 6 months. The pool area is predicted to not have future noise levels exceeding the Activity Category B NAC.	
Apartment Exterior Use Areas (Activity Category B)		
Line	**For an Average Single Family Residential Unit in North Carolina**	
A	People per Residence	3
B	Hours Available for Use per Year	8,760
C	**Person-hours per Year Available for Use = A x B**	**26,280**
	For the Apartment Recreational Area	
D	Average Hourly Occupancy for Recreation Area	8
E	Hours Per Day Recreation Area is Available for Use	8
F	Days per Month Recreation Area is Available for Use	30
G	Months per Year Recreation Area is Available for Use	6
H	**Person-hours per Year Available for Use = D x E x F x G**	**11,520**
I	**Equivalent Receptor Unit Value for Recreational Area = H/C**	**1.0**

Appendix C

Traffic Noise Models

General

This appendix documents the TNM Model Input used in this traffic noise and abatement analysis. The TNM Models utilized five TNM object types to approximate the traffic segments assessed for the U-4738 project Traffic Noise Analysis:

Roadways
Receptors (Receivers)
Barriers
Terrain Lines
Ground Zones

Coordinate System

Each of the TNM Objects was modeled using the North American Datum 1983 (NAD83) horizontal coordinate system, and North American Vertical Datum 1988 (NAVD88).

Modeling Procedure

Roadways:

TNM Roadway Element widths were selected based upon representation of one (1) or two (2) lanes of traffic plus paved shoulders or paved medians (if applicable) per TNM roadway element. For the proposed highway facility, TNM Roadway vertices were selected to represent interval lengths that appropriately represent fluctuations in the horizontal and vertical roadway geometry. For highways in which more than one parallel TNM roadway element were modeled, the modeled roadway lane widths were set to ensure horizontal overlapping of adjacent modeled roadway elements. Overlapping TNM roadway elements is necessary to accurately represent the contiguous paved surface. TNM roadway elements of various widths were also modeled to represent the existing local roadways.

Receptors (Receivers):

TNM Receiver Elements were modeled by assigning a point location to the most sensitive likely 'area of frequent human use' for each residence, school, church, medical facility, and noise-sensitive commercial land use within the Project limits. All receivers in the TNM models were assigned a height of 4.92 feet. Given the non-homogeneous terrain and resulting inconsistent intervening source-to-receptor topography throughout the project vicinity, noise levels at each discrete receptor were determined by means of modeling an individual TNM receiver at all representative locations for 'loudest-condition' existing, design year 2040 no-build, and design year 2040 build-condition predicted traffic.

Terrain Lines (Elevation Contours):

Elevations (vertical, "Z" coordinates) were input into TNM by hand (typing) the English coordinate values of vertices that define significant changes in grades and/ or slopes throughout the study areas.

Ground Zones:

When ground surfaces other than the default ground (grass) intervene between roadway and receptors (ex. pavement and water), ground zones are used to represent oddly-shaped hard or reflective surface areas to more accurately represent the study area.

Figure C.1: 2018 Existing, 1B-Ex and 2040 No-Build, 1B-FYNB

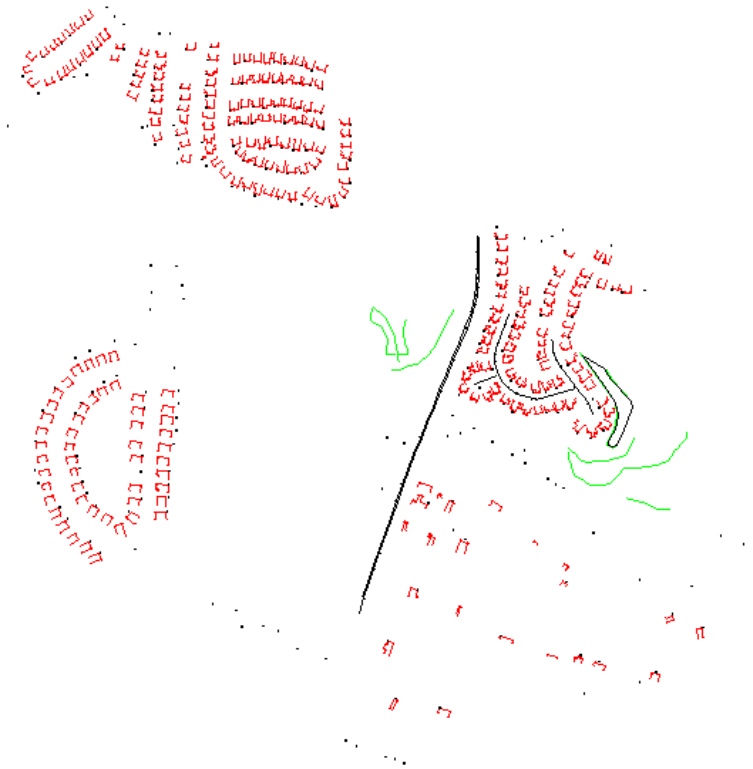


Figure C.2: 2018 Existing, 2-6-Ex and 2040 No-Build, 2-6-FYNB

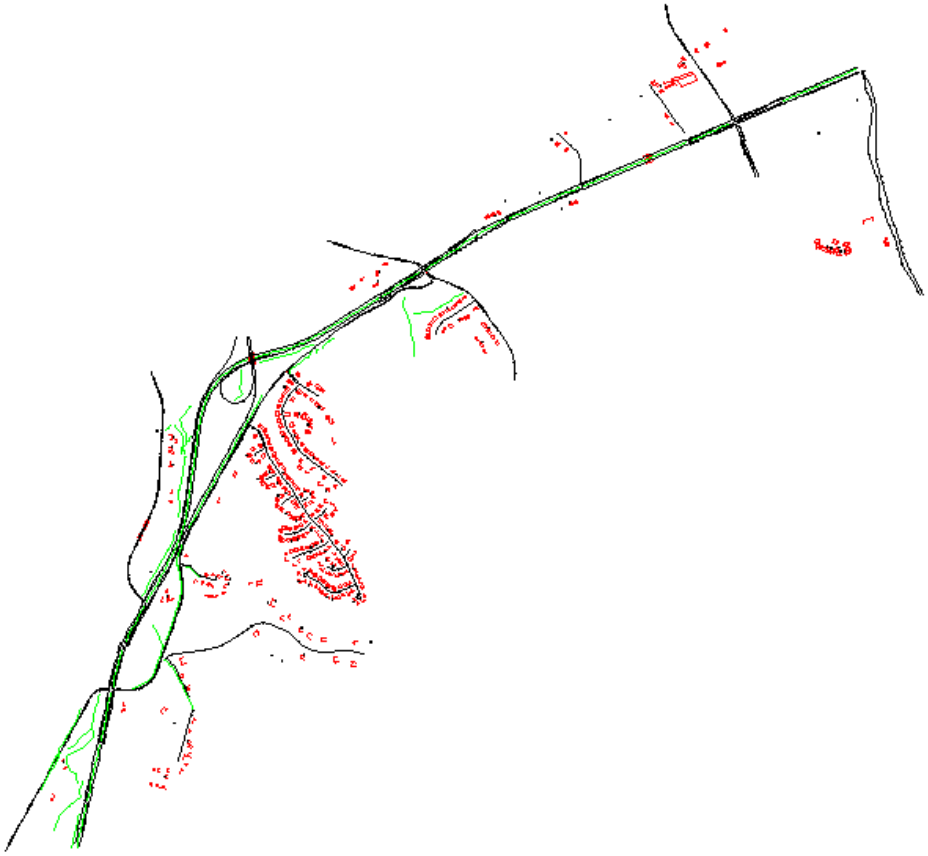


Figure C.3: 2018 Existing, 3-Ex and 2040 No-Build, 3-FYNB

Figure C.4: 2018 Existing, 4A-Ex and 2040 No-Build, 4A-FYNB

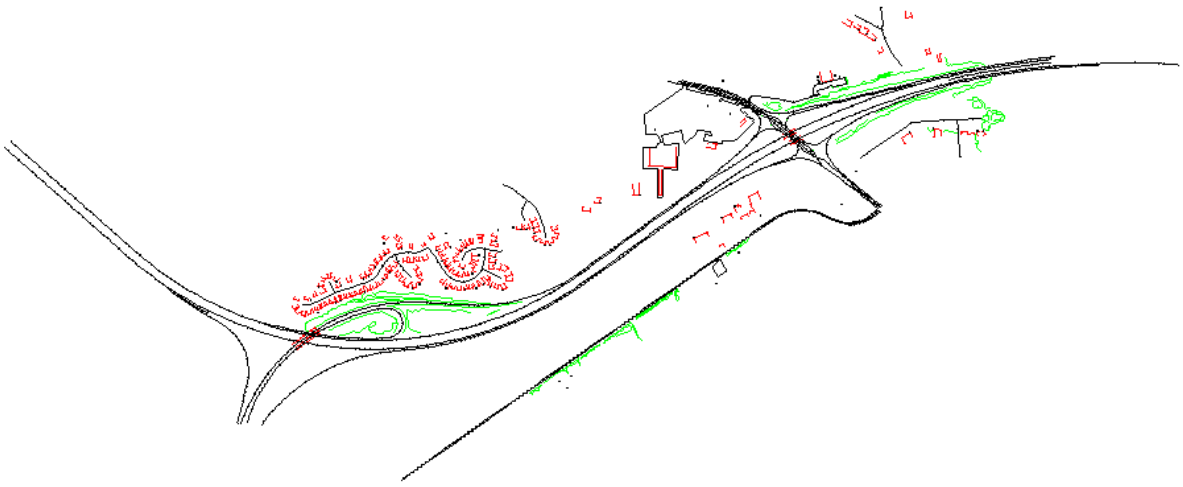


Figure C.5: 2018 Existing, 5C-Ex and 2040 No-Build, 5C-FYNB

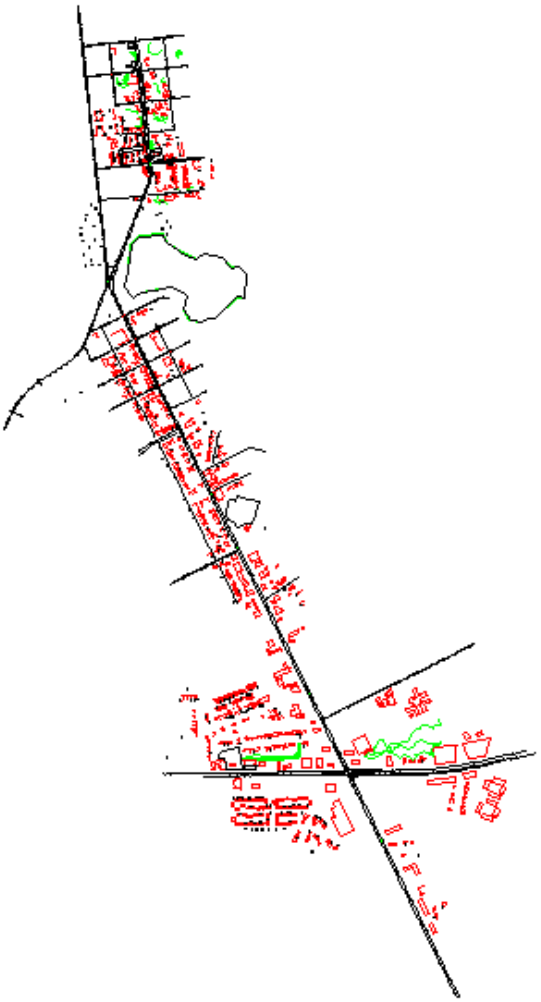


Figure C.6: 2018 Existing, 8B-Ex and 2040 No-Build, 8B-FYNB

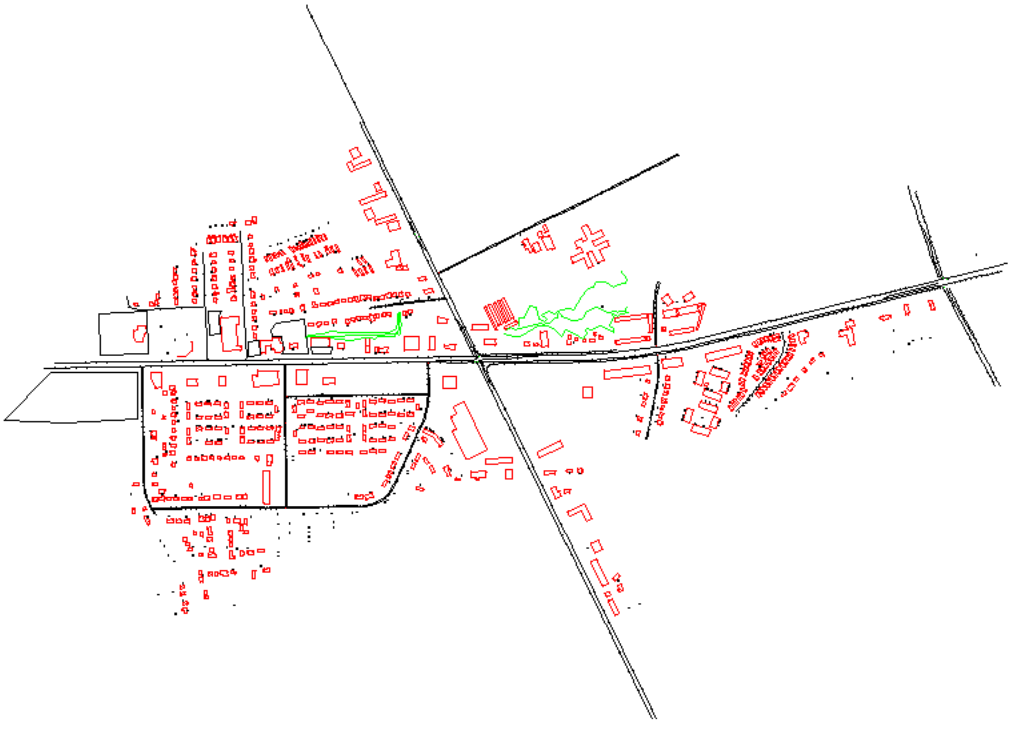


Figure C.7: 2018 Existing, 9B-Ex and 2040 No-Build, 9B-FYNB

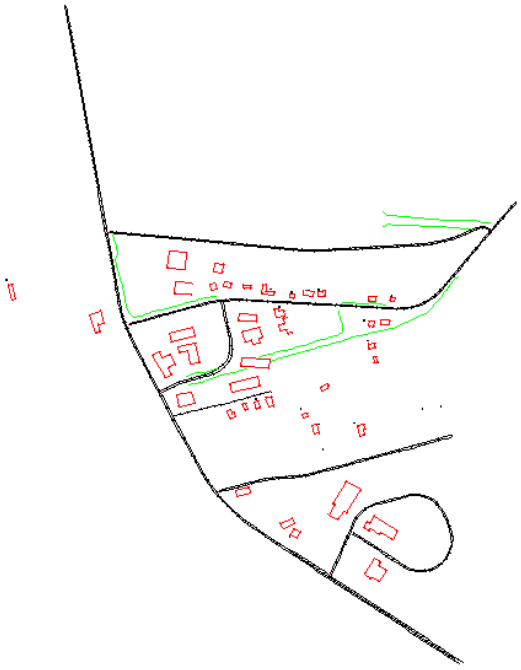


Figure C.8: 2018 Existing, 9D-Ex and 2040 No-Build, 9D-FYNB

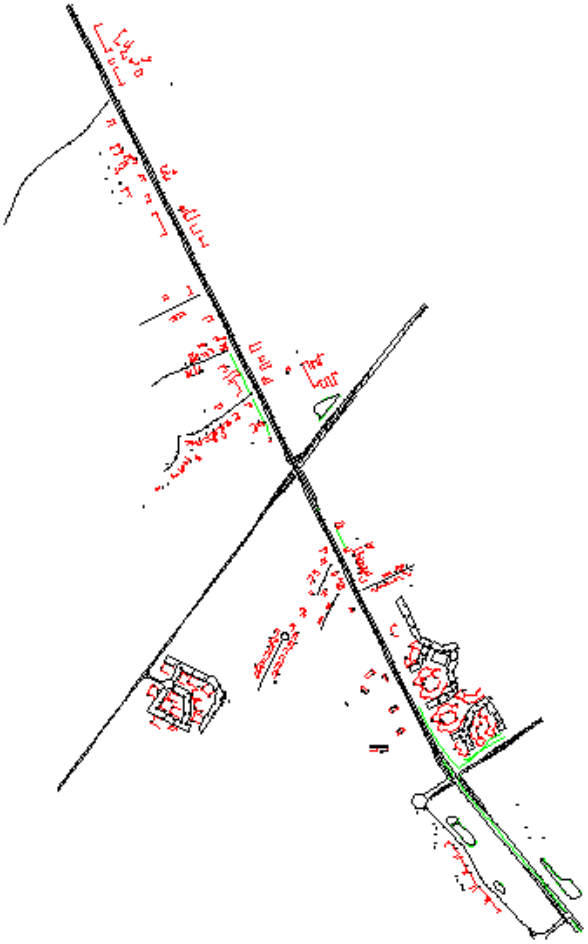


Figure C.9: 2018 Existing, 10-Ex and 2040 No-Build, 10-FYNB

Figure C.10: 2040 Build, 1B-FB (Alt B)

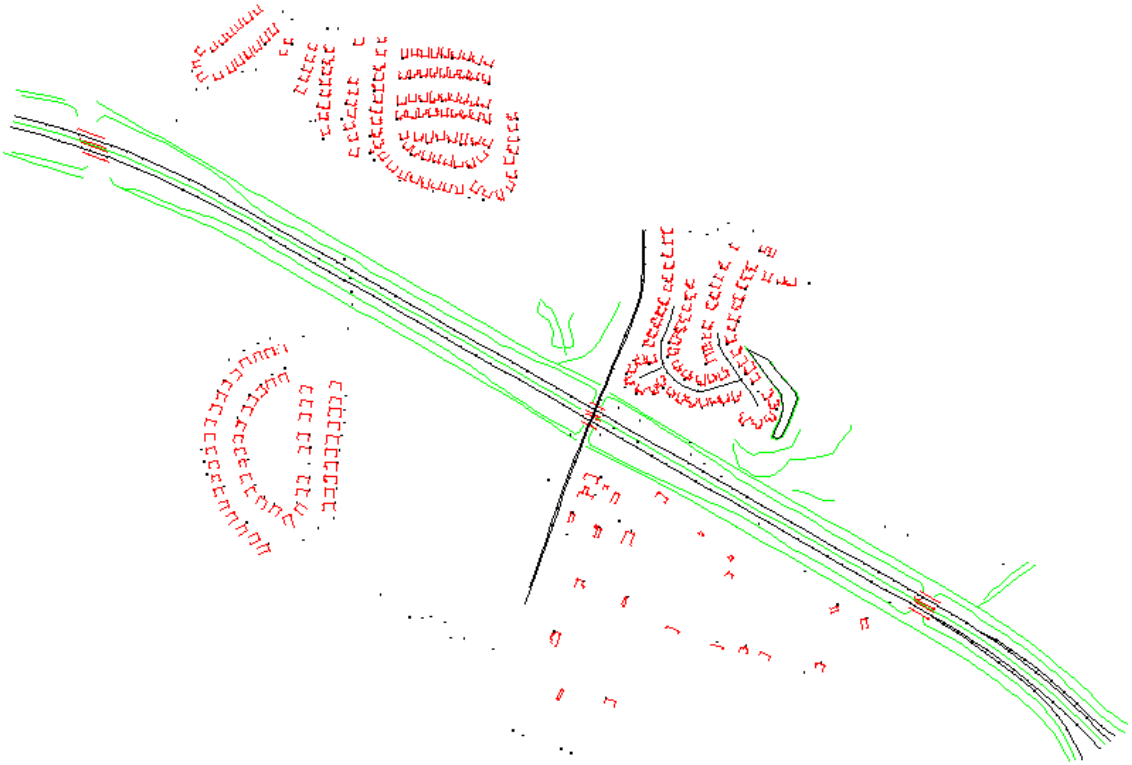


Figure C.11: 2040 Build, 2A-FB (Alt Q)

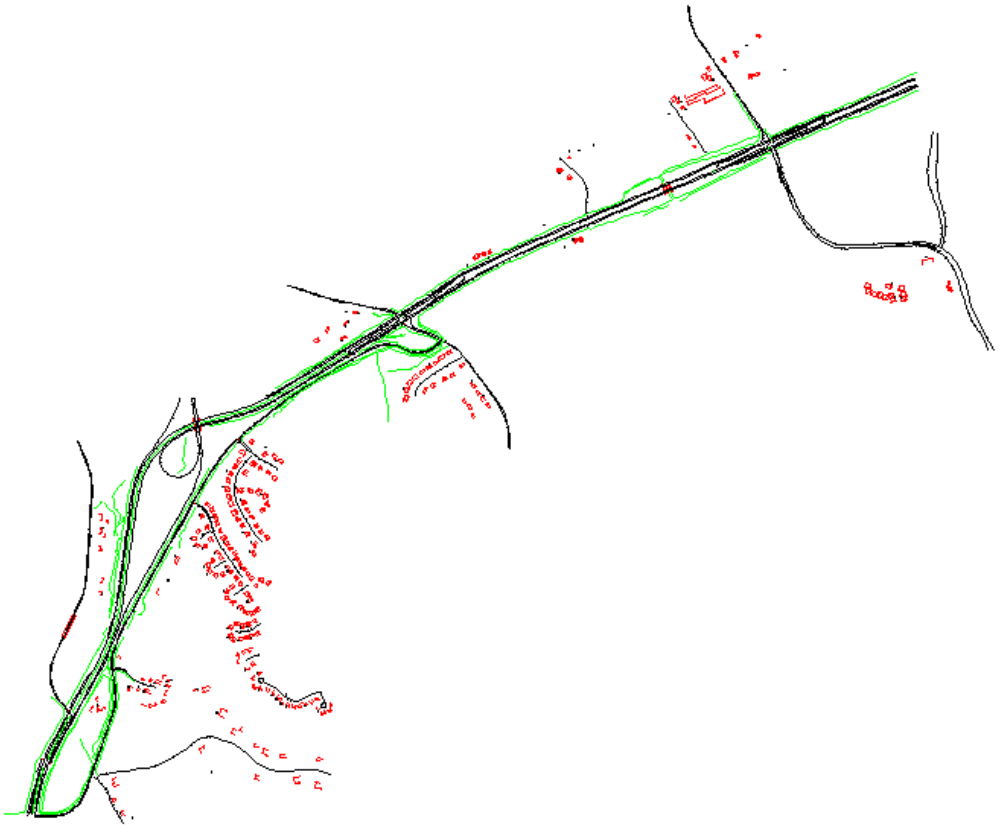


Figure C.12: 2040 Build, 2B-FB (Alt T)

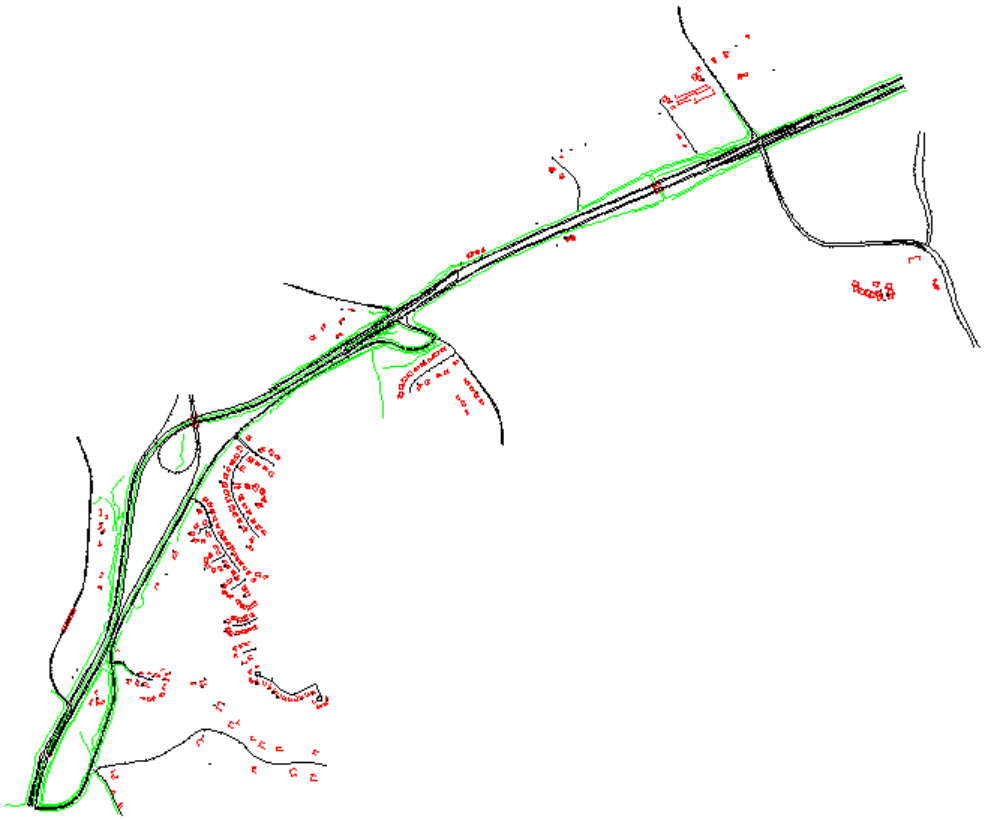


Figure C.13: 2040 Build, 2C-FB (Alt V-AW)

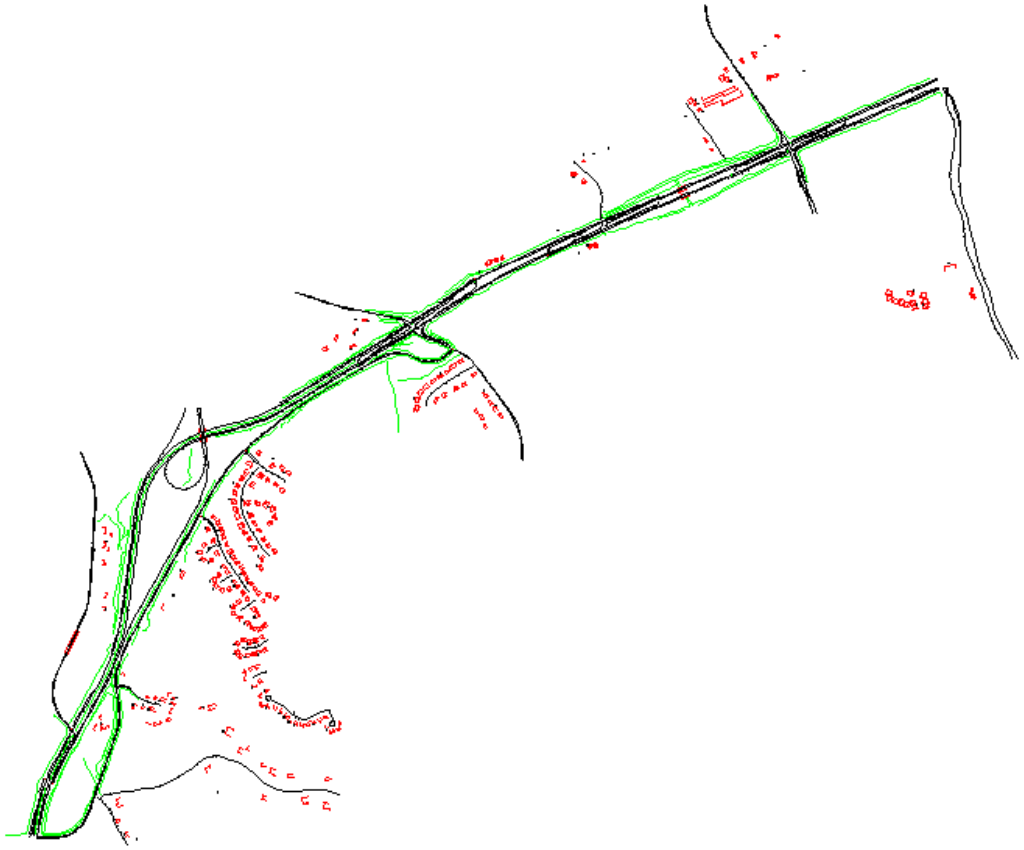


Figure C.14: 2040 Build, 2D-FB (Alt B)

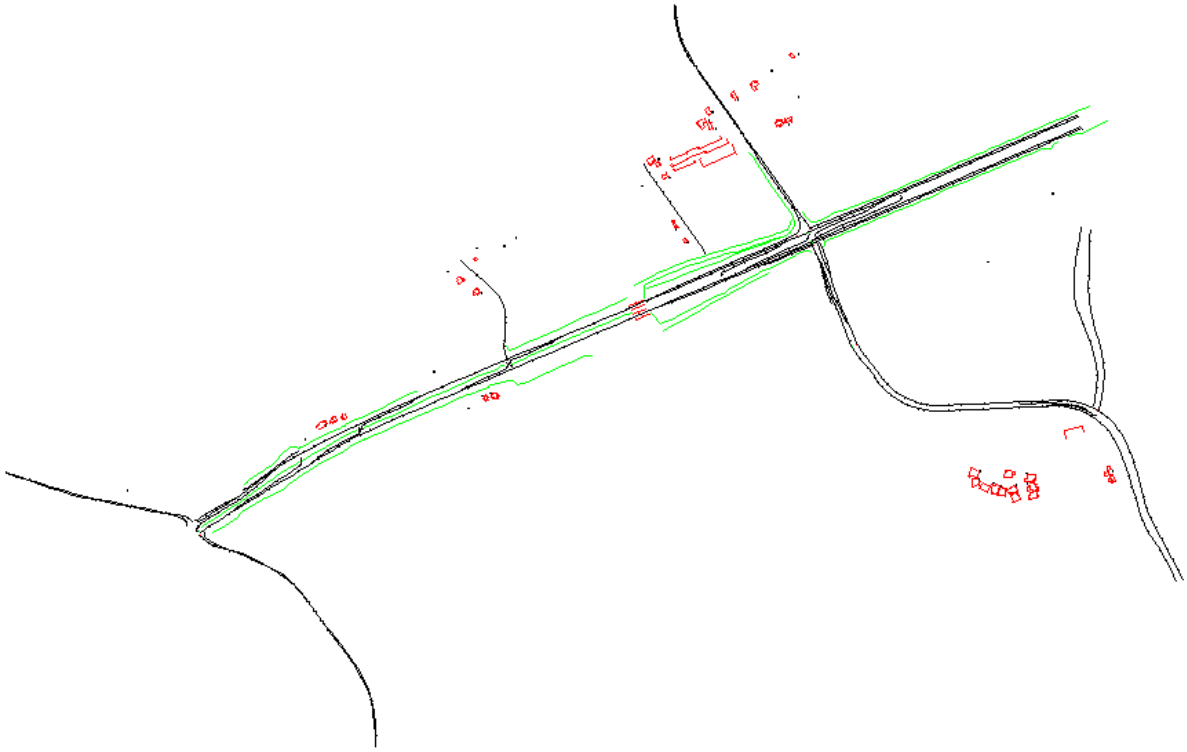


Figure C.15: 2040 Build, 3A-FB (Alt B)

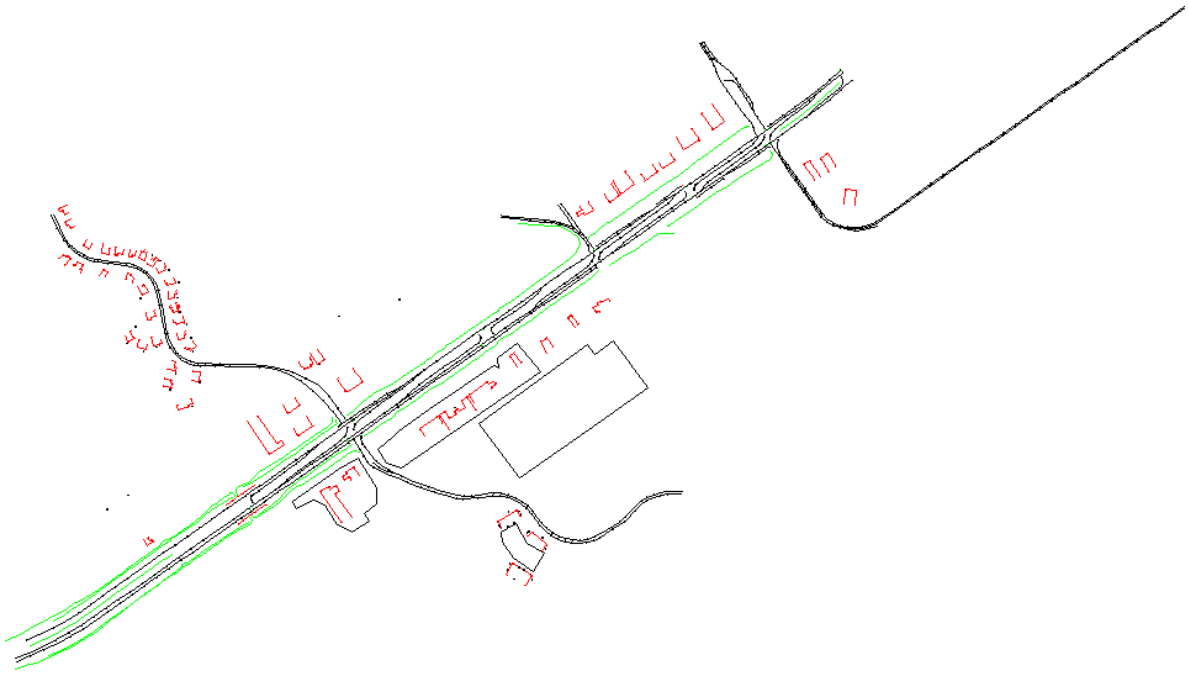


Figure C.16: 2040 Build, 3B-FB (Alt Q)

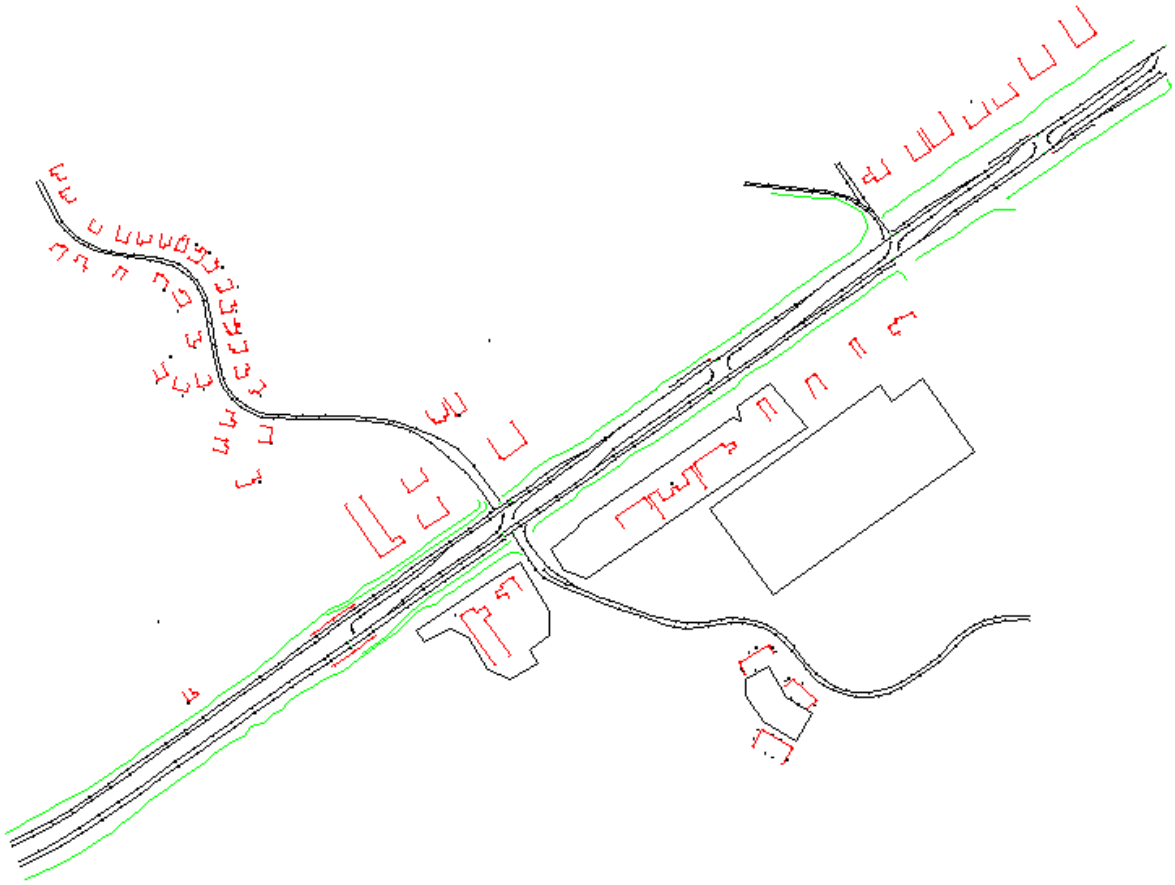


Figure C.17: 2040 Build, 3C-FB (Alt T)

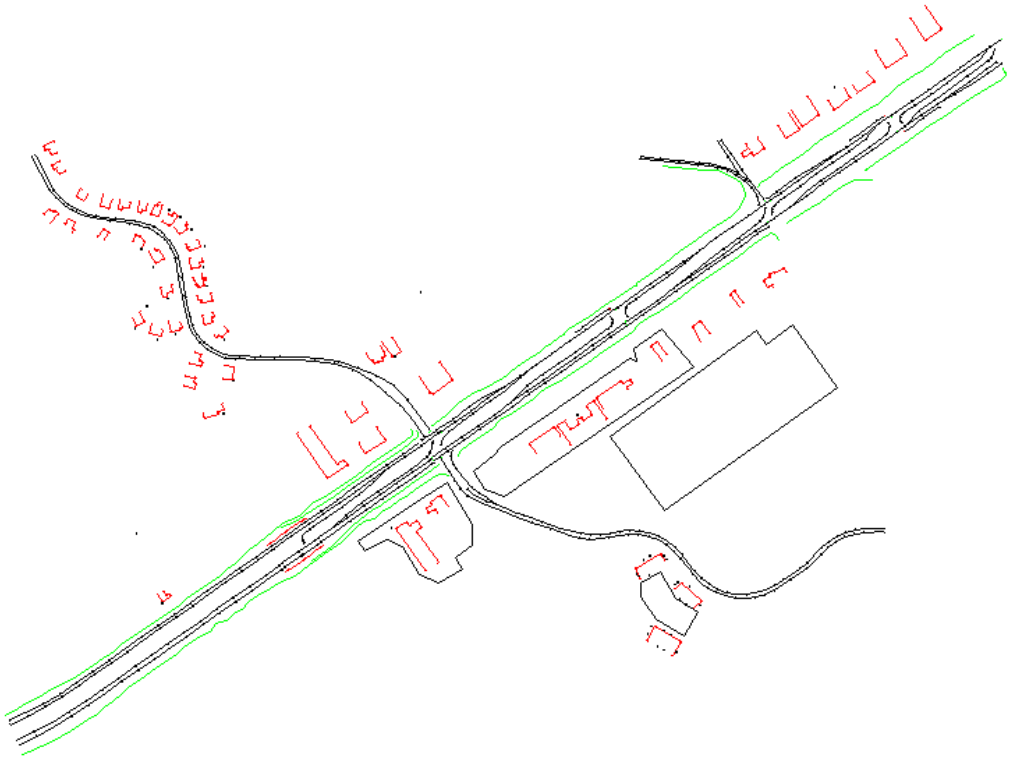


Figure C.18: 2040 Build, 3D-FB (Alt V-AW)

Figure C.19: 2040 Build, 4A-FB (Alt V-AW)

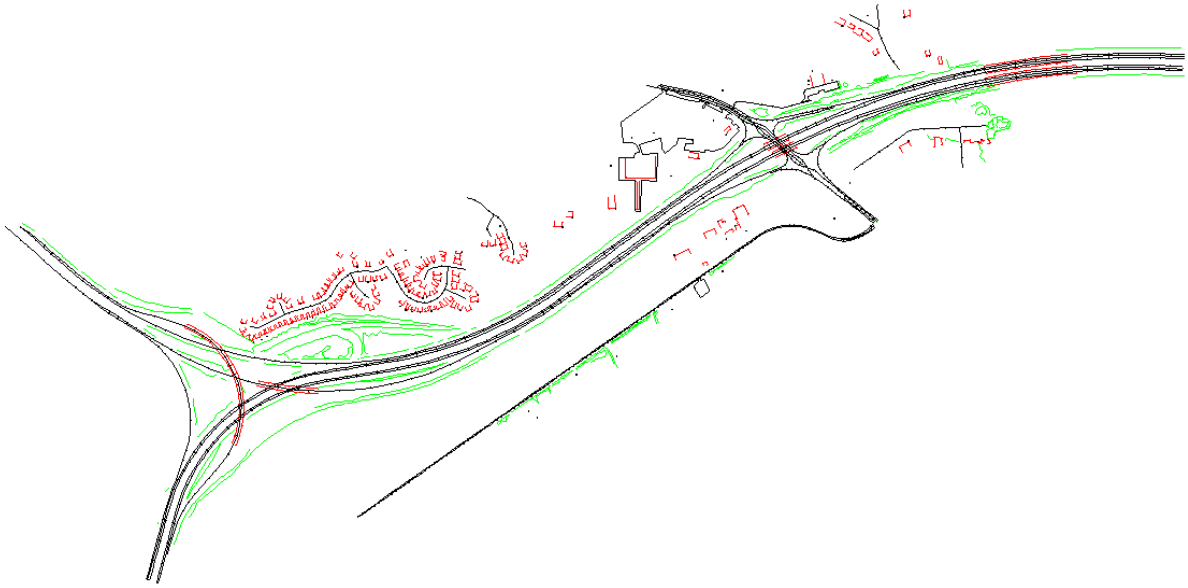


Figure C.20: 2040 Build, 5C-FB (Alt V-AW)

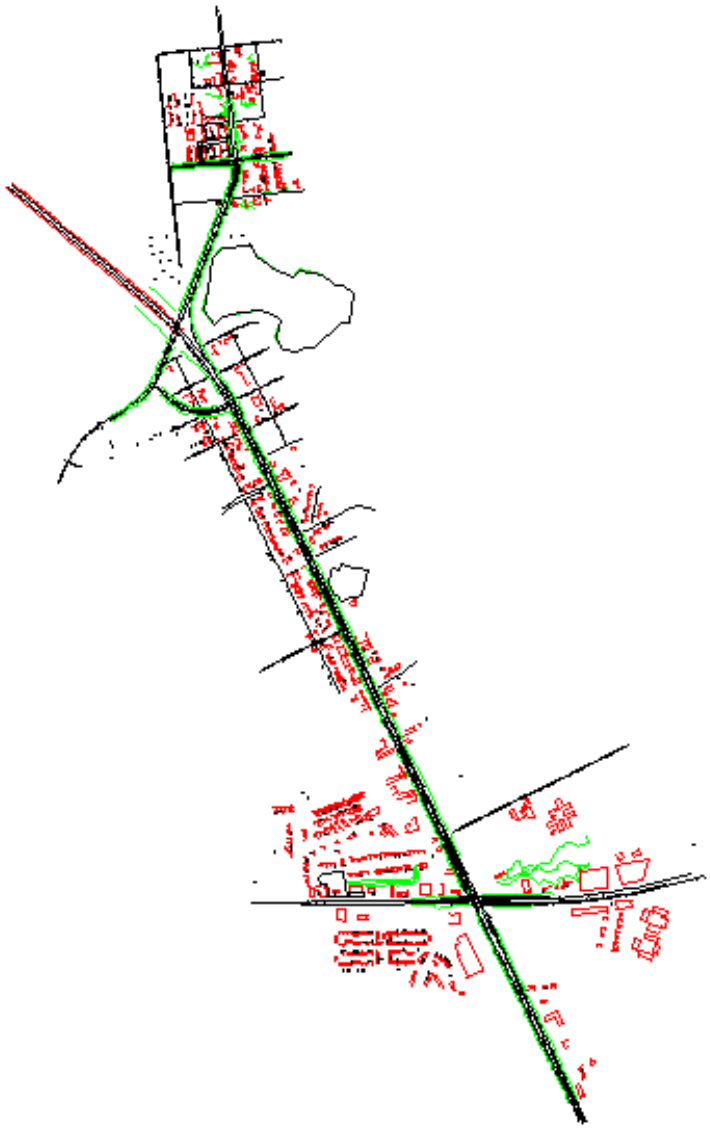


Figure C.21: 2040 Build, 6A-FB (Alt MA, NA)

Figure C.22: 2040 Build, 7B-FB (Alt T)

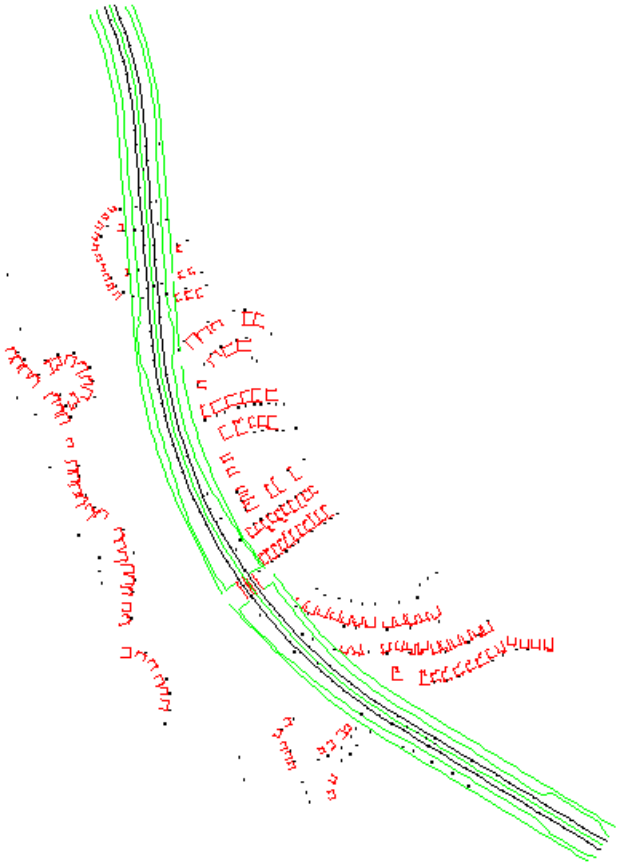


Figure C.23: 2040 Build, 7C-FB (Alt B, Q)

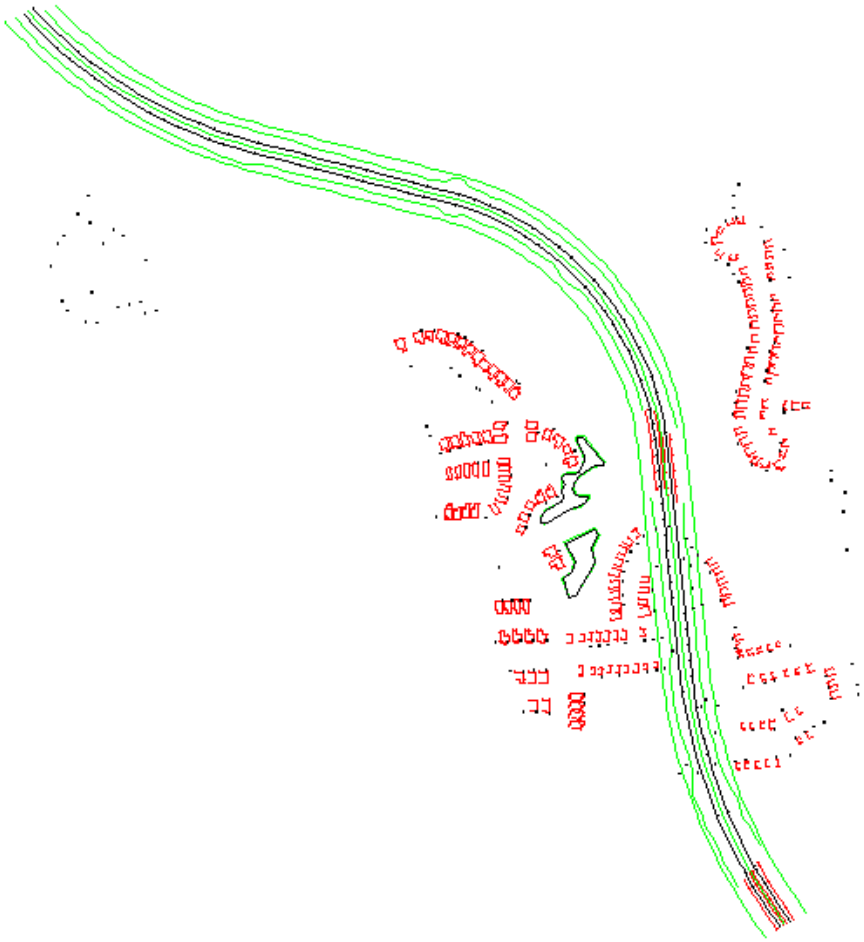


Figure C.24: 2040 Build, 8B-FB (Alt B, NA, T)

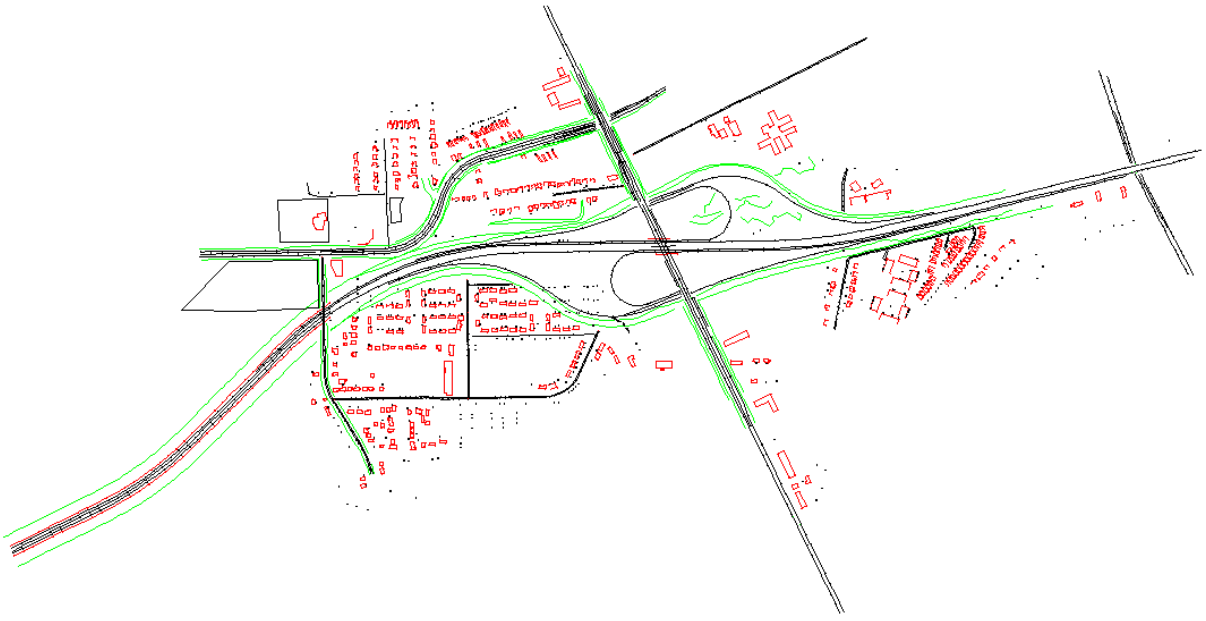


Figure C.25: 2040 Build, 9B-FB (Alt MA, Q)

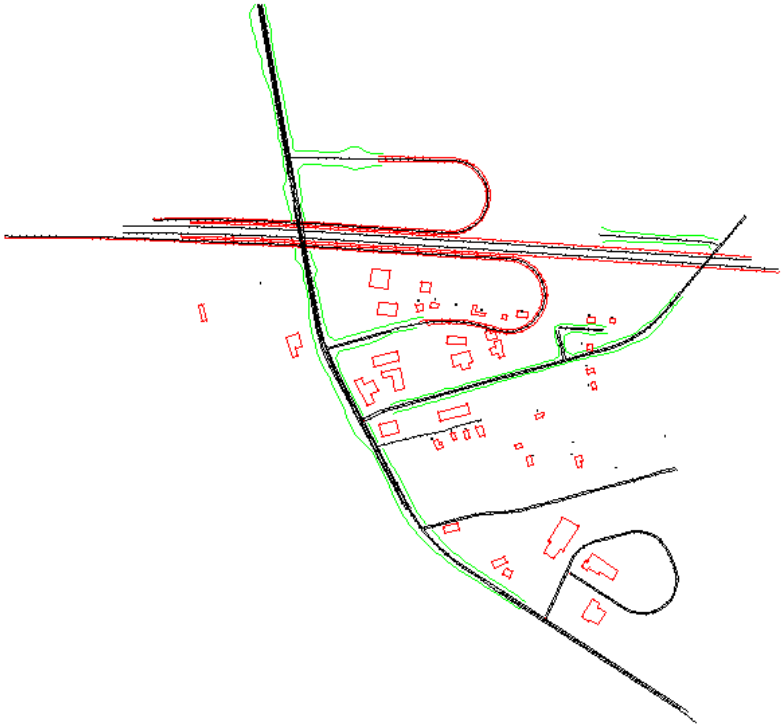


Figure C.26: 2040 Build, 9D-FB (Alt MA, Q)

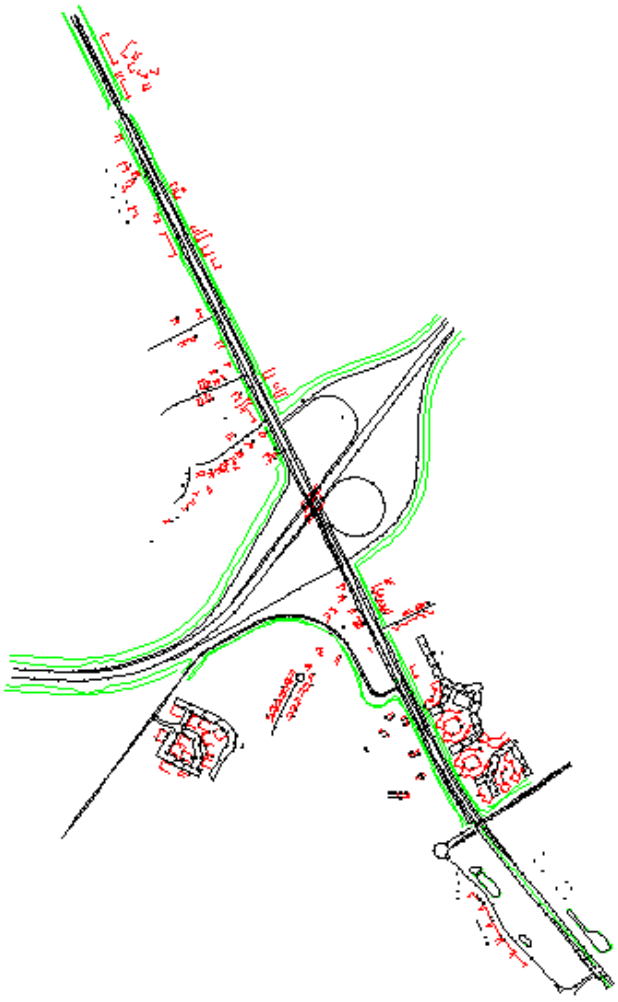


Figure C.27: 2040 Build, 10A-FB (Alt MA, NA)

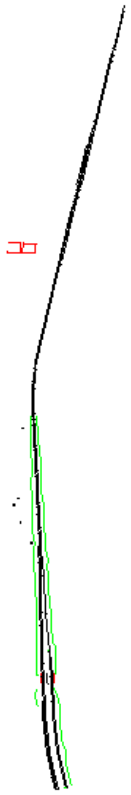


Figure C.28: 2040 Build, 10B-FB (Alt B, Q, T)

Appendix D

Noise Barrier Analysis

Noise Barrier Analysis
Alternative MA/NA, Barrier 2

Alternative MA/NA, Barrier 2 Acoustical Performance Summary	
Impacts: 2	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 2	Total Benefits: 2
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 2 Parameters	
Length (ft): 600	Area / Benefit (ft^2): 3000
Average Height (ft): 10	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 6000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
188	007090 ANNIE M BRYANT DR	1	B	70	64	6
189	007090 ANNIE M BRYANT DR	1	B	71	64	7

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 2 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 2 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 2 (MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 2 **# BENEFITS -** 2 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 3000 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 2/15/2019

Noise Barrier Analysis
Alternative MA/NA, Barrier 3 West

Alternative MA/NA, Barrier 3 West Acoustical Performance Summary	
Impacts: 2	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 2	Total Benefits: 2
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 3 West Parameters	
Length (ft): 450	Area / Benefit (ft^2): 2250
Average Height (ft): 10	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 4500	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
195	007132 DAVE WAY	1	B	74	67	7
197	007120 DAVE WAY	1	B	73	67	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 3 West does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 3 West is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 3 W(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 2 **# BENEFITS -** 2 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2250 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/NA, Barrier 3 East

Alternative MA/NA, Barrier 3 East Acoustical Performance Summary	
Impacts: 8	Benefited Receptors @ ≥ 7 dB(A) NLR: 2
Impacted Receptors Benefited: 8	Total Benefits: 8
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 3 East Parameters	
Length (ft): 2180	Area / Benefit (ft^2): 5995
Average Height (ft): 22	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 47960	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
221	007017 WHITE BRIDGE LN	1	B	62	57	5
226	007037 WHITE BRIDGE LN	1	B	67	58	9
227	007049 WHITE BRIDGE LN	1	B	70	60	10
228	007057 WHITE BRIDGE LN	1	B	70	65	5
439	006768 CAMPBELLS RIDGE DR	1	B	61	55	6
440	006772 CAMPBELLS RIDGE DR	1	B	60	54	6
441	006776 CAMPBELLS RIDGE DR	1	B	59	54	5
442	006780 CAMPBELLS RIDGE DR	1	B	59	53	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 3 East does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 3 East is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 3 E(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 8 **# BENEFITS -** 8 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 5995 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2018

Noise Barrier Analysis
Alternative MA/NA, Barrier 4 South

Alternative MA/NA, Barrier 4 South Acoustical Performance Summary	
Impacts: 3	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 3	Total Benefits: 3
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 4 South Parameters	
Length (ft): 550	Area / Benefit (ft^2): 2567
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 2000
Area (ft^2): 7700	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
144	000027 OLD TOWN CREEK RD	1.2	D	45	45	0
145	007139 OCEAN HWY	1	B	72	67	5
146	007139 OCEAN HWY	1	B	73	66	7
147	007139 OCEAN HWY	1	B	73	67	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 4 South does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 4 South is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 4S(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 3 **# BENEFITS -** 3 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2567 square feet less than the maximum allowable quantity per benefited receptor of 2000 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2018

Noise Barrier Analysis
Alternative MA/NA, Barrier 4 North

Alternative MA/NA, Barrier 4 North Acoustical Performance Summary	
Impacts: 8	Benefited Receptors @ ≥ 7 dB(A) NLR: 3
Impacted Receptors Benefited: 3	Total Benefits: 3
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 4 North Parameters	
Length (ft): 1589	Area / Benefit (ft^2): 11653
Average Height (ft): 22	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 34958	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
148	000033 MACO RD	1	B	66	66	0
149	000028 MACO RD	1	B	71	63	8
150	000032 MACO RD	1	B	70	62	8
151	000076 MACO RD	1	B	69	62	7
152	000083 MACO RD	1	B	73	73	0
153	000112 MACO RD	1	B	68	64	4
154	000126 MACO RD	1	B	68	64	4
155	000105 MACO RD	1	B	70	70	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 4 North does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 4 North is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 4N(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 8 **# BENEFITS -** 3 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 11653 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/NA, Barrier 5

Alternative MA/NA, Barrier 5 Acoustical Performance Summary	
Impacts: 156	Benefited Receptors @ ≥ 7 dB(A) NLR: 108
Impacted Receptors Benefited: 128	Total Benefits: 137
Non-Impacted Receptors Benefited: 9	

Alternative MA/NA, Barrier 5 Parameters	
Length (ft): 6000	Area / Benefit (ft^2): 1051
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 144000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
231	000114 STONEY CREEK LN	1	B	57	51	6
232	000116 STONEY CREEK LN	1	B	58	52	6
233	000118 STONEY CREEK LN	1	B	62	53	9
234	000117 STONEY CREEK LN	1	B	63	54	9
235	000115 STONEY CREEK LN	1	B	63	52	11
236	007398 RUBY STONE CT	1	B	59	49	10
237	007396 RUBY STONE CT	1	B	61	51	10
238	007397 RUBY STONE CT	1	B	56	46	10
239	007395 RUBY STONE CT	1	B	57	47	10
240	007394 RUBY STONE CT	1	B	62	52	10
241	007392 RUBY STONE CT	1	B	64	53	11
242	007391 RUBY STONE CT	1	B	59	49	10
243	007390 RUBY STONE CT	1	B	65	53	12
244	007388 RUBY STONE CT	1	B	65	53	12
245	007386 RUBY STONE CT	1	B	65	53	12
246	007387 RUBY STONE CT	1	B	60	49	11
247	007384 RUBY STONE CT	1	B	64	53	11
248	007382 RUBY STONE CT	1	B	65	53	12
249	007383 RUBY STONE CT	1	B	61	51	10
250	007381 RUBY STONE CT	1	B	62	50	12
251	007380 RUBY STONE CT	1	B	65	53	12
252	007379 RUBY STONE CT	1	B	61	50	11
253	007378 RUBY STONE CT	1	B	65	54	11
254	007376 RUBY STONE CT	1	B	66	55	11
255	007372 RUBY STONE CT	1	B	66	54	12
256	007377 RUBY STONE CT	1	B	61	50	11
257	007373 RUBY STONE CT	1	B	63	51	12
258	007382 HAZELSTONE LN	1	B	61	50	11
259	007378 HAZELSTONE LN	1	B	62	51	11
260	007372 HAZELSTONE LN	1	B	66	53	13
261	007368 HAZELSTONE LN	1	B	66	54	12
262	007367 HAZELSTONE LN	1	B	67	54	13
263	007371 HAZELSTONE LN	1	B	67	55	12
264	007375 HAZELSTONE LN	1	B	63	52	11
265	007379 HAZELSTONE LN	1	B	61	49	12
266	007390 BRICKSTONE CT	1	B	59	49	10
267	007386 BRICKSTONE CT	1	B	61	50	11
268	007382 BRICKSTONE CT	1	B	63	52	11
269	007380 BRICKSTONE CT	1	B	67	54	13
270	007378 BRICKSTONE CT	1	B	67	55	12
271	007381 BRICKSTONE CT	1	B	66	54	12
272	007383 BRICKSTONE CT	1	B	63	53	10
273	007387 BRICKSTONE CT	1	B	59	50	9
274	007391 BRICKSTONE CT	1	B	58	50	8
275	007394 OPAL STONE CT	1	B	58	50	8
276	007390 OPAL STONE CT	1	B	62	52	10
277	007399 OPAL STONE CT	1	B	58	52	6
278	007391 OPAL STONE CT	1	B	62	52	10
279	007398 RED STONE CT	1	B	60	52	8
280	007394 RED STONE CT	1	B	59	51	8
281	007390 RED STONE CT	1	B	63	53	10
282	007387 RED STONE CT	1	B	64	54	10
283	007391 RED STONE CT	1	B	64	55	9

Noise Barrier Analysis
Alternative MA/NA, Barrier 5

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
284	007395 RED STONE CT	1	B	63	54	9
285	000053 STONEY CREEK LN	1	B	61	53	8
286	000049 STONEY CREEK LN	1	B	62	53	9
287	000046 STONEY CREEK LN	1	B	60	54	6
288	000042 STONEY CREEK LN	1	B	59	54	5
289	000043 STONEY CREEK LN	1	B	60	53	7
290	007394 DIAMOND CT	1	B	62	53	9
291	007392 DIAMOND CT	1	B	64	54	10
297	000035 STONEY CREEK LN	1	B	62	54	8
298	000038 STONEY CREEK LN	1	B	61	54	7
299	000034 STONEY CREEK LN	1	B	61	54	7
300	000029 STONEY CREEK LN	1	B	63	54	9
301	007395 DIAMOND CT	1	B	66	56	10
302	000025 STONEY CREEK LN	1	B	65	55	10
303	000030 STONEY CREEK LN	1	B	61	54	7
304	000026 STONEY CREEK LN	1	B	62	55	7
305	000022 STONEY CREEK LN	1	B	63	56	7
306	000018 STONEY CREEK LN	1	B	64	56	8
307	007398 YELLOW STONE CT	1	B	66	56	10
313	000014 STONEY CREEK LN	1	B	66	57	9
314	000010 STONEY CREEK LN	1	B	67	57	10
318	007445 COLE CT	1	B	56	53	3
319	007447 COLE CT	1	B	57	54	3
320	000090 COMBINE LN	1	B	55	53	2
321	000086 COMBINE LN	1	B	56	54	2
322	000083 COMBINE LN	1	B	59	55	4
323	000082 COMBINE LN	1	B	55	53	2
324	000079 COMBINE LN	1	B	60	56	4
325	000078 COMBINE LN	1	B	57	55	2
326	000074 COMBINE LN	1	B	55	53	2
327	007468 RYE LN	1	B	56	54	2
328	000075 COMBINE LN	1	B	62	56	6
329	000074 COMBINE LN	1	B	58	55	3
330	000071 COMBINE LN	1	B	63	56	7
331	007464 RYE LN	1	B	51	48	3
332	007460 RYE LN	1	B	55	53	2
333	000068 COMBINE LN	1	B	58	54	4
334	000067 COMBINE LN	1	B	64	57	7
335	000063 COMBINE LN	1	B	65	57	8
336	007456 RYE LN	1	B	58	54	4
337	007452 RYE LN	1	B	58	53	5
338	000059 COMBINE LN	1	B	64	57	7
339	000055 COMBINE LN	1	B	64	57	7
340	000051 COMBINE LN	1	B	64	58	6
341	000047 COMBINE LN	1	B	63	58	5
342	000044 COMBINE LN	1	B	62	57	5
343	000057 BRIDLE WAY	1	B	56	54	2
344	000047 BRIDLE WAY	1	B	57	55	2
345	000027 BRIDLE WAY	1	B	55	54	1
346	000027 BRIDLE WAY	1	B	60	58	2
347	000043 COMBINE LN	1	B	62	59	3
348	000007 BRIDLE WAY	1	B	62	61	1
349	000029 COMBINE LN	1	B	63	63	0
350	000026 COMBINE LN	1	B	61	61	0
351	000030 COMBINE LN	1	B	60	59	1
352	000040 BRIDLE WAY	1	B	59	58	1
353	000050 BRIDLE WAY	1	B	56	55	1
3837	67 BRIDLE WAY	1	B	55	53	2
3838	85 BRIDLE WAY	1	B	56	54	2
3839	103 BRIDLE WAY	1	B	54	52	2
3840	105 BRIDLE WAY	1	B	54	52	2
3841	94 COMBINE LN	1	B	54	53	1

Noise Barrier Analysis
Alternative MA/NA, Barrier 5

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3842	98 COMBINE LN	1	B	54	53	1
3843	102 COMBINE LN	1	B	53	51	2
3844	106 COMBINE LN	1	B	53	51	2
3845	110 COMBINE LN	1	B	52	50	2
3846	114 COMBINE LN	1	B	54	52	2
3847	7448 ANVIL CT	1	B	54	52	2
3848	7444 ANVIL CT	1	B	54	53	1
3849	7445 ANVIL CT	1	B	53	51	2
3850	7447 ANVIL CT	1	B	54	52	2
3851	7448 COLE CT	1	B	52	49	3
3852	7444 COLE CT	1	B	55	52	3
3853	50 STONEY CREEK LN	1	B	58	54	4
3854	54 STONEY CREEK LN	1	B	58	54	4
3855	7400 CREEK STONE CT	1	B	58	53	5
3856	7404 CREEK STONE CT	1	B	55	48	7
3857	7408 CREEK STONE CT	1	B	54	49	5
3858	7407 CREEK STONE CT	1	B	56	50	6
3859	7403 CREEK STONE CT	1	B	55	50	5
3860	7401 CREEK STONE CT	1	B	54	47	7
3861	7398 OPAL STONE CT	1	B	54	50	4
3862	7400 RHINESTONE CT	1	B	55	52	3
3863	7404 RHINESTONE CT	1	B	54	49	5
3864	7408 RHINESTONE CT	1	B	54	49	5
3865	7412 RHINESTONE CT	1	B	54	50	4
3866	7416 RHINESTONE CT	1	B	53	48	5
3867	7413 RHINESTONE CT	1	B	53	49	4
3868	7409 RHINESTONE CT	1	B	52	49	3
3869	7405 RHINESTONE CT	1	B	53	49	4
3870	74 STONEY CREEK LN	1	B	56	50	6
3871	78 STONEY CREEK LN	1	B	55	49	6
3872	73 STONEY CREEK LN	1	B	56	50	6
3873	7395 BRICKSTONE CT	1	B	56	49	7
3874	7394 BRICKSTONE CT	1	B	58	49	9
3875	7396 BRICKSTONE CT	1	B	55	48	7
3876	7398 BRICKSTONE CT	1	B	56	49	7
3877	79 STONEY CREEK LN	1	B	55	47	8
3878	83 STONEY CREEK LN	1	B	55	48	7
3879	87 STONEY CREEK LN	1	B	54	48	6
3880	82 STONEY CREEK LN	1	B	54	48	6
3881	86 STONEY CREEK LN	1	B	54	49	5
3882	7383 HAZELSTONE LN	1	B	60	50	10
3883	7387 HAZELSTONE LN	1	B	59	50	9
3884	7391 HAZELSTONE LN	1	B	56	48	8
3885	7395 HAZELSTONE LN	1	B	55	48	7
3886	7398 HAZELSTONE LN	1	B	54	47	7
3887	7396 HAZELSTONE LN	1	B	54	49	5
3888	7394 HAZELSTONE LN	1	B	57	49	8
3889	7392 HAZELSTONE LN	1	B	59	49	10
3890	7390 HAZELSTONE LN	1	B	59	50	9
3891	7386 HAZELSTONE LN	1	B	61	51	10
3892	7401 HAZELSTONE LN	1	B	56	51	5
3893	7401 BLUESTONE CT	1	B	55	50	5
3894	7405 BLUESTONE CT	1	B	50	45	5
3895	7406 BLUESTONE CT	1	B	51	48	3
3896	7404 BLUESTONE CT	1	B	52	47	5
3897	7402 BLUESTONE CT	1	B	54	49	5
3898	95 STONEY CREEK LN	1	B	55	48	7
3899	97 STONEY CREEK LN	1	B	54	46	8
3900	99 STONEY CREEK LN	1	B	55	47	8
3901	7393 CRYSTAL STONE CT	1	B	57	48	9
3902	7389 CRYSTAL STONE CT	1	B	57	49	8
3903	7387 CRYSTAL STONE CT	1	B	59	50	9

Noise Barrier Analysis
Alternative MA/NA, Barrier 5

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3904	7388 CRYSTAL STONE CT	1	B	59	49	10
3905	7390 CRYSTAL STONE CT	1	B	59	49	10
3906	7392 CRYSTAL STONE CT	1	B	58	49	9
3907	7394 CRYSTAL STONE CT	1	B	57	49	8
3908	7396 CRYSTAL STONE CT	1	B	55	48	7
3909	7398 CRYSTAL STONE CT	1	B	55	48	7
3910	102 STONEY CREEK LN	1	B	56	49	7
3911	104 STONEY CREEK LN	1	B	56	48	8
3912	106 STONEY CREEK LN	1	B	56	48	8
3913	108 STONEY CREEK LN	1	B	58	48	10
3914	112 STONEY CREEK LN	1	B	61	50	11
3915	7399 RUBY STONE CT	1	B	55	48	7

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 5 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 5 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 5(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 156 **# BENEFITS -** 137 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1051 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative Q, Barrier 6

Alternative Q, Barrier 6 Acoustical Performance Summary	
Impacts: 6	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 3	Total Benefits: 4
Non-Impacted Receptors Benefited: 1	

Alternative Q, Barrier 6 Parameters	
Length (ft): 1200	Area / Benefit (ft^2): 5400
Average Height (ft): 18	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 21600	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
374	000051 MIMOSA TRL	1	B	66	61	5
375	000051 MIMOSA TRL	1	B	65	60	5
376	000067 GOODMAN RD	1	B	73	63	10
377	000028 MIMOSA TRL	1	B	67	62	5
378	000067 GOODMAN RD	1	B	65	63	2
379	000067 GOODMAN RD	1	B	67	66	1
380	000067 GOODMAN RD	1	B	68	67	1
381	000050 GOODMAN RD	1	B	67	66	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 6 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 6 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 6(Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 6 **# BENEFITS -** 4 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 5400 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative T, Barrier 6

Alternative T, Barrier 6 Acoustical Performance Summary	
Impacts: 6	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 2	Total Benefits: 3
Non-Impacted Receptors Benefited: 1	

Alternative T, Barrier 6 Parameters	
Length (ft): 1650	Area / Benefit (ft^2): 8800
Average Height (ft): 16	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 26400	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
374	000051 MIMOSA TRL	1	B	65	60	5
375	000051 MIMOSA TRL	1	B	64	60	4
376	000067 GOODMAN RD	1	B	73	63	10
377	000028 MIMOSA TRL	1	B	67	62	5
378	000067 GOODMAN RD	1	B	66	63	3
379	000067 GOODMAN RD	1	B	67	66	1
380	000067 GOODMAN RD	1	B	68	66	2
381	000050 GOODMAN RD	1	B	67	66	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 6 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 6 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 6(T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 6 **# BENEFITS -** 3 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 8800 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 6

Alternative V-AW, Barrier 6 Acoustical Performance Summary	
Impacts: 7	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 3	Total Benefits: 4
Non-Impacted Receptors Benefited: 1	

Alternative V-AW, Barrier 6 Parameters	
Length (ft): 1700	Area / Benefit (ft^2): 7650
Average Height (ft): 18	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 30600	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
374	000051 MIMOSA TRL	1	B	66	60	6
375	000051 MIMOSA TRL	1	B	64	59	5
376	000067 GOODMAN RD	1	B	73	62	11
377	000028 MIMOSA TRL	1	B	67	62	5
378	000067 GOODMAN RD	1	B	66	63	3
379	000067 GOODMAN RD	1	B	67	66	1
380	000067 GOODMAN RD	1	B	68	67	1
381	000050 GOODMAN RD	1	B	67	67	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 6 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 6 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 6(V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 7 **# BENEFITS -** 4 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 7650 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/NA, Barrier 6

Alternative MA/NA, Barrier 6 Acoustical Performance Summary	
Impacts: 4	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 2	Total Benefits: 2
Non-Impacted Receptors Benefited: 0	

Alternative MA/NA, Barrier 6 Parameters	
Length (ft): 1225	Area / Benefit (ft^2): 8575
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 17150	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
374	000051 MIMOSA TRL	1	B	66	61	5
375	000051 MIMOSA TRL	1	B	64	60	4
376	000067 GOODMAN RD	1	B	73	64	9
377	000028 MIMOSA TRL	1	B	65	62	3
378	000067 GOODMAN RD	1	B	64	63	1
379	000067 GOODMAN RD	1	B	66	66	0
380	000067 GOODMAN RD	1	B	67	66	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 6 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 6 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 6(MA/NA) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 4 **# BENEFITS -** 2 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 8575 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B, Barrier 13 Shoulder

Alternative B, Barrier 13 Shoulder Acoustical Performance Summary	
Impacts: 41	Benefited Receptors @ ≥ 7 dB(A) NLR: 17
Impacted Receptors Benefited: 29	Total Benefits: 29
Non-Impacted Receptors Benefited: 0	

Alternative B, Barrier 13 Shoulder Parameters	
Length (ft): 4300	Area / Benefit (ft^2): 3262
Average Height (ft): 22	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 94600	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
71	000423 LANVALE RD	1	B	70	64	6
73	000395 LANVALE RD	1	B	69	67	2
77	000404 LANVALE RD	1	B	68	63	5
78	000396 LANVALE RD	1	B	68	59	9
79	000398 LANVALE RD	1	B	67	60	7
80	000398 LANVALE RD	1	B	69	67	2
81	000398 LANVALE RD	1	B	68	67	1
82	000398 LANVALE RD	1	B	64	57	7
83	000398 LANVALE RD	1	B	66	57	9
84	000398 LANVALE RD	1	B	65	57	8
86	000422 LANVALE RD	1	B	66	55	11
87	000280 LANSAN LN	1	B	72	60	12
88	000311 SAVANNA BRANCH RD	1	B	60	52	8
89	000301 SAVANNA BRANCH RD	1	B	61	53	8
90	000291 SAVANNA BRANCH RD	1	B	61	53	8
92	000265 QUAIL COVEY RD	1	B	69	59	10
93	000271 SAVANNA BRANCH RD	1	B	60	53	7
94	000271 SAVANNA BRANCH RD	1	B	62	55	7
95	000264 QUAIL COVEY RD	1	B	70	60	10
3738	386 SOUTHBEND CT	1	B	52	48	4
3739	394 SOUTHBEND CT	1	B	52	49	3
3740	286 LANVALE RD	1	B	55	50	5
3741	375 SAVANNA BRANCH RD	1	B	62	57	5
3742	331 SAVANNA BRANCH RD	1	B	60	52	8
3743	375 SAVANNA BRANCH RD	1	B	61	54	7
3744	368 SOUTHBEND CT	1	B	52	47	5
3745	372 SOUTHBEND CT	1	B	52	48	4
3746	280 LANVALE RD	1	B	56	50	6
3747	328 LANVALE RD	1	B	61	53	8
3748	316 LANVALE RD	1	B	59	56	3
3749	390 SOUTHBEND CT	1	B	52	48	4
3750	364 SOUTHBEND CT	1	B	53	48	5
3751	360 SOUTHBEND CT	1	B	53	48	5
3787	1232 SPRINGVALE TERRACE CT	1	B	55	51	4
3788	1036 SPARKLE STREAM CT	1	B	56	53	3
3789	1228 SPRINGVALE TERRACE CT	1	B	55	51	4
3790	1032 SPARKLE STREAM CT	1	B	57	55	2
3791	1233 SPRINGVALE TERRACE CT	1	B	55	50	5
3792	1033 SPARKLE STREAM CT	1	B	55	52	3
3793	1524 MISTY RUN CT	1	B	54	49	5
3794	1229 SPRINGVALE TERRACE CT	1	B	54	50	4
3795	1528 MISTY RUN CT	1	B	54	50	4
3796	1532 MISTY RUN CT	1	B	54	49	5
3797	1529 MISTY RUN CT	1	B	54	49	5

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 13 Shoulder does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 13 Shoulder is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 13(B) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 41 **# BENEFITS -** 29 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 3262 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B, Barrier 13 ROW

Alternative B, Barrier 13 ROW Acoustical Performance Summary	
Impacts: 41	Benefited Receptors @ ≥ 7 dB(A) NLR: 4
Impacted Receptors Benefited: 7	Total Benefits: 7
Non-Impacted Receptors Benefited: 0	

Alternative B, Barrier 13 ROW Parameters	
Length (ft): 2600	Area / Benefit (ft^2): 8543
Average Height (ft): 23	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 59800	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
71	000423 LANVALE RD	1	B	70	63	7
73	000395 LANVALE RD	1	B	69	69	0
77	000404 LANVALE RD	1	B	68	63	5
78	000396 LANVALE RD	1	B	68	62	6
79	000398 LANVALE RD	1	B	67	64	3
80	000398 LANVALE RD	1	B	69	68	1
81	000398 LANVALE RD	1	B	68	68	0
82	000398 LANVALE RD	1	B	64	63	1
83	000398 LANVALE RD	1	B	66	63	3
84	000398 LANVALE RD	1	B	65	62	3
86	000422 LANVALE RD	1	B	66	59	7
87	000280 LANSAN LN	1	B	72	60	12
88	000311 SAVANNA BRANCH RD	1	B	60	57	3
89	000301 SAVANNA BRANCH RD	1	B	61	58	3
90	000291 SAVANNA BRANCH RD	1	B	61	58	3
92	000265 QUAIL COVEY RD	1	B	69	62	7
93	000271 SAVANNA BRANCH RD	1	B	60	58	2
94	000271 SAVANNA BRANCH RD	1	B	62	60	2
95	000264 QUAIL COVEY RD	1	B	70	65	5
3738	386 SOUTHBEND CT	1	B	52	52	0
3739	394 SOUTHBEND CT	1	B	52	52	0
3740	286 LANVALE RD	1	B	55	54	1
3741	375 SAVANNA BRANCH RD	1	B	62	61	1
3742	331 SAVANNA BRANCH RD	1	B	60	58	2
3743	375 SAVANNA BRANCH RD	1	B	61	60	1
3744	368 SOUTHBEND CT	1	B	52	52	0
3745	372 SOUTHBEND CT	1	B	52	52	0
3746	280 LANVALE RD	1	B	56	55	1
3747	328 LANVALE RD	1	B	61	58	3
3748	316 LANVALE RD	1	B	59	59	0
3749	390 SOUTHBEND CT	1	B	52	52	0
3750	364 SOUTHBEND CT	1	B	53	52	1
3751	360 SOUTHBEND CT	1	B	53	52	1
3787	1232 SPRINGVALE TERRACE CT	1	B	55	55	0
3788	1036 SPARKLE STREAM CT	1	B	56	56	0
3789	1228 SPRINGVALE TERRACE CT	1	B	55	54	1
3790	1032 SPARKLE STREAM CT	1	B	57	57	0
3791	1233 SPRINGVALE TERRACE CT	1	B	55	55	0
3792	1033 SPARKLE STREAM CT	1	B	55	55	0
3793	1524 MISTY RUN CT	1	B	54	54	0
3794	1229 SPRINGVALE TERRACE CT	1	B	54	54	0
3795	1528 MISTY RUN CT	1	B	54	54	0
3796	1532 MISTY RUN CT	1	B	54	54	0
3797	1529 MISTY RUN CT	1	B	54	54	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 13 ROW does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 13 ROW is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 13 ROW(B) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 41 **# BENEFITS -** 7 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 8343 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B, Barrier 14

Alternative B, Barrier 14 Acoustical Performance Summary	
Impacts: 33	Benefited Receptors @ ≥ 7 dB(A) NLR: 16
Impacted Receptors Benefited: 31	Total Benefits: 36
Non-Impacted Receptors Benefited: 5	

Alternative B, Barrier 14 Parameters	
Length (ft): 3350	Area / Benefit (ft^2): 2233
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 80400	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
97	002436 TARA FOREST DR	1	B	60	52	8
98	002440 TARA FOREST DR	1	B	61	52	9
99	002444 TARA FOREST DR	1	B	62	53	9
100	002448 TARA FOREST DR	1	B	63	54	9
111	002445 TARA FOREST DR	1	B	61	52	9
112	002441 TARA FOREST DR	1	B	60	49	11
115	002175 SPRINGSTONE DR	1	B	61	52	9
118	002187 SPRINGSTONE DR	1	B	63	54	9
3752	2409 TARA FOREST DR	1	B	50	47	3
3753	2417 TARA FOREST DR	1	B	51	46	5
3754	2425 TARA FOREST DR	1	B	51	46	5
3755	2421 TARA FOREST DR	1	B	52	47	5
3756	2424 TARA FOREST DR	1	B	57	51	6
3757	2416 TARA FOREST DR	1	B	56	50	6
3758	2412 TARA FOREST DR	1	B	56	50	6
3759	2408 TARA FOREST DR	1	B	55	50	5
3760	2400 TARA FOREST DR	1	B	52	49	3
3761	2404 TARA FOREST DR	1	B	53	49	4
3762	2420 TARA FOREST DR	1	B	57	51	6
3763	2405 TARA FOREST DR	1	B	50	43	7
3764	2429 TARA FOREST DR	1	B	53	48	5
3765	2437 TARA FOREST DR	1	B	54	47	7
3766	2433 TARA FOREST DR	1	B	54	48	6
3767	2432 TARA FOREST DR	1	B	59	51	8
3769	2152 SPRINGSTONE DR	1	B	54	47	7
3770	2148 SPRINGSTONE DR	1	B	53	46	7
3774	2132 SPRINGSTONE DR	1	B	52	46	6
3775	2128 SPRINGSTONE DR	1	B	52	46	6
3776	2144 SPRINGSTONE DR	1	B	53	47	6
3777	2136 SPRINGSTONE DR	1	B	52	45	7
3778	2163 SPRINGSTONE DR	1	B	54	49	5
3779	2171 SPRINGSTONE DR	1	B	56	50	6
3780	2167 SPRINGSTONE DR	1	B	55	50	5
3781	2140 SPRINGSTONE DR	1	B	53	46	7
3782	2159 SPRINGSTONE DR	1	B	54	49	5
3783	2155 SPRINGSTONE DR	1	B	52	47	5
3784	2143 SPRINGSTONE DR	1	B	49	46	3
3785	2151 SPRINGSTONE DR	1	B	51	46	5
3786	2147 SPRINGSTONE DR	1	B	50	45	5
3836	2428 TARA FOREST DR	1	B	58	51	7

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 14 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 14 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 14(B) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 33 **# BENEFITS -** 36 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2233 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B, Barrier 15/16

Alternative B, Barrier 15/16 Acoustical Performance Summary	
Impacts: 125	Benefited Receptors @ ≥ 7 dB(A) NLR: 84
Impacted Receptors Benefited: 111	Total Benefits: 147
Non-Impacted Receptors Benefited: 36	

Alternative B, Barrier 15/16 Parameters	
Length (ft): 6300	Area / Benefit (ft^2): 1029
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 151200	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1	000247 LANSAN LN	1	B	65	60	5
4	000269 LANSAN LN	1	B	67	58	9
5	000269 LANSAN LN	1	B	68	57	11
17	001004 SLATER WAY	1	B	62	53	9
18	001000 SLATER WAY	1	B	65	53	12
19	001001 SLATER WAY	1	B	67	55	12
20	001005 SLATER WAY	1	B	66	55	11
21	001008 SLATER WAY	1	B	61	52	9
22	001012 SLATER WAY	1	B	61	51	10
23	000169 WATERSFIELD RD	1	B	63	52	11
24	000165 WATERSFIELD RD	1	B	64	54	10
25	000161 WATERSFIELD RD	1	B	65	54	11
26	000157 WATERSFIELD RD	1	B	65	55	10
27	000153 WATERSFIELD RD	1	B	67	57	10
28	000149 WATERSFIELD RD	1	B	67	58	9
29	000147 WATERSFIELD RD	1	B	67	59	8
30	000102 TILLINGTON CT	1	B	65	54	11
31	000104 TILLINGTON CT	1	B	68	60	8
32	000106 TILLINGTON CT	1	B	69	63	6
33	000107 TILLINGTON CT	1	B	70	67	3
34	000105 TILLINGTON CT	1	B	70	69	1
35	000103 TILLINGTON CT	1	B	69	68	1
36	000101 TILLINGTON CT	1	B	64	58	6
37	000139 WATERSFIELD RD	1	B	68	67	1
38	000137 WATERSFIELD RD	1	B	68	67	1
39	000135 WATERSFIELD RD	1	B	68	67	1
40	000133 WATERSFIELD RD	1	B	67	66	1
41	000131 WATERSFIELD RD	1	B	68	67	1
42	000134 WATERSFIELD RD	1	B	59	54	5
43	000136 WATERSFIELD RD	1	B	59	54	5
44	000138 WATERSFIELD RD	1	B	60	55	5
45	000140 WATERSFIELD RD	1	B	63	57	6
46	000146 WATERSFIELD RD	1	B	63	55	8
47	000148 WATERSFIELD RD	1	B	62	55	7
48	000156 WATERSFIELD RD	1	B	63	54	9
49	000160 WATERSFIELD RD	1	B	62	52	10
50	000164 WATERSFIELD RD	1	B	61	51	10
51	001033 SLATER WAY	1	B	61	53	8
52	001037 SLATER WAY	1	B	62	53	9
53	001041 SLATER WAY	1	B	61	53	8
54	001040 SLATER WAY	1	B	61	52	9
55	001032 SLATER WAY	1	B	62	52	10
56	001028 SLATER WAY	1	B	61	54	7
57	001024 SLATER WAY	1	B	62	54	8
58	001020 SLATER WAY	1	B	61	53	8
59	008655 ORCHARD LOOP RD	1	B	59	51	8
60	008653 ORCHARD LOOP RD	1	B	60	51	9
61	008715 ORCHARD LOOP RD	1	B	60	51	9
62	008713 ORCHARD LOOP RD	1	B	60	51	9
63	008711 ORCHARD LOOP RD	1	B	61	51	10
64	008709 ORCHARD LOOP RD	1	B	61	52	9
65	008707 ORCHARD LOOP RD	1	B	61	51	10
66	008705 ORCHARD LOOP RD	1	B	62	52	10
67	008703 ORCHARD LOOP RD	1	B	61	51	10
68	008701 ORCHARD LOOP RD	1	B	61	51	10
69	008641 ORCHARD LOOP RD	1	B	61	51	10
70	008639 ORCHARD LOOP RD	1	B	59	50	9
133	004530 COMBS FOREST CT	1	B	63	57	6

Noise Barrier Analysis
Alternative B, Barrier 15/16

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
134	004534 COMBS FOREST CT	1	B	64	57	7
138	004529 COMBS FOREST CT	1	B	61	56	5
3633	8657 ORCHARD LOOP RD	1	B	59	51	8
3634	8659 ORCHARD LOOP RD	1	B	57	49	8
3635	8661 ORCHARD LOOP RD	1	B	55	48	7
3636	8663 ORCHARD LOOP RD	1	B	53	47	6
3637	8667 ORCHARD LOOP RD	1	B	52	46	6
3638	8669 ORCHARD LOOP RD	1	B	51	46	5
3639	8665 ORCHARD LOOP RD	1	B	53	47	6
3640	8671 ORCHARD LOOP RD	1	B	51	45	6
3641	4111 PINEBRUSH DR	1	B	52	46	6
3642	4115 PINEBRUSH DR	1	B	52	45	7
3643	4117 PINEBRUSH DR	1	B	52	45	7
3644	4113 PINEBRUSH DR	1	B	51	44	7
3645	4119 PINEBRUSH DR	1	B	51	44	7
3646	8668 ORCHARD LOOP RD	1	B	53	46	7
3647	8656 ORCHARD LOOP RD	1	B	55	47	8
3648	8652 ORCHARD LOOP RD	1	B	54	46	8
3649	8666 ORCHARD LOOP RD	1	B	55	47	8
3650	8650 ORCHARD LOOP RD	1	B	55	46	9
3651	4112 PINEBRUSH DR	1	B	51	45	6
3652	3123 THISTLEWOOD DR	1	B	49	43	6
3653	4116 PINEBRUSH DR	1	B	50	44	6
3654	4118 PINEBRUSH DR	1	B	51	44	7
3655	3121 THISTLEWOOD DR	1	B	49	43	6
3656	4114 PINEBRUSH DR	1	B	50	45	5
3657	4120 PINEBRUSH DR	1	B	50	44	6
3658	3111 THISTLEWOOD DR	1	B	47	43	4
3659	2125 HEATHWOOD DR	1	B	49	42	7
3660	3115 THISTLEWOOD DR	1	B	48	42	6
3661	3117 THISTLEWOOD DR	1	B	49	43	6
3662	3128 THISTLEWOOD DR	1	B	50	43	7
3663	3113 THISTLEWOOD DR	1	B	47	42	5
3664	3119 THISTLEWOOD DR	1	B	48	42	6
3665	8654 ORCHARD LOOP RD	1	B	54	46	8
3666	8648 ORCHARD LOOP RD	1	B	55	46	9
3667	8640 ORCHARD LOOP RD	1	B	55	46	9
3668	4121 PINEBRUSH DR	1	B	50	44	6
3669	8644 ORCHARD LOOP RD	1	B	55	47	8
3670	4125 PINEBRUSH DR	1	B	51	44	7
3671	2121 HEATHWOOD DR	1	B	48	43	5
3672	2119 HEATHWOOD DR	1	B	48	42	6
3673	2115 HEATHWOOD DR	1	B	47	43	4
3674	2113 HEATHWOOD DR	1	B	47	43	4
3675	2117 HEATHWOOD DR	1	B	48	43	5
3676	2111 HEATHWOOD DR	1	B	48	43	5
3677	3127 THISTLEWOOD DR	1	B	51	44	7
3678	3125 THISTLEWOOD DR	1	B	48	42	6
3679	4126 PINEBRUSH DR	1	B	52	45	7
3680	4124 PINEBRUSH DR	1	B	51	44	7
3681	4128 PINEBRUSH DR	1	B	53	45	8
3682	4122 PINEBRUSH DR	1	B	51	44	7
3683	8637 ORCHARD LOOP RD	1	B	57	49	8
3684	8635 ORCHARD LOOP RD	1	B	56	48	8
3685	8625 ORCHARD LOOP RD	1	B	53	47	6
3686	8631 ORCHARD LOOP RD	1	B	55	48	7
3687	8629 ORCHARD LOOP RD	1	B	54	47	7
3688	8633 ORCHARD LOOP RD	1	B	54	47	7
3689	8627 ORCHARD LOOP RD	1	B	54	47	7
3690	3122 THISTLEWOOD DR	1	B	50	44	6
3691	3120 THISTLEWOOD DR	1	B	50	44	6
3692	3116 THISTLEWOOD DR	1	B	48	44	4
3693	3114 THISTLEWOOD DR	1	B	48	44	4
3694	3118 THISTLEWOOD DR	1	B	49	44	5
3695	3112 THISTLEWOOD DR	1	B	49	44	5
3696	2123 HEATHWOOD DR	1	B	49	43	6
3697	3124 THISTLEWOOD DR	1	B	50	44	6
3698	2127 HEATHWOOD DR	1	B	49	44	5

Noise Barrier Analysis
Alternative B, Barrier 15/16

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3699	3128 THISTLEWOOD DR	1	B	50	45	5
3700	8623 ORCHARD LOOP RD	1	B	52	46	6
3701	132 WATERSFIELD RD	1	B	61	56	5
3702	130 WATERSFIELD RD	1	B	59	55	4
3703	128 WATERSFIELD RD	1	B	59	54	5
3704	209 WHITEHILL RD	1	B	54	48	6
3705	205 WHITEHILL RD	1	B	55	49	6
3706	207 WHITEHILL RD	1	B	55	49	6
3707	116 WATERSFIELD RD	1	B	55	50	5
3708	1053 SLATER WAY	1	B	59	52	7
3709	1057 SLATER WAY	1	B	56	49	7
3710	1061 SLATER WAY	1	B	56	48	8
3711	1073 SLATER WAY	1	B	53	49	4
3712	1081 SLATER WAY	1	B	52	48	4
3713	1065 SLATER WAY	1	B	54	49	5
3714	1089 SLATER WAY	1	B	53	46	7
3715	1044 SLATER WAY	1	B	55	49	6
3716	1048 SLATER WAY	1	B	54	48	6
3717	1052 SLATER WAY	1	B	53	48	5
3718	1064 SLATER WAY	1	B	53	47	6
3719	1072 SLATER WAY	1	B	53	47	6
3720	1056 SLATER WAY	1	B	53	47	6
3721	1045 SLATER WAY	1	B	61	54	7
3722	2032 LAPHAM DR	1	B	56	48	8
3723	2028 LAPHAM DR	1	B	56	48	8
3724	2005 LAPHAM DR	1	B	52	46	6
3725	2016 LAPHAM DR	1	B	55	48	7
3726	2008 LAPHAM DR	1	B	54	48	6
3727	2020 LAPHAM DR	1	B	56	48	8
3728	1076 SLATER WAY	1	B	53	47	6
3729	129 WATERSFIELD RD	1	B	66	65	1
3730	127 WATERSFIELD RD	1	B	64	63	1
3731	125 WATERSFIELD RD	1	B	66	65	1
3732	119 WATERSFIELD RD	1	B	66	65	1
3733	117 WATERSFIELD RD	1	B	65	64	1
3734	123 WATERSFIELD RD	1	B	66	66	0
3735	115 WATERSFIELD RD	1	B	63	62	1
3736	2009 LAPHAM DR	1	B	52	46	6
3737	1092 SLATER WAY	1	B	51	45	6
3811	8599 LANVALE FOREST DR	1	B	54	49	5
3812	8595 LANVALE FOREST DR	1	B	54	46	8
3813	4505 COMBS FOREST CT	1	B	55	49	6
3817	4521 COMBS FOREST CT	1	B	58	53	5
3821	4506 COMBS FOREST CT	1	B	57	51	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 15/16 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 15/16 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 15/16(B) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 125 **# BENEFITS -** 147 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1029 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 20

Alternative V-AW, Barrier 20 Acoustical Performance Summary	
Impacts: 5	Benefited Receptors @ ≥ 7 dB(A) NLR: 0
Impacted Receptors Benefited: 0	Total Benefits: 0
Non-Impacted Receptors Benefited: 0	

Alternative V-AW, Barrier 20 Parameters	
Length (ft): 2000	Area / Benefit (ft^2): N/A
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 48000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
470	001008 HUNTERSTONE DR	1	B	61	60	1
471	001008 HUNTERSTONE DR	1	B	63	62	1
472	001008 HUNTERSTONE DR	1	B	66	66	0
473	001008 HUNTERSTONE DR	1	B	65	65	0
474	001008 HUNTERSTONE DR	1	B	57	57	0
475	001008 HUNTERSTONE DR	1	B	54	54	0
476	001008 HUNTERSTONE DR	1	B	55	54	1
477	001008 HUNTERSTONE DR	1	B	56	55	1
478	001010 HUNTERSTONE DR	1	B	54	53	1
479	001010 HUNTERSTONE DR	1	B	55	54	1
480	001010 HUNTERSTONE DR	1	B	52	52	0
481	001010 HUNTERSTONE DR	1	B	52	52	0
482	001010 HUNTERSTONE DR	1	B	52	52	0
483	001010 HUNTERSTONE DR	1	B	52	52	0
484	001010 HUNTERSTONE DR	1	B	54	53	1
485	001010 HUNTERSTONE DR	1	B	54	53	1
486	001006 HUNTERSTONE DR	1	B	52	52	0
487	001006 HUNTERSTONE DR	1	B	52	52	0
488	001006 HUNTERSTONE DR	1	B	57	57	0
489	001006 HUNTERSTONE DR	1	B	59	59	0
490	001006 HUNTERSTONE DR	1	B	65	65	0
491	001006 HUNTERSTONE DR	1	B	65	65	0
492	001006 HUNTERSTONE DR	1	B	62	62	0
493	001006 HUNTERSTONE DR	1	B	60	60	0
494	001008 HUNTERSTONE DR	1	B	63	62	1
495	001008 HUNTERSTONE DR	1	B	64	63	1
496	001008 HUNTERSTONE DR	1	B	66	66	0
497	001008 HUNTERSTONE DR	1	B	66	65	1
498	001008 HUNTERSTONE DR	1	B	59	59	0
499	001008 HUNTERSTONE DR	1	B	56	56	0
500	001008 HUNTERSTONE DR	1	B	58	57	1
501	001008 HUNTERSTONE DR	1	B	58	57	1
502	001010 HUNTERSTONE DR	1	B	56	55	1
503	001010 HUNTERSTONE DR	1	B	57	56	1
504	001010 HUNTERSTONE DR	1	B	52	52	0
505	001010 HUNTERSTONE DR	1	B	52	52	0
506	001010 HUNTERSTONE DR	1	B	52	52	0
507	001010 HUNTERSTONE DR	1	B	53	53	0
508	001010 HUNTERSTONE DR	1	B	56	55	1
509	001010 HUNTERSTONE DR	1	B	56	55	1
510	001006 HUNTERSTONE DR	1	B	52	52	0
511	001006 HUNTERSTONE DR	1	B	52	52	0
512	001006 HUNTERSTONE DR	1	B	59	59	0
513	001006 HUNTERSTONE DR	1	B	61	61	0
514	001006 HUNTERSTONE DR	1	B	66	65	1
515	001006 HUNTERSTONE DR	1	B	65	65	0
516	001006 HUNTERSTONE DR	1	B	63	63	0
517	001006 HUNTERSTONE DR	1	B	62	61	1
518	001008 HUNTERSTONE DR	1	B	63	63	0
519	001008 HUNTERSTONE DR	1	B	64	63	1
520	001008 HUNTERSTONE DR	1	B	66	66	0
521	001008 HUNTERSTONE DR	1	B	65	65	0

Noise Barrier Analysis
Alternative V-AW, Barrier 20

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
522	001008 HUNTERSTONE DR	1	B	60	60	0
523	001008 HUNTERSTONE DR	1	B	58	57	1
524	001008 HUNTERSTONE DR	1	B	59	58	1
525	001008 HUNTERSTONE DR	1	B	59	58	1
526	001010 HUNTERSTONE DR	1	B	57	56	1
527	001010 HUNTERSTONE DR	1	B	58	57	1
528	001010 HUNTERSTONE DR	1	B	52	52	0
529	001010 HUNTERSTONE DR	1	B	52	52	0
530	001010 HUNTERSTONE DR	1	B	54	53	1
531	001010 HUNTERSTONE DR	1	B	54	54	0
532	001010 HUNTERSTONE DR	1	B	57	56	1
533	001010 HUNTERSTONE DR	1	B	57	56	1
534	001006 HUNTERSTONE DR	1	B	54	53	1
535	001006 HUNTERSTONE DR	1	B	54	53	1
536	001006 HUNTERSTONE DR	1	B	59	59	0
537	001006 HUNTERSTONE DR	1	B	61	61	0
538	001006 HUNTERSTONE DR	1	B	65	65	0
539	001006 HUNTERSTONE DR	1	B	65	65	0
540	001006 HUNTERSTONE DR	1	B	63	63	0
541	001006 HUNTERSTONE DR	1	B	62	61	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 20 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 20 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 20 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 5 **# BENEFITS -** 0 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	NO
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	NO
2.	Is the quantity per benefited receptor of N/A square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	NO
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 21

Alternative V-AW, Barrier 21 Acoustical Performance Summary	
Impacts: 3	Benefited Receptors @ ≥ 7 dB(A) NLR: 0
Impacted Receptors Benefited: 0	Total Benefits: 0
Non-Impacted Receptors Benefited: 0	

Alternative V-AW, Barrier 21 Parameters	
Length (ft): 2184	Area / Benefit (ft^2): N/A
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 52416	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
845	000201 SAND PEBBLE DR	1	B	67	67	0
846	000205 SAND PEBBLE DR	1	B	63	62	1
847	000207 SAND PEBBLE DR	1	B	60	59	1
848	000209 SAND PEBBLE DR	1	B	54	52	2
849	000211 SAND PEBBLE DR	1	B	57	55	2
850	000213 SAND PEBBLE DR	1	B	56	54	2
851	000215 SAND PEBBLE DR	1	B	56	53	3
852	000219 SAND PEBBLE DR	1	B	55	52	3
853	000218 SAND PEBBLE DR	1	B	52	52	0
854	000216 SAND PEBBLE DR	1	B	52	52	0
855	000214 SAND PEBBLE DR	1	B	52	52	0
856	000212 SAND PEBBLE DR	1	B	52	52	0
857	000210 SAND PEBBLE DR	1	B	56	54	2
858	000208 SAND PEBBLE DR	1	B	56	55	1
859	000206 SAND PEBBLE DR	1	B	59	58	1
860	000204 SAND PEBBLE DR	1	B	64	64	0
861	000203 BIRCH CREEK DR	1	B	68	68	0
862	000205 BIRCH CREEK DR	1	B	60	59	1
863	000209 BIRCH CREEK DR	1	B	56	54	2
864	000213 BIRCH CREEK DR	1	B	53	52	1
865	000217 BIRCH CREEK DR	1	B	52	52	0
866	000221 BIRCH CREEK DR	1	B	52	52	0
867	000220 BIRCH CREEK DR	1	B	53	52	1
868	000216 BIRCH CREEK DR	1	B	54	52	2
869	000212 BIRCH CREEK DR	1	B	56	55	1
870	000208 BIRCH CREEK DR	1	B	59	58	1
871	000204 BIRCH CREEK DR	1	B	68	68	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 21 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 21 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 21(V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 3 **# BENEFITS -** 0 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	NO
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	NO
2.	Is the quantity per benefited receptor of N/A square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	NO
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 22

Alternative V-AW, Barrier 22 Acoustical Performance Summary	
Impacts: 57	Benefited Receptors @ ≥ 7 dB(A) NLR: 97
Impacted Receptors Benefited: 55	Total Benefits: 138
Non-Impacted Receptors Benefited: 83	

Alternative V-AW, Barrier 22 Parameters	
Length (ft): 2181	Area / Benefit (ft^2): 379
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 52344	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
542	000412 HAWTHORNE LOOP RD	1	B	66	58	8
543	000412 HAWTHORNE LOOP RD	1	B	65	58	7
544	000412 HAWTHORNE LOOP RD	1	B	63	57	6
545	000412 HAWTHORNE LOOP RD	1	B	63	57	6
546	000412 HAWTHORNE LOOP RD	1	B	60	52	8
547	000412 HAWTHORNE LOOP RD	1	B	61	52	9
548	000412 HAWTHORNE LOOP RD	1	B	64	53	11
549	000412 HAWTHORNE LOOP RD	1	B	65	54	11
550	000411 HAWTHORNE LOOP RD	1	B	66	57	9
551	000411 HAWTHORNE LOOP RD	1	B	65	56	9
552	000411 HAWTHORNE LOOP RD	1	B	62	52	10
553	000411 HAWTHORNE LOOP RD	1	B	61	52	9
554	000411 HAWTHORNE LOOP RD	1	B	60	52	8
555	000411 HAWTHORNE LOOP RD	1	B	61	52	9
556	000411 HAWTHORNE LOOP RD	1	B	64	54	10
557	000411 HAWTHORNE LOOP RD	1	B	65	54	11
558	000431 HAWTHORNE LOOP RD	1	B	56	52	4
559	000404 HAWTHORNE LOOP RD	1	B	55	52	3
560	000404 HAWTHORNE LOOP RD	1	B	54	52	2
561	000404 HAWTHORNE LOOP RD	1	B	55	52	3
562	000404 HAWTHORNE LOOP RD	1	B	52	52	0
563	000404 HAWTHORNE LOOP RD	1	B	52	52	0
564	000404 HAWTHORNE LOOP RD	1	B	53	52	1
565	000404 HAWTHORNE LOOP RD	1	B	53	53	0
566	000435 HAWTHORNE LOOP RD	1	B	56	54	2
567	000435 HAWTHORNE LOOP RD	1	B	55	53	2
568	000435 HAWTHORNE LOOP RD	1	B	54	53	1
569	000435 HAWTHORNE LOOP RD	1	B	54	52	2
570	000435 HAWTHORNE LOOP RD	1	B	60	60	0
571	000435 HAWTHORNE LOOP RD	1	B	60	60	0
572	000435 HAWTHORNE LOOP RD	1	B	61	61	0
573	000435 HAWTHORNE LOOP RD	1	B	61	61	0
573.1	000436 HAWTHORNE LOOP RD	1	B	60	60	0
574	000430 HAWTHORNE LOOP RD	1	B	55	55	0
575	000430 HAWTHORNE LOOP RD	1	B	55	55	0
576	000430 HAWTHORNE LOOP RD	1	B	55	55	0
577	000430 HAWTHORNE LOOP RD	1	B	55	55	0
578	000430 HAWTHORNE LOOP RD	1	B	57	52	5
579	000430 HAWTHORNE LOOP RD	1	B	56	52	4
580	000430 HAWTHORNE LOOP RD	1	B	54	52	2
581	000430 HAWTHORNE LOOP RD	1	B	54	52	2
582	000424 HAWTHORNE LOOP RD	1	B	55	52	3
583	000424 HAWTHORNE LOOP RD	1	B	55	52	3
584	000424 HAWTHORNE LOOP RD	1	B	56	53	3
585	000424 HAWTHORNE LOOP RD	1	B	56	53	3
586	000424 HAWTHORNE LOOP RD	1	B	57	54	3
587	000424 HAWTHORNE LOOP RD	1	B	58	54	4
588	000424 HAWTHORNE LOOP RD	1	B	57	52	5
589	000424 HAWTHORNE LOOP RD	1	B	56	52	4
590	000415 HAWTHORNE LOOP RD	1	B	53	52	1
591	000415 HAWTHORNE LOOP RD	1	B	54	52	2
592	000415 HAWTHORNE LOOP RD	1	B	57	53	4
593	000415 HAWTHORNE LOOP RD	1	B	59	54	5
594	000415 HAWTHORNE LOOP RD	1	B	65	57	8
595	000415 HAWTHORNE LOOP RD	1	B	65	57	8

Noise Barrier Analysis
Alternative V-AW, Barrier 22

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
596	000415 HAWTHORNE LOOP RD	1	B	65	57	8
597	000415 HAWTHORNE LOOP RD	1	B	65	57	8
598	000423 HAWTHORNE LOOP RD	1	B	63	55	8
599	000423 HAWTHORNE LOOP RD	1	B	63	55	8
600	000423 HAWTHORNE LOOP RD	1	B	60	52	8
601	000423 HAWTHORNE LOOP RD	1	B	59	52	7
602	000423 HAWTHORNE LOOP RD	1	B	57	52	5
603	000423 HAWTHORNE LOOP RD	1	B	58	52	6
604	000423 HAWTHORNE LOOP RD	1	B	60	52	8
605	000423 HAWTHORNE LOOP RD	1	B	63	53	10
606	000420 HAWTHORNE LOOP RD	1	B	66	56	10
607	000420 HAWTHORNE LOOP RD	1	B	65	55	10
608	000420 HAWTHORNE LOOP RD	1	B	63	54	9
609	000420 HAWTHORNE LOOP RD	1	B	63	55	8
610	000420 HAWTHORNE LOOP RD	1	B	61	56	5
611	000420 HAWTHORNE LOOP RD	1	B	61	56	5
612	000420 HAWTHORNE LOOP RD	1	B	63	57	6
613	000420 HAWTHORNE LOOP RD	1	B	63	57	6
614	000412 HAWTHORNE LOOP RD	1	B	69	61	8
615	000412 HAWTHORNE LOOP RD	1	B	68	61	7
616	000412 HAWTHORNE LOOP RD	1	B	66	61	5
617	000412 HAWTHORNE LOOP RD	1	B	66	61	5
618	000412 HAWTHORNE LOOP RD	1	B	64	53	11
619	000412 HAWTHORNE LOOP RD	1	B	64	52	12
620	000412 HAWTHORNE LOOP RD	1	B	67	55	12
621	000412 HAWTHORNE LOOP RD	1	B	68	55	13
622	000411 HAWTHORNE LOOP RD	1	B	68	60	8
623	000411 HAWTHORNE LOOP RD	1	B	67	58	9
624	000411 HAWTHORNE LOOP RD	1	B	65	53	12
625	000411 HAWTHORNE LOOP RD	1	B	65	53	12
626	000411 HAWTHORNE LOOP RD	1	B	64	53	11
627	000411 HAWTHORNE LOOP RD	1	B	65	54	11
628	000411 HAWTHORNE LOOP RD	1	B	67	55	12
629	000411 HAWTHORNE LOOP RD	1	B	68	56	12
630	000404 HAWTHORNE LOOP RD	1	B	61	56	5
631	000404 HAWTHORNE LOOP RD	1	B	61	56	5
632	000404 HAWTHORNE LOOP RD	1	B	60	55	5
633	000404 HAWTHORNE LOOP RD	1	B	61	55	6
634	000404 HAWTHORNE LOOP RD	1	B	55	55	0
635	000404 HAWTHORNE LOOP RD	1	B	55	55	0
636	000404 HAWTHORNE LOOP RD	1	B	56	56	0
637	000404 HAWTHORNE LOOP RD	1	B	57	57	0
638	000435 HAWTHORNE LOOP RD	1	B	60	58	2
639	000435 HAWTHORNE LOOP RD	1	B	58	56	2
640	000435 HAWTHORNE LOOP RD	1	B	58	56	2
641	000435 HAWTHORNE LOOP RD	1	B	58	56	2
642	000435 HAWTHORNE LOOP RD	1	B	64	64	0
643	000435 HAWTHORNE LOOP RD	1	B	64	64	0
644	000435 HAWTHORNE LOOP RD	1	B	64	64	0
645	000435 HAWTHORNE LOOP RD	1	B	64	64	0
646	000430 HAWTHORNE LOOP RD	1	B	60	60	0
647	000430 HAWTHORNE LOOP RD	1	B	60	60	0
648	000430 HAWTHORNE LOOP RD	1	B	60	60	0
649	000430 HAWTHORNE LOOP RD	1	B	60	60	0
650	000430 HAWTHORNE LOOP RD	1	B	60	56	4
651	000430 HAWTHORNE LOOP RD	1	B	60	55	5
652	000430 HAWTHORNE LOOP RD	1	B	59	53	6
653	000430 HAWTHORNE LOOP RD	1	B	59	53	6
654	000424 HAWTHORNE LOOP RD	1	B	59	53	6
655	000424 HAWTHORNE LOOP RD	1	B	59	52	7
656	000424 HAWTHORNE LOOP RD	1	B	61	57	4
657	000424 HAWTHORNE LOOP RD	1	B	61	57	4
658	000424 HAWTHORNE LOOP RD	1	B	62	57	5
659	000424 HAWTHORNE LOOP RD	1	B	63	57	6

Noise Barrier Analysis
Alternative V-AW, Barrier 22

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
660	000424 HAWTHORNE LOOP RD	1	B	61	53	8
661	000424 HAWTHORNE LOOP RD	1	B	60	53	7
662	000415 HAWTHORNE LOOP RD	1	B	56	54	2
663	000415 HAWTHORNE LOOP RD	1	B	56	54	2
664	000415 HAWTHORNE LOOP RD	1	B	60	56	4
665	000415 HAWTHORNE LOOP RD	1	B	62	57	5
666	000415 HAWTHORNE LOOP RD	1	B	70	59	11
667	000415 HAWTHORNE LOOP RD	1	B	70	59	11
668	000415 HAWTHORNE LOOP RD	1	B	70	59	11
669	000415 HAWTHORNE LOOP RD	1	B	69	59	10
670	000423 HAWTHORNE LOOP RD	1	B	67	57	10
671	000423 HAWTHORNE LOOP RD	1	B	67	57	10
672	000423 HAWTHORNE LOOP RD	1	B	64	53	11
673	000423 HAWTHORNE LOOP RD	1	B	64	53	11
674	000423 HAWTHORNE LOOP RD	1	B	61	54	7
675	000423 HAWTHORNE LOOP RD	1	B	62	53	9
676	000423 HAWTHORNE LOOP RD	1	B	64	53	11
677	000423 HAWTHORNE LOOP RD	1	B	67	54	13
678	000420 HAWTHORNE LOOP RD	1	B	68	57	11
679	000420 HAWTHORNE LOOP RD	1	B	68	57	11
680	000420 HAWTHORNE LOOP RD	1	B	66	57	9
681	000420 HAWTHORNE LOOP RD	1	B	66	57	9
682	000420 HAWTHORNE LOOP RD	1	B	67	60	7
683	000420 HAWTHORNE LOOP RD	1	B	67	60	7
684	000420 HAWTHORNE LOOP RD	1	B	68	61	7
685	000420 HAWTHORNE LOOP RD	1	B	69	61	8
686	000412 HAWTHORNE LOOP RD	1	B	69	62	7
687	000412 HAWTHORNE LOOP RD	1	B	68	62	6
688	000412 HAWTHORNE LOOP RD	1	B	67	62	5
689	000412 HAWTHORNE LOOP RD	1	B	67	62	5
690	000412 HAWTHORNE LOOP RD	1	B	64	55	9
691	000412 HAWTHORNE LOOP RD	1	B	65	54	11
692	000412 HAWTHORNE LOOP RD	1	B	67	57	10
693	000412 HAWTHORNE LOOP RD	1	B	68	57	11
694	000411 HAWTHORNE LOOP RD	1	B	68	60	8
695	000411 HAWTHORNE LOOP RD	1	B	68	59	9
696	000411 HAWTHORNE LOOP RD	1	B	66	55	11
697	000411 HAWTHORNE LOOP RD	1	B	65	55	10
698	000411 HAWTHORNE LOOP RD	1	B	65	55	10
699	000411 HAWTHORNE LOOP RD	1	B	66	56	10
700	000411 HAWTHORNE LOOP RD	1	B	67	58	9
701	000411 HAWTHORNE LOOP RD	1	B	68	58	10
702	000404 HAWTHORNE LOOP RD	1	B	63	58	5
703	000404 HAWTHORNE LOOP RD	1	B	63	58	5
704	000404 HAWTHORNE LOOP RD	1	B	63	57	6
705	000404 HAWTHORNE LOOP RD	1	B	63	57	6
706	000404 HAWTHORNE LOOP RD	1	B	58	58	0
707	000404 HAWTHORNE LOOP RD	1	B	58	57	1
708	000404 HAWTHORNE LOOP RD	1	B	59	58	1
709	000404 HAWTHORNE LOOP RD	1	B	60	59	1
710	000435 HAWTHORNE LOOP RD	1	B	61	59	2
711	000435 HAWTHORNE LOOP RD	1	B	60	58	2
712	000435 HAWTHORNE LOOP RD	1	B	60	58	2
713	000435 HAWTHORNE LOOP RD	1	B	59	57	2
714	000435 HAWTHORNE LOOP RD	1	B	64	64	0
715	000435 HAWTHORNE LOOP RD	1	B	64	64	0
716	000435 HAWTHORNE LOOP RD	1	B	64	64	0
717	000435 HAWTHORNE LOOP RD	1	B	64	64	0
718	000430 HAWTHORNE LOOP RD	1	B	61	61	0
719	000430 HAWTHORNE LOOP RD	1	B	61	61	0
720	000430 HAWTHORNE LOOP RD	1	B	61	61	0
721	000430 HAWTHORNE LOOP RD	1	B	61	61	0
722	000430 HAWTHORNE LOOP RD	1	B	62	57	5
723	000430 HAWTHORNE LOOP RD	1	B	62	57	5

Noise Barrier Analysis
Alternative V-AW, Barrier 22

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
724	000430 HAWTHORNE LOOP RD	1	B	61	55	6
725	000430 HAWTHORNE LOOP RD	1	B	61	55	6
726	000424 HAWTHORNE LOOP RD	1	B	61	55	6
727	000424 HAWTHORNE LOOP RD	1	B	61	53	8
728	000424 HAWTHORNE LOOP RD	1	B	62	59	3
729	000424 HAWTHORNE LOOP RD	1	B	63	59	4
730	000424 HAWTHORNE LOOP RD	1	B	63	59	4
731	000424 HAWTHORNE LOOP RD	1	B	64	59	5
732	000424 HAWTHORNE LOOP RD	1	B	63	55	8
733	000424 HAWTHORNE LOOP RD	1	B	62	54	8
734	000415 HAWTHORNE LOOP RD	1	B	59	56	3
735	000415 HAWTHORNE LOOP RD	1	B	59	56	3
736	000415 HAWTHORNE LOOP RD	1	B	61	58	3
737	000415 HAWTHORNE LOOP RD	1	B	63	58	5
738	000415 HAWTHORNE LOOP RD	1	B	70	60	10
739	000415 HAWTHORNE LOOP RD	1	B	70	60	10
740	000415 HAWTHORNE LOOP RD	1	B	70	60	10
741	000415 HAWTHORNE LOOP RD	1	B	70	60	10
742	000423 HAWTHORNE LOOP RD	1	B	67	58	9
743	000423 HAWTHORNE LOOP RD	1	B	67	58	9
744	000423 HAWTHORNE LOOP RD	1	B	65	54	11
745	000423 HAWTHORNE LOOP RD	1	B	65	55	10
746	000423 HAWTHORNE LOOP RD	1	B	62	56	6
747	000423 HAWTHORNE LOOP RD	1	B	63	56	7
748	000423 HAWTHORNE LOOP RD	1	B	65	56	9
749	000423 HAWTHORNE LOOP RD	1	B	67	56	11
750	000420 HAWTHORNE LOOP RD	1	B	69	60	9
751	000420 HAWTHORNE LOOP RD	1	B	68	59	9
752	000420 HAWTHORNE LOOP RD	1	B	67	58	9
753	000420 HAWTHORNE LOOP RD	1	B	66	58	8
754	000420 HAWTHORNE LOOP RD	1	B	67	61	6
755	000420 HAWTHORNE LOOP RD	1	B	67	61	6
756	000420 HAWTHORNE LOOP RD	1	B	69	61	8
757	000420 HAWTHORNE LOOP RD	1	B	69	62	7
758	9633 BLACKWELL RD SE	1	B	69	69	0
759	9629 BLACKWELL ROAD	1	B	61	59	2
760	9633 BLACKWELL ROAD SE	1	B	65	65	0
761	009729 CHAPPELL LOOP RD	1	B	66	65	1
762	009729 CHAPPELL LOOP RD	1	B	62	62	0
763	009661 BLACKWELL RD	1	B	64	63	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 22 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 22 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 22 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 57 **# BENEFITS -** 138 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 379 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 23

Alternative V-AW, Barrier 23 Acoustical Performance Summary	
Impacts: 8	Benefited Receptors @ ≥ 7 dB(A) NLR: 8
Impacted Receptors Benefited: 8	Total Benefits: 17
Non-Impacted Receptors Benefited: 9	

Alternative V-AW, Barrier 23 Parameters	
Length (ft): 1950	Area / Benefit (ft^2): 2294
Average Height (ft): 20	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 39000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
764	002041 WIND LAKE WAY	1	B	59	59	0
765	002037 WIND LAKE WAY	1	B	59	59	0
766	002033 WIND LAKE WAY	1	B	58	58	0
767	002029 WIND LAKE WAY	1	B	52	52	0
768	002025 WIND LAKE WAY	1	B	54	54	0
769	002051 WIND LAKE WAY	1	B	59	59	0
770	001005 LAYNE CT	1	B	59	59	0
771	001009 LAYNE CT	1	B	57	57	0
772	001010 SWELL CT	1	B	56	56	0
773	001014 SWELL CT	1	B	56	56	0
774	001002 LAYNE CT	1	B	60	60	0
775	001006 LAYNE CT	1	B	60	60	0
776	001010 LAYNE CT	1	B	55	55	0
777	001018 SWELL CT	1	B	57	57	0
778	001001 CLOUDBREAK CT	1	B	60	60	0
779	001005 CLOUDBREAK CT	1	B	60	60	0
780	001009 CLOUDBREAK CT	1	B	59	59	0
781	001013 CLOUDBREAK CT	1	B	57	57	0
782	001002 CLOUDBREAK CT	1	B	62	62	0
783	001006 CLOUDBREAK CT	1	B	61	61	0
784	001010 CLOUDBREAK CT	1	B	61	61	0
785	001014 CLOUDBREAK CT	1	B	60	60	0
786	001021 DAYBREAK CT	1	B	58	58	0
787	002071 WIND LAKE WAY	1	B	64	64	0
788	002075 WIND LAKE WAY	1	B	63	63	0
789	001017 DAYBREAK CT	1	B	58	58	0
790	002079 WIND LAKE WAY	1	B	62	62	0
791	001009 DAYBREAK CT	1	B	60	60	0
792	001009 DAYBREAK CT	1	B	61	61	0
793	002085 WIND LAKE WAY	1	B	62	62	0
794	001002 DAYBREAK CT	1	B	62	62	0
795	001006 DAYBREAK CT	1	B	61	61	0
796	001010 DAYBREAK CT	1	B	60	60	0
797	001014 DAYBREAK CT	1	B	59	59	0
798	001018 DAYBREAK CT	1	B	58	58	0
799	000963 WOODWIND DR	1	B	64	64	0
800	000965 WOODWIND DR	1	B	61	61	0
801	000967 WOODWIND DR	1	B	60	61	-1
802	000969 WOODWIND DR	1	B	59	59	0
803	000971 WOODWIND DR	1	B	57	56	1
804	000973 WOODWIND DR	1	B	57	57	0
805	000962 WOODWIND DR	1	B	65	64	1
806	000964 WOODWIND DR	1	B	60	59	1
807	000966 WOODWIND DR	1	B	58	57	1
808	000968 WOODWIND DR	1	B	55	55	0
809	000970 WOODWIND DR	1	B	56	55	1
810	001043 SUN SKIPPER LN	1	B	58	55	3
811	001039 SUN SKIPPER LN	1	B	60	57	3
812	001035 SUN SKIPPER LN	1	B	61	58	3
813	001031 SUN SKIPPER LN	1	B	61	58	3
814	001027 SUN SKIPPER LN	1	B	63	59	4
815	001023 SUN SKIPPER LN	1	B	64	60	4
816	001015 SUN SKIPPER LN	1	B	65	60	5
817	001011 SUN SKIPPER LN	1	B	65	60	5
818	001040 SUN SKIPPER LN	1	B	55	53	2

Noise Barrier Analysis
Alternative V-AW, Barrier 23

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
819	001034 SUN SKIPPER LN	1	B	58	55	3
820	001026 SUN SKIPPER LN	1	B	58	56	2
821	001022 SUN SKIPPER LN	1	B	60	56	4
822	001018 SUN SKIPPER LN	1	B	61	57	4
823	001014 SUN SKIPPER LN	1	B	61	57	4
824	001010 SUN SKIPPER LN	1	B	60	56	4
825	001006 SUN SKIPPER LN	1	B	60	56	4
826	001002 SUN SKIPPER LN	1	B	66	61	5
827	001051 NATURAL SPRINGS WAY	1	B	57	53	4
828	001049 NATURAL SPRINGS WAY	1	B	58	53	5
829	001045 NATURAL SPRINGS WAY	1	B	59	53	6
830	001043 NATURAL SPRINGS WAY	1	B	60	54	6
831	001041 NATURAL SPRINGS WAY	1	B	61	55	6
832	001039 NATURAL SPRINGS WAY	1	B	66	58	8
833	001037 NATURAL SPRINGS WAY	1	B	70	60	10
834	1035 NATURAL SPRINGS WAY	1	B	71	60	11
835	001044 NATURAL SPRINGS WAY	1	B	55	52	3
836	001042 NATURAL SPRINGS WAY	1	B	55	52	3
837	001040 NATURAL SPRINGS WAY	1	B	57	52	5
838	001038 NATURAL SPRINGS WAY	1	B	60	54	6
839	001036 NATURAL SPRINGS WAY	1	B	64	56	8
840	001033 NATURAL SPRINGS WAY	1	B	70	60	10
841	001099 WATER LILY WAY	1	B	71	61	10
842	001031 NATURAL SPRINGS WAY	1	B	67	59	8
843	001101 WATER LILY WAY	1	B	67	60	7
844	001029 NATURAL SPRINGS WAY	1	B	61	55	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 23 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 23 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 23 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 8 **# BENEFITS -** 17 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2294 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 24

Alternative V-AW, Barrier 24 Acoustical Performance Summary	
Impacts: 12	Benefited Receptors @ ≥ 7 dB(A) NLR: 18
Impacted Receptors Benefited: 12	Total Benefits: 39
Non-Impacted Receptors Benefited: 27	

Alternative V-AW, Barrier 24 Parameters	
Length (ft): 4669	Area / Benefit (ft^2): 1915
Average Height (ft): 16	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 74704	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
872	002368 COTTAGEFIELD LN	1	B	65	62	3
873	002369 COTTAGEFIELD LN	1	B	66	61	5
874	002365 COTTAGEFIELD LN	1	B	67	61	6
875	002361 COTTAGEFIELD LN	1	B	64	59	5
876	002357 COTTAGEFIELD LN	1	B	61	57	4
877	002353 COTTAGEFIELD LN	1	B	60	56	4
878	002349 COTTAGEFIELD LN	1	B	59	56	3
879	002345 COTTAGEFIELD LN	1	B	59	55	4
880	002341 COTTAGEFIELD LN	1	B	58	55	3
881	002337 COTTAGEFIELD LN	1	B	58	54	4
882	002333 COTTAGEFIELD LN	1	B	57	54	3
883	002329 COTTAGEFIELD LN	1	B	57	54	3
884	002325 COTTAGEFIELD LN	1	B	57	54	3
885	002321 COTTAGEFIELD LN	1	B	57	54	3
886	002317 COTTAGEFIELD LN	1	B	57	54	3
887	002313 COTTAGEFIELD LN	1	B	57	54	3
888	002309 COTTAGEFIELD LN	1	B	57	54	3
889	002305 COTTAGEFIELD LN	1	B	57	54	3
890	002301 COTTAGEFIELD LN	1	B	55	52	3
891	002297 COTTAGEFIELD LN	1	B	53	52	1
892	002297 COTTAGEFIELD LN	1	B	55	52	3
893	002293 COTTAGEFIELD LN	1	B	53	52	1
894	002364 COTTAGEFIELD LN	1	B	63	61	2
895	002356 COTTAGEFIELD LN	1	B	60	57	3
896	002352 COTTAGEFIELD LN	1	B	59	56	3
897	001501 SPRING CT	1	B	59	56	3
898	001505 SPRING CT	1	B	58	56	2
899	001509 SPRING CT	1	B	56	54	2
900	001510 SPRING CT	1	B	57	55	2
901	001506 SPRING CT	1	B	57	54	3
902	001502 SPRING CT	1	B	57	54	3
903	002328 COTTAGEFIELD LN	1	B	57	54	3
904	002310 COTTAGEFIELD LN	1	B	56	54	2
905	002306 COTTAGEFIELD LN	1	B	56	54	2
906	002302 COTTAGEFIELD LN	1	B	53	52	1
907	002302 COTTAGEFIELD LN	1	B	52	52	0
908	002298 COTTAGEFIELD LN	1	B	53	52	1
909	002290 COTTAGEFIELD LN	1	B	52	52	0
910	002290 COTTAGEFIELD LN	1	B	54	52	2
911	002606 SOUTH SNOWBELL CT	1	B	55	53	2
912	002610 SOUTH SNOWBELL CT	1	B	53	52	1
913	002614 SOUTH SNOWBELL CT	1	B	58	55	3
914	002618 SOUTH SNOWBELL CT	1	B	58	54	4
915	002617 SOUTH SNOWBELL CT	1	B	58	54	4
916	002609 SOUTH SNOWBELL CT	1	B	57	52	5
917	002605 SOUTH SNOWBELL CT	1	B	54	52	2
918	002505 NORTH SNOWBELL CT	1	B	54	53	1
919	002506 NORTH SNOWBELL CT	1	B	52	52	0
920	002278 COTTAGEFIELD LN	1	B	53	52	1
921	002273 COTTAGEFIELD LN	1	B	55	52	3
922	002269 COTTAGEFIELD LN	1	B	54	52	2
923	002265 COTTAGEFIELD LN	1	B	55	52	3
924	002261 COTTAGEFIELD LN	1	B	56	53	3
925	002270 COTTAGEFIELD LN	1	B	54	52	2
926	002262 COTTAGEFIELD LN	1	B	52	52	0
927	002252 COTTAGEFIELD LN	1	B	53	52	1
928	002240 COTTAGEFIELD LN	1	B	54	53	1
929	002153 WILLOW CREEK LN	1	B	61	55	6

Noise Barrier Analysis
Alternative V-AW, Barrier 24

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
930	002149 WILLOW CREEK LN	1	B	62	56	6
931	002145 WILLOW CREEK LN	1	B	63	57	6
932	002141 WILLOW CREEK LN	1	B	65	57	8
933	002137 WILLOW CREEK LN	1	B	65	58	7
934	002133 WILLOW CREEK LN	1	B	65	58	7
935	002129 WILLOW CREEK LN	1	B	66	58	8
936	002125 WILLOW CREEK LN	1	B	65	57	8
937	002408 RED MAPLE CIR	1	B	59	52	7
938	002412 RED MAPLE CIR	1	B	66	58	8
939	002416 RED MAPLE CIR	1	B	67	59	8
940	002422 RED MAPLE CIR	1	B	67	58	9
941	002424 RED MAPLE CIR	1	B	68	60	8
942	002423 RED MAPLE CIR	1	B	65	58	7
943	002419 RED MAPLE CIR	1	B	58	53	5
944	002415 RED MAPLE CIR	1	B	60	53	7
945	002113 WILLOW CREEK LN	1	B	59	54	5
946	002109 WILLOW CREEK LN	1	B	56	52	4
947	002105 WILLOW CREEK LN	1	B	58	53	5
948	002097 WILLOW CREEK LN	1	B	59	54	5
949	002093 WILLOW CREEK LN	1	B	57	52	5
950	002085 WILLOW CREEK LN	1	B	58	53	5
951	002081 WILLOW CREEK LN	1	B	57	53	4
952	002170 WILLOW CREEK LN	1	B	54	52	2
953	002166 WILLOW CREEK LN	1	B	54	52	2
954	002162 WILLOW CREEK LN	1	B	55	52	3
955	002158 WILLOW CREEK LN	1	B	55	52	3
956	002154 WILLOW CREEK LN	1	B	56	52	4
957	002150 WILLOW CREEK LN	1	B	57	52	5
958	002142 WILLOW CREEK LN	1	B	58	53	5
959	002134 WILLOW CREEK LN	1	B	58	54	4
960	002122 WILLOW CREEK LN	1	B	57	55	2
961	002311 CURRAN CT	1	B	56	52	4
962	002327 CURRAN CT	1	B	58	53	5
963	002331 CURRAN CT	1	B	60	54	6
964	002332 CURRAN CT	1	B	54	52	2
965	002328 CURRAN CT	1	B	52	52	0
966	002324 CURRAN CT	1	B	54	52	2
967	002320 CURRAN CT	1	B	56	52	4
968	002316 CURRAN CT	1	B	54	52	2
969	002312 CURRAN CT	1	B	54	52	2
970	002094 WILLOW CREEK LN	1	B	56	53	3
971	002086 WILLOW CREEK LN	1	B	53	52	1
972	002243 COTTAGEFIELD LN	1	B	52	52	0
973	002231 COTTAGEFIELD LN	1	B	52	52	0
974	001007 SWEET BAY CIR	1	B	59	52	7
975	001011 SWEET BAY CIR	1	B	60	53	7
976	001012 SWEET BAY CIR	1	B	60	53	7
977	001002 SWEET BAY CIR	1	B	60	56	4
978	001031 STONY WOODS LN	1	B	55	52	3
979	001033 STONY WOODS LN	1	B	56	52	4
980	001035 STONY WOODS LN	1	B	54	52	2
981	001039 STONY WOODS LN	1	B	63	55	8
982	001041 STONY WOODS LN	1	B	66	57	9
983	001042 STONY WOODS LN	1	B	68	60	8
984	001040 STONY WOODS LN	1	B	68	60	8
985	001038 STONY WOODS LN	1	B	65	59	6
986	001047 MACKLIN ST	1	B	67	61	6
987	001044 MACKLIN ST	1	B	67	62	5
991	000117 VILLAGE RD	1	D	27	27	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 24 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 24 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 24 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 12 **# BENEFITS -** 39 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1915 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 25

Alternative V-AW, Barrier 25 Acoustical Performance Summary	
Impacts: 3	Benefited Receptors @ ≥ 7 dB(A) NLR: 0
Impacted Receptors Benefited: 1	Total Benefits: 1
Non-Impacted Receptors Benefited: 0	

Alternative V-AW, Barrier 25 Parameters	
Length (ft): 2000	Area / Benefit (ft^2): 24000
Average Height (ft): 12	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 24000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1000	009991 BLACKWELL RD	1	B	65	65	0
1001	010003 BLACKWELL RD	1	B	61	61	0
1002	010003 BLACKWELL RD	1	B	64	64	0
1003	010051 BLACKWELL RD	1	D	43	43	0
1004	010099 BLACKWELL RD	1	B	64	63	1
1005	010125 BLACKWELL RD	1	B	62	61	1
1006	010183 BLACKWELL RD	1	B	67	66	1
1007	010499 CHAPPELL LOOP RD	1	D	47	46	1
1008	010481 CHAPPELL LOOP RD	1	B	63	61	2
1012	010242-010276 BLACKWELL RD	1	B	68	63	5
1013	010242-010276 BLACKWELL RD	1	B	63	59	4
1014	010258 BLACKWELL RD	1	B	64	62	2
1016	010242-010276 BLACKWELL RD	1	B	63	59	4
1017	010274 BLACKWELL RD	1	B	66	66	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 25 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 25 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 25 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 3 **# BENEFITS -** 1 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	NO
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	NO
2.	Is the quantity per benefited receptor of N/A square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	NO
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 26

Alternative V-AW, Barrier 26 Acoustical Performance Summary	
Impacts: 6	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 6	Total Benefits: 10
Non-Impacted Receptors Benefited: 4	

Alternative V-AW, Barrier 26 Parameters	
Length (ft): 2130	Area / Benefit (ft^2): 2613
Average Height (ft): 12	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 25560	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1023	000109 THOMAS GARST LN	1	B	67	62	5
1024	000111 THOMAS GARST LN	0.63	C	67	61	6
1025	000111 THOMAS GARST LN	0.63	C	66	61	5
1026	000111 THOMAS GARST LN	0.63	C	65	60	5
1027	000111 THOMAS GARST LN	0.63	C	64	60	4
1028	000111 THOMAS GARST LN	0.63	C	67	61	6
1029	000111 THOMAS GARST LN	0.63	C	67	62	5
1030	000111 THOMAS GARST LN	0.63	C	66	61	5
1031	000111 THOMAS GARST LN	0.63	C	62	59	3
1032	000130 DIXIE DR	1	B	61	57	4
1033	000132 DIXIE DR	1	B	59	56	3
1034	000134 DIXIE DR	1	B	61	56	5
1035	000136 DIXIE DR	1	B	64	59	5
1036	000101 RIVERVIEW DR	1	B	65	60	5
1037	000109 RIVERVIEW DR	1	B	62	58	4
1038	000110 RIVERVIEW DR	1	B	64	61	3
1039	000102 RIVERVIEW DR	1	B	70	62	8
1040	000102 RIVERVIEW DR	1	B	71	66	5

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 26 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 26 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 26 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 6 **# BENEFITS -** 10 **NAC:** ☐ **A** ☑ **B** ☑ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2613 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 27

Alternative V-AW, Barrier 27 Acoustical Performance Summary	
Impacts: 4	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 4	Total Benefits: 5
Non-Impacted Receptors Benefited: 1	

Alternative V-AW, Barrier 27 Parameters	
Length (ft): 2037	Area / Benefit (ft^2): 5704
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 28518	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1044	000015 OLD RIVER RD	1	D	42	36	6
1045	000015 OLD RIVER RD	1	B	67	61	6
1046	000015 OLD RIVER RD	1	B	67	61	6
1047	000015 OLD RIVER RD	1	B	65	62	3
1048	000012 OLD RIVER RD	1	B	68	61	7
1049	000015 OLD RIVER RD	1	B	68	62	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 27 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 27 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 27 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 4 **# BENEFITS -** 5 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 5704 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative T, Barrier 28

Alternative T, Barrier 28 Acoustical Performance Summary	
Impacts: 38	Benefited Receptors @ ≥ 7 dB(A) NLR: 12
Impacted Receptors Benefited: 38	Total Benefits: 62
Non-Impacted Receptors Benefited: 24	

Alternative T, Barrier 28 Parameters	
Length (ft): 5659	Area / Benefit (ft^2): 1095
Average Height (ft): 12	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 67908	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2174	001513 EAST GANTRY CT	1	B	66	58	8
2175	001510 EAST GANTRY CT	1	B	66	58	8
2176	001508 EAST GANTRY CT	1	B	63	57	6
2176.01	001215 LILLIBRIDGE DR	1	B	57	52	5
2176.02	001217 LILLIBRIDGE DR	1	B	57	52	5
2176.03	001221 LILLIBRIDGE DR	1	B	57	52	5
2176.04	001223 LILLIBRIDGE DR	1	B	57	52	5
2176.05	001231 LILLIBRIDGE DR	1	B	56	51	5
2176.06	001233 LILLIBRIDGE DR	1	B	56	52	4
2176.07	001235 LILLIBRIDGE DR	1	B	55	51	4
2176.08	001237 LILLIBRIDGE DR	1	B	54	50	4
2176.09	001507 EAST GANTRY CT	1	B	56	51	5
2176.10	001509 EAST GANTRY CT	1	B	59	53	6
2176.11	001511 EAST GANTRY CT	1	B	62	56	6
2176.12	001506 EAST GANTRY CT	1	B	60	54	6
2176.13	001504 EAST GANTRY CT	1	B	55	50	5
2176.14	001245 LILLIBRIDGE DR	1	B	52	50	2
2176.15	001247 LILLIBRIDGE DR	1	B	61	54	7
2176.16	001251 LILLIBRIDGE DR	1	B	61	55	6
2176.17	001255 LILLIBRIDGE DR	1	B	62	55	7
2176.18	001257 LILLIBRIDGE DR	1	B	61	55	6
2176.19	001259 LILLIBRIDGE DR	1	B	62	55	7
2176.2	001261 LILLIBRIDGE DR	1	B	61	55	6
2176.21	001265 LILLIBRIDGE DR	1	B	60	54	6
2176.22	001267 LILLIBRIDGE DR	1	B	62	56	6
2176.23	001271 LILLIBRIDGE DR	1	B	63	57	6
2176.24	001273 LILLIBRIDGE DR	1	B	63	57	6
2176.25	001275 LILLIBRIDGE DR	1	B	63	57	6
2176.26	001277 LILLIBRIDGE DR	1	B	62	56	6
2176.27	001279 LILLIBRIDGE DR	1	B	62	56	6
2176.28	001281 LILLIBRIDGE DR	1	B	61	55	6
2176.29	001285 LILLIBRIDGE DR	1	B	60	55	5
2176.3	001287 LILLIBRIDGE DR	1	B	60	54	6
2327	FONTANA LAKE CT	1	B	70	61	9
2328	8444 FONTANA LAKE CT	1	B	65	59	6
2331	007020 SPALDING DR	1	B	70	62	8
2332	007024 SPALDING DR	1	B	68	60	8
2333	007028 SPALDING DR	1	B	66	58	8
2334	007032 SPALDING DR	1	B	63	57	6
2335	007036 SPALDING DR	1	B	61	56	5
2336	007029 SPALDING DR	1	B	64	58	6
2337	007025 SPALDING DR	1	B	67	59	8
2338	007021 SPALDING DR	1	B	68	60	8
2339	007017 SPALDING DR	1	B	72	63	9
4029	1236 LILLIBRIDGE DR	1	B	52	49	3
4030	1238 LILLIBRIDGE DR	1	B	53	49	4
4031	1405 WEST GANTRY CT	1	B	54	50	4
4032	1246 LILLIBRIDGE DR	1	B	57	51	6
4033	1254 LILLIBRIDGE DR	1	B	57	51	6
4034	1266 LILLIBRIDGE DR	1	B	56	51	5
4035	1268 LILLIBRIDGE DR	1	B	57	51	6
4036	1272 LILLIBRIDGE DR	1	B	57	51	6
4037	1276 LILLIBRIDGE DR	1	B	57	51	6
4038	1278 LILLIBRIDGE DR	1	B	57	51	6
4039	1804 DUDLEY CT	1	B	56	51	5
4040	1288 LILLIBRIDGE DR	1	B	55	50	5
4041	1338 CROSS WATER CIR	1	B	59	53	6
4042	1334 CROSS WATER CIR	1	B	59	54	5

Noise Barrier Analysis
Alternative T, Barrier 28

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
4043	1330 CROSS WATER CIR	1	B	60	54	6
4044	1326 CROSS WATER CIR	1	B	59	54	5
4045	1320 CROSS WATER CIR	1	B	58	53	5
4046	1316 CROSS WATER CIR	1	B	57	52	5
4047	1308 CROSS WATER CIR	1	B	55	51	4
4048	1319 CROSS WATER CIR	1	B	54	49	5
4049	1327 CROSS WATER CIR	1	B	56	51	5
4050	1335 CROSS WATER CIR	1	B	55	50	5
4058	8412 FONTANA LAKE CT	1	B	58	53	5
4059	3551 BIRDFIELD CT	1	B	58	53	5
4060	3548 BIRDFIELD CT	1	B	57	52	5
4061	8417 FONTANA LAKE CT	1	B	61	55	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 28 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 28 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 28 (T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 38 **# BENEFITS -** 62 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1095 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative T, Barrier 29

Alternative T, Barrier 29 Acoustical Performance Summary	
Impacts: 101	Benefited Receptors @ ≥ 7 dB(A) NLR: 91
Impacted Receptors Benefited: 99	Total Benefits: 132
Non-Impacted Receptors Benefited: 33	

Alternative T, Barrier 29 Parameters	
Length (ft): 6800	Area / Benefit (ft^2): 721
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 95200	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2162	005229 NATIONAL GARDEN TRL	1	B	71	61	10
2163	005233 NATIONAL GARDEN TRL	1	B	68	59	9
2177	002125 SIMMERMAN WAY	1	B	54	49	5
2178	002121 SIMMERMAN WAY	1	B	56	50	6
2179	002117 SIMMERMAN WAY	1	B	58	51	7
2180	002113 SIMMERMAN WAY	1	B	60	53	7
2181	001004 SALTER PATH	1	B	61	55	6
2182	002105 SIMMERMAN WAY	1	B	64	56	8
2183	002101 SIMMERMAN WAY	1	B	66	57	9
2184	002097 SIMMERMAN WAY	1	B	67	57	10
2185	002093 SIMMERMAN WAY	1	B	69	58	11
2186	002089 SIMMERMAN WAY	1	B	70	59	11
2187	002085 SIMMERMAN WAY	1	B	72	61	11
2195	001073 SANDY GROVE PL	1	B	57	51	6
2196	001065 SANDY GROVE PL	1	B	56	50	6
2197	001061 SANDY GROVE PL	1	B	58	52	6
2198	001057 SANDY GROVE PL	1	B	58	52	6
2199	001053 SANDY GROVE PL	1	B	60	53	7
2200	001049 SANDY GROVE PL	1	B	62	54	8
2201	001045 SANDY GROVE PL	1	B	61	53	8
2202	002012 SIMMERMAN WAY	1	B	68	58	10
2203	002016 SIMMERMAN WAY	1	B	69	59	10
2204	002020 SIMMERMAN WAY	1	B	69	59	10
2205	002024 SIMMERMAN WAY	1	B	69	59	10
2206	002028 SIMMERMAN WAY	1	B	70	60	10
2207	002030-002034 SIMMERMAN WAY	1	B	69	60	9
2208	002044 SIMMERMAN WAY	1	B	70	60	10
2209	001387 STILL BLUFF LN	1	B	69	58	11
2210	001383 STILL BLUFF LN	1	B	63	54	9
2211	001379 STILL BLUFF LN	1	B	62	53	9
2212	001375 STILL BLUFF LN	1	B	61	53	8
2213	001371 STILL BLUFF LN	1	B	60	54	6
2214	001363 STILL BLUFF LN	1	B	60	53	7
2215	001359 STILL BLUFF LN	1	B	60	53	7
2216	001355 STILL BLUFF LN	1	B	59	53	6
2217	001351 STILL BLUFF LN	1	B	59	52	7
2218	001347 STILL BLUFF LN	1	B	59	52	7
2219	002168 SIMMERMAN WAY	1	B	58	51	7
2220	001356 STILL BLUFF LN	1	B	58	52	6
2221	001360 STILL BLUFF LN	1	B	57	51	6
2222	001364 STILL BLUFF LN	1	B	58	51	7
2223	001368 STILL BLUFF LN	1	B	59	52	7
2224	001372 STILL BLUFF LN	1	B	60	52	8
2225	001376 STILL BLUFF LN	1	B	61	52	9
2226	001380 STILL BLUFF LN	1	B	63	53	10
2227	001384 STILL BLUFF LN	1	B	65	54	11
2228	001388 STILL BLUFF LN	1	B	68	57	11
2229	002056 SIMMERMAN WAY	1	B	69	60	9
2230	002066 SIMMERMAN WAY	1	B	70	61	9
2231	002072 SIMMERMAN WAY	1	B	70	60	10
2232	002076 SIMMERMAN WAY	1	B	70	59	11
2233	002084 SIMMERMAN WAY	1	B	68	58	10
2234	002092 SIMMERMAN WAY	1	B	66	55	11
2235	002100 SIMMERMAN WAY	1	B	62	53	9
2236	002104 SIMMERMAN WAY	1	B	60	52	8
2237	002108 SIMMERMAN WAY	1	B	59	52	7
2238	002116 SIMMERMAN WAY	1	B	56	50	6
2239	002122 SIMMERMAN WAY	1	B	57	51	6
2240	002130 SIMMERMAN WAY	1	B	57	51	6
2241	002138 SIMMERMAN WAY	1	B	57	51	6

Noise Barrier Analysis
Alternative T, Barrier 29

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2242	002146 SIMMERMAN WAY	1	B	57	50	7
2243	002129 SIMMERMAN WAY	1	B	55	49	6
2244	001072 SANDY GROVE PL	1	B	55	49	6
2245	001068 SANDY GROVE PL	1	B	56	50	6
2246	001064 SANDY GROVE PL	1	B	57	50	7
2247	001060 SANDY GROVE PL	1	B	58	51	7
2248	001056 SANDY GROVE PL	1	B	59	51	8
2249	001052 SANDY GROVE PL	1	B	60	52	8
2250	001048 SANDY GROVE PL	1	B	61	53	8
2251	001044 SANDY GROVE PL	1	B	63	53	10
2252	001040 SANDY GROVE PL	1	B	64	55	9
2253	001036 SANDY GROVE PL	1	B	66	57	9
2254	001032 SANDY GROVE PL	1	B	69	61	8
2259	002017 SHELMORE WAY	1	B	66	63	3
2260	002021 SHELMORE WAY	1	B	65	61	4
2261	002025 SHELMORE WAY	1	B	65	60	5
2262	002029 SHELMORE WAY	1	B	64	59	5
2263	002033 SHELMORE WAY	1	B	63	58	5
2264	002037 SHELMORE WAY	1	B	62	56	6
2265	002041 SHELMORE WAY	1	B	61	56	5
2266	002045 SHELMORE WAY	1	B	60	55	5
2267	002049 SHELMORE WAY	1	B	59	54	5
2268	002053 SHELMORE WAY	1	B	59	54	5
2269	002057 SHELMORE WAY	1	B	58	53	5
2270	006053 SHORE PARK DR	1	B	58	52	6
2271	006045 SHORE PARK DR	1	B	61	53	8
2272	006041 SHORE PARK DR	1	B	61	54	7
2273	006035 SHORE PARK DR	1	B	62	54	8
2274	006031 SHORE PARK DR	1	B	62	55	7
2275	006027 SHORE PARK DR	1	B	61	55	6
2276	006023 SHORE PARK DR	1	B	62	56	6
2277	006017 SHORE PARK DR	1	B	64	58	6
2278	006013 SHORE PARK DR	1	B	65	59	6
2282	006016 SHORE PARK DR	1	B	70	61	9
2283	006020 SHORE PARK DR	1	B	69	59	10
2284	006024 SHORE PARK DR	1	B	68	58	10
2285	006028 SHORE PARK DR	1	B	67	57	10
2286	006032 SHORE PARK DR	1	B	66	56	10
2287	006036 SHORE PARK DR	1	B	64	55	9
2288	006042 SHORE PARK DR	1	B	62	54	8
2289	006046 SHORE PARK DR	1	B	60	54	6
2290	006050 SHORE PARK DR	1	B	57	50	7
2291	006054 SHORE PARK DR	1	B	56	50	6
2292	006058 SHORE PARK DR	1	B	54	49	5
2293	005093 STONEY POINT DR	1	B	54	49	5
2294	005089 STONEY POINT DR	1	B	55	49	6
2295	005085 STONEY POINT DR	1	B	56	49	7
2296	005081 STONEY POINT DR	1	B	59	51	8
2297	005077 STONEY POINT DR	1	B	60	52	8
2298	005073 STONEY POINT DR	1	B	62	54	8
2299	005069 STONEY POINT DR	1	B	63	55	8
2300	005065 STONEY POINT DR	1	B	65	55	10
2301	005061 STONEY POINT DR	1	B	67	56	11
2302	005049 STONEY POINT DR	1	B	67	57	10
2303	005053 STONEY POINT DR	1	B	70	59	11
2316	005062 STONEY POINT DR	1	B	69	60	9
2317	005066 STONEY POINT DR	1	B	67	58	9
2318	005070 STONEY POINT DR	1	B	65	57	8
2319	005074 STONEY POINT DR	1	B	64	56	8
2320	005078 STONEY POINT DR	1	B	66	56	10
2321	005082 STONEY POINT DR	1	B	65	55	10
2322	005086 STONEY POINT DR	1	B	63	54	9
2323	005090 STONEY POINT DR	1	B	62	53	9
2324	005094 STONEY POINT DR	1	B	61	52	9
2325	005098 STONEY POINT DR	1	B	61	51	10
3996	6057 SHORE PARK DR	1	B	57	51	6
3997	6065 SHORE PARK DR	1	B	56	50	6
3998	6053 SHORE PARK DR	1	B	59	52	7
3999	6058 SHORE PARK DR	1	B	51	49	2

Noise Barrier Analysis
Alternative T, Barrier 29

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
4004	5097 STONEY POINT DR	1	B	54	49	5
4005	5102 STONEY POINT DR	1	B	59	50	9
4006	5106 STONEY POINT DR	1	B	60	50	10
4007	5110 STONEY POINT DR	1	B	59	50	9
4008	5114 STONEY POINT DR	1	B	59	49	10
4028	1343 STILL BLUFF LN	1	B	58	52	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 29 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 29 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 29 (T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 101 **# BENEFITS -** 131 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 721 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B/Q, Barrier 29/30

Alternative B/Q, Barrier 29/30 Acoustical Performance Summary	
Impacts: 66	Benefited Receptors @ ≥ 7 dB(A) NLR: 53
Impacted Receptors Benefited: 66	Total Benefits: 103
Non-Impacted Receptors Benefited: 37	

Alternative B/Q, Barrier 29/30 Parameters	
Length (ft): 7883	Area / Benefit (ft^2): 1071
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 110362	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2156	002321 JASPER FOREST TRL	1	B	54	49	5
2161	005225 NATIONAL GARDEN TRL	1	B	56	50	6
2162	005229 NATIONAL GARDEN TRL	1	B	57	50	7
2163	005233 NATIONAL GARDEN TRL	1	B	58	51	7
2165	005226 NATIONAL GARDEN TRL	1	B	59	51	8
2166	005222 NATIONAL GARDEN TRL	1	B	58	51	7
2167	005218 NATIONAL GARDEN TRL	1	B	57	50	7
2168	005210 NATIONAL GARDEN TRL	1	B	56	50	6
2171	004217 WHISPERING WILLOW COVE	1	B	59	52	7
2172	004216 WHISPERING WILLOW COVE	1	B	60	52	8
2358	001374 STAR GRASS WAY	1	B	60	53	7
2359	001370 STAR GRASS WAY	1	B	60	53	7
2360	001366 STAR GRASS WAY	1	B	60	54	6
2361	001362 STAR GRASS WAY	1	B	60	54	6
2362	001358 STAR GRASS WAY	1	B	60	54	6
2363	001354 STAR GRASS WAY	1	B	60	54	6
2364	001350 STAR GRASS WAY	1	B	60	54	6
2365	001346 STAR GRASS WAY	1	B	61	54	7
2366	001342 STAR GRASS WAY	1	B	61	55	6
2367	001338 STAR GRASS WAY	1	B	61	55	6
2368	001330 STAR GRASS WAY	1	B	63	57	6
2369	001326 STAR GRASS WAY	1	B	60	51	9
2370	005030 SNEADENS COVE	1	B	63	58	5
2371	005026 SNEADENS COVE	1	B	65	60	5
2372	005022 SNEADENS COVE	1	B	68	62	6
2373	005018 SNEADENS COVE	1	B	68	62	6
2374	SNEADENS COVE	1	B	63	57	6
2375	005006 SNEADENS COVE	1	B	65	59	6
2376	005002 SNEADENS COVE	1	B	63	57	6
2377	002155 SHELMORE WAY	1	B	61	56	5
2378	002159 SHELMORE WAY	1	B	62	56	6
2413	004005 STAFFORDALE DR	1	B	61	54	7
2414	004009 STAFFORDALE DR	1	B	61	53	8
2415	004013 STAFFORDALE DR	1	B	63	55	8
2416	004017 STAFFORDALE DR	1	B	62	55	7
2417	004021 STAFFORDALE DR	1	B	64	55	9
2418	004025 STAFFORDALE DR	1	B	66	57	9
2419	004029 STAFFORDALE DR	1	B	68	58	10
2420	004041 STAFFORDALE DR	1	B	74	61	13
2421	004045 STAFFORDALE DR	1	B	76	62	14
2437	003026 SMEADES DR	1	B	72	62	10
2438	003022 SMEADES DR	1	B	72	62	10
2439	003018 SMEADES DR	1	B	74	62	12
2440	003014 SMEADES DR	1	B	77	63	14
2441	003013 SMEADES DR	1	B	68	59	9
2442	003017 SMEADES DR	1	B	67	59	8
2443	003021 SMEADES DR	1	B	67	58	9
2444	003025 SMEADES DR	1	B	67	58	9
2445	003029 SMEADES DR	1	B	68	58	10
2446	003033 SMEADES DR	1	B	69	58	11
2447	003037 SMEADES DR	1	B	68	59	9
2448	003041 SMEADES DR	1	B	70	60	10
2449	003045 SMEADES DR	1	B	72	62	10
2501	006313 SAXON MEADOW DR	1	B	71	61	10
2511	004042 STAFFORDALE DR	1	B	72	61	11
2512	004038 STAFFORDALE DR	1	B	72	60	12
2513	004034 STAFFORDALE DR	1	B	71	59	12
2514	004030 STAFFORDALE DR	1	B	68	58	10
2515	004026 STAFFORDALE DR	1	B	67	57	10
2516	004022 STAFFORDALE DR	1	B	65	56	9
2517	004018 STAFFORDALE DR	1	B	64	56	8
2518	004014 STAFFORDALE DR	1	B	63	54	9

Noise Barrier Analysis
Alternative B/Q, Barrier 29/30

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2519	004010 STAFFORDALE DR	1	B	62	54	8
2520	002207 SHELMORE WAY	1	B	62	54	8
2521	002211 SHELMORE WAY	1	B	63	54	9
2522	002215 SHELMORE WAY	1	B	63	55	8
2523	002219 SHELMORE WAY	1	B	63	54	9
2524	002223 SHELMORE WAY	1	B	63	54	9
3916	1390 STAR GRASS WAY	1	B	56	51	5
3917	1378 STAR GRASS WAY	1	B	59	52	7
3918	1382 STAR GRASS WAY	1	B	58	52	6
3919	1383 STAR GRASS WAY	1	B	54	49	5
3920	1387 STAR GRASS WAY	1	B	54	49	5
3921	1375 STAR GRASS WAY	1	B	54	49	5
3922	1363 STAR GRASS WAY	1	B	55	50	5
3923	1359 STAR GRASS WAY	1	B	55	50	5
3924	1355 STAR GRASS WAY	1	B	55	50	5
3925	1351 STAR GRASS WAY	1	B	55	51	4
3926	1347 STAR GRASS WAY	1	B	55	51	4
3927	1343 STAR GRASS WAY	1	B	57	52	5
3928	1331 STAR GRASS WAY	1	B	57	51	6
3929	1159 SANDY GROVE PL	1	B	59	51	8
3930	1155 SANDY GROVE PL	1	B	56	49	7
3931	1151 SANDY GROVE PL	1	B	54	49	5
3932	1147 SANDY GROVE PL	1	B	52	49	3
3933	1143 SANDY GROVE PL	1	B	50	49	1
3934	1139 SANDY GROVE PL	1	B	50	49	1
3935	1135 SANDY GROVE PL	1	B	51	49	2
3936	1140 SANDY GROVE PL	1	B	49	49	0
3937	1144 SANDY GROVE PL	1	B	49	49	0
3938	1148 SANDY GROVE PL	1	B	49	49	0
3939	1152 SANDY GROVE PL	1	B	50	49	1
3940	1156 SANDY GROVE PL	1	B	55	49	6
3941	1323 STAR GRASS WAY	1	B	59	53	6
3942	1319 STAR GRASS WAY	1	B	59	53	6
3945	1307 STAR GRASS WAY	1	B	58	52	6
3946	2127 SHELMORE WAY	1	B	58	52	6
3947	2123 SHELMORE WAY	1	B	57	51	6
3948	2119 SHELMORE WAY	1	B	55	50	5
3949	2115 SHELMORE WAY	1	B	53	49	4
3950	2111 SHELMORE WAY	1	B	53	49	4
3951	2107 SHELMORE WAY	1	B	51	49	2
3984	6097 SHORE PARK DR	1	B	57	51	6
3985	6095 SHORE PARK DR	1	B	54	49	5
3986	6091 SHORE PARK DR	1	B	55	49	6
3987	6089 SHORE PARK DR	1	B	55	49	6
3988	6085 SHORE PARK DR	1	B	54	49	5
3989	6083 SHORE PARK DR	1	B	54	50	4
3990	6098 SHORE PARK DR	1	B	60	53	7
3991	6094 SHORE PARK DR	1	B	56	49	7
3992	6090 SHORE PARK DR	1	B	54	49	5
3993	6086 SHORE PARK DR	1	B	54	49	5
3994	6082 SHORE PARK DR	1	B	52	49	3
3995	2162 SHELMORE WAY	1	B	56	52	4
4000	5117 STONEY POINT DR	1	B	59	51	8
4001	5113 STONEY POINT DR	1	B	56	50	6
4002	5109 STONEY POINT DR	1	B	53	49	4
4003	5105 STONEY POINT DR	1	B	52	49	3
4006	5106 STONEY POINT DR	1	B	53	49	4
4007	5110 STONEY POINT DR	1	B	53	49	4
4008	5114 STONEY POINT DR	1	B	52	49	3
4020	1244 N. SLEEPY OAK LN	1	B	54	49	5
4021	1236 N. SLEEPY OAK LN	1	B	55	49	6
4022	1232 N. SLEEPY OAK LN	1	B	54	49	5
4025	1210 S. SLEEPY OAK LN	1	B	53	50	3
4027	1202 S. SLEEPY OAK LN	1	B	50	49	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 29/30 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 29/30 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 29/30 (B/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 66 **# BENEFITS -** 103 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1071 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Alternative B/Q, Barrier 31 Acoustical Performance Summary	
Impacts: 53	Benefited Receptors @ ≥ 7 dB(A) NLR: 34
Impacted Receptors Benefited: 52	Total Benefits: 60
Non-Impacted Receptors Benefited: 8	

Alternative B/Q, Barrier 31 Parameters	
Length (ft): 4100	Area / Benefit (ft^2): 1093
Average Height (ft): 16	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 65600	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2379	000142 COVE LANDING	1	B	62	57	5
2380	000148 COVE LANDING	1	B	62	57	5
2381	000139 COVE LANDING	1	B	62	56	6
2382	000135 COVE LANDING	1	B	62	56	6
2383	001192 SOUTH BROOK RD	1	B	62	56	6
2384	001196 SOUTH BROOK RD	1	B	62	55	7
2385	001200 SOUTH BROOK RD	1	B	62	55	7
2386	001204 SOUTH BROOK RD	1	B	62	54	8
2387	001208 SOUTH BROOK RD	1	B	62	54	8
2388	001212 SOUTH BROOK RD	1	B	62	54	8
2389	001216 SOUTH BROOK RD	1	B	63	55	8
2390	001220 SOUTH BROOK RD	1	B	63	56	7
2391	001224 SOUTH BROOK RD	1	B	64	56	8
2392	001228 SOUTH BROOK RD	1	B	64	57	7
2393	001232 SOUTH BROOK RD	1	B	64	58	6
2394	001236 SOUTH BROOK RD	1	B	64	59	5
2395	001240 SOUTH BROOK RD	1	B	64	59	5
2396	001244 SOUTH BROOK RD	1	B	64	60	4
2397	001252 SOUTH BROOK RD	1	B	66	61	5
2398	001256 SOUTH BROOK RD	1	B	66	61	5
2399	001260 SOUTH BROOK RD	1	B	65	60	5
2400	001264 SOUTH BROOK RD	1	B	64	59	5
2401	001268 SOUTH BROOK RD	1	B	62	57	5
2402	001272 SOUTH BROOK RD	1	B	60	55	5
2403	001265 SOUTH BROOK RD	1	B	57	51	6
2404	001261 SOUTH BROOK RD	1	B	58	52	6
2405	001257 SOUTH BROOK RD	1	B	59	53	6
2406	001245 SOUTH BROOK RD	1	B	59	54	5
2407	001241 SOUTH BROOK RD	1	B	57	51	6
2408	001312 WATERS END CT	1	B	56	51	5
2409	001233 SOUTH BROOK RD	1	B	56	50	6
2410	001229 SOUTH BROOK RD	1	B	56	50	6
2411	001225 SOUTH BROOK RD	1	B	57	50	7
2412	001221 SOUTH BROOK RD	1	B	58	50	8
2428	004073 STAFFORDALE DR	1	B	72	61	11
2456	003073 SMEADES DR	1	B	72	61	11
2457	003077 SMEADES DR	1	B	71	61	10
2458	003081 SMEADES DR	1	B	70	60	10
2459	003085 SMEADES DR	1	B	69	59	10
2460	003089 SMEADES DR	1	B	68	59	9
2461	003093 SMEADES DR	1	B	68	59	9
2462	003101 SMEADES DR	1	B	66	57	9
2463	003103-003107 SMEADES DR	1	B	67	57	10
2464	003109 SMEADES DR	1	B	67	58	9
2465	003113 SMEADES DR	1	B	66	58	8
2466	006349 SAXON MEADOW DR	1	B	66	58	8
2467	006353 SAXON MEADOW DR	1	B	62	54	8
2468	006357 SAXON MEADOW DR	1	B	60	53	7
2469	006361 SAXON MEADOW DR	1	B	59	53	6
2470	006365 SAXON MEADOW DR	1	B	60	53	7
2471	006369 SAXON MEADOW DR	1	B	59	53	6
2472	006370 SAXON MEADOW DR	1	B	59	53	6
2473	006366 SAXON MEADOW DR	1	B	60	53	7
2474	006362 SAXON MEADOW DR	1	B	61	54	7
2475	006358 SAXON MEADOW DR	1	B	62	55	7
2476	006354 SAXON MEADOW DR	1	B	64	56	8
2477	006350 SAXON MEADOW DR	1	B	64	56	8

Noise Barrier Analysis
Alternative B/Q, Barrier 31

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2478	006346 SAXON MEADOW DR	1	B	68	58	10
2479	006342 SAXON MEADOW DR	1	B	70	60	10
2480	006338 SAXON MEADOW DR	1	B	72	61	11
2488	006420 SAXON MEADOW DR	1	B	63	56	7
3955	138 COVE LANDING	1	B	59	55	4
3956	134 COVE LANDING	1	B	55	55	0
3957	1180 SOUTH BROOK RD	1	B	58	54	4
3958	1176 SOUTH BROOK RD	1	B	58	54	4
3959	1172 SOUTH BROOK RD	1	B	57	53	4
3960	130 COVE LANDING	1	B	54	49	5
3961	127 COVE LANDING	1	B	56	53	3
3962	123 COVE LANDING	1	B	51	49	2
3963	116 HILLSHIRE DR	1	B	52	49	3
3964	1187 SOUTH BROOK RD	1	B	55	49	6
3965	1191 SOUTH BROOK RD	1	B	56	52	4
3966	1195 SOUTH BROOK RD	1	B	54	49	5
3967	1201 SOUTH BROOK RD	1	B	54	49	5
3968	1205 SOUTH BROOK RD	1	B	55	49	6
3969	1209 SOUTH BROOK RD	1	B	56	49	7
3970	1213 SOUTH BROOK RD	1	B	56	49	7
3971	1217 SOUTH BROOK RD	1	B	55	49	6
3972	1312 WATERS END CT	1	B	56	51	5
3973	1316 WATERS END CT	1	B	56	51	5
3974	1320 WATERS END CT	1	B	54	49	5
3975	1324 WATERS END CT	1	B	55	50	5
3976	1313 WATERS END CT	1	B	56	50	6
3977	320 ARUBA CT	1	B	57	51	6
3978	321 ARUBA CT	1	B	58	52	6
3979	319 ARUBA CT	1	B	57	51	6
3980	254 BIMINI DR	1	B	57	51	6
3981	256 BIMINI DR	1	B	58	52	6
3982	257 BIMINI DR	1	B	58	52	6
3983	255 BIMINI DR	1	B	58	51	7
4009	6385 SAXON MEADOW DR	1	B	57	52	5

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 31 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 31 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 31 (B/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 53 **# BENEFITS -** 60 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1093 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/Q, Barrier 33/34

Alternative MA/Q, Barrier 33/34 Acoustical Performance Summary	
Impacts: 15	Benefited Receptors @ ≥ 7 dB(A) NLR: 6
Impacted Receptors Benefited: 9	Total Benefits: 10
Non-Impacted Receptors Benefited: 1	

Alternative MA/Q, Barrier 33/34 Parameters	
Length (ft): 4300	Area / Benefit (ft^2): 10320
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 103200	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2937	3713 RIVER RD	1	B	69	69	0
2938	3410 RIVER RD	0.52	C	61	60	1
2942	154 BRYAN RD	1	B	68	67	1
2943	154 BRYAN RD	1	B	62	58	4
2945	145 BRYAN RD	1	B	67	57	10
2953	3410 RIVER RD	0.52	C	59	55	4
2954	160 FLOYD DR	1	B	60	58	2
2955	170 FLOYD DR	1	B	61	57	4
2956	180 FLOYD DR	1	B	56	54	2
2957	190 FLOYD DR	1	B	60	56	4
2958	3613 BEATTRICE ST	1	B	59	54	5
2959	5 HAZEL SMITH DR	1	B	61	56	5
2960	3621 BEATTRICE ST	1	B	59	52	7
2961	5 HAZEL SMITH DR	1	B	59	52	7
2962	409 MELTON RD	1	B	59	52	7
2963	413 MELTON RD	1	B	60	52	8
2964	403 MELTON RD	1	B	59	51	8
2965	205 MELTON RD	1	B	58	53	5
2966	5 HAZEL SMITH DR	1	B	59	53	6

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 33/34 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 33/34 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 33/34 (MA/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 15 **# BENEFITS -** 10 **NAC:** ☐ **A** ☑ **B** ☑ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 10320 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/Q, Barrier 35

Alternative MA/Q, Barrier 35 Acoustical Performance Summary	
Impacts: 125	Benefited Receptors @ ≥ 7 dB(A) NLR: 42
Impacted Receptors Benefited: 100	Total Benefits: 112
Non-Impacted Receptors Benefited: 12	

Alternative MA/Q, Barrier 35 Parameters	
Length (ft): 3050	Area / Benefit (ft^2): 654
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 73200	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3041	409 RIDGE RD	1	B	61	55	6
3042	413 RIDGE RD	1	B	62	55	7
3043	417 RIDGE RD	1	B	62	55	7
3044	421 RIDGE RD	1	B	62	55	7
3045	425 RIDGE RD	1	B	63	56	7
3046	429 RIDGE RD	1	B	63	56	7
3047	433 RIDGE RD	1	B	63	57	6
3048	437 RIDGE RD	1	B	63	58	5
3049	438 RIDGE RD	1	B	63	59	4
3050	434 RIDGE RD	1	B	61	59	2
3051	530 CRAB APPLE LN	1	B	59	58	1
3052	426 RIDGE RD	1	B	57	56	1
3053	422 RIDGE RD	1	B	56	55	1
3054	418 RIDGE RD	1	B	57	56	1
3055	414 RIDGE RD	1	B	56	55	1
3056	410 RIDGE RD	1	B	57	54	3
3057	3916 CAROLINA BEACH RD	1	B	60	59	1
3066	505 CRAB APPLE LN	1	B	65	63	2
3069	3916 CAROLINA BEACH RD	1	B	70	70	0
3070	3916 CAROLINA BEACH RD	1	B	64	64	0
3460	3801 PORTOFINO CT	1	B	73	70	3
3461	3801 PORTOFINO CT	1	B	74	71	3
3462	3801 PORTOFINO CT	1	B	72	67	5
3463	3801 PORTOFINO CT	1	B	70	65	5
3464	3801 PORTOFINO CT	1	B	70	64	6
3465	3801 PORTOFINO CT	1	B	60	55	5
3466	3803 PORTOFINO CT	1	B	65	59	6
3467	3803 PORTOFINO CT	1	B	64	59	5
3468	3803 PORTOFINO CT	1	B	65	59	6
3469	3803 PORTOFINO CT	1	B	66	60	6
3470	3803 PORTOFINO CT	1	B	65	58	7
3471	3803 PORTOFINO CT	1	B	61	55	6
3472	3805 PORTOFINO CT	1	B	58	53	5
3473	3805 PORTOFINO CT	1	B	65	58	7
3474	3805 PORTOFINO CT	1	B	64	58	6
3475	3805 PORTOFINO CT	1	B	64	57	7
3476	3805 PORTOFINO CT	1	B	64	57	7
3477	3805 PORTOFINO CT	1	B	56	52	4
3478	3910 CAPTIVA CT	1	B	59	53	6
3479	3910 CAPTIVA CT	1	B	63	56	7
3480	3910 CAPTIVA CT	1	B	62	55	7
3481	3910 CAPTIVA CT	1	B	61	54	7
3482	3910 CAPTIVA CT	1	B	60	54	6
3483	3910 CAPTIVA CT	1	B	49	49	0
3484	3908 CAPTIVA CT	1	B	61	55	6
3485	3908 CAPTIVA CT	1	B	61	55	6
3486	3908 CAPTIVA CT	1	B	61	55	6
3487	3908 CAPTIVA CT	1	B	60	54	6
3488	3908 CAPTIVA CT	1	B	60	54	6
3489	3908 CAPTIVA CT	1	B	59	54	5
3490	3906 CAPTIVA CT	1	B	59	54	5
3491	3906 CAPTIVA CT	1	B	59	54	5

Noise Barrier Analysis
Alternative MA/Q, Barrier 35

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3492	3906 CAPTIVA CT	1	B	58	53	5
3493	3906 CAPTIVA CT	1	B	57	53	4
3494	3906 CAPTIVA CT	1	B	56	52	4
3495	3904 CAPTIVA CT	1	B	55	52	3
3496	3904 CAPTIVA CT	1	B	55	52	3
3497	3904 CAPTIVA CT	1	B	54	51	3
3498	3811 PORTOFINO CT	1	B	51	49	2
3499	3811 PORTOFINO CT	1	B	49	49	0
3500	3811 PORTOFINO CT	1	B	49	49	0
3501	3811 PORTOFINO CT	1	B	49	49	0
3502	3811 PORTOFINO CT	1	B	51	49	2
3503	3811 PORTOFINO CT	1	B	52	49	3
3504	3809 PORTOFINO CT	1	B	49	49	0
3505	3809 PORTOFINO CT	1	B	54	49	5
3506	3809 PORTOFINO CT	1	B	56	49	7
3507	3809 PORTOFINO CT	1	B	57	51	6
3508	3809 PORTOFINO CT	1	B	58	52	6
3509	3807 PORTOFINO CT	1	B	49	49	0
3510	3807 PORTOFINO CT	1	B	56	53	3
3511	3807 PORTOFINO CT	1	B	59	53	6
3512	3807 PORTOFINO CT	1	B	59	53	6
3513	3807 PORTOFINO CT	1	B	59	53	6
3514	3807 PORTOFINO CT	1	B	59	53	6
3515	3812 PORTOFINO CT	1	B	53	49	4
3516	3812 PORTOFINO CT	1	B	62	56	6
3517	3812 PORTOFINO CT	1	B	63	56	7
3518	3812 PORTOFINO CT	1	B	63	57	6
3519	3812 PORTOFINO CT	1	B	64	58	6
3520	3812 PORTOFINO CT	1	B	63	58	5
3521	3802 PORTOFINO CT	1	B	69	65	4
3522	3802 PORTOFINO CT	1	B	58	55	3
3523	3802 PORTOFINO CT	1	B	56	53	3
3524	3802 PORTOFINO CT	1	B	56	53	3
3525	3802 PORTOFINO CT	1	B	57	55	2
3526	3802 PORTOFINO CT	1	B	65	63	2
3527	3804 PORTOFINO CT	1	B	62	58	4
3528	3804 PORTOFINO CT	1	B	61	57	4
3529	3804 PORTOFINO CT	1	B	60	55	5
3530	3804 PORTOFINO CT	1	B	59	54	5
3531	3804 PORTOFINO CT	1	B	59	54	5
3532	3806 PORTOFINO CT	1	B	56	54	2
3533	3806 PORTOFINO CT	1	B	61	58	3
3534	3806 PORTOFINO CT	1	B	61	58	3
3535	3806 PORTOFINO CT	1	B	61	57	4
3536	3806 PORTOFINO CT	1	B	62	57	5
3537	3812 PORTOFINO CT	1	B	56	51	5
3538	3808 PORTOFINO CT	1	B	51	49	2
3539	3808 PORTOFINO CT	1	B	55	52	3
3540	3808 PORTOFINO CT	1	B	52	51	1
3541	3808 PORTOFINO CT	1	B	52	50	2
3542	3808 PORTOFINO CT	1	B	52	50	2
3543	3808 PORTOFINO CT	1	B	50	49	1
3544	3801 PORTOFINO CT	1	B	75	72	3
3545	3801 PORTOFINO CT	1	B	75	72	3
3546	3801 PORTOFINO CT	1	B	74	70	4
3547	3801 PORTOFINO CT	1	B	73	68	5
3548	3801 PORTOFINO CT	1	B	72	67	5
3549	3801 PORTOFINO CT	1	B	64	58	6
3550	3803 PORTOFINO CT	1	B	68	63	5
3551	3803 PORTOFINO CT	1	B	68	63	5
3552	3803 PORTOFINO CT	1	B	69	63	6
3553	3803 PORTOFINO CT	1	B	70	63	7

Noise Barrier Analysis
Alternative MA/Q, Barrier 35

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3554	3803 PORTOFINO CT	1	B	69	62	7
3555	3803 PORTOFINO CT	1	B	63	58	5
3556	3805 PORTOFINO CT	1	B	63	55	8
3557	3805 PORTOFINO CT	1	B	69	61	8
3558	3805 PORTOFINO CT	1	B	69	61	8
3559	3805 PORTOFINO CT	1	B	68	60	8
3560	3805 PORTOFINO CT	1	B	68	60	8
3561	3805 PORTOFINO CT	1	B	60	54	6
3562	3910 CAPTIVA CT	1	B	64	56	8
3563	3910 CAPTIVA CT	1	B	67	59	8
3564	3910 CAPTIVA CT	1	B	66	58	8
3565	3910 CAPTIVA CT	1	B	65	57	8
3566	3910 CAPTIVA CT	1	B	64	57	7
3567	3910 CAPTIVA CT	1	B	52	51	1
3568	3908 CAPTIVA CT	1	B	65	57	8
3569	3908 CAPTIVA CT	1	B	65	57	8
3570	3908 CAPTIVA CT	1	B	64	57	7
3571	3908 CAPTIVA CT	1	B	63	56	7
3572	3908 CAPTIVA CT	1	B	63	56	7
3573	3908 CAPTIVA CT	1	B	63	56	7
3574	3906 CAPTIVA CT	1	B	62	56	6
3575	3906 CAPTIVA CT	1	B	62	56	6
3576	3906 CAPTIVA CT	1	B	61	55	6
3577	3906 CAPTIVA CT	1	B	61	55	6
3578	3906 CAPTIVA CT	1	B	60	55	5
3579	3904 CAPTIVA CT	1	B	59	54	5
3580	3904 CAPTIVA CT	1	B	58	54	4
3581	3904 CAPTIVA CT	1	B	58	53	5
3582	3811 PORTOFINO CT	1	B	54	52	2
3583	3811 PORTOFINO CT	1	B	51	50	1
3584	3811 PORTOFINO CT	1	B	51	50	1
3585	3811 PORTOFINO CT	1	B	51	50	1
3586	3811 PORTOFINO CT	1	B	54	51	3
3587	3811 PORTOFINO CT	1	B	55	50	5
3588	3809 PORTOFINO CT	1	B	49	49	0
3589	3809 PORTOFINO CT	1	B	58	51	7
3590	3809 PORTOFINO CT	1	B	59	51	8
3591	3809 PORTOFINO CT	1	B	60	52	8
3592	3809 PORTOFINO CT	1	B	61	53	8
3593	3807 PORTOFINO CT	1	B	50	49	1
3594	3807 PORTOFINO CT	1	B	60	55	5
3595	3807 PORTOFINO CT	1	B	61	55	6
3596	3807 PORTOFINO CT	1	B	62	54	8
3597	3807 PORTOFINO CT	1	B	62	54	8
3598	3807 PORTOFINO CT	1	B	62	54	8
3599	3812 PORTOFINO CT	1	B	57	51	6
3600	3812 PORTOFINO CT	1	B	65	58	7
3601	3812 PORTOFINO CT	1	B	66	59	7
3602	3812 PORTOFINO CT	1	B	67	60	7
3603	3812 PORTOFINO CT	1	B	68	62	6
3604	3812 PORTOFINO CT	1	B	67	61	6
3605	3802 PORTOFINO CT	1	B	72	69	3
3606	3802 PORTOFINO CT	1	B	63	59	4
3607	3802 PORTOFINO CT	1	B	60	55	5
3608	3802 PORTOFINO CT	1	B	60	55	5
3609	3802 PORTOFINO CT	1	B	62	60	2
3610	3802 PORTOFINO CT	1	B	69	68	1
3611	3804 PORTOFINO CT	1	B	66	63	3
3612	3804 PORTOFINO CT	1	B	65	61	4
3613	3804 PORTOFINO CT	1	B	64	59	5
3614	3804 PORTOFINO CT	1	B	63	58	5
3615	3804 PORTOFINO CT	1	B	62	56	6

Noise Barrier Analysis
Alternative MA/Q, Barrier 35

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3616	3806 PORTOFINO CT	1	B	61	58	3
3617	3806 PORTOFINO CT	1	B	65	62	3
3618	3806 PORTOFINO CT	1	B	65	62	3
3619	3806 PORTOFINO CT	1	B	65	62	3
3620	3806 PORTOFINO CT	1	B	66	61	5
3621	3812 PORTOFINO CT	1	B	59	53	6
3622	3808 PORTOFINO CT	1	B	54	50	4
3623	3808 PORTOFINO CT	1	B	58	56	2
3624	3808 PORTOFINO CT	1	B	56	54	2
3625	3808 PORTOFINO CT	1	B	56	54	2
3626	3808 PORTOFINO CT	1	B	56	54	2
3627	3808 PORTOFINO CT	1	B	54	49	5
3627.1	3810 PORTOFINO CT	1	B	56	52	4

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 35 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 35 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 35 (MA/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 125 **# BENEFITS -** 112 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 654 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative MA/Q, Barrier 36

Alternative MA/Q, Barrier 36 Acoustical Performance Summary	
Impacts: 6	Benefited Receptors @ ≥ 7 dB(A) NLR: 0
Impacted Receptors Benefited: 0	Total Benefits: 0
Non-Impacted Receptors Benefited: 0	

Alternative MA/Q, Barrier 36 Parameters	
Length (ft): 2850	Area / Benefit (ft^2): N/A
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 68400	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
3086	3907 CAROLINA BEACH RD	1	B	67	66	1
3087	3913 CAROLINA BEACH RD	1	B	72	71	1
3088	3913 CAROLINA BEACH RD	1	B	64	62	2
3089	3913 CAROLINA BEACH RD	1	B	61	59	2
3090	3917 CAROLINA BEACH RD	1	B	72	71	1
3091	3919 CAROLINA BEACH RD	1	B	72	72	0
3092	3921 CAROLINA BEACH RD	1	B	74	74	0
3094	3925 CAROLINA BEACH RD	1	B	71	70	1
3095	3925 CAROLINA BEACH RD	1	B	64	64	0
3096	3925 CAROLINA BEACH RD	1	B	60	60	0
3097	3925 CAROLINA BEACH RD	1	B	61	61	0
3098	3925 CAROLINA BEACH RD	1	B	58	57	1
3099	3925 CAROLINA BEACH RD	1	B	59	57	2
3100	3925 CAROLINA BEACH RD	1	B	55	54	1
3101	3925 CAROLINA BEACH RD	1	B	55	55	0
3102	3925 CAROLINA BEACH RD	1	B	58	55	3
3103	3925 CAROLINA BEACH RD	1	B	56	54	2
3104	4128 BREEZEWOOD DR	1	B	59	58	1
3105	4126 BREEZEWOOD DR	1	B	61	60	1
3106	4126 BREEZEWOOD DR	1	B	61	61	0
3107	4126 BREEZEWOOD DR	1	B	61	60	1
3108	4124 BREEZEWOOD DR	1	B	60	59	1
3110	4124 BREEZEWOOD DR	1	B	61	60	1
3111	4124 BREEZEWOOD DR	1	B	61	61	0
3206	4128 BREEZEWOOD DR	1	B	63	62	1
3207	4126 BREEZEWOOD DR	1	B	65	64	1
3208	4126 BREEZEWOOD DR	1	B	65	64	1
3209	4126 BREEZEWOOD DR	1	B	65	64	1
3210	4124 BREEZEWOOD DR	1	B	63	62	1
3211	4124 BREEZEWOOD DR	1	B	64	64	0
3212	4124 BREEZEWOOD DR	1	B	64	64	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 36 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 36 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 36 (MA/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 6 **# BENEFITS -** 0 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	NO
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	NO
2.	Is the quantity per benefited receptor of N/A square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	NO
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Alternative MA/Q, Barrier 37 Acoustical Performance Summary	
Impacts: 18	Benefited Receptors @ ≥ 7 dB(A) NLR: 9
Impacted Receptors Benefited: 12	Total Benefits: 12
Non-Impacted Receptors Benefited: 0	

Alternative MA/Q, Barrier 37 Parameters	
Length (ft): 4550	Area / Benefit (ft^2): 8342
Average Height (ft): 22	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 100100	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2989	14 SUNNYVALE DR	1	B	59	59	0
2990	12 SUNNYVALE DR	1	B	62	62	0
2991	9 SUNNYVALE DR	1	B	64	64	0
2992	15 SUNNYVALE DR	1	B	60	60	0
2993	17 SUNNYVALE DR	1	B	59	58	1
2994	3626 CAROLINA BEACH RD	1	B	65	65	0
2995	3626 CAROLINA BEACH RD	1	B	65	65	0
2998	3706 CAROLINA BEACH RD	1	B	67	67	0
2999	3706 CAROLINA BEACH RD	1	B	64	64	0
3000	3706 CAROLINA BEACH RD	1	B	61	59	2
3001	3706 CAROLINA BEACH RD	1	B	60	58	2
3002	3706 CAROLINA BEACH RD	1	B	57	56	1
3003	3706 CAROLINA BEACH RD	1	B	57	56	1
3004	3706 CAROLINA BEACH RD	1	B	58	56	2
3005	3706 CAROLINA BEACH RD	1	B	58	56	2
3006	3706 CAROLINA BEACH RD	1	B	60	57	3
3007	3706 CAROLINA BEACH RD	1	B	61	60	1
3008	3706 CAROLINA BEACH RD	1	B	62	61	1
3010	209 SOLID HOLLOW LN	1	B	61	59	2
3011	214 SOLID HOLLOW LN	1	B	62	61	1
3012	210 SOLID HOLLOW LN	1	B	62	60	2
3013	134 SOUTHGATE RD	1	B	61	57	4
3014	130 SOUTHGATE RD	1	B	61	58	3
3015	3722 CAROLINA BEACH RD	1	B	64	62	2
3016	3730 CAROLINA BEACH RD	1	B	77	77	0
3017	3730 CAROLINA BEACH RD	1	B	67	66	1
3018	125 SOUTHGATE RD	1	B	63	60	3
3019	129 SOUTHGATE RD	1	B	61	58	3
3020	131 SOUTHGATE RD	1	B	59	57	2
3021	135 SOUTHGATE RD	1	B	58	56	2
3022	141 SOUTHGATE RD	1	B	60	56	4
3023	145 SOUTHGATE RD	1	B	59	57	2
3024	201 HOLLINS RD	1	B	60	55	5
3025	206 HOLLINS RD	1	B	59	54	5
3026	205 HOLLINS RD	1	B	62	56	6
3027	210 HOLLINS RD	1	B	62	55	7
3028	235 HOLLINS RD	1	B	63	55	8
3029	231 HOLLINS RD	1	B	63	55	8
3030	227 HOLLINS RD	1	B	63	55	8
3031	223 HOLLINS RD	1	B	63	55	8
3032	223 HOLLINS RD	1	B	63	55	8
3033	217 HOLLINS RD	1	B	63	56	7
3034	213 HOLLINS RD	1	B	63	56	7
3035	209 HOLLINS RD	1	B	63	56	7
3036	3736 CAROLINA BEACH RD	0.55	D	48	48	0
3037	3736 CAROLINA BEACH RD	0.55	D	53	53	0
3038	3736 CAROLINA BEACH RD	0.55	D	47	47	0
3039	3736 CAROLINA BEACH RD	0.55	D	44	41	3

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 37 does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 37 is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 37 (MA/Q) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 18 **# BENEFITS -** 12 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 8342 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B/NA/T, Barrier 40

Alternative B/NA/T, Barrier 40 Acoustical Performance Summary	
Impacts: 44	Benefited Receptors @ ≥ 7 dB(A) NLR: 30
Impacted Receptors Benefited: 42	Total Benefits: 54
Non-Impacted Receptors Benefited: 12	

Alternative B/NA/T, Barrier 40 Parameters	
Length (ft): 1853	Area / Benefit (ft^2): 610
Average Height (ft): 18	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 32963	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1070	817 HOLBROOKE AVE	1	B	68	61	7
1071	809 HOLBROOKE AVE	1	B	66	61	5
1072	801 HOLBROOKE AVE	1	B	63	60	3
1073	805 HOLBROOKE AVE	1	B	64	61	3
1074	721 HOLBROOKE AVE	1	B	62	60	2
1075	717 HOLBROOKE AVE	1	B	61	59	2
1076	713 HOLBROOKE AVE	1	B	60	59	1
1077	722 HOLBROOKE AVE	1	B	58	56	2
1078	802 HOLBROOKE AVE	1	B	59	56	3
1079	806 HOLBROOKE AVE	1	B	58	55	3
1080	806 HOLBROOKE AVE	1	B	61	57	4
1081	810 HOLBROOKE AVE	1	B	62	57	5
1082	814 HOLBROOKE AVE	1	B	64	58	6
1083	818 HOLBROOKE AVE	1	B	67	59	8
1084	822 HOLBROOKE AVE	1	B	70	60	10
1088	2601 CONSTITUTION BLV	1	B	70	61	9
1089	1102 FRANCIS MARION DR	1	B	56	55	1
2020	1002 MAYFLOWER DR	1	B	71	61	10
2021	1002 MAYFLOWER DR	1	B	69	59	10
2022	1002 MAYFLOWER DR	1	B	69	59	10
2023	1002 MAYFLOWER DR	1	B	67	58	9
2024	2603 CONSTITUTION BLV	1	B	59	53	6
2025	2603 CONSTITUTION BLV	1	B	57	52	5
2026	2603 CONSTITUTION BLV	1	B	56	52	4
2027	2603 CONSTITUTION BLV	1	B	54	50	4
2028	2605 CONSTITUTION BLV	1	B	58	54	4
2029	2605 CONSTITUTION BLV	1	B	56	53	3
2030	2605 CONSTITUTION BLV	1	B	54	50	4
2031	2605 CONSTITUTION BLV	1	B	53	52	1
2032	2607 CONSTITUTION BLV	1	B	58	56	2
2033	2607 CONSTITUTION BLV	1	B	60	56	4
2034	1001 MONITOR DR	1	B	51	49	2
2035	1001 MONITOR DR	1	B	52	50	2
2036	1001 MONITOR DR	1	B	52	50	2
2037	2601 CONSTITUTION BLV	1	B	69	61	8
2038	2601 CONSTITUTION BLV	1	B	68	60	8
2039	2601 CONSTITUTION BLV	1	B	67	59	8
2040	2601 CONSTITUTION BLV	1	B	66	59	7
2041	1004 MAYFLOWER DR	1	B	59	53	6
2042	1004 MAYFLOWER DR	1	B	58	52	6
2043	1004 MAYFLOWER DR	1	B	58	53	5
2044	1004 MAYFLOWER DR	1	B	57	51	6
2045	1004 MAYFLOWER DR	1	B	56	51	5
2046	1004 MAYFLOWER DR	1	B	56	51	5
2047	1004 MAYFLOWER DR	1	B	55	51	4
2048	1003 MONITOR DR	1	B	52	49	3
2049	1003 MONITOR DR	1	B	52	49	3
2050	1003 MONITOR DR	1	B	52	49	3
2051	1003 MONITOR DR	1	B	51	49	2
2052	1003 MONITOR DR	1	B	52	49	3
2053	1003 MONITOR DR	1	B	52	49	3
2054	1003 MONITOR DR	1	B	52	49	3
2055	1003 MONITOR DR	1	B	52	49	3

Noise Barrier Analysis
Alternative B/NA/T, Barrier 40

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2056	2607 CONSTITUTION BLV	1	B	59	56	3
2057	2607 CONSTITUTION BLV	1	B	59	56	3
2058	2607 CONSTITUTION BLV	1	B	59	55	4
2059	2607 CONSTITUTION BLV	1	B	59	56	3
2060	2607 CONSTITUTION BLV	1	B	59	56	3
2061	2607 CONSTITUTION BLV	1	B	58	56	2
2062	2607 CONSTITUTION BLV	1	B	59	55	4
2063	2607 CONSTITUTION BLV	1	B	58	55	3
2064	1001 MONITOR DR	1	B	52	50	2
2065	1001 MONITOR DR	1	B	52	50	2
2066	1001 MONITOR DR	1	B	51	49	2
2067	1004 MAYFLOWER DR	1	B	59	53	6
2526	2606 NEWKIRK AVE	0.63	D	36	36	0
2527	2606 NEWKIRK AVE	0.63	D	31	30	1
2529	2619 NEWKIRK AVE	5.6	C	63	62	1
2530	1272 SHIPYARD BLV	1.1	B	53	51	2
2531	1272 SHIPYARD BLV	1	B	57	51	6
2532	1002 MAYFLOWER DR	1	B	71	61	10
2533	1002 MAYFLOWER DR	1	B	67	58	9
2534	2603 CONSTITUTION BLV	1	B	54	51	3
2535	2603 CONSTITUTION BLV	1	B	59	54	5
2536	1004 MAYFLOWER DR	1	B	53	50	3
2537	2605 CONSTITUTION BLV	1	B	55	51	4
2538	1003 MONITOR DR	1	B	53	52	1
2539	1208 SHIPYARD BLV	1	B	56	53	3
2540	1206 SHIPYARD BLV	1	B	56	53	3
2541	1204 SHIPYARD BLV	1	B	57	52	5
2542	1202 SHIPYARD BLV	1	B	57	53	4
2543	1200 SHIPYARD BLV	1	B	57	53	4
2544	1198 SHIPYARD BLV	1	B	59	52	7
2545	1196 SHIPYARD BLV	1	B	62	55	7
2546	1194 SHIPYARD BLV	1	B	64	56	8
2547	2601 CONSTITUTION BLV	1	B	66	59	7
2548	1218 SHIPYARD BLV	1	B	52	51	1
2549	1220 SHIPYARD BLV	1	B	53	52	1
2550	1222 SHIPYARD BLV	1	B	53	52	1
2551	1224 SHIPYARD BLV	1	B	54	52	2
2552	1226 SHIPYARD BLV	1	B	54	52	2
2553	1228 SHIPYARD BLV	1	B	54	52	2
2554	1005 FRANCIS MARION DR	1	B	54	52	2
2555	1009 FRANCIS MARION DR	1	B	55	53	2
2556	1013 FRANCIS MARION DR	1	B	59	57	2
2557	1017 FRANCIS MARION DR	1	B	58	56	2
2558	1014 FRANCIS MARION DR	1	B	55	53	2
2559	1018 FRANCIS MARION DR	1	B	55	54	1
2560	1106 FRANCIS MARION DR	1	B	57	56	1
2561	1112 FRANCIS MARION DR	1	B	59	57	2
2562	1017 FRANCIS MARION DR	1	B	58	56	2
2563	1105 FRANCIS MARION DR	1	B	60	58	2
2564	1109 FRANCIS MARION DR	1	B	64	62	2
2565	1113 FRANCIS MARION DR	1	B	65	63	2
2567	1276 SHIPYARD BLV	1	B	72	67	5
2568	1274 SHIPYARD BLV	1	B	69	64	5
2569	1272 SHIPYARD BLV	1	B	68	62	6
2570	1270 SHIPYARD BLV	1	B	67	61	6
2571	2700 S 17TH ST	1	B	61	61	0
2572	2700 S 17TH ST	1	B	61	61	0
2573	2700 S 17TH ST	1	B	61	61	0
2574	2700 S 17TH ST	1	B	61	60	1
2575	1616 SHIPYARD BLV	1	B	60	60	0
2576	2700 S 17TH ST	1	B	60	60	0
2577	1268 SHIPYARD BLV	1	B	65	60	5
2578	1264 SHIPYARD BLV	1	B	64	59	5

Noise Barrier Analysis
Alternative B/NA/T, Barrier 40

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2579	1260 SHIPYARD BLV	1	B	61	58	3
2580	1256 SHIPYARD BLV	1	B	59	57	2
2581	1252 SHIPYARD BLV	1	B	59	57	2
2582	1248 SHIPYARD BLV	1	B	57	55	2
2583	1244 SHIPYARD BLV	1	B	56	54	2
2584	1240 SHIPYARD BLV	1	B	56	54	2
2585	1236 SHIPYARD BLV	1	B	56	53	3
2586	1232 SHIPYARD BLV	1	B	56	53	3
2587	1230 SHIPYARD BLV	1	B	55	53	2
2588	1228 SHIPYARD BLV	1	B	55	53	2
2589	1192 SHIPYARD BLV	1	B	66	57	9
2590	1190 SHIPYARD BLV	1	B	68	58	10
2591	1188 SHIPYARD BLV	1	B	69	59	10
2592	1186 SHIPYARD BLV	1	B	71	60	11
2593	1184 SHIPYARD BLV	1	B	71	61	10
2594	1180 SHIPYARD BLV	1	B	73	60	13
2595	2605 CONSTITUTION BLV	1	B	58	54	4
2603	1266 SHIPYARD BLV	1	B	72	62	10
2604	1170 SHIPYARD BLV	1	B	73	61	12
2605	1174 SHIPYARD BLV	1	B	72	61	11
2606	1178 SHIPYARD BLV	1	B	71	60	11
2607	1182 SHIPYARD BLV	1	B	68	59	9
2608	1262 SHIPYARD BLV	1	B	69	60	9
2609	1258 SHIPYARD BLV	1	B	59	56	3
2610	1254 SHIPYARD BLV	1	B	57	54	3
2611	1250 SHIPYARD BLV	1	B	55	53	2
2612	1246 SHIPYARD BLV	1	B	59	55	4
2613	1242 SHIPYARD BLV	1	B	60	55	5
2614	1238 SHIPYARD BLV	1	B	60	55	5
2615	1234 SHIPYARD BLV	1	B	60	55	5
2707	SHIPYARD BLV	1	B	53	51	2
2708	SHIPYARD BLV	1	B	53	52	1
2929	1121 MIDLAND DR	1	B	58	58	0
2930	2702 NEWKIRK AVE	1	B	60	60	0
2931	1118 FRANCIS MARION DR	1	B	59	59	0
2932	1117 MIDLAND DR	1	B	57	57	0
2933	1113 MIDLAND DR	1	B	56	55	1
2934	2703 NEWKIRK AVE	1	B	60	60	0

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 40 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 40 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 40 (B/NA/T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 44 **# BENEFITS -** 54 **NAC:** ☐ **A** ☑ **B** ☑ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 610 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B/NA/T, Barrier 42

Alternative B/NA/T, Barrier 42 Acoustical Performance Summary	
Impacts: 108	Benefited Receptors @ ≥ 7 dB(A) NLR: 151
Impacted Receptors Benefited: 108	Total Benefits: 247
Non-Impacted Receptors Benefited: 139	

Alternative B/NA/T, Barrier 42 Parameters	
Length (ft): 4949	Area / Benefit (ft^2): 466
Average Height (ft): 23	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 115311	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1058	428 DAVIE DR	1	B	60	58	2
1059	418 DAVIE DR	1	B	62	58	4
1060	412 DAVIE DR	1	B	62	58	4
1115	2605 VANCE ST	1	B	68	58	10
1116	306 WILLIAMSON DR	1	B	67	58	9
1117	310 WILLIAMSON DR	1	B	67	58	9
1118	314 WILLIAMSON DR	1	B	68	58	10
1119	318 WILLIAMSON DR	1	B	68	58	10
1137	325 DAVIE DR	1	B	65	57	8
1138	323 DAVIE DR	1	B	65	57	8
1139	317 DAVIE DR	1	B	63	56	7
1140	313 DAVIE DR	1	B	62	57	5
1141	309 DAVIE DR	1	B	65	56	9
1142	305 DAVIE DR	1	B	62	56	6
1143	2605 VANCE ST	1	B	57	52	5
1145	409 CALHOUN DR	1	B	62	57	5
1146	406 CALHOUN DR	1	B	61	55	6
1147	418 RUTLEDGE DR	1	B	62	55	7
1148	420 RUTLEDGE DR	1	B	64	54	10
1150	419 RUTLEDGE DR	1	B	59	54	5
1151	415 RUTLEDGE DR	1	B	56	51	5
1152	409 RUTLEDGE DR	1	B	55	51	4
1153	414 RUTLEDGE DR	1	B	59	53	6
1154	408 RUTLEDGE DR	1	B	58	54	4
1155	410 CALHOUN DR	1	B	60	55	5
1156	422 DAVIE DR	1	B	60	57	3
1160	336 DAVIE DR	1	B	65	55	10
1161	330 DAVIE DR	1	B	63	55	8
1162	326 DAVIE DR	1	B	62	55	7
1163	326 DAVIE DR	1	B	61	55	6
1164	322 DAVIE DR	1	B	60	55	5
1165	318 DAVIE DR	1	B	60	54	6
1166	314 DAVIE DR	1	B	60	55	5
1167	310 DAVIE DR	1	B	62	56	6
1168	306 DAVIE DR	1	B	61	55	6
1169	2707 VANCE ST	1	B	61	53	8
1170	309 CALHOUN DR	1	B	58	53	5
1171	313 CALHOUN DR	1	B	58	53	5
1172	317 CALHOUN DR	1	B	59	54	5
1173	323 CALHOUN DR	1	B	59	55	4
1174	325 CALHOUN DR	1	B	59	54	5
1175	325 CALHOUN DR	1	B	59	55	4
1176	329 CALHOUN DR	1	B	58	53	5
1177	333 CALHOUN DR	1	B	60	54	6
1178	337 CALHOUN DR	1	B	62	54	8
1179	341 CALHOUN DR	1	B	64	55	9
1180	328 CALHOUN DR	1	B	58	54	4
1181	330 CALHOUN DR	1	B	58	53	5
1182	334 CALHOUN DR	1	B	57	53	4
1183	340 CALHOUN DR	1	B	57	53	4
1184	405 MARION DR	1	B	56	53	3
1721	324 CALHOUN DR	1	B	58	53	5
1722	320 CALHOUN DR	1	B	57	53	4

Noise Barrier Analysis
Alternative B/NA/T, Barrier 42

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1723	316 CALHOUN DR	1	B	57	52	5
1724	310 CALHOUN DR	1	B	57	52	5
1725	306 CALHOUN DR	1	B	58	53	5
2068	306 WILLIAMSON DR	1	B	68	58	10
2069	310 WILLIAMSON DR	1	B	67	61	6
2070	314 WILLIAMSON DR	1	B	68	58	10
2071	318 WILLIAMSON DR	1	B	68	58	10
2072	324 WILLIAMSON DR	1	B	67	57	10
2083	323 DAVIE DR	1	B	63	56	7
2084	325 DAVIE DR	1	B	65	57	8
2085	317 DAVIE DR	1	B	63	56	7
2086	313 DAVIE DR	1	B	63	57	6
2087	309 DAVIE DR	1	B	66	56	10
2088	305 DAVIE DR	1	B	61	56	5
2089	306 DAVIE DR	1	B	61	55	6
2090	310 DAVIE DR	1	B	62	56	6
2091	314 DAVIE DR	1	B	60	55	5
2092	318 DAVIE DR	1	B	60	54	6
2093	322 DAVIE DR	1	B	60	55	5
2094	336 DAVIE DR	1	B	65	55	10
2099	341 CALHOUN DR	1	B	63	55	8
2100	337 CALHOUN DR	1	B	62	55	7
2101	333 CALHOUN DR	1	B	59	54	5
2102	325 CALHOUN DR	1	B	58	54	4
2103	323 CALHOUN DR	1	B	59	55	4
2104	317 CALHOUN DR	1	B	58	54	4
2105	328 CALHOUN DR	1	B	58	54	4
2106	324 CALHOUN DR	1	B	57	52	5
2107	320 CALHOUN DR	1	B	57	52	5
2108	316 CALHOUN DR	1	B	57	52	5
2109	310 CALHOUN DR	1	B	57	52	5
2110	330 CALHOUN DR	1	B	58	53	5
2111	340 CALHOUN DR	1	B	58	54	4
2112	334 CALHOUN DR	1	B	58	53	5
2619	2713 WORTH DR	1	B	67	56	11
2620	2718 DARE ST	1	B	66	53	13
2621	2714 DARE ST	1	B	66	57	9
2622	2710 DARE ST	1	B	65	54	11
2625	2706 DARE ST	1	B	67	55	12
2631	202 CALHOUN DR	1	B	66	55	11
2632	206 CALHOUN DR	1	B	64	54	10
2633	210 CALHOUN DR	1	B	64	54	10
2634	2711 DARE ST	1	B	65	55	10
2635	2703 DARE ST	1	B	68	56	12
2636	206 DAVIE DR	1	B	66	55	11
2637	205 CALHOUN DR	1	B	64	54	10
2638	209 CALHOUN DR	1	B	65	57	8
2639	215 CALHOUN DR	1	B	64	56	8
2640	210 DAVIE DR	1	B	66	56	10
2641	214 DAVIE DR	1	B	65	56	9
2642	218 DAVIE DR	1	B	65	56	9
2643	218 DAVIE DR	1	B	64	56	8
2644	224 DAVIE DR	1	B	63	56	7
2645	226 DAVIE DR	1	B	61	54	7
2646	230 DAVIE DR	1	B	60	54	6
2647	236 DAVIE DR	1	B	60	54	6
2648	2710 VANCE ST	1	B	62	55	7
2649	233 CALHOUN DR	1	B	58	51	7
2650	229 CALHOUN DR	1	B	58	52	6
2651	225 CALHOUN DR	1	B	58	53	5
2652	221 CALHOUN DR	1	B	61	54	7
2653	219 CALHOUN DR	1	B	61	54	7
2658	222 WILLIAMSON DR	1	B	73	59	14

Noise Barrier Analysis
Alternative B/NA/T, Barrier 42

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2659	226 WILLIAMSON DR	1	B	71	59	12
2660	230 WILLIAMSON DR	1	B	71	59	12
2661	234 WILLIAMSON DR	1	B	71	59	12
2662	2606 VANCE ST	1	B	68	58	10
2663	233 DAVIE DR	1	B	63	55	8
2664	231 DAVIE DR	1	B	64	57	7
2665	225 DAVIE DR	1	B	64	56	8
2666	221 DAVIE DR	1	B	65	55	10
2667	218 WILLIAMSON DR	1	B	72	59	13
2668	217 DAVIE DR	1	B	68	57	11
2669	215 DAVIE DR	1	B	67	56	11
2670	209 DAVIE DR	1	B	69	57	12
2671	205 DAVIE DR	1	B	69	57	12
2673	2615 DARE ST	1	B	69	58	11
2709	214 CALHOUN DR	1	B	62	53	9
2710	218 CALHOUN DR	1	B	62	53	9
2711	222 CALHOUN DR	1	B	61	53	8
2712	226 CALHOUN DR	1	B	61	53	8
2713	230 CALHOUN DR	1	B	61	52	9
2714	2882 WORTH DR	1	B	58	51	7
2715	2882 WORTH DR	1	B	56	50	6
2716	2878 WORTH DR	1	B	57	51	6
2717	2866 WORTH DR	1	B	59	52	7
2718	2866 WORTH DR	1	B	59	51	8
2719	2870 WORTH DR	1	B	49	49	0
2720	2886 WORTH DR	1	B	56	50	6
2721	20 VIRGIL LN	1	B	57	51	6
2722	2858 WORTH DR	1	B	59	51	8
2723	2846 WORTH DR	1	B	60	52	8
2724	2838 WORTH DR	1	B	61	52	9
2725	2830 WORTH DR	1	B	62	52	10
2726	2826 WORTH DR	1	B	62	53	9
2727	2818 WORTH DR	1	B	63	53	10
2728	2810 WORTH DR	1	B	62	53	9
2729	2806 WORTH DR	1	B	61	50	11
2730	2734 WORTH DR	1	B	60	50	10
2733	2726 WORTH DR	1	B	66	55	11
2734	2722 WORTH DR	1	B	67	57	10
2735	2875 WORTH DR	3.3	D	31	24	7
2736	2853 WORTH DR	1	B	57	50	7
2737	2845 WORTH DR	1	B	57	50	7
2738	2837 WORTH DR	1	B	52	49	3
2739	116 DOBBS ST	1	B	57	49	8
2740	202 DOBBS ST	1	B	57	50	7
2741	202 DOBBS ST	1	B	56	50	6
2742	222 DOBBS ST	1	B	56	50	6
2743	226 DOBBS ST	1	B	57	51	6
2744	230 DOBBS ST	1	B	56	50	6
2745	2823 WORTH DR	1	B	57	51	6
2746	2817 WORTH DR	1	B	60	49	11
2747	2824 CHAPPELL AVE	1	B	59	50	9
2748	2812 CHAPPELL AVE	1	B	60	51	9
2749	2825 CHAPPELL AVE	1	B	55	50	5
2750	2819 CHAPPELL AVE	1	B	55	49	6
2751	2825 CHAPPELL AVE	1	B	56	49	7
2752	221 DOBBS ST	1	B	58	51	7
2753	229 DOBBS ST	1	B	58	51	7
2754	2811 CHAPPELL AVE	1	B	56	49	7
2755	210 RUTLEDGE DR	1	B	59	51	8
2756	2803 CHAPPELL AVE	1	B	58	50	8
2757	2802 CHAPPELL AVE	1	B	60	51	9
2758	134 RUTLEDGE DR	1	B	61	52	9
2759	134 RUTLEDGE DR	1	B	58	51	7

Noise Barrier Analysis
Alternative B/NA/T, Barrier 42

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2760	122 RUTLEDGE DR	1	B	61	52	9
2761	122 RUTLEDGE DR	1	B	62	51	11
2762	114 RUTLEDGE DR	1	B	62	52	10
2763	110 RUTLEDGE DR	1	B	62	52	10
2764	105 DOBBS ST	1	B	58	50	8
2765	210 RUTLEDGE DR	1	B	58	49	9
2766	133 RUTLEDGE DR	1	B	62	51	11
2767	125 RUTLEDGE DR	1	B	62	51	11
2768	125 RUTLEDGE DR	1	B	63	52	11
2769	117 RUTLEDGE DR	1	B	63	51	12
2770	113 RUTLEDGE DR	1	B	60	51	9
2771	101 RUTLEDGE DR	1	B	63	52	11
2772	109 RUTLEDGE DR	1	B	60	51	9
2773	2723 WORTH DR	1	B	64	52	12
2774	2719 WORTH DR	1	B	65	54	11
2830	313 CALHOUN DR	1	B	59	53	6
2831	2707 VANCE ST	1	B	57	52	5
2832	233 CALHOUN DR	1	B	58	51	7
2833	236 DAVIE DR	1	B	60	55	5
2834	230 DAVIE DR	1	B	60	54	6
2835	229 CALHOUN DR	1	B	59	53	6
2836	225 CALHOUN DR	1	B	58	52	6
2837	224 DAVIE DR	1	B	57	51	6
2838	221 CALHOUN DR	1	B	55	51	4
2839	218 DAVIE DR	1	B	63	54	9
2840	214 DAVIE DR	1	B	65	56	9
2841	210 DAVIE DR	1	B	66	55	11
2842	209 CALHOUN DR	1	B	66	57	9
2843	215 CALHOUN DR	1	B	63	55	8
2844	205 CALHOUN DR	1	B	66	56	10
2845	2711 DARE ST	1	B	60	52	8
2846	2703 DARE ST	1	B	61	52	9
2847	205 DAVIE DR	1	B	69	58	11
2848	209 DAVIE DR	1	B	69	57	12
2849	215 DAVIE DR	1	B	68	57	11
2850	221 DAVIE DR	1	B	61	54	7
2851	217 DAVIE DR	1	B	64	54	10
2852	225 DAVIE DR	1	B	63	56	7
2853	231 DAVIE DR	1	B	64	56	8
2854	233 DAVIE DR	1	B	63	55	8
2855	2606 VANCE ST	1	B	63	55	8
2856	234 WILLIAMSON DR	1	B	70	59	11
2857	230 WILLIAMSON DR	1	B	71	58	13
2858	226 WILLIAMSON DR	1	B	71	58	13
2859	222 WILLIAMSON DR	1	B	66	54	12
2864	206 DAVIE DR	1	B	67	55	12
2865	2722 DARE ST	1	B	64	55	9
2866	2605 VANCE ST	1	B	65	55	10
2868	2725 VANCE ST	1	B	61	53	8
2869	2725 VANCE ST	1	B	61	54	7
2870	419 RUTLEDGE DR	1	B	58	52	6
2871	415 RUTLEDGE DR	1	B	55	51	4
2872	409 RUTLEDGE DR	1	B	55	52	3
2873	407 RUTLEDGE DR	1	B	54	51	3
2874	407 RUTLEDGE DR	1	B	54	51	3
2875	403 RUTLEDGE DR	1	B	55	51	4
2876	403 RUTLEDGE DR	1	B	56	52	4
2877	331 RUTLEDGE DR	1	B	56	52	4
2878	331 RUTLEDGE DR	1	B	56	52	4
2879	327 RUTLEDGE DR	1	B	56	52	4
2880	327 RUTLEDGE DR	1	B	56	53	3
2881	2818 VANCE ST	1	B	56	51	5
2882	2818 VANCE ST	1	B	56	50	6

Noise Barrier Analysis
Alternative B/NA/T, Barrier 42

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2883	2816 VANCE ST	1	B	57	51	6
2884	2816 VANCE ST	1	B	57	51	6
2885	2810 VANCE ST	1	B	57	51	6
2886	2810 VANCE ST	1	B	57	51	6
2887	2806 VANCE ST	1	B	57	51	6
2888	2806 VANCE ST	1	B	58	51	7
2889	2804 VANCE ST	1	B	57	51	6
2890	2804 VANCE ST	1	B	57	51	6
2891	304 RUTLEDGE DR	1	B	59	51	8
2892	308 RUTLEDGE DR	1	B	56	51	5
2893	310 RUTLEDGE DR	1	B	58	52	6
2894	310 RUTLEDGE DR	1	B	58	51	7
2895	314 RUTLEDGE DR	1	B	57	51	6
2896	314 RUTLEDGE DR	1	B	57	51	6
2897	2807 VANCE ST	1	B	57	51	6
2898	2807 VANCE ST	1	B	57	51	6
2899	2809 VANCE ST	1	B	57	51	6
2900	2809 VANCE ST	1	B	57	51	6
2901	2806 GRAHAM ST	1	B	57	51	6
2902	2806 GRAHAM ST	1	B	56	51	5
2903	2810 GRAHAM ST	1	B	57	51	6
2904	2810 GRAHAM ST	1	B	57	51	6
2905	2814 GRAHAM ST	1	B	56	51	5
2906	2809 GRAHAM ST	1	B	56	51	5
2907	2809 GRAHAM ST	1	B	56	50	6
2908	2805 GRAHAM ST	1	B	56	51	5
2909	2805 GRAHAM ST	1	B	56	51	5
2910	2806 WARD ST	1	B	56	51	5
2911	2806 WARD ST	1	B	56	50	6
2912	2810 WARD ST	1	B	55	51	4
2913	318 RUTLEDGE DR	1	B	57	52	5
2914	318 RUTLEDGE DR	1	B	57	51	6
2915	324 RUTLEDGE DR	1	B	58	51	7
2916	324 RUTLEDGE DR	1	B	55	50	5
2917	328 RUTLEDGE DR	1	B	56	51	5
2918	328 RUTLEDGE DR	1	B	56	52	4
2919	420 MARION DR	1	B	58	52	6
2920	420 MARION DR	1	B	56	52	4
2921	420 MARION DR	1	B	56	52	4
2922	420 MARION DR	1	B	56	52	4
2923	420 MARION DR	1	B	57	54	3
2924	420 MARION DR	1	B	56	53	3
2925	408 RUTLEDGE DR	1	B	58	54	4
2926	222 RUTLEDGE DR	1	B	58	49	9
2927	206 DOBBS ST	1	B	56	50	6
2928	323 RUTLEDGE DR	1	B	56	52	4

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 42 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 42 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 42 (B/NA/T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 108 **# BENEFITS -** 247 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 466 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B/NA/T, Barrier 43

Alternative B/NA/T, Barrier 43 Acoustical Performance Summary	
Impacts: 72	Benefited Receptors @ ≥ 7 dB(A) NLR: 27
Impacted Receptors Benefited: 54	Total Benefits: 60
Non-Impacted Receptors Benefited: 6	

Alternative B/NA/T, Barrier 43 Parameters	
Length (ft): 2890	Area / Benefit (ft^2): 1155
Average Height (ft): 24	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 69360	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1112	215 SHIPYARD BLV	0.26	C	67	61	6
1113	215 SHIPYARD BLV	0.26	C	66	61	5
1240	309 MARYLAND AVE	1	B	57	53	4
1241	2359 ADAMS ST	1	B	60	55	5
1242	405 MARYLAND AVE	1	B	62	56	6
1243	2421 ADAMS ST	1	B	59	54	5
1244	317 BELL ST	1	B	77	59	18
1245	2425 ADAMS ST	1	B	71	61	10
1246	321 BELL ST	1	B	77	59	18
1247	331 BELL ST	1	B	78	58	20
1250	331 BELL ST	1	B	74	67	7
1252	331 BELL ST	1	B	76	67	9
1253	331 BELL ST	1	B	79	58	21
1254	331 BELL ST	1	B	78	57	21
1255	331 BELL ST	1	B	77	59	18
1256	331 BELL ST	1	B	77	59	18
1257	331 BELL ST	1	B	76	59	17
1258	331 BELL ST	1	B	76	59	17
1259	331 BELL ST	1	B	76	59	17
1260	331 BELL ST	1	B	77	59	18
1261	331 BELL ST	1	B	74	70	4
1262	331 BELL ST	1	B	61	53	8
1263	331 BELL ST	1	B	61	54	7
1264	331 BELL ST	1	B	56	52	4
1265	331 BELL ST	1	B	59	53	6
1266	331 BELL ST	1	B	60	56	4
1267	331 BELL ST	1	B	59	54	5
1268	331 BELL ST	1	B	58	53	5
1269	331 BELL ST	1	B	61	54	7
1270	331 BELL ST	1	B	57	52	5
1271	331 BELL ST	1	B	60	54	6
1272	331 BELL ST	1	B	61	53	8
1273	331 BELL ST	1	B	60	53	7
1274	331 BELL ST	1	B	61	53	8
1275	331 BELL ST	1	B	61	54	7
1276	331 BELL ST	1	B	60	54	6
1277	331 BELL ST	1	B	60	54	6
1278	331 BELL ST	1	B	63	56	7
1279	331 BELL ST	1	B	64	58	6
1280	331 BELL ST	1	B	64	57	7
1281	331 BELL ST	1	B	64	57	7
1282	331 BELL ST	1	B	63	57	6
1283	331 BELL ST	1	B	63	57	6
1284	331 BELL ST	1	B	62	56	6
1285	331 BELL ST	1	B	61	56	5
1286	331 BELL ST	1	B	61	56	5
1287	331 BELL ST	1	B	62	56	6
1288	331 BELL ST	1	B	61	56	5
1289	331 BELL ST	1	B	61	55	6
1290	331 BELL ST	1	B	61	56	5
1291	331 BELL ST	1	B	61	56	5

Noise Barrier Analysis
Alternative B/NA/T, Barrier 43

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1292	331 BELL ST	1	B	61	57	4
1293	331 BELL ST	1	B	62	57	5
1294	331 BELL ST	1	B	62	57	5
1295	331 BELL ST	1	B	62	58	4
1296	331 BELL ST	1	B	62	58	4
1297	331 BELL ST	1	B	61	58	3
1298	331 BELL ST	1	B	60	56	4
1299	331 BELL ST	1	B	61	57	4
1301	2374 CAROLINA BEACH RD	1	B	62	62	0
1302	2370 CAROLINA BEACH RD	1	B	75	75	0
1832	320 MARYLAND AVE	1	B	60	55	5
1833	316 MARYLAND AVE	1	B	60	55	5
1834	312 MARYLAND AVE	1	B	59	55	4
1835	308 MARYLAND AVE	1	B	58	55	3
1836	304 MARYLAND AVE	1	B	59	56	3
1837	300 MARYLAND AVE	1	B	58	55	3
1838	2421 JEFFERSON ST	1	B	61	57	4
1839	2429 JEFFERSON ST	1	B	60	57	3
1840	2437 JEFFERSON ST	1	B	60	57	3
1841	2441 JEFFERSON ST	1	B	61	57	4
1842	2445 JEFFERSON ST	1	B	62	58	4
1843	2449 JEFFERSON ST	1	B	65	60	5
1844	2420 ADAMS ST	1	B	63	58	5
1845	2422 ADAMS ST	1	B	62	58	4
1846	2426 ADAMS ST	1	B	64	60	4
1847	2430 ADAMS ST	1	B	66	62	4
1848	2434 ADAMS ST	1	B	66	63	3
1849	2436 ADAMS ST	1	B	69	66	3
2616	215 SHIPYARD BLV	0.26	C	73	66	7
2617	215 SHIPYARD BLV	0.26	C	71	61	10
2618	215 SHIPYARD BLV	0.26	C	65	61	4
2674	2449 LOUISIANA AVE	1	B	64	60	4
2675	2442 MONROE ST	1	B	63	60	3
2676	2442 MONROE ST	1	B	63	60	3
2677	2441 MONROE ST	1	B	63	60	3
2678	2437 MONROE ST	1	B	61	56	5
2679	2433 MONROE ST	1	B	60	56	4
2680	2429 MONROE ST	1	B	60	56	4
2681	2425 MONROE ST	1	B	58	55	3
2682	2421 MONROE ST	1	B	56	54	2
2683	2417 MONROE ST	1	B	57	54	3
2684	2450 JEFFERSON ST	1	B	65	60	5
2685	2446 JEFFERSON ST	1	B	62	58	4
2686	2442 JEFFERSON ST	1	B	59	56	3
2687	2438 MONROE ST	1	B	62	59	3
2688	2434 MONROE ST	1	B	62	58	4
2689	2436 JEFFERSON ST	1	B	61	57	4
2690	2428 JEFFERSON ST	1	B	60	56	4
2691	2420 JEFFERSON ST	1	B	60	56	4
2692	2412 JEFFERSON ST	1	B	59	56	3
2693	2406 JEFFERSON ST	1	B	59	56	3
2694	2433 ADAMS ST	1	B	75	72	3
2695	310 BELL ST	1	B	69	58	11
2696	2353 JEFFERSON ST	1	B	56	54	2
2697	305 MARYLAND AVE	1	B	56	53	3
2698	313 MARYLAND AVE	1	B	57	53	4
2699	317 MARYLAND AVE	1	B	58	54	4
2700	2358 ADAMS ST	1	B	58	54	4
2701	2363 ADAMS ST	1	B	61	55	6
2702	2403 ADAMS ST	1	B	61	56	5

Noise Barrier Analysis
Alternative B/NA/T, Barrier 43

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2703	2409 ADAMS ST	1	B	57	53	4
2704	2413 ADAMS ST	1	B	59	54	5
2705	2417 ADAMS ST	1	B	58	53	5
2706	2425 ADAMS ST	1	B	67	58	9

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 43 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 43 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 43 (B/NA/T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 72 **# BENEFITS -** 60 **NAC:** ☐ **A** ☑ **B** ☑ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1155 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative B/NA/T, Barrier 44

Alternative B/NA/T, Barrier 44 Acoustical Performance Summary	
Impacts: 39	Benefited Receptors @ ≥ 7 dB(A) NLR: 23
Impacted Receptors Benefited: 39	Total Benefits: 40
Non-Impacted Receptors Benefited: 1	

Alternative B/NA/T, Barrier 44 Parameters	
Length (ft): 4135	Area / Benefit (ft^2): 2295
Average Height (ft): 22	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 91802	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1193	319 CAPE FEAR BLV	1	B	72	63	9
1194	323 CAPE FEAR BLV	1	B	70	63	7
1195	327 CAPE FEAR BLV	1	B	68	62	6
1196	331 CAPE FEAR BLV	1	B	67	62	5
1197	339 CAPE FEAR BLV	1	B	67	62	5
1198	2414 CROSSOVER ST	1	B	73	66	7
1199	347 CAPE FEAR BLV	1	B	65	60	5
1200	351 CAPE FEAR BLV	1	B	66	60	6
1201	355 CAPE FEAR BLV	1	B	65	60	5
1202	359 CAPE FEAR BLV	1	B	66	60	6
1203	401 CAPE FEAR BLV	1	B	65	60	5
1204	405 CAPE FEAR BLV	1	B	65	60	5
1205	409 CAPE FEAR BLV	1	B	65	60	5
1206	413 CAPE FEAR BLV	1	B	65	60	5
1207	417 CAPE FEAR BLV	1	B	66	61	5
1208	344 CAPE FEAR BLV	1	B	68	61	7
1209	348 CAPE FEAR BLV	1	B	68	61	7
1210	352 CAPE FEAR BLV	1	B	68	60	8
1211	356 CAPE FEAR BLV	1	B	68	60	8
1212	402 CAPE FEAR BLV	1	B	69	60	9
1213	406 CAPE FEAR BLV	1	B	69	60	9
1214	410 CAPE FEAR BLV	1	B	69	60	9
1215	414 CAPE FEAR BLV	1	B	68	60	8
1216	418 CAPE FEAR BLV	1	B	69	61	8
1217	422 CAPE FEAR BLV	1	B	68	60	8
1218	426 CAPE FEAR BLV	1	B	68	61	7
1219	434 CAPE FEAR BLV	1	B	68	61	7
1220	442 CAPE FEAR BLV	1	B	68	61	7
1221	448 CAPE FEAR BLV	1	B	67	60	7
1222	434 CAPE FEAR BLV	1	B	68	61	7
1223	441 CAPE FEAR BLV	1	B	66	61	5
1224	437 CAPE FEAR BLV	1	B	66	61	5
1225	433 CAPE FEAR BLV	1	B	66	61	5
1226	429 CAPE FEAR BLV	1	B	65	61	4
1227	425 CAPE FEAR BLV	1	B	66	61	5
1228	421 CAPE FEAR BLV	1	B	66	61	5
1232	402 BELL ST	1	B	78	61	17
1233	418 BELL ST	1	B	76	61	15
1234	418 BELL ST	1	B	75	61	14
1235	418 BELL ST	1	B	75	61	14
1236	418 BELL ST	1	B	76	62	14

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 44 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 44 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 44 (B/NA/T) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 39 **# BENEFITS -** 40 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 2295 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 45 North

Alternative V-AW, Barrier 45 North Acoustical Performance Summary	
Impacts: 2	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 2	Total Benefits: 2
Non-Impacted Receptors Benefited: 0	

Alternative V-AW, Barrier 45 North Parameters	
Length (ft): 850	Area / Benefit (ft^2): 8500
Average Height (ft): 20	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 17000	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1381	1809 CAROLINA BEACH RD	1	B	71	60	11
1393	602 SOUTH CAROLINA AVE	1	B	60	58	2
1394	601 SOUTH CAROLINA AVE	1	B	61	57	4
1395	1828 W LAKE SHORE DR	1	B	61	60	1
1396	1822 W LAKE SHORE DR	1	B	63	61	2
1397	1818 E LAKE SHORE DR	1	B	64	61	3
1398	1812 W LAKE SHORE DR	1	B	66	61	5

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 45 North does NOT preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 45 North is NOT likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 45N (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 2 **# BENEFITS -** 2 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 8500 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	NO

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	NO
3.	Is the noise wall likely?	NO

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 45 South

Alternative V-AW, Barrier 45 South Acoustical Performance Summary	
Impacts: 3	Benefited Receptors @ ≥ 7 dB(A) NLR: 1
Impacted Receptors Benefited: 3	Total Benefits: 5
Non-Impacted Receptors Benefited: 2	

Alternative V-AW, Barrier 45 South Parameters	
Length (ft): 319	Area / Benefit (ft^2): 893
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 2000
Area (ft^2): 4466	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1410	517 WOODLAWN AVE	1	B	63	58	5
1411	513 WOODLAWN AVE	1	B	63	57	6
1412	509 WOODLAWN AVE	1	B	68	61	7
1413	505 WOODLAWN AVE	1	B	71	65	6
1414	503 WOODLAWN AVE	1	B	73	67	6
1415	504 WOODLAWN AVE	1	B	62	60	2
1416	607 IVEY CIR	1	B	58	58	0
1417	510 WOODLAWN AVE	1	B	60	59	1
1418	516 WOODLAWN AVE	1	B	58	58	0
1419	606 WOODLAWN AVE	1	B	58	57	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 45 South does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 45 South is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 45S (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 3 **# BENEFITS -** 5 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 893 square feet less than the maximum allowable quantity per benefited receptor of 2000 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 46

Alternative V-AW, Barrier 46 Acoustical Performance Summary	
Impacts: 33	Benefited Receptors @ ≥ 7 dB(A) NLR: 14
Impacted Receptors Benefited: 20	Total Benefits: 21
Non-Impacted Receptors Benefited: 1	

Alternative V-AW, Barrier 46 Parameters	
Length (ft): 1823	Area / Benefit (ft^2): 1864
Average Height (ft): 21	Allowable Area / Benefit (ft^2): 2500
Area (ft^2): 39144	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1505	314 SOUTH CAROLINA AVE	1	D	64	64	0
1509	1837 WASHINGTON ST	1	B	67	62	5
1510	1833 WASHINGTON ST	1	B	67	59	8
1511	1829 WASHINGTON ST	1	B	69	65	4
1515	317 NORTH CAROLINA AVE	1	B	70	70	0
1516	313 NORTH CAROLINA AVE	1	B	68	54	14
1517	309 NORTH CAROLINA AVE	1	B	65	54	11
1518	305 NORTH CAROLINA AVE	1	B	63	54	9
1519	301 NORTH CAROLINA AVE	1	B	62	54	8
1521	302 KENTUCKY AVE	1	B	73	73	0
1523	1918 CAROLINA BEACH RD	1	B	77	64	13
1524	1926 CAROLINA BEACH RD	1	B	76	70	6
1525	401 TENNESSEE AVE	1	B	64	60	4
1526	1909 WASHINGTON ST	1	B	67	58	9
1528	1922 CAROLINA BEACH RD	1	B	77	65	12
1529	1904 WASHINGTON ST	1	B	66	55	11
1530	1908 WASHINGTON ST	1	B	64	55	9
1531	1912 WASHINGTON ST	1	B	62	55	7
1532	1916 WASHINGTON ST	1	B	61	55	6
1533	1920 WASHINGTON ST	1	B	60	55	5
1534	313 TENNESSEE AVE	1	B	54	50	4
1535	309 TENNESSEE AVE	1	B	56	51	5
1536	307 TENNESSEE AVE	1	B	56	52	4
1537	301 TENNESSEE AVE	1	B	57	54	3
1538	232 NORTH CAROLINA AVE	1	B	59	57	2
1539	238 NORTH CAROLINA AVE	1	B	60	57	3
1540	242 NORTH CAROLINA AVE	1	B	60	57	3
1541	246 NORTH CAROLINA AVE	1	B	60	56	4
1542	250 NORTH CAROLINA AVE	1	B	60	56	4
1543	302 NORTH CAROLINA AVE	1	B	61	55	6
1544	306 NORTH CAROLINA AVE	1	B	61	53	8
1545	308 NORTH CAROLINA AVE	1	B	62	53	9
1546	312 NORTH CAROLINA AVE	1	B	62	52	10
1547	249 NORTH CAROLINA AVE	1	B	62	57	5
1548	249 NORTH CAROLINA AVE	1	B	62	58	4
1549	241 NORTH CAROLINA AVE	1	B	61	58	3
1550	237 NORTH CAROLINA AVE	1	B	61	58	3
1551	229 NORTH CAROLINA AVE	1	B	60	58	2
1552	225 NORTH CAROLINA AVE	1	B	60	58	2
1553	221 NORTH CAROLINA AVE	1	B	59	58	1
1554	213 NORTH CAROLINA AVE	1	B	59	58	1
1555	213 NORTH CAROLINA AVE	1	B	58	58	0
1556	201 NORTH CAROLINA AVE	1	B	58	57	1
1557	1813 PINE ST	1	B	59	59	0
1558	1895 BURNETT BLV	1	B	63	63	0
1559	151 NORTH CAROLINA AVE	1	B	61	61	0
1560	151 NORTH CAROLINA AVE	1	B	59	58	1

Noise Barrier Analysis
Alternative V-AW, Barrier 46

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1561	151 NORTH CAROLINA AVE	1	B	57	57	0
1562	151 NORTH CAROLINA AVE	1	B	57	57	0
1563	151 NORTH CAROLINA AVE	1	B	59	58	1
1564	151 NORTH CAROLINA AVE	1	B	60	59	1

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 46 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 46 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 46 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 33 **# BENEFITS -** 21 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☑ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 1864 square feet less than the maximum allowable quantity per benefited receptor of 2500 square feet?	YES

C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

Noise Barrier Analysis
Alternative V-AW, Barrier 47

Alternative V-AW, Barrier 47 Acoustical Performance Summary	
Impacts: 25	Benefited Receptors @ ≥ 7 dB(A) NLR: 28
Impacted Receptors Benefited: 22	Total Benefits: 59
Non-Impacted Receptors Benefited: 37	

Alternative V-AW, Barrier 47 Parameters	
Length (ft): 837	Area / Benefit (ft^2): 199
Average Height (ft): 14	Allowable Area / Benefit (ft^2): 1500
Area (ft^2): 11718	

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1624	210 RIVER ROCK WAY	1	B	60	54	6
1625	1408 S 3RD ST	1	B	73	58	15
1626	208 MARTIN ST	1	B	62	54	8
1627	210 RIVER ROCK WAY	1	B	66	57	9
1628	210 RIVER ROCK WAY	1	B	60	54	6
1629	1415 S 2ND ST	1	B	64	64	0
1630	1414 S 2ND ST	1	B	55	55	0
1631	100 RIVER ROCK WAY	1	B	59	59	0
1632	1400 S 2ND ST	1	B	55	55	0
1633	204 MARTIN ST	1	B	50	49	1
1634	1401 S 2ND ST	1	B	54	51	3
1635	1315 S 2ND ST	1	B	54	51	3
1636	1309 S 2ND ST	1	B	56	54	2
1637	1302 S 2ND ST	1	B	49	49	0
1638	109 LAUGHING OAK LN	1	B	50	49	1
1639	1302 S 2ND ST	1	B	50	50	0
1640	101 LAUGHING OAK LN	1	B	53	53	0
1641	102 LAUGHING OAK LN	1	B	55	55	0
1642	106 LAUGHING OAK LN	1	B	55	55	0
1643	110 LAUGHING OAK LN	1	B	54	53	1
1644	1314 S 2ND ST	1	B	52	51	1
1726	109 LAUGHING OAK LN	1	B	50	50	0
1727	101 LAUGHING OAK LN	1	B	49	49	0
1728	105 LAUGHING OAK LN	1	B	52	52	0
1729	105 LAUGHING OAK LN	1	B	49	49	0
1730	1309 S 2ND ST	1	B	56	54	2
1731	1309 S 2ND ST	1	B	56	54	2
1732	1315 S 2ND ST	1	B	55	54	1
1733	1315 S 2ND ST	1	B	55	53	2
1734	205 MARTIN ST	1	B	56	54	2
1735	205 MARTIN ST	1	B	57	55	2
1736	205 MARTIN ST	1	B	59	56	3
1737	209 MARTIN STT	1	B	61	57	4
1738	209 MARTIN STT	1	B	64	59	5
1739	209 MARTIN STT	1	B	68	57	11
1740	1408 S 3RD ST	1	B	52	51	1
1741	1408 S 3RD ST	1	B	66	56	10
1742	208 MARTIN ST	1	B	56	54	2
1743	208 MARTIN ST	1	B	61	53	8
1744	204 MARTIN ST	1	B	49	49	0
1745	204 MARTIN ST	1	B	56	52	4
1746	1401 S 2ND ST	1	B	49	49	0
1747	1401 S 2ND ST	1	B	49	49	0
1748	1314 S 2ND ST	1	B	52	52	0
1749	1314 S 2ND ST	1	B	50	49	1
1750	110 LAUGHING OAK LN	1	B	52	52	0
1751	110 LAUGHING OAK LN	1	B	53	53	0
1752	1302 S 2ND ST	1	B	53	52	1
1753	109 LAUGHING OAK LN	1	B	50	50	0
1754	105 LAUGHING OAK LN	1	B	49	49	0
1755	101 LAUGHING OAK LN	1	B	49	49	0

Noise Barrier Analysis
Alternative V-AW, Barrier 47

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1756	106 LAUGHING OAK LN	1	B	50	50	0
1757	106 LAUGHING OAK LN	1	B	49	49	0
1758	102 LAUGHING OAK LN	1	B	49	49	0
1759	102 LAUGHING OAK LN	1	B	49	49	0
1760	206 RIVER ROCK WAY	1	B	57	52	5
1761	206 RIVER ROCK WAY	1	B	52	52	0
1762	206 RIVER ROCK WAY	1	B	64	63	1
1763	1415 S 2ND ST	1	B	55	55	0
1764	1415 S 2ND ST	1	B	55	52	3
1765	1422 S 3RD ST	1	B	58	53	5
1766	1422 S 3RD ST	1	B	73	57	16
1767	1414 S 2ND ST	1	B	51	51	0
1768	1414 S 2ND ST	1	B	64	64	0
1769	112 RIVER ROCK WAY	1	B	51	51	0
1770	112 RIVER ROCK WAY	1	B	54	54	0
1771	112 RIVER ROCK WAY	1	B	64	64	0
1772	1422 S 3RD ST	1	B	73	59	14
1850	1414 S 2ND ST	1	B	60	60	0
1851	1414 S 2ND ST	1	B	57	57	0
1852	1414 S 2ND ST	1	B	54	54	0
1853	1414 S 2ND ST	1	B	53	53	0
1854	1414 S 2ND ST	1	B	54	52	2
1855	1414 S 2ND ST	1	B	56	56	0
1856	112 RIVER ROCK WAY	1	B	60	60	0
1857	112 RIVER ROCK WAY	1	B	57	57	0
1858	112 RIVER ROCK WAY	1	B	55	55	0
1859	112 RIVER ROCK WAY	1	B	53	53	0
1860	112 RIVER ROCK WAY	1	B	52	52	0
1861	1408 S 3RD ST	1	B	73	58	15
1862	1408 S 3RD ST	1	B	73	58	15
1863	1408 S 3RD ST	1	B	73	58	15
1864	1408 S 3RD ST	1	B	73	58	15
1865	1408 S 3RD ST	1	B	73	58	15
1866	1408 S 3RD ST	1	B	73	57	16
1867	1408 S 3RD ST	1	B	73	58	15
1868	208 MARTIN ST	1	B	60	54	6
1869	208 MARTIN ST	1	B	58	54	4
1870	208 MARTIN ST	1	B	58	53	5
1871	208 MARTIN ST	1	B	57	54	3
1872	208 MARTIN ST	1	B	56	52	4
1873	208 MARTIN ST	1	B	61	54	7
1874	208 MARTIN ST	1	B	56	53	3
1875	208 MARTIN ST	1	B	59	53	6
1876	1401 S 2ND ST	1	B	49	49	0
1877	1401 S 2ND ST	1	B	49	49	0
1878	1401 S 2ND ST	1	B	50	49	1
1879	1401 S 2ND ST	1	B	49	49	0
1880	1401 S 2ND ST	1	B	49	49	0
1881	1401 S 2ND ST	1	B	54	50	4
1882	1401 S 2ND ST	1	B	55	52	3
1883	1401 S 2ND ST	1	B	49	49	0
1884	1401 S 2ND ST	1	B	49	49	0
1885	1401 S 2ND ST	1	B	49	49	0
1886	1401 S 2ND ST	1	B	49	49	0
1887	1401 S 2ND ST	1	B	50	49	1
1888	1401 S 2ND ST	1	B	51	50	1
1889	1401 S 2ND ST	1	B	49	49	0
1890	1401 S 2ND ST	1	B	49	49	0
1891	1401 S 2ND ST	1	B	50	50	0
1892	204 MARTIN ST	1	B	50	49	1

Noise Barrier Analysis
Alternative V-AW, Barrier 47

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1893	204 MARTIN ST	1	B	50	49	1
1894	204 MARTIN ST	1	B	50	49	1
1895	204 MARTIN ST	1	B	54	50	4
1896	204 MARTIN ST	1	B	50	49	1
1897	204 MARTIN ST	1	B	53	49	4
1898	204 MARTIN ST	1	B	52	50	2
1899	204 MARTIN ST	1	B	56	51	5
1900	204 MARTIN ST	1	B	57	52	5
1901	204 MARTIN ST	1	B	50	49	1
1902	204 MARTIN ST	1	B	52	50	2
1903	204 MARTIN ST	1	B	52	49	3
1904	204 MARTIN ST	1	B	52	49	3
1905	204 MARTIN ST	1	B	51	49	2
1906	204 MARTIN ST	1	B	55	50	5
1907	204 MARTIN ST	1	B	60	55	5
1908	1415 S 2ND ST	1	B	54	54	0
1909	210 RIVER ROCK WAY	1	B	59	54	5
1910	1415 S 2ND ST	1	B	61	61	0
1911	1415 S 2ND ST	1	B	56	56	0
1912	206 RIVER ROCK WAY	1	B	62	57	5
1913	206 RIVER ROCK WAY	1	B	55	51	4
1914	210 RIVER ROCK WAY	1	B	62	54	8
1915	1415 S 2ND ST	1	B	63	63	0
1916	206 RIVER ROCK WAY	1	B	56	51	5
1917	1415 S 2ND ST	1	B	57	57	0
1918	1415 S 2ND ST	1	B	52	52	0
1919	206 RIVER ROCK WAY	1	B	56	51	5
1920	1415 S 2ND ST	1	B	59	59	0
1921	206 RIVER ROCK WAY	1	B	60	54	6
1922	210 RIVER ROCK WAY	1	B	64	55	9
1923	1415 S 2ND ST	1	B	53	53	0
1924	210 RIVER ROCK WAY	1	B	63	55	8
1925	1415 S 2ND ST	1	B	63	63	0
1926	206 RIVER ROCK WAY	1	B	65	60	5
1927	206 RIVER ROCK WAY	1	B	57	52	5
1928	210 RIVER ROCK WAY	1	B	66	57	9
1929	206 RIVER ROCK WAY	1	B	65	59	6
1930	1415 S 2ND ST	1	B	57	57	0
1931	210 RIVER ROCK WAY	1	B	60	54	6
1932	1415 S 2ND ST	1	B	55	55	0
1933	206 RIVER ROCK WAY	1	B	58	52	6
1934	1415 S 2ND ST	1	B	58	58	0
1935	206 RIVER ROCK WAY	1	B	57	52	5
1936	206 RIVER ROCK WAY	1	B	58	53	5
1937	206 RIVER ROCK WAY	1	B	61	55	6
1938	1415 S 2ND ST	1	B	61	61	0
1939	1415 S 2ND ST	1	B	56	56	0
1940	210 RIVER ROCK WAY	1	B	59	54	5
1941	206 RIVER ROCK WAY	1	B	60	54	6
1942	1415 S 2ND ST	1	B	65	65	0
1943	206 RIVER ROCK WAY	1	B	59	53	6
1944	1415 S 2ND ST	1	B	60	60	0
1945	206 RIVER ROCK WAY	1	B	63	57	6
1946	210 RIVER ROCK WAY	1	B	60	54	6
1947	206 RIVER ROCK WAY	1	B	66	62	4
1948	1422 S 3RD ST	1	B	73	58	15
1949	1422 S 3RD ST	1	B	73	58	15
1950	1422 S 3RD ST	1	B	73	58	15
1951	1422 S 3RD ST	1	B	73	58	15
1952	1422 S 3RD ST	1	B	73	58	15

Noise Barrier Analysis
Alternative V-AW, Barrier 47

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
1953	1422 S 3RD ST	1	B	73	58	15
1954	1422 S 3RD ST	1	B	73	58	15
1955	1422 S 3RD ST	1	B	73	58	15
1956	102 LAUGHING OAK LN	1	B	49	49	0
1957	102 LAUGHING OAK LN	1	B	49	49	0
1958	102 LAUGHING OAK LN	1	B	49	49	0
1959	102 LAUGHING OAK LN	1	B	50	50	0
1960	102 LAUGHING OAK LN	1	B	53	53	0
1961	102 LAUGHING OAK LN	1	B	55	55	0
1962	106 LAUGHING OAK LN	1	B	56	56	0
1963	106 LAUGHING OAK LN	1	B	49	49	0
1964	106 LAUGHING OAK LN	1	B	52	52	0
1965	106 LAUGHING OAK LN	1	B	49	49	0
1966	106 LAUGHING OAK LN	1	B	49	49	0
1967	106 LAUGHING OAK LN	1	B	49	49	0
1968	110 LAUGHING OAK LN	1	B	54	54	0
1969	110 LAUGHING OAK LN	1	B	53	53	0
1970	110 LAUGHING OAK LN	1	B	54	53	1
1971	110 LAUGHING OAK LN	1	B	52	52	0
1972	110 LAUGHING OAK LN	1	B	51	51	0
1973	110 LAUGHING OAK LN	1	B	54	54	0
1974	1314 S 2ND ST	1	B	50	50	0
1975	1314 S 2ND ST	1	B	50	49	1
1976	1314 S 2ND ST	1	B	49	49	0
1977	1314 S 2ND ST	1	B	49	49	0
1978	1314 S 2ND ST	1	B	52	51	1
1979	1314 S 2ND ST	1	B	49	49	0
1980	101 LAUGHING OAK LN	1	B	49	49	0
1981	101 LAUGHING OAK LN	1	B	49	49	0
1982	101 LAUGHING OAK LN	1	B	49	49	0
1983	101 LAUGHING OAK LN	1	B	50	50	0
1984	101 LAUGHING OAK LN	1	B	49	49	0
1985	101 LAUGHING OAK LN	1	B	53	53	0
1986	105 LAUGHING OAK LN	1	B	49	49	0
1987	105 LAUGHING OAK LN	1	B	49	49	0
1988	105 LAUGHING OAK LN	1	B	51	51	0
1989	105 LAUGHING OAK LN	1	B	49	49	0
1990	105 LAUGHING OAK LN	1	B	49	49	0
1991	105 LAUGHING OAK LN	1	B	49	49	0
1992	109 LAUGHING OAK LN	1	B	49	49	0
1993	109 LAUGHING OAK LN	1	B	49	49	0
1994	109 LAUGHING OAK LN	1	B	50	50	0
1995	109 LAUGHING OAK LN	1	B	50	50	0
1996	109 LAUGHING OAK LN	1	B	50	50	0
1997	109 LAUGHING OAK LN	1	B	49	49	0
1998	1302 S 2ND ST	1	B	52	52	0
1999	1302 S 2ND ST	1	B	53	52	1
2000	1302 S 2ND ST	1	B	53	52	1
2001	1302 S 2ND ST	1	B	51	51	0
2002	1302 S 2ND ST	1	B	53	52	1
2003	1302 S 2ND ST	1	B	53	52	1
2004	1309 S 2ND ST	1	B	56	54	2
2005	1309 S 2ND ST	1	B	56	54	2
2006	1309 S 2ND ST	1	B	56	54	2
2007	1309 S 2ND ST	1	B	56	54	2
2008	1315 S 2ND ST	1	B	55	53	2
2009	1315 S 2ND ST	1	B	55	53	2
2010	1315 S 2ND ST	1	B	51	50	1
2011	1315 S 2ND ST	1	B	54	51	3
2012	205 MARTIN ST	1	B	56	53	3

Noise Barrier Analysis
Alternative V-AW, Barrier 47

Receptor No.	Address	E.R.s	NAC Category	Future Year Build dB(A)	dB(A) With Barrier	Noise Level Red. (dB(A))
2013	205 MARTIN ST	1	B	56	54	2
2014	205 MARTIN ST	1	B	57	55	2
2015	205 MARTIN ST	1	B	59	56	3
2016	209 MARTIN ST	1	B	61	57	4
2017	209 MARTIN ST	1	B	62	58	4
2018	209 MARTIN ST	1	B	64	58	6
2019	209 MARTIN ST	1	B	67	57	10

Impact =
5 to 6 dB(A) Reduction =
≥ 7 dB(A) Reduction =

Barrier 47 does preliminarily meet NCDOT feasibility and reasonableness criteria due to Area/Benefit exceeding the Allowable Area/Benefit.

Barrier 47 is likely to be incorporated into the project.

To be used with Traffic Noise Reports only

NCDOT NOISE WALL

FEASIBILITY & REASONABLENESS WORKSHEET

PROJECT - Cape Fear Crossing **TIP# -** U-4738

NOISE WALL # - 47 (V-AW) **COUNTY(IES) -** Brunswick and New Hanover

 # IMPACTS - 25 **# BENEFITS -** 59 **NAC:** ☐ **A** ☑ **B** ☐ **C** ☐ **D** ☐ **E**

A. FEASBILITY:

1.	Can a 5-dB(A) reduction in traffic noise levels be achieved for at least two impacted receptors?	YES
2.	Does topography negatively affect the proposed noise wall?	NO
3.	Does the proposed noise wall negatively affect property access, drainage, utilities or maintenance requirements?	NO
4.	Is there control of access in the vicinity of the proposed noise wall?	YES

B. REASONABLENESS

1.	Can a 7- dB(A) reduction in traffic noise levels be achieved for at least one benefited receptor?	YES
2.	Is the quantity per benefited receptor of 199 square feet less than the maximum allowable quantity per benefited receptor of 1500 square feet?	YES

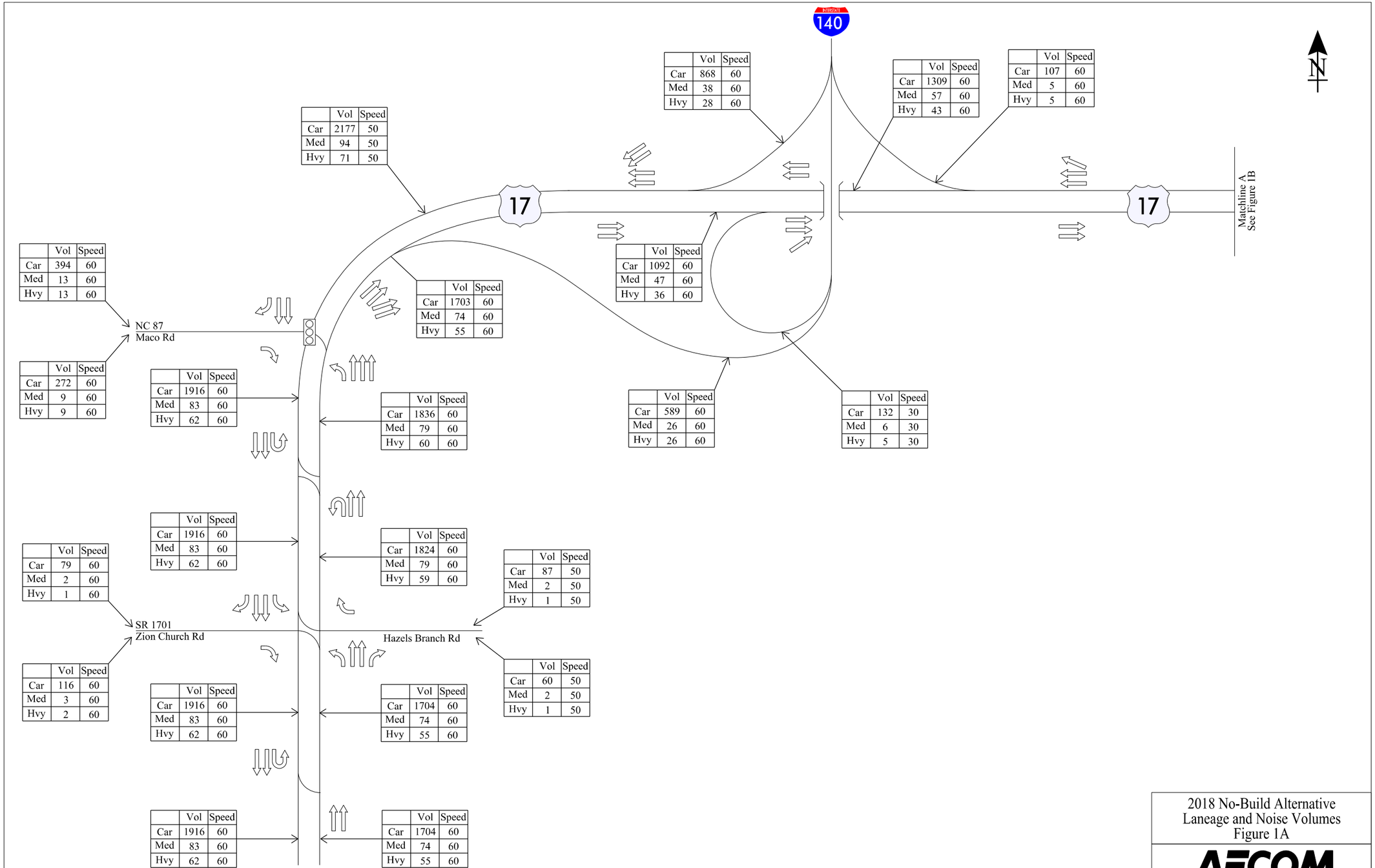
C. NOISE WALL PRELIMINARY DECISION

1.	Is the noise wall preliminarily feasible?	YES
2.	Is the noise wall preliminarily reasonable?	YES
3.	Is the noise wall likely?	YES

PREPARED BY: Cole Martin **DATE PREPARED:** 02/15/2019

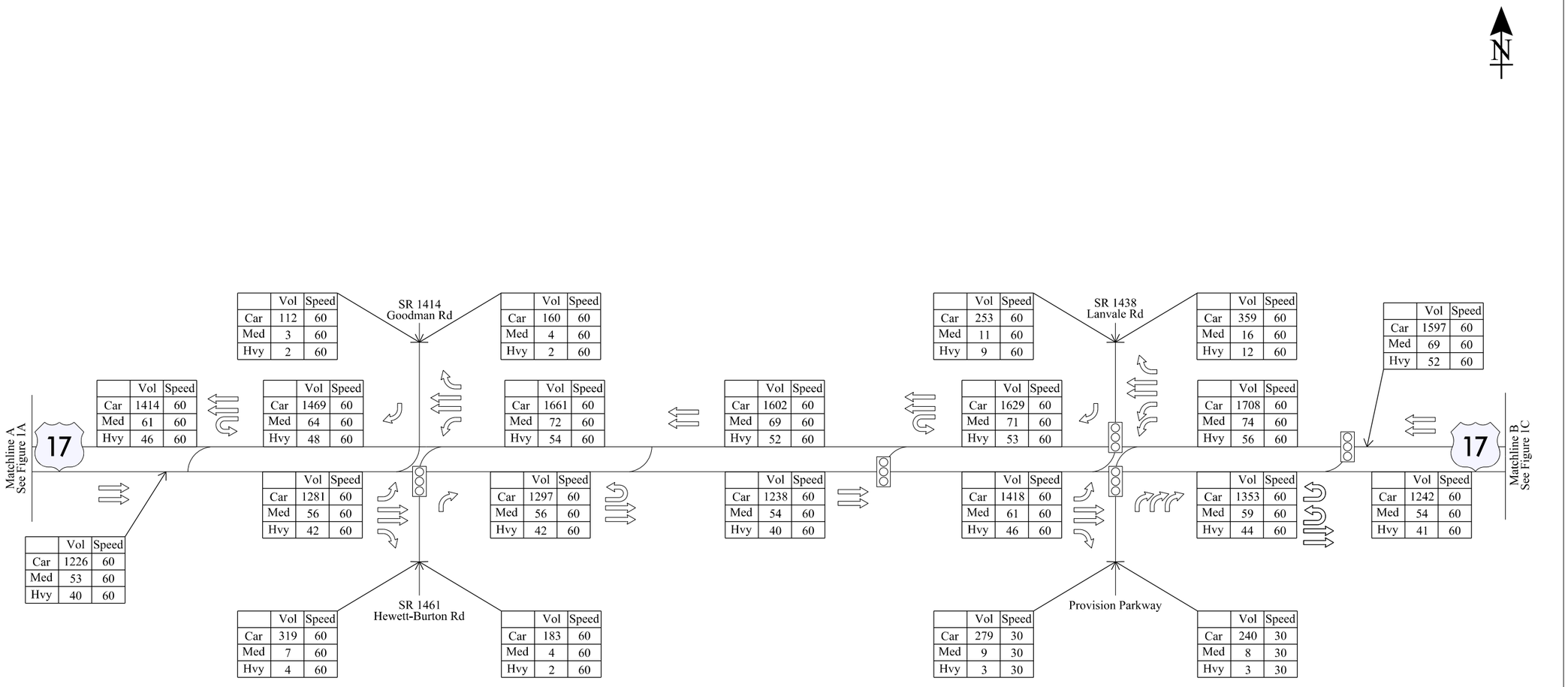
Appendix E

Predicted Traffic Volumes



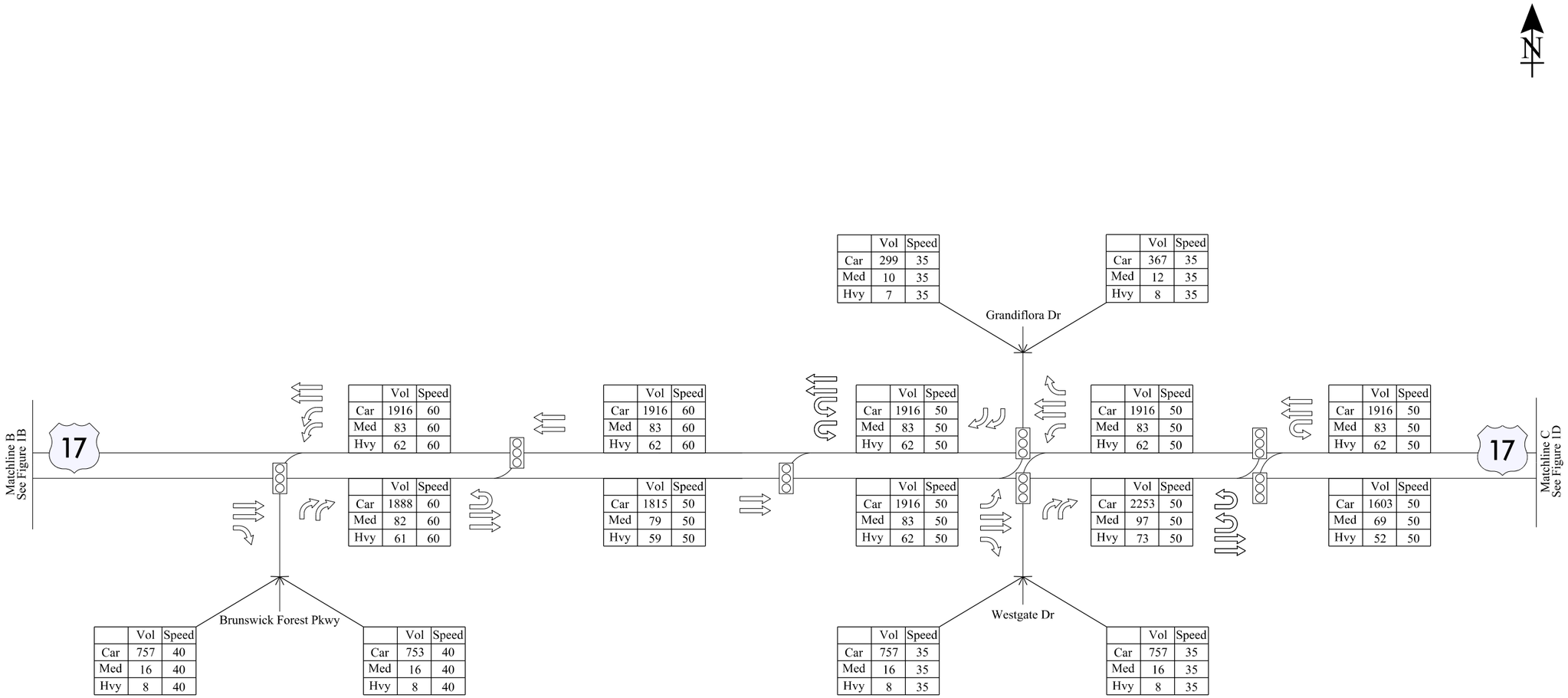
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1A

AECOM



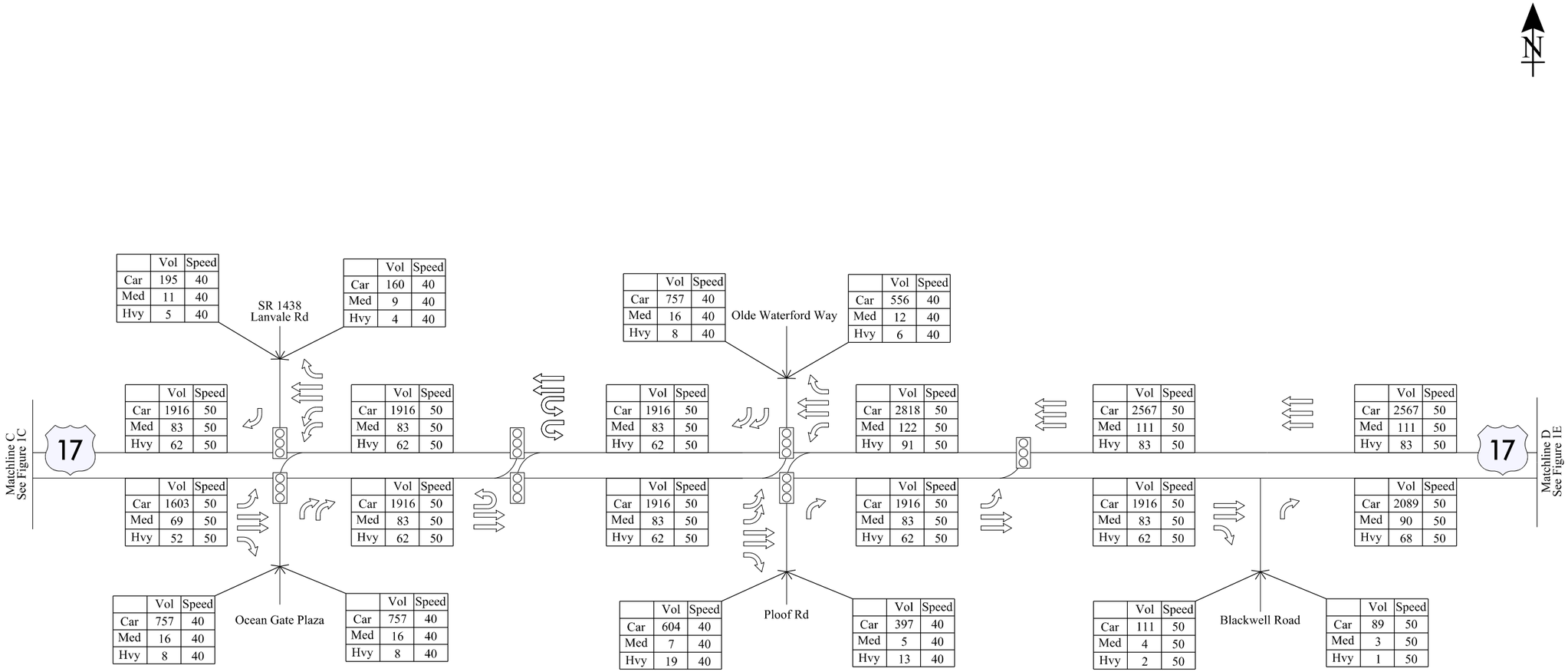
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1B

AECOM



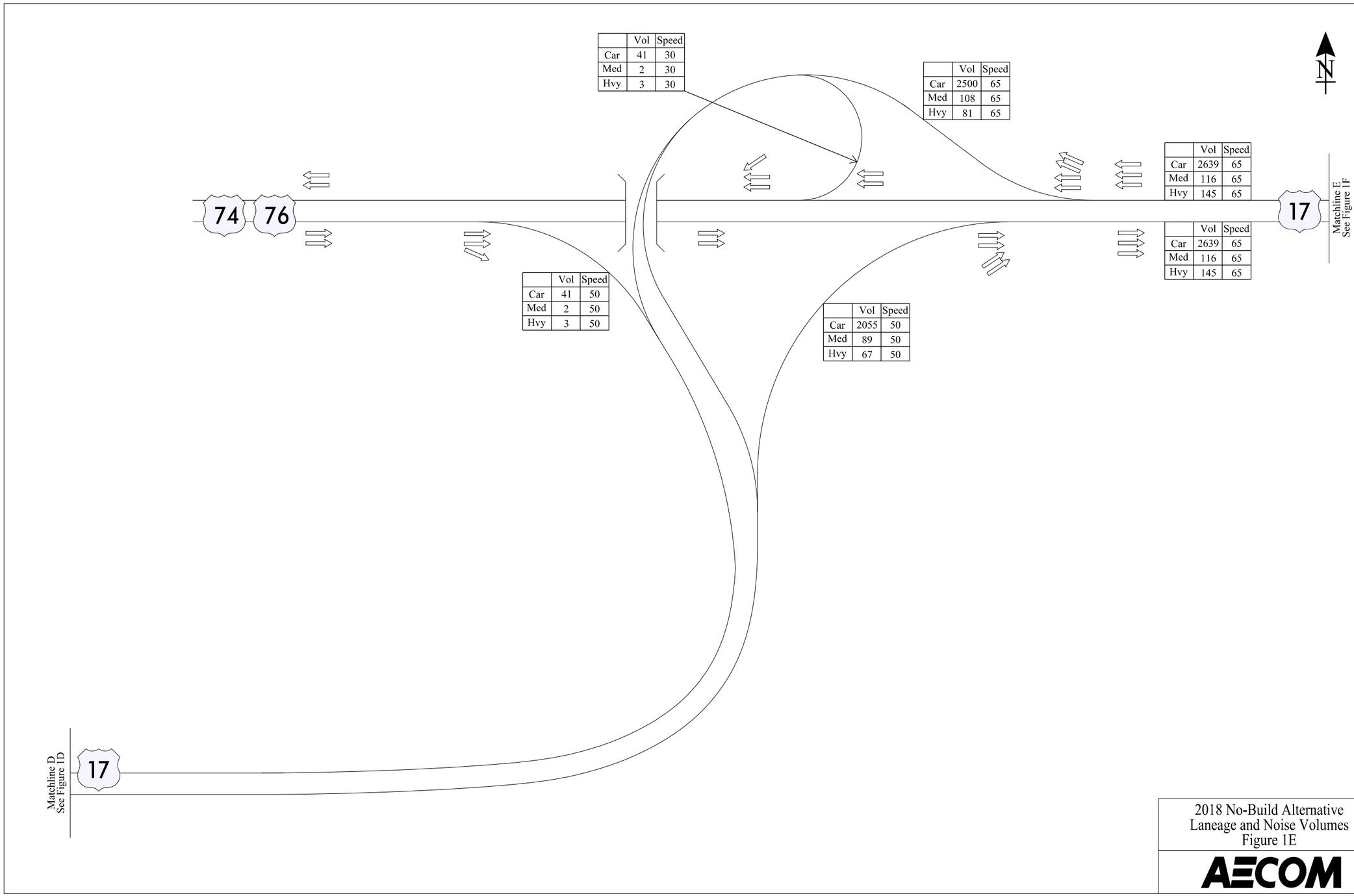
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1C

AECOM



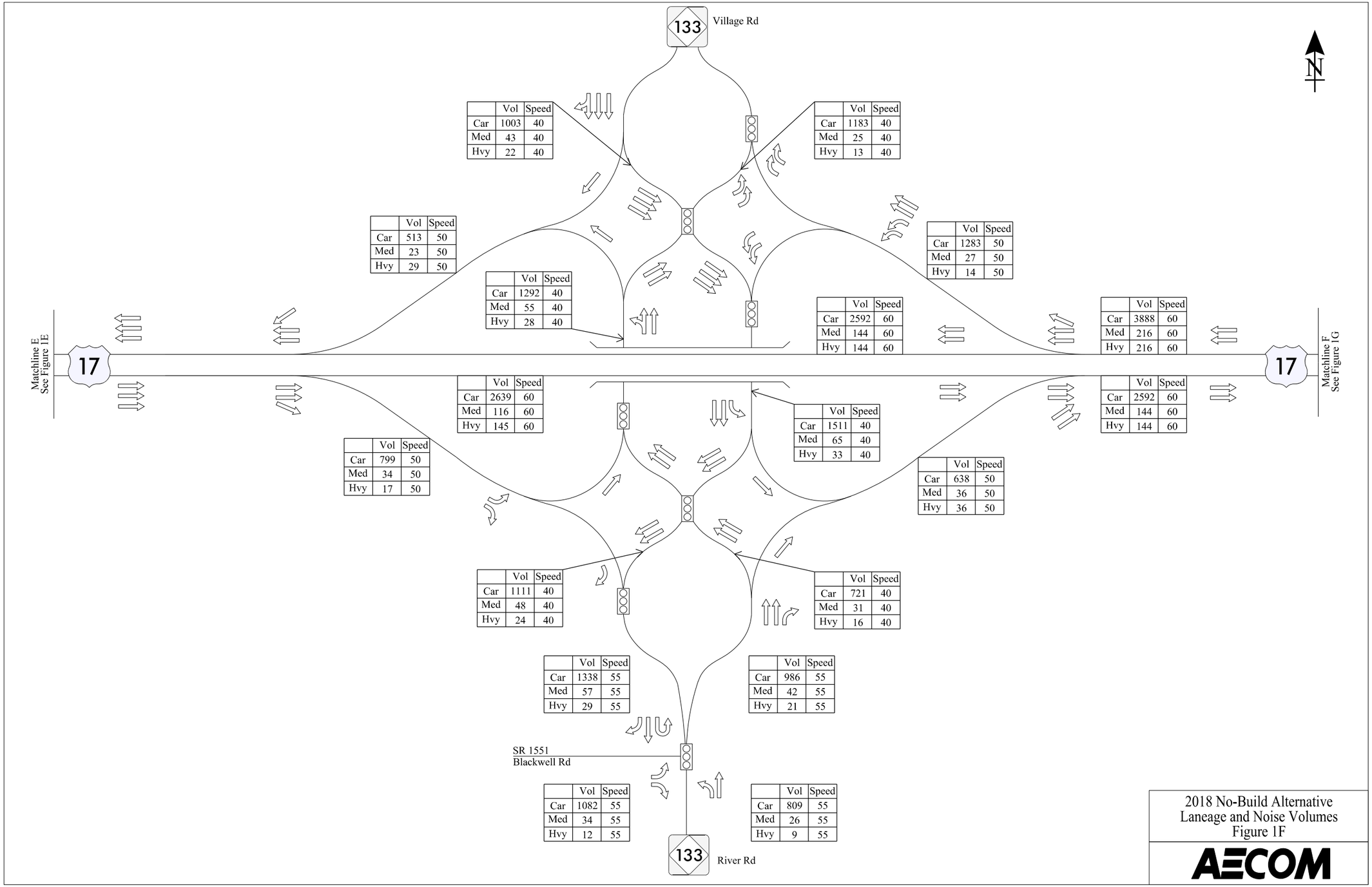
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1D

AECOM



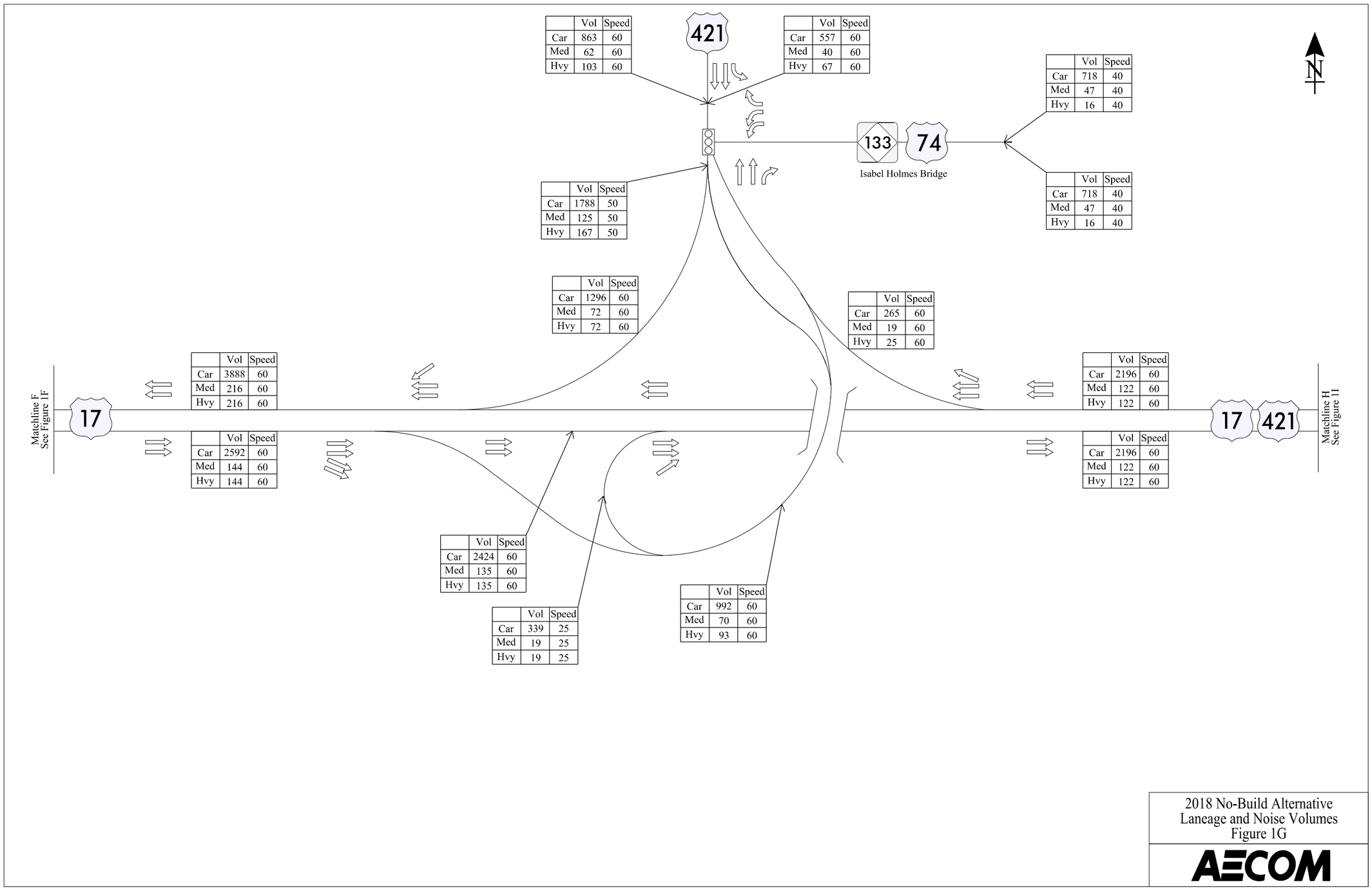
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1E

AECOM



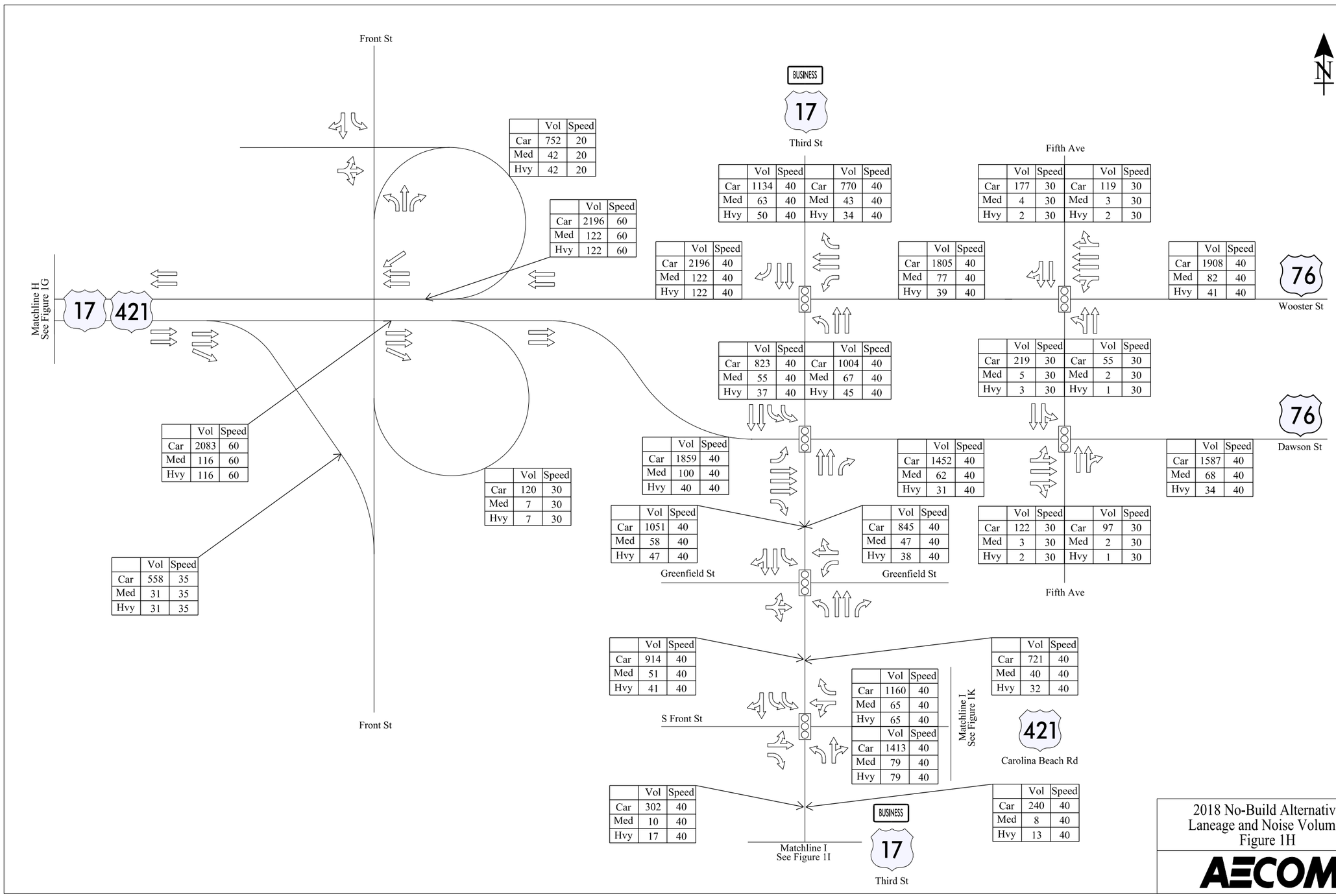
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1F

AECOM



2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1G

AECOM



	Vol	Speed
Car	752	20
Med	42	20
Hvy	42	20

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

	Vol	Speed
Car	2083	60
Med	116	60
Hvy	116	60

	Vol	Speed
Car	120	30
Med	7	30
Hvy	7	30

	Vol	Speed
Car	558	35
Med	31	35
Hvy	31	35

	Vol	Speed		Vol	Speed
Car	1134	40	Car	770	40
Med	63	40	Med	43	40
Hvy	50	40	Hvy	34	40

	Vol	Speed
Car	2196	40
Med	122	40
Hvy	122	40

	Vol	Speed
Car	1805	40
Med	77	40
Hvy	39	40

	Vol	Speed		Vol	Speed
Car	177	30	Car	119	30
Med	4	30	Med	3	30
Hvy	2	30	Hvy	2	30

	Vol	Speed
Car	1908	40
Med	82	40
Hvy	41	40

	Vol	Speed		Vol	Speed
Car	823	40	Car	1004	40
Med	55	40	Med	67	40
Hvy	37	40	Hvy	45	40

	Vol	Speed		Vol	Speed
Car	219	30	Car	55	30
Med	5	30	Med	2	30
Hvy	3	30	Hvy	1	30

	Vol	Speed
Car	1859	40
Med	100	40
Hvy	40	40

	Vol	Speed
Car	1452	40
Med	62	40
Hvy	31	40

	Vol	Speed
Car	1587	40
Med	68	40
Hvy	34	40

	Vol	Speed
Car	1051	40
Med	58	40
Hvy	47	40

	Vol	Speed
Car	845	40
Med	47	40
Hvy	38	40

	Vol	Speed		Vol	Speed
Car	122	30	Car	97	30
Med	3	30	Med	2	30
Hvy	2	30	Hvy	1	30

	Vol	Speed
Car	914	40
Med	51	40
Hvy	41	40

	Vol	Speed
Car	1160	40
Med	65	40
Hvy	65	40

	Vol	Speed
Car	1413	40
Med	79	40
Hvy	79	40

	Vol	Speed
Car	721	40
Med	40	40
Hvy	32	40

	Vol	Speed
Car	302	40
Med	10	40
Hvy	17	40

	Vol	Speed
Car	240	40
Med	8	40
Hvy	13	40

2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1H

AECOM

	Vol	Speed
Car	24	50
Med	7	50
Hvy	11	50

	Vol	Speed
Car	132	50
Med	36	50
Hvy	59	50

	Vol	Speed
Car	333	50
Med	91	50
Hvy	133	50

	Vol	Speed
Car	338	50
Med	45	50
Hvy	68	50

	Vol	Speed
Car	382	50
Med	23	50
Hvy	45	50

	Vol	Speed
Car	757	50
Med	16	50
Hvy	8	50

	Vol	Speed
Car	348	50
Med	95	50
Hvy	154	50

	Vol	Speed
Car	194	50
Med	53	50
Hvy	86	50

	Vol	Speed
Car	157	50
Med	43	50
Hvy	63	50

	Vol	Speed
Car	156	50
Med	21	50
Hvy	32	50

	Vol	Speed
Car	164	50
Med	10	50
Hvy	20	50

	Vol	Speed
Car	203	50
Med	5	50
Hvy	3	50

	Vol	Speed
Car	19	40
Med	3	40
Hvy	3	40

	Vol	Speed
Car	24	40
Med	2	40
Hvy	2	40

	Vol	Speed
Car	31	40
Med	2	40
Hvy	2	40

	Vol	Speed
Car	36	40
Med	2	40
Hvy	2	40

	Vol	Speed
Car	39	40
Med	3	40
Hvy	2	40

	Vol	Speed
Car	301	50
Med	82	50
Hvy	133	50

	Vol	Speed
Car	194	50
Med	53	50
Hvy	86	50

	Vol	Speed
Car	210	50
Med	57	50
Hvy	93	50

	Vol	Speed
Car	288	50
Med	9	50
Hvy	3	50

	Vol	Speed
Car	162	50
Med	6	50
Hvy	2	50

	Vol	Speed
Car	1470	50
Med	63	50
Hvy	32	50

	Vol	Speed
Car	1015	50
Med	44	50
Hvy	22	50

	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

	Vol	Speed
Car	1128	50
Med	48	50
Hvy	24	50

117 Shipyard Blvd

Burnett Blvd

Worth Dr

Matchline I
See Figure 1H

17th St

Independence Blvd

117 Shipyard Blvd

Sunnyvale Rd

Bryan Rd

Sunnyvale Rd

Worth Dr

421 Carolina Beach Rd

Independence Blvd

River Rd

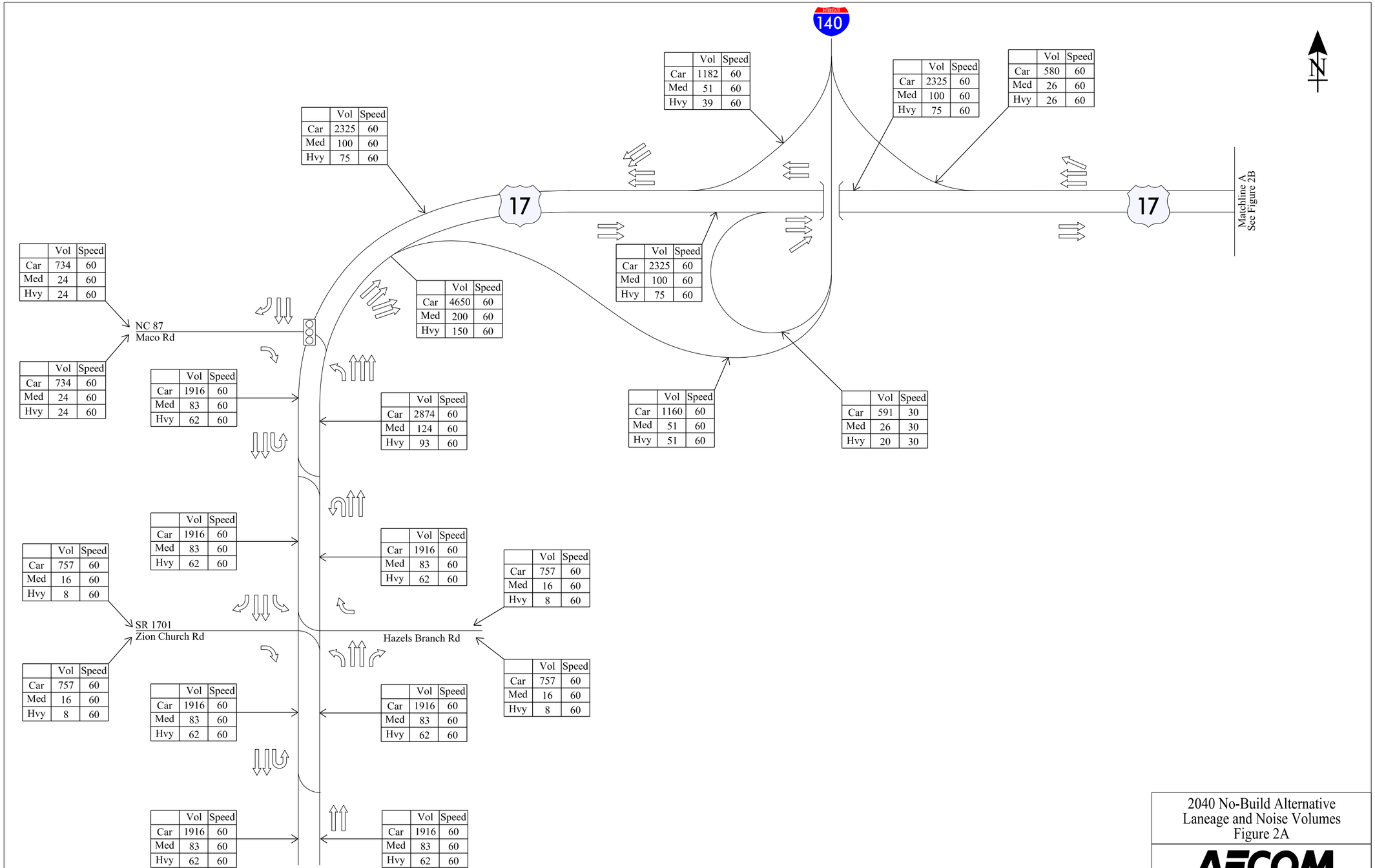
421 Carolina Beach Rd

17th St

N

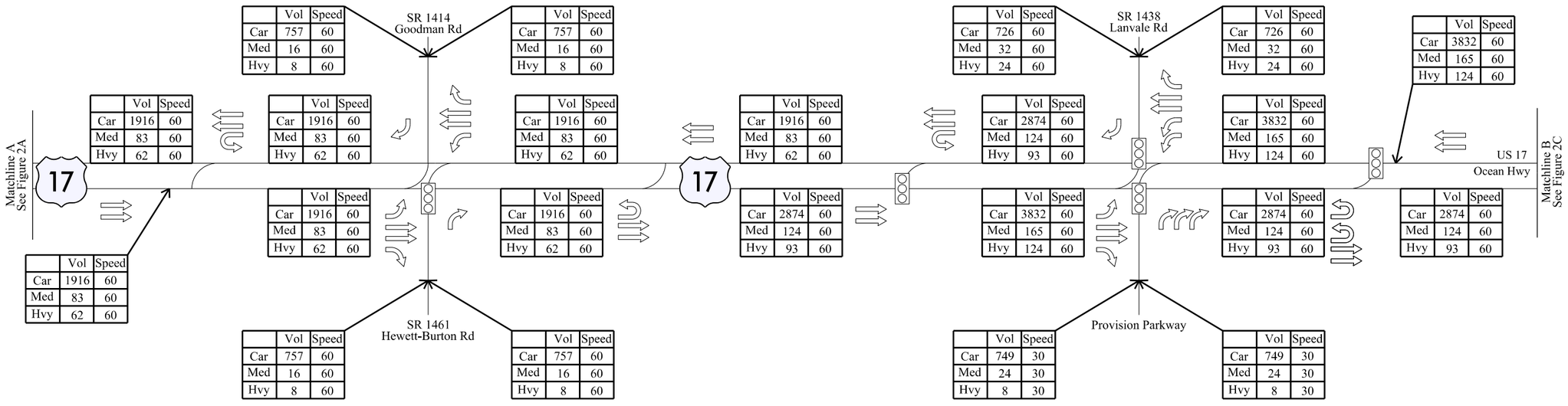
2018 No-Build Alternative
Laneage and Noise Volumes
Figure 1I

AECOM



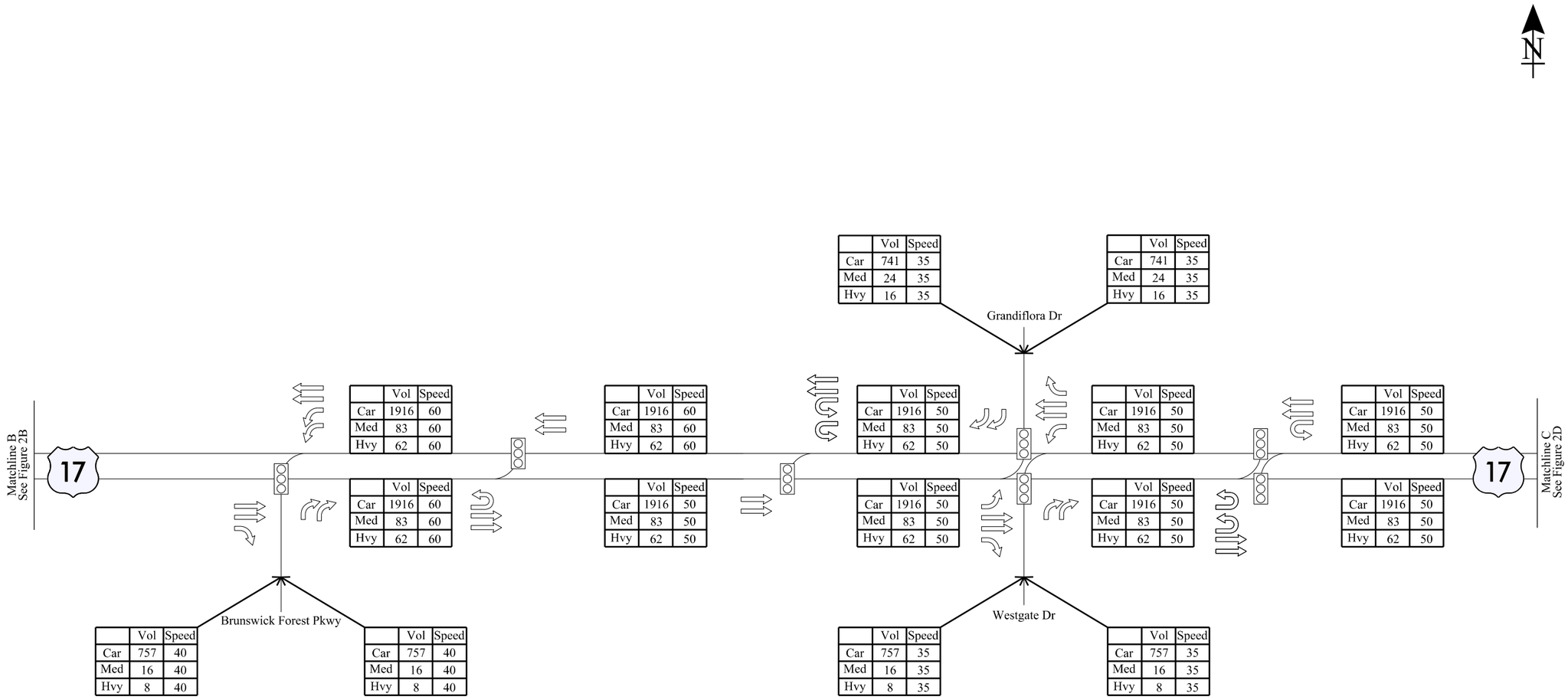
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2A

AECOM



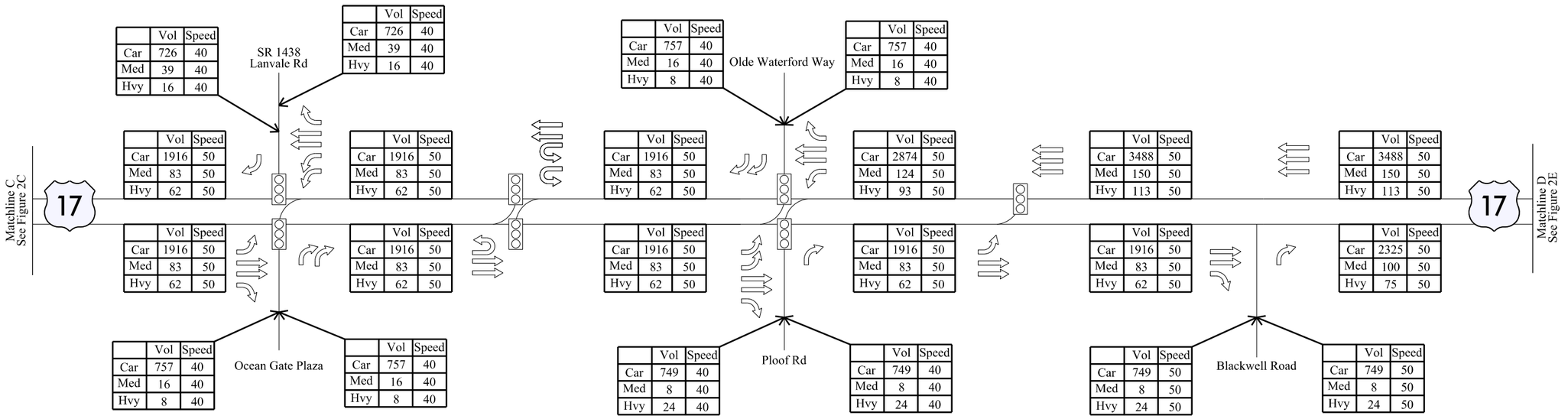
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2B

AECOM



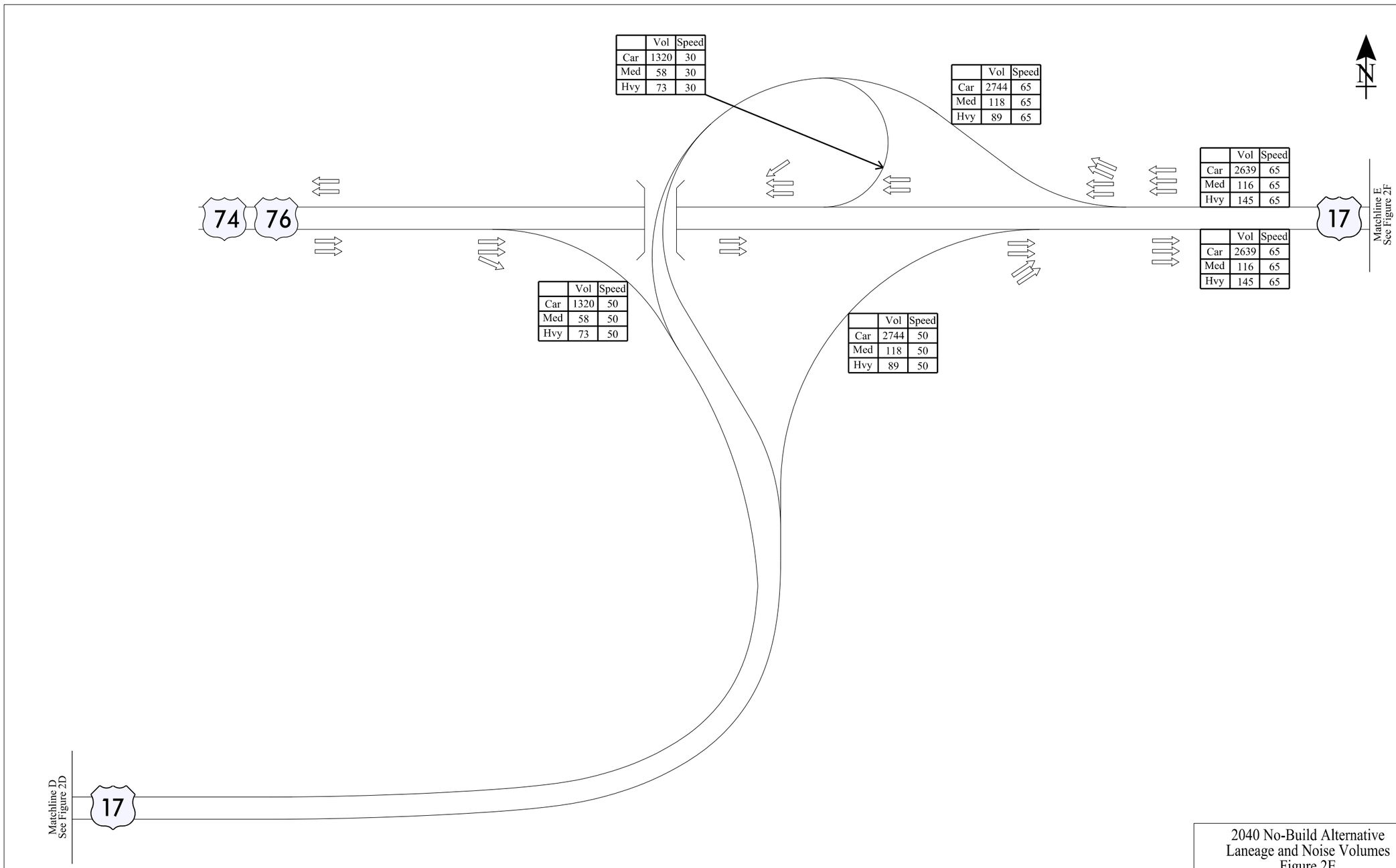
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2C

AECOM



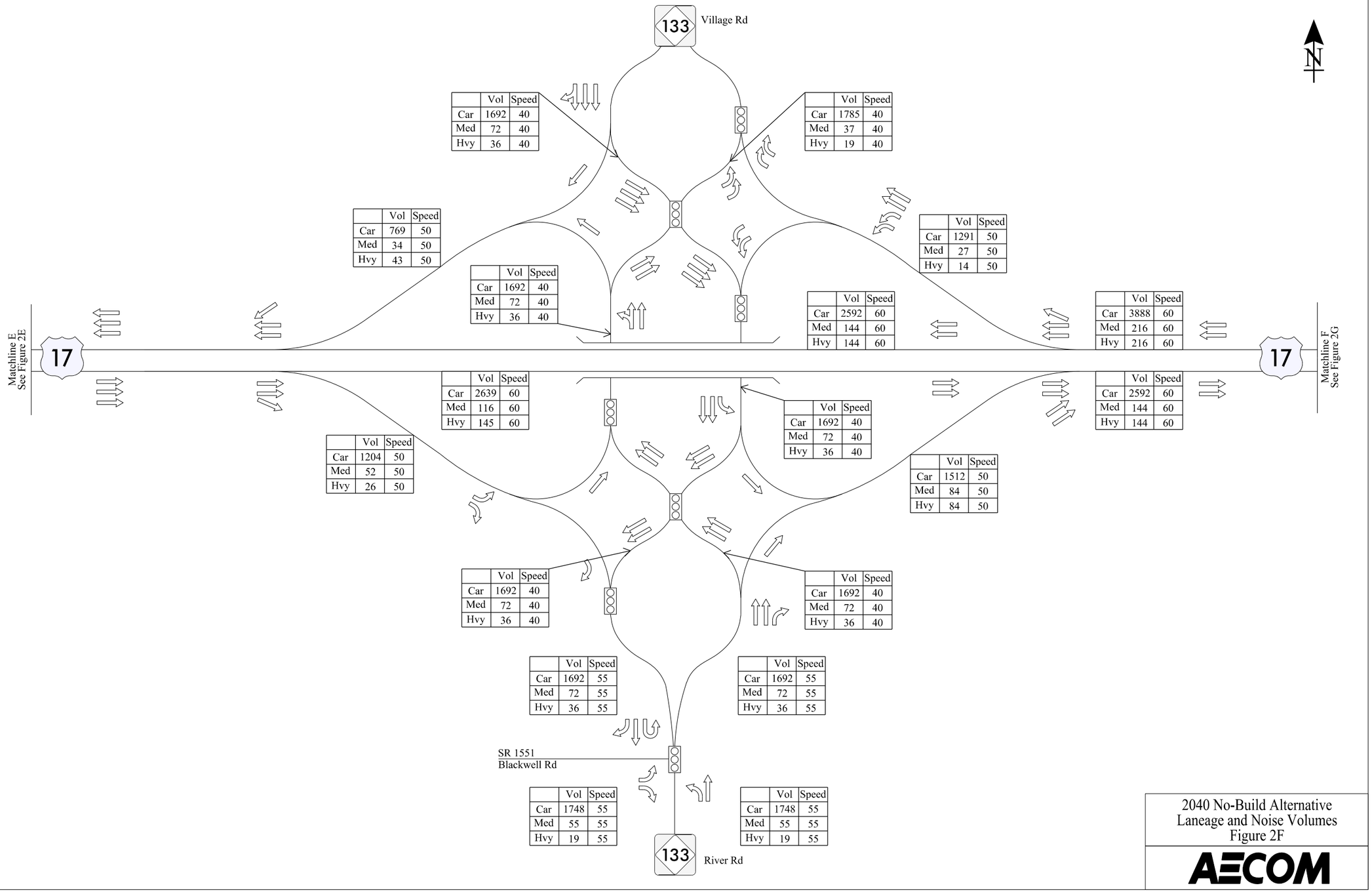
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2D

AECOM



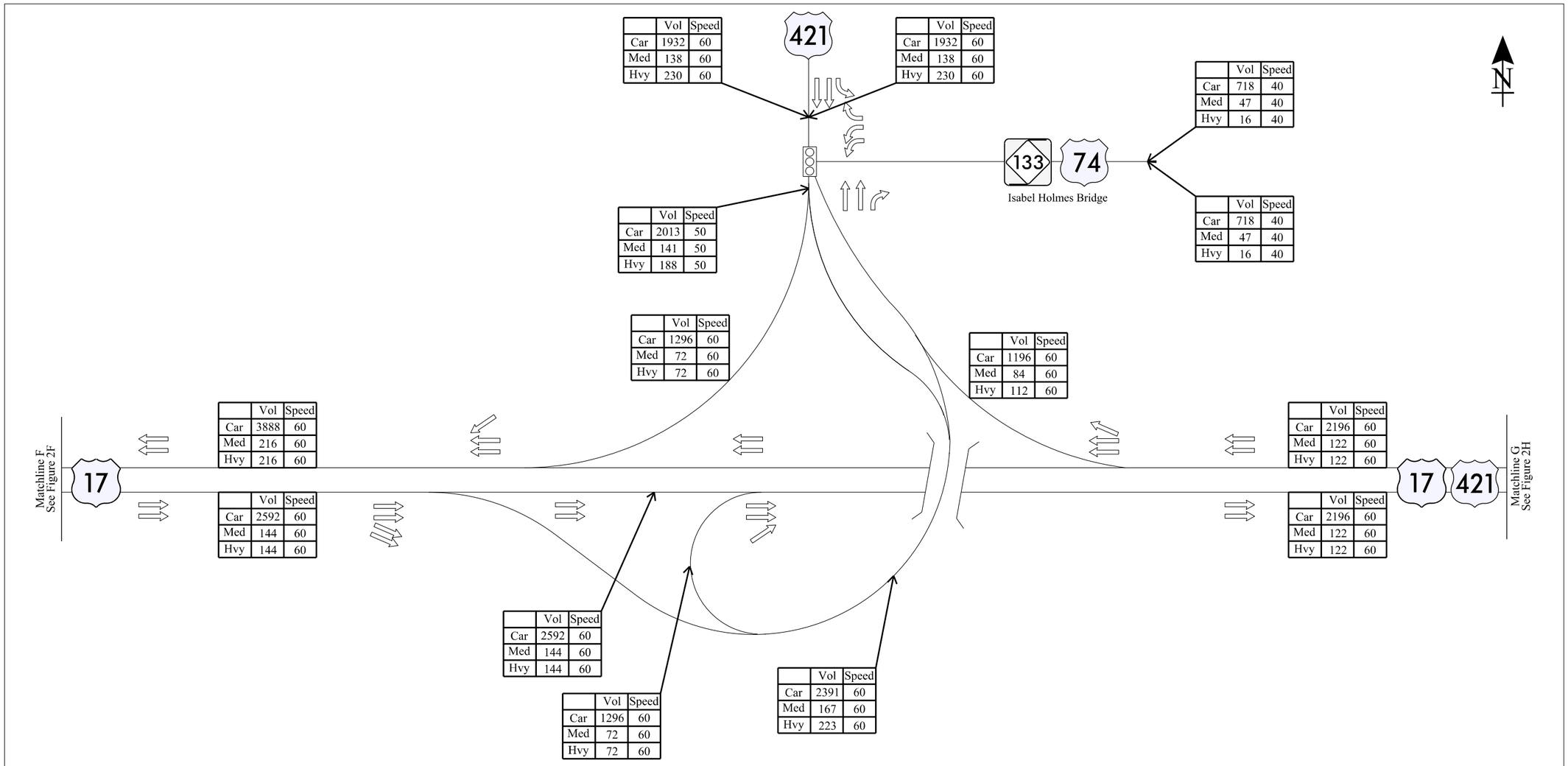
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2E

AECOM



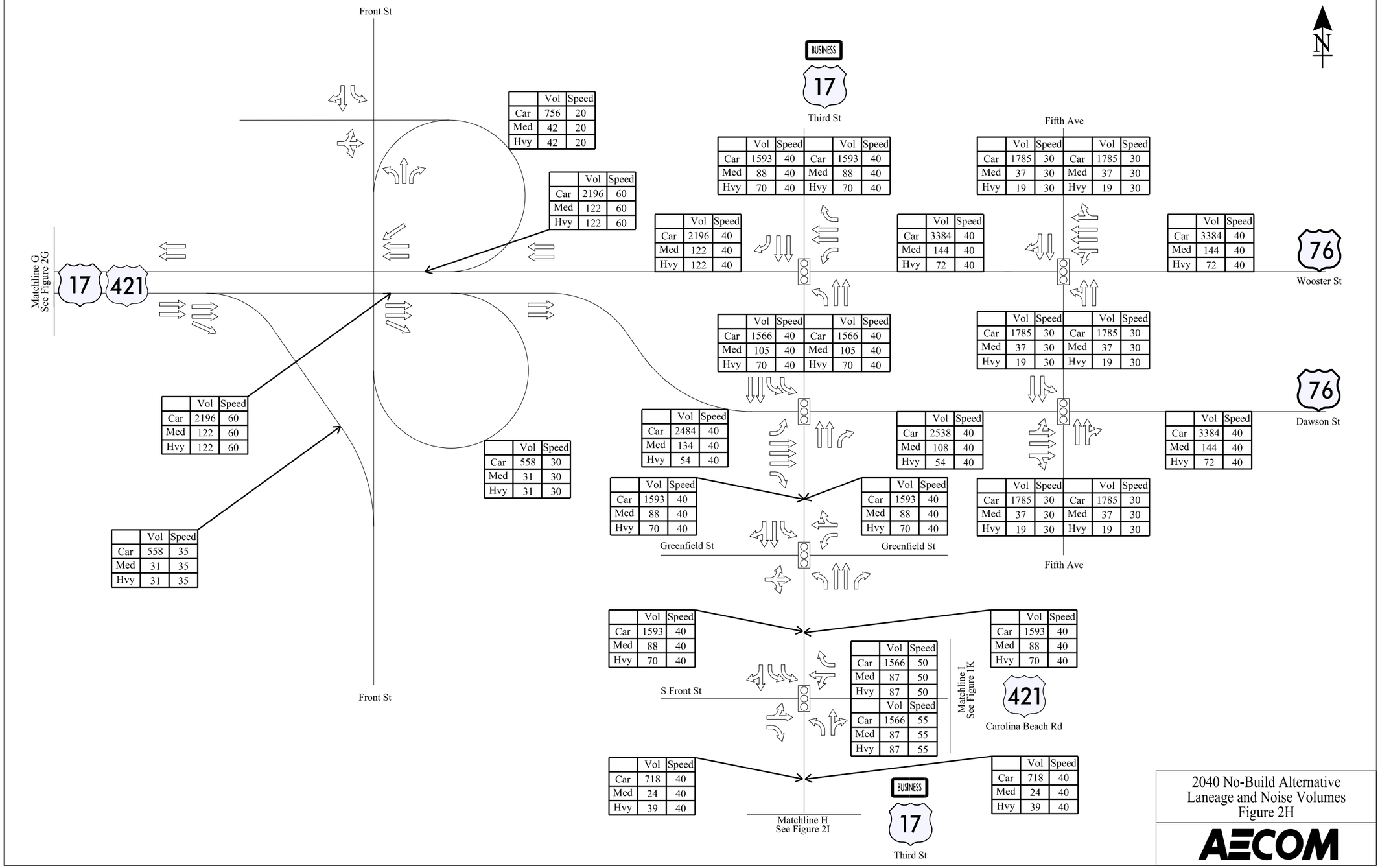
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2F

AECOM



2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2G

AECOM



	Vol	Speed
Car	756	20
Med	42	20
Hvy	42	20

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

	Vol	Speed
Car	2196	40
Med	122	40
Hvy	122	40

	Vol	Speed		Vol	Speed
Car	1593	40	Car	1593	40
Med	88	40	Med	88	40
Hvy	70	40	Hvy	70	40

	Vol	Speed
Car	3384	40
Med	144	40
Hvy	72	40

	Vol	Speed		Vol	Speed
Car	1785	30	Car	1785	30
Med	37	30	Med	37	30
Hvy	19	30	Hvy	19	30

	Vol	Speed		Vol	Speed
Car	1566	40	Car	1566	40
Med	105	40	Med	105	40
Hvy	70	40	Hvy	70	40

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

	Vol	Speed
Car	558	30
Med	31	30
Hvy	31	30

	Vol	Speed
Car	558	35
Med	31	35
Hvy	31	35

	Vol	Speed
Car	2484	40
Med	134	40
Hvy	54	40

	Vol	Speed
Car	2538	40
Med	108	40
Hvy	54	40

	Vol	Speed
Car	1593	40
Med	88	40
Hvy	70	40

	Vol	Speed
Car	1593	40
Med	88	40
Hvy	70	40

	Vol	Speed
Car	1566	50
Med	87	50
Hvy	87	50

	Vol	Speed
Car	1566	55
Med	87	55
Hvy	87	55

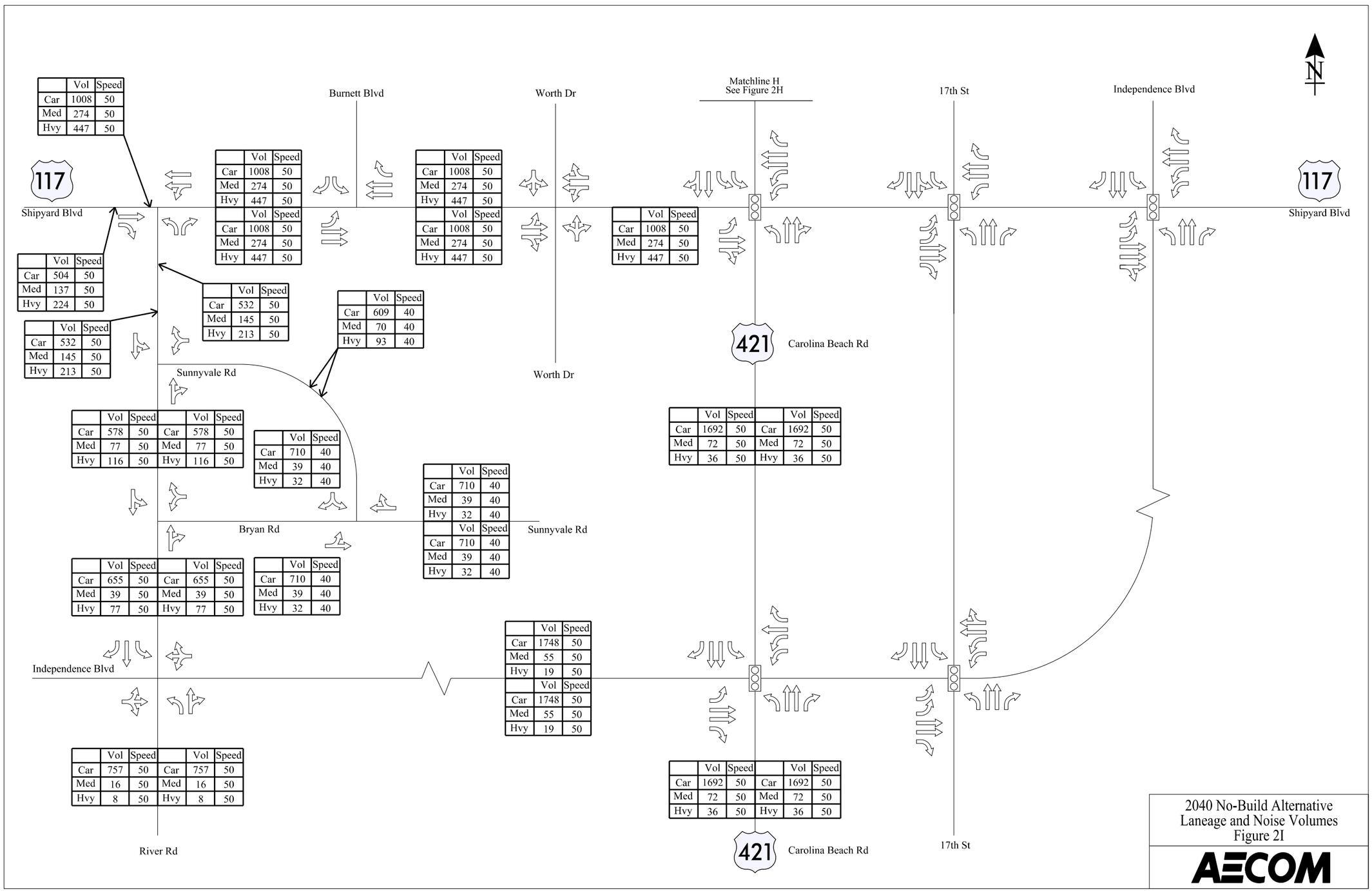
	Vol	Speed
Car	1593	40
Med	88	40
Hvy	70	40

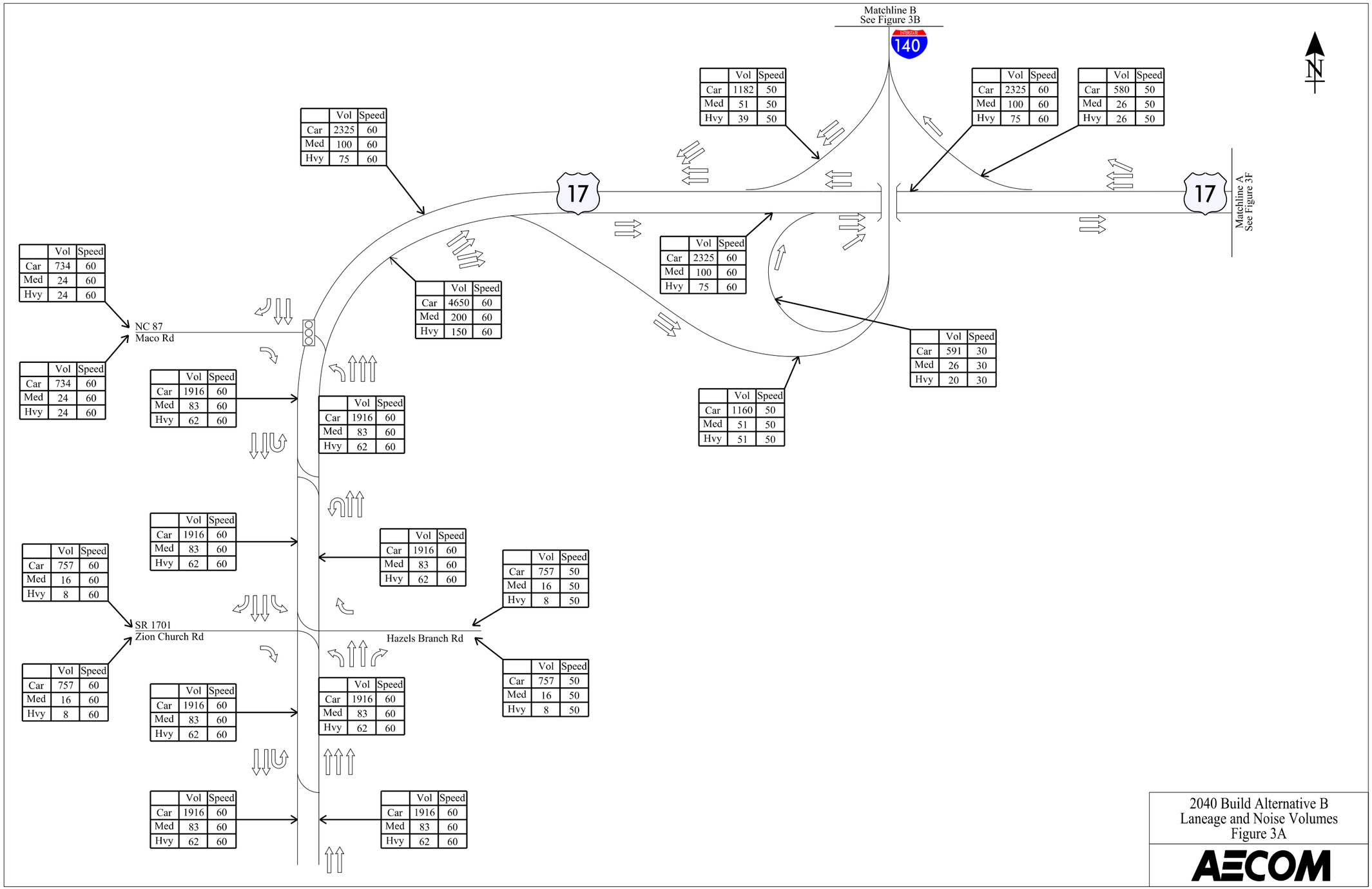
	Vol	Speed
Car	718	40
Med	24	40
Hvy	39	40

	Vol	Speed
Car	718	40
Med	24	40
Hvy	39	40

2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2H

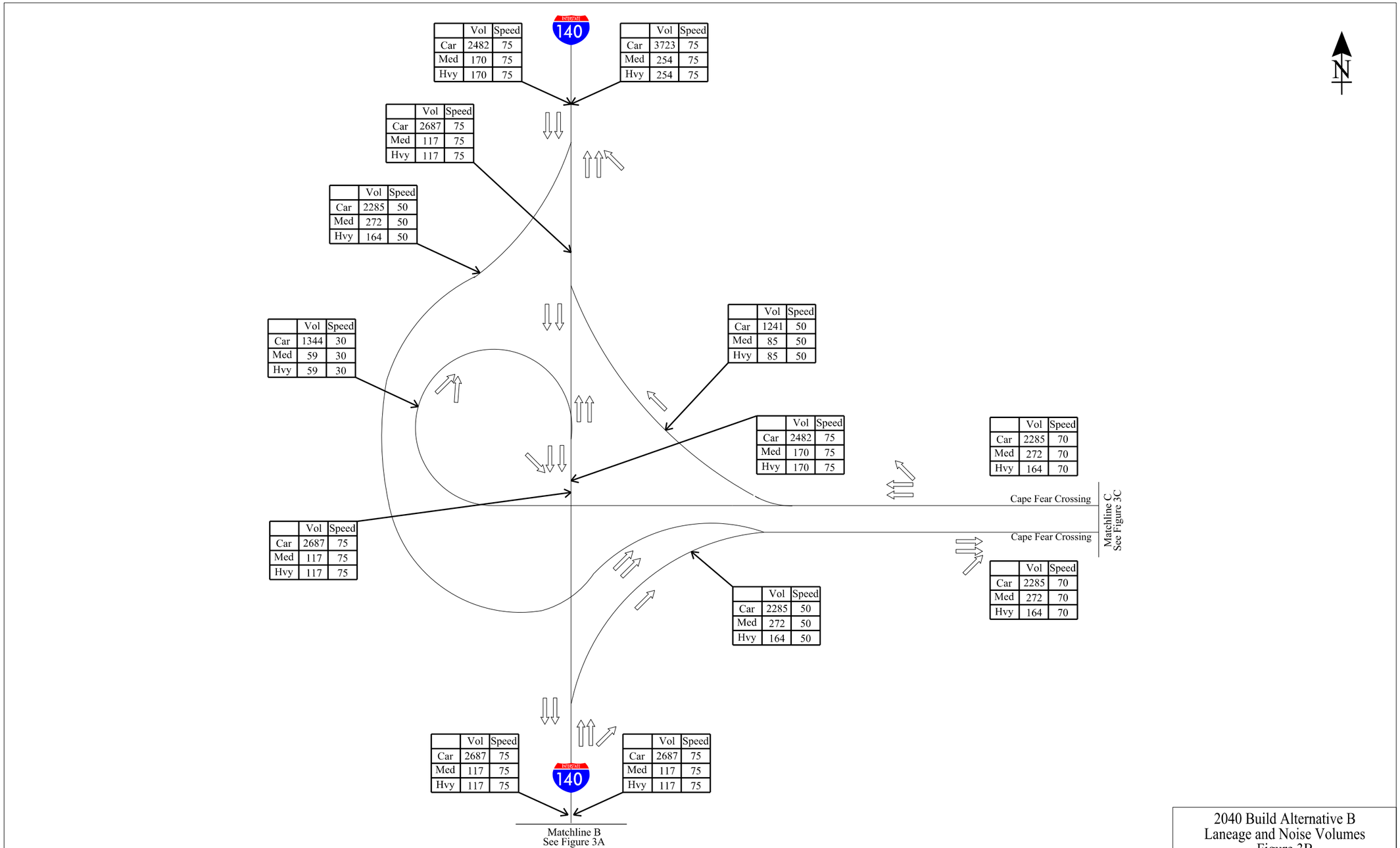
AECOM


Shipyard Blvd
117
Burnett Blvd
Worth Dr
Matchline H
See Figure 2H
17th St
Independence Blvd
Shipyard Blvd
117
Sunnyvale Rd
Worth Dr
421
Carolina Beach Rd
Bryan Rd
Sunnyvale Rd
Independence Blvd
River Rd
421
Carolina Beach Rd
17th St
N
2040 No-Build Alternative
Laneage and Noise Volumes
Figure 2I
AECOM



2040 Build Alternative B
Laneage and Noise Volumes
Figure 3A

AECOM



2040 Build Alternative B
Laneage and Noise Volumes
Figure 3B

AECOM

Matchline C
See Figure 3B

Cape Fear Crossing

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	591	30
Med	26	30
Hvy	20	30

	Vol	Speed
Car	664	30
Med	79	30
Hvy	48	30

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	591	50
Med	26	50
Hvy	20	50

	Vol	Speed
Car	664	50
Med	79	50
Hvy	48	50

	Vol	Speed
Car	3832	60
Med	165	60
Hvy	124	60
	Vol	Speed
Car	2874	60
Med	124	60
Hvy	93	60

	Vol	Speed
Car	1916	60
Med	83	60
Hvy	62	60
	Vol	Speed
Car	1916	60
Med	83	60
Hvy	62	60

	Vol	Speed
Car	1916	60
Med	83	60
Hvy	62	60
	Vol	Speed
Car	1916	60
Med	83	60
Hvy	62	60

	Vol	Speed
Car	1916	60
Med	83	60
Hvy	62	60
	Vol	Speed
Car	3832	60
Med	165	60
Hvy	124	60

17

17

	Vol	Speed
Car	664	50
Med	79	50
Hvy	48	50

	Vol	Speed
Car	591	50
Med	26	50
Hvy	20	50

	Vol	Speed
Car	591	30
Med	26	30
Hvy	20	30

	Vol	Speed
Car	664	30
Med	79	30
Hvy	48	30

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

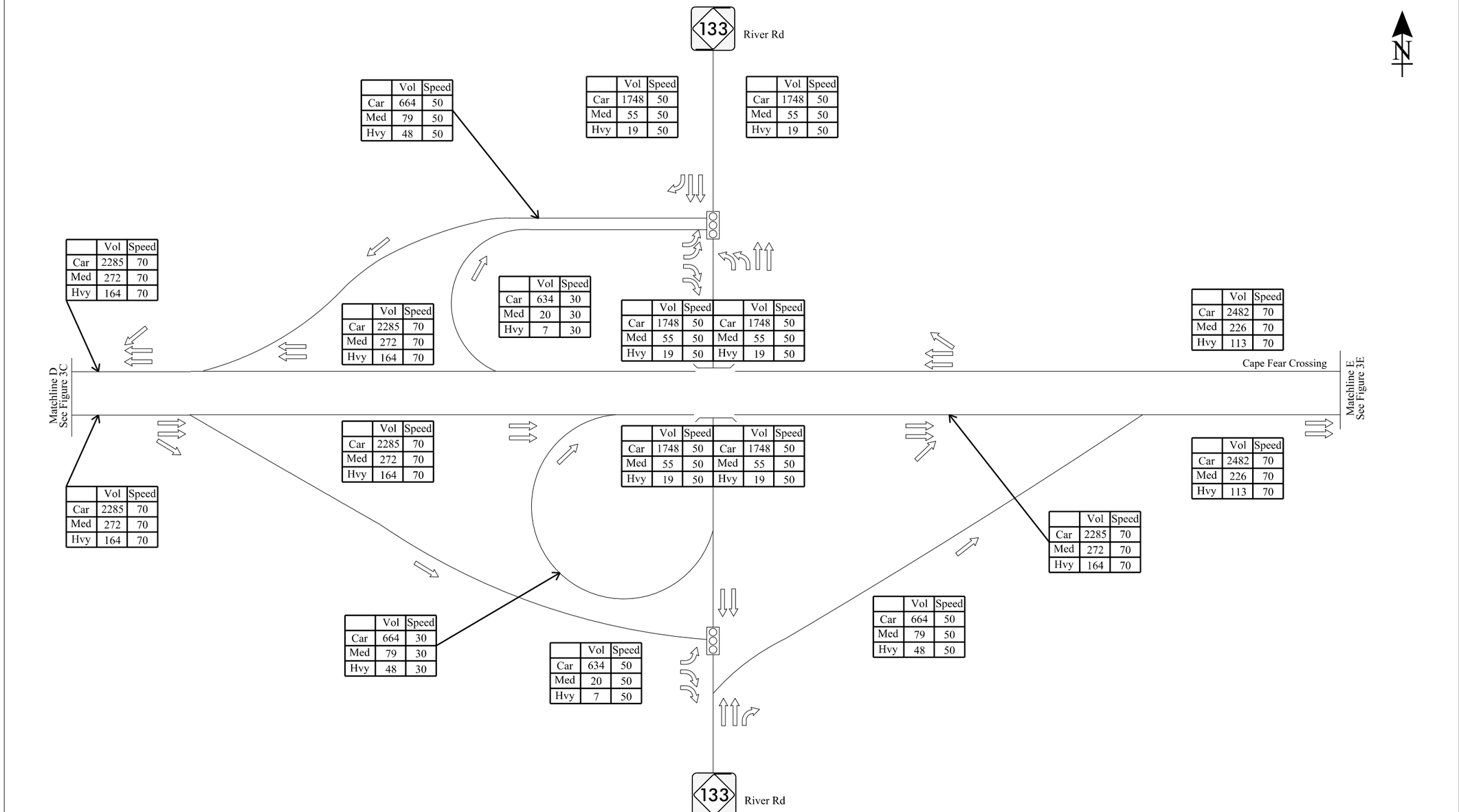
	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

Cape Fear Crossing

Matchline D
See Figure 3D

2040 Build Alternative B
Laneage and Noise Volumes
Figure 3C

AECOM



2040 Build Alternative B
Laneage and Noise Volumes
Figure 3D

AECOM

Matchline N
See Figure 3M

421 Carolina Beach Rd

	Vol	Speed
Car	2349	55
Med	131	55
Hvy	131	55

	Vol	Speed
Car	1566	50
Med	87	50
Hvy	87	50

Matchline P
See Figure 5P

Medical Center Dr

	Vol	Speed
Car	2349	55
Med	131	55
Hvy	131	55

	Vol	Speed
Car	722	30
Med	66	30
Hvy	33	30

	Vol	Speed
Car	558	50
Med	31	50
Hvy	31	50

	Vol	Speed
Car	722	50
Med	66	50
Hvy	33	50

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed
Car	3723	70
Med	339	70
Hvy	170	70

Cape Fear Crossing

Matchline E
See Figure 3D

117 Shipyard Blvd

Matchline O
See Figure 3M

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed
Car	2687	70
Med	117	70
Hvy	117	70

	Vol	Speed
Car	782	30
Med	34	30
Hvy	34	30

	Vol	Speed
Car	782	50
Med	34	50
Hvy	34	50

	Vol	Speed
Car	602	50
Med	26	50
Hvy	13	50

	Vol	Speed
Car	2538	50
Med	108	50
Hvy	54	50

	Vol	Speed
Car	1692	55
Med	72	55
Hvy	36	55

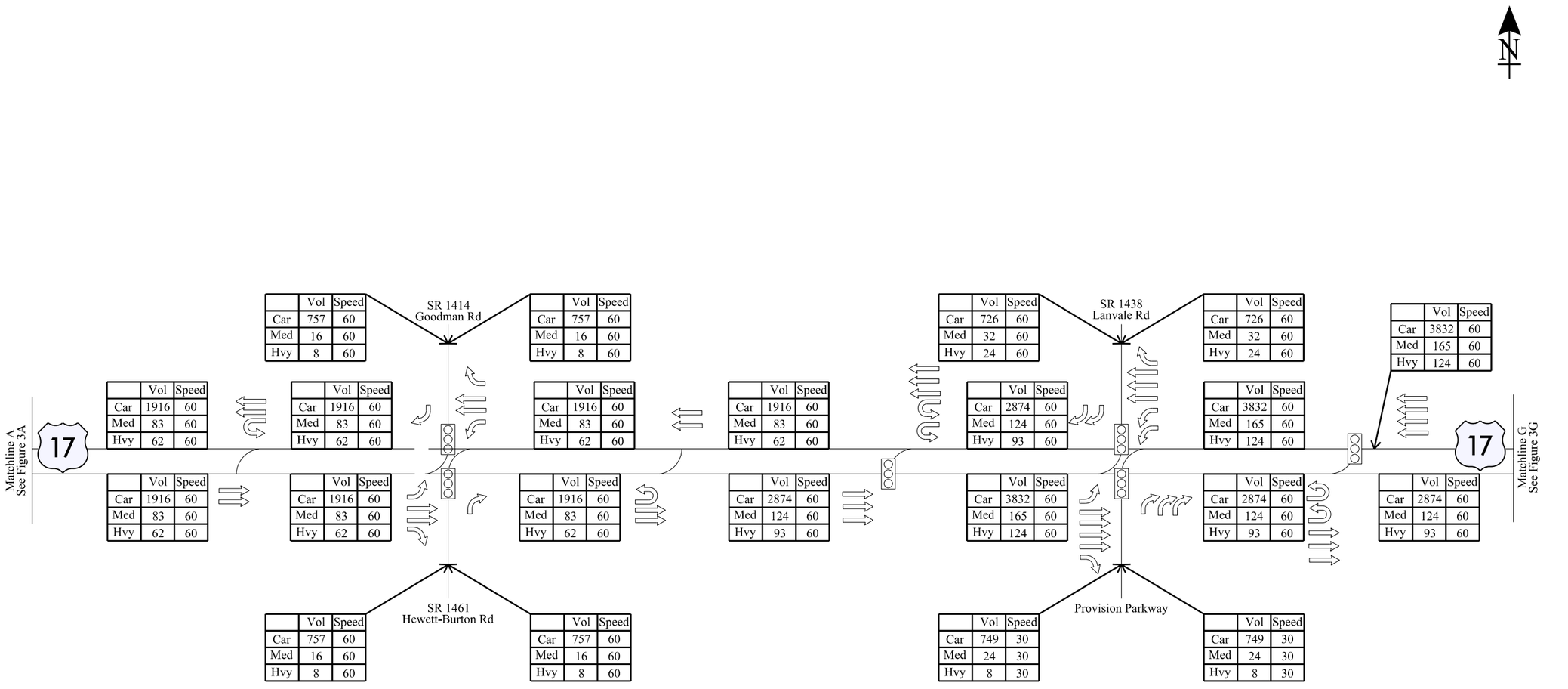
	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

421 Carolina Beach Rd

Matchline Q
See Figure 3M

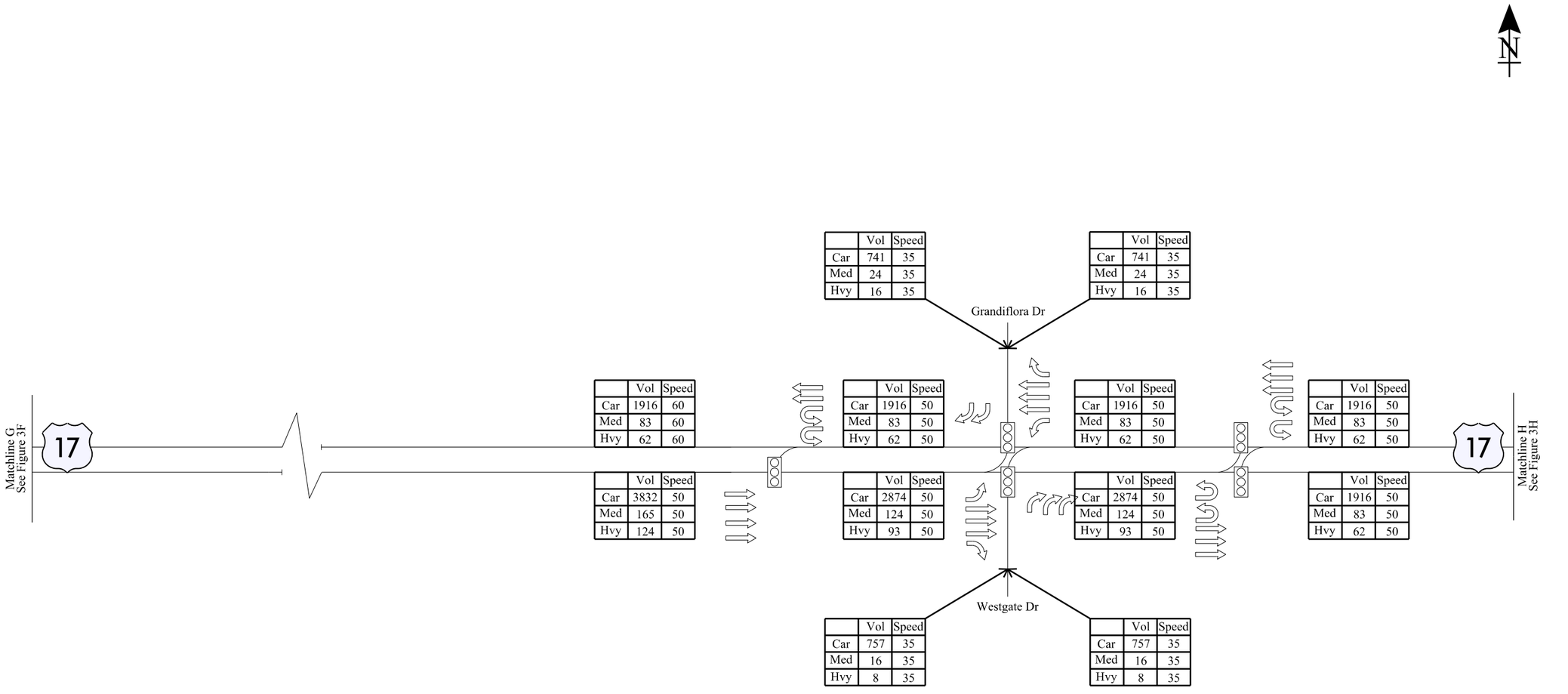
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3E

AECOM



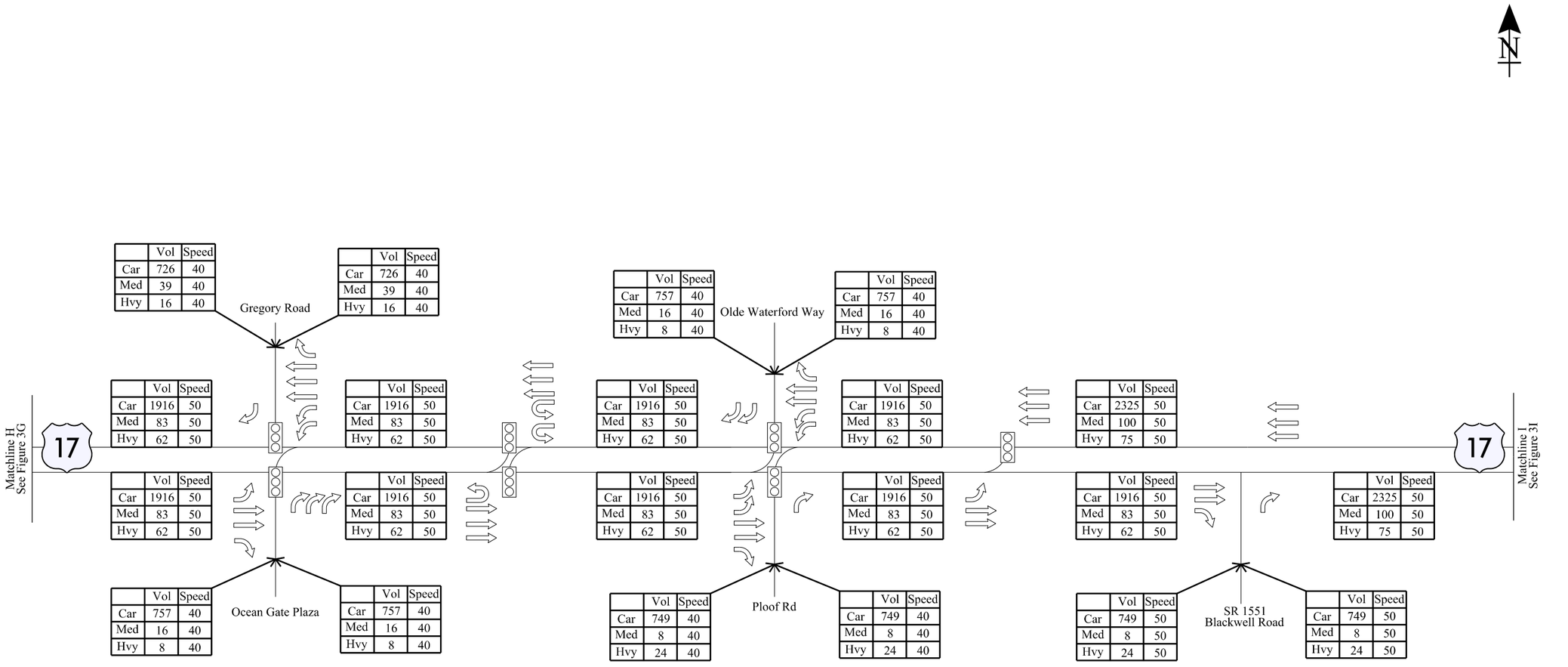
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3F

AECOM



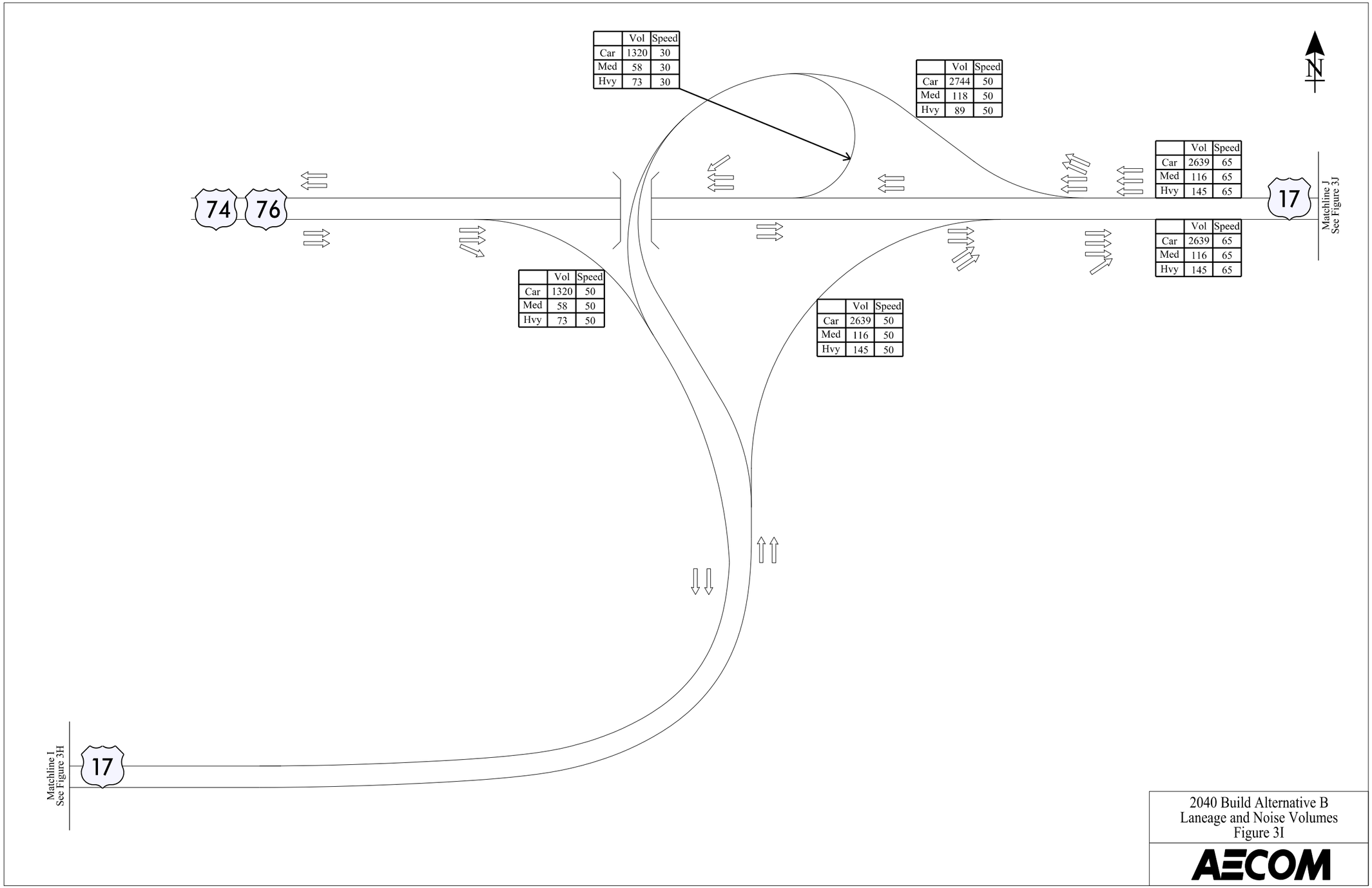
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3G

AECOM



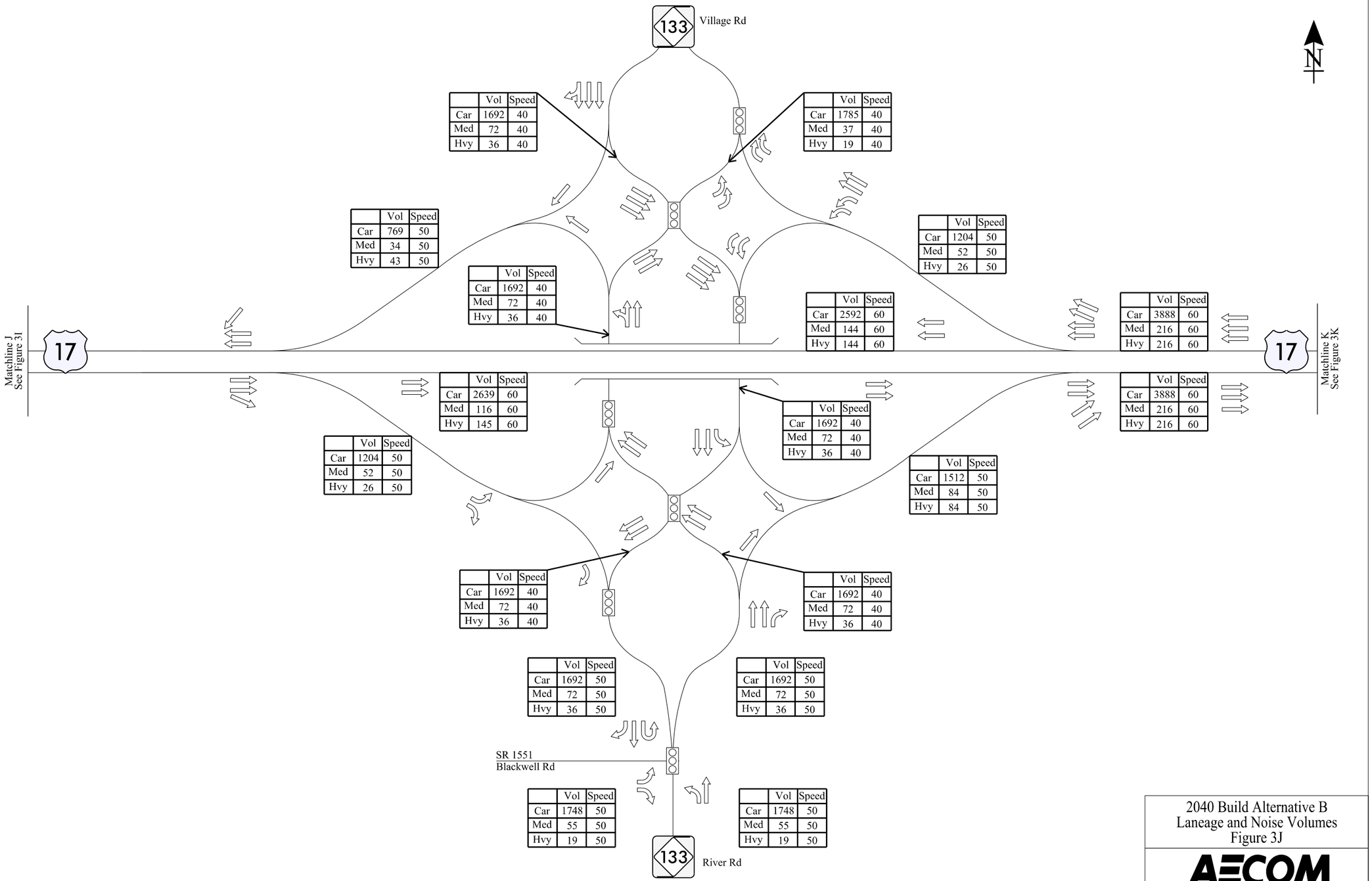
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3H

AECOM



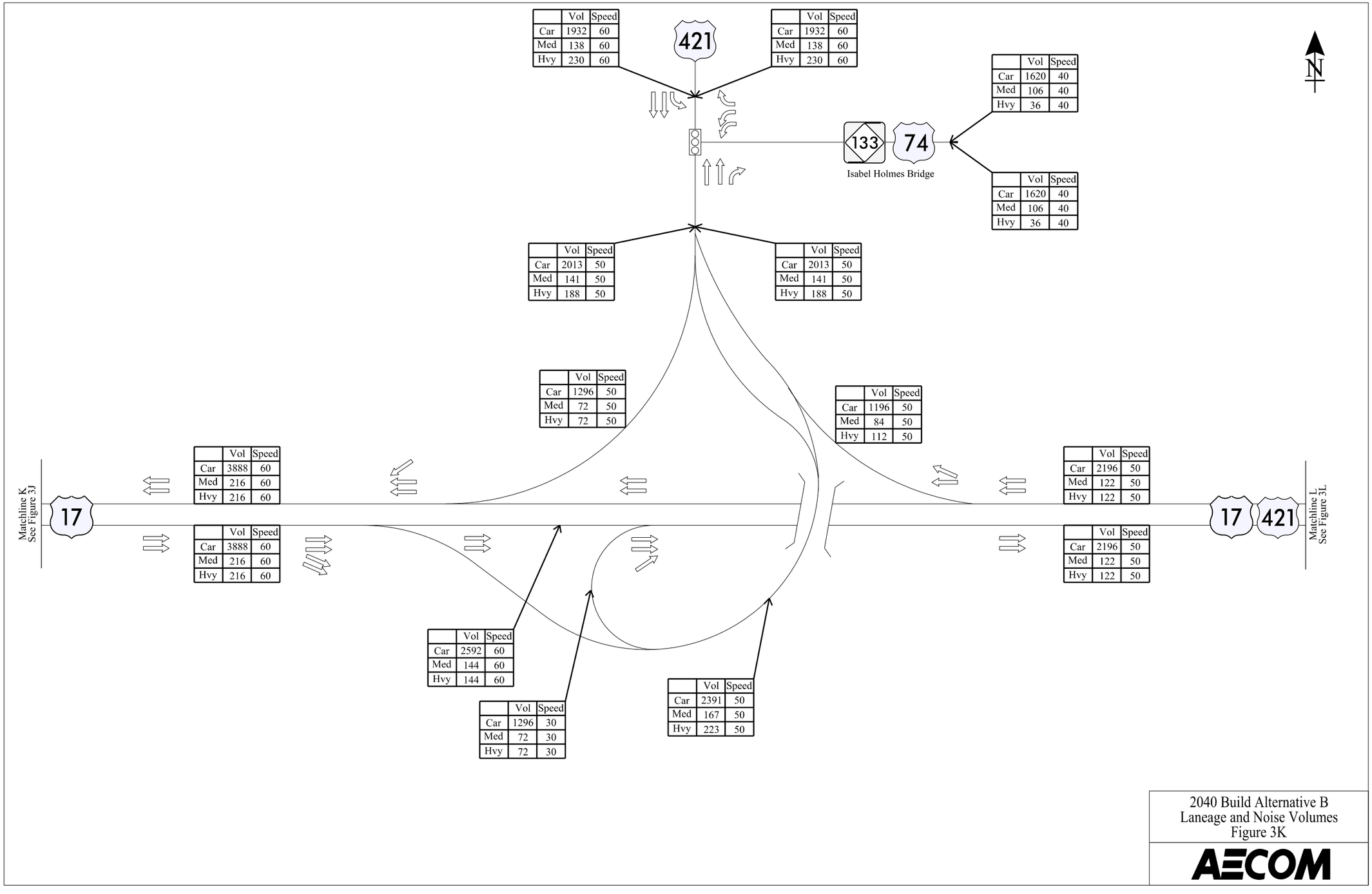
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3I

AECOM



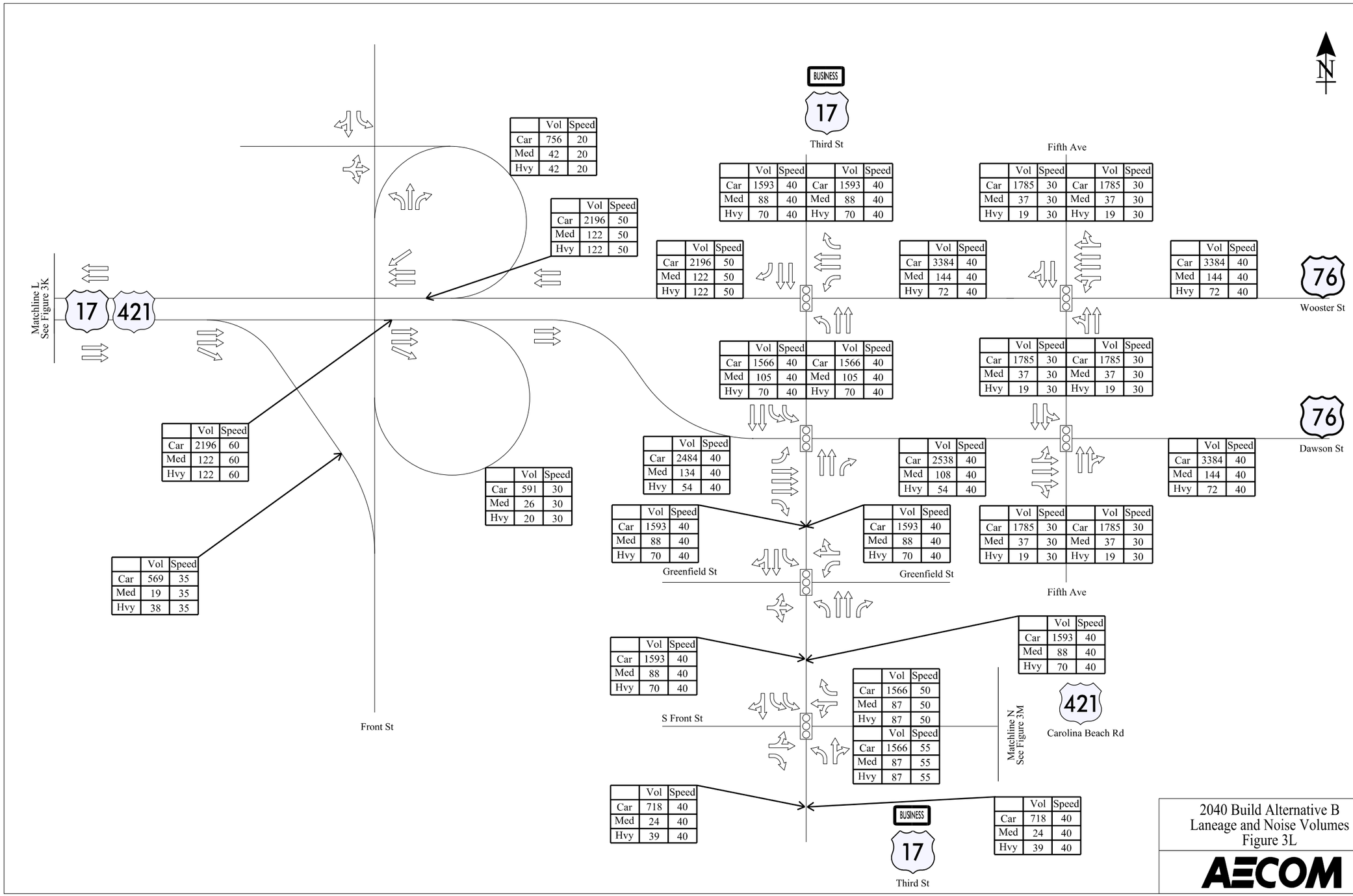
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3J

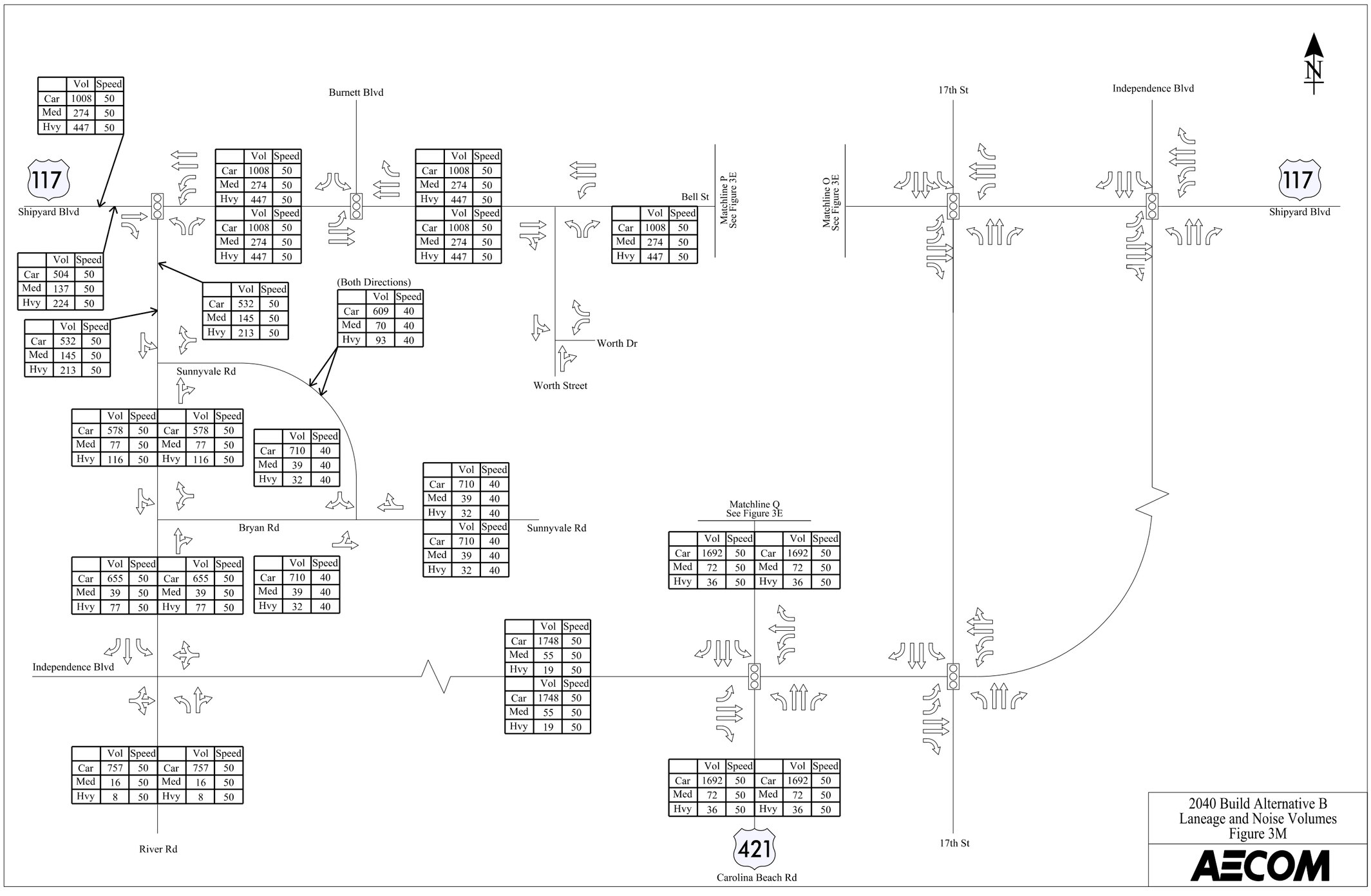
AECOM

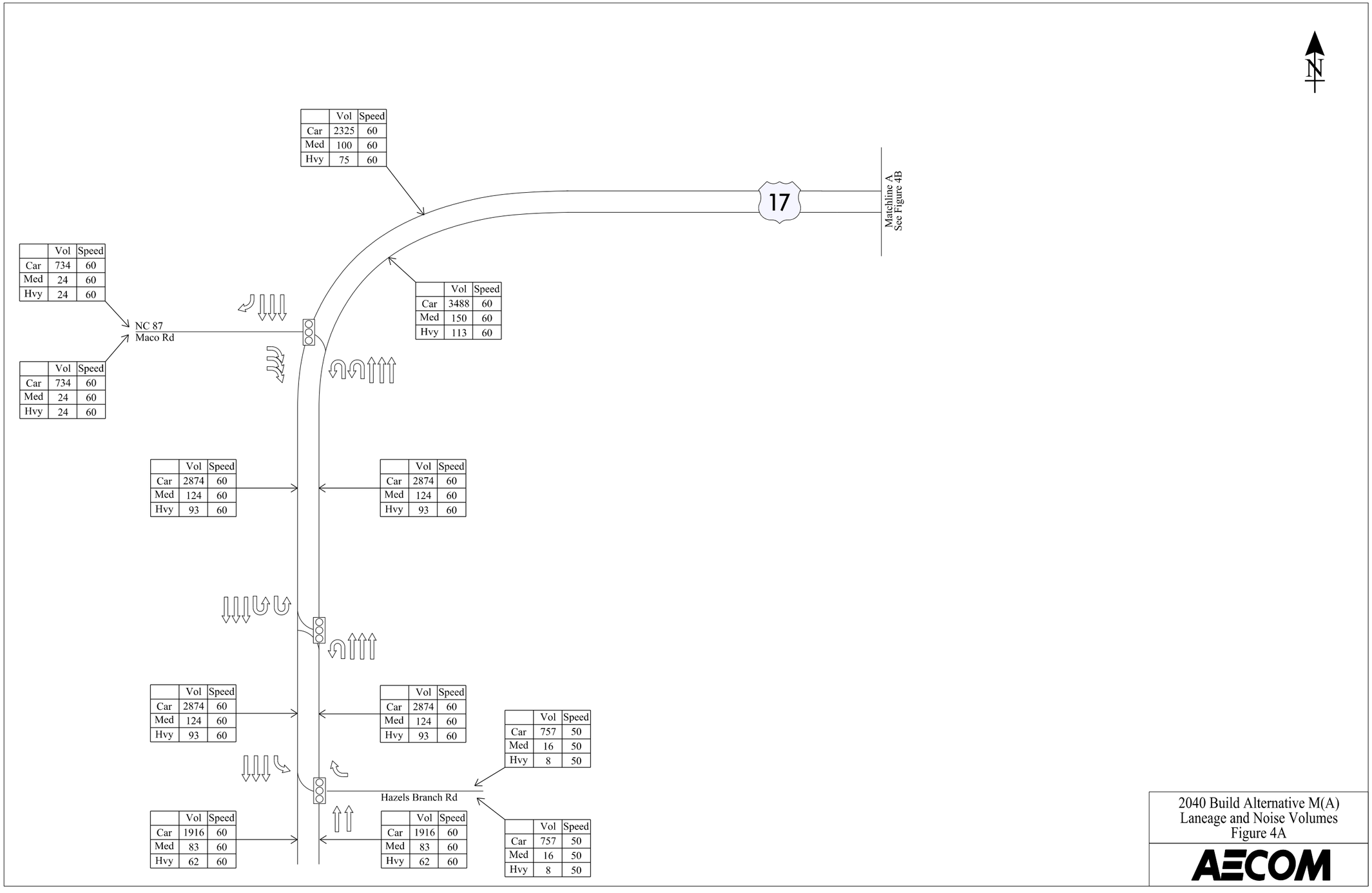


2040 Build Alternative B
Laneage and Noise Volumes
Figure 3K

AECOM

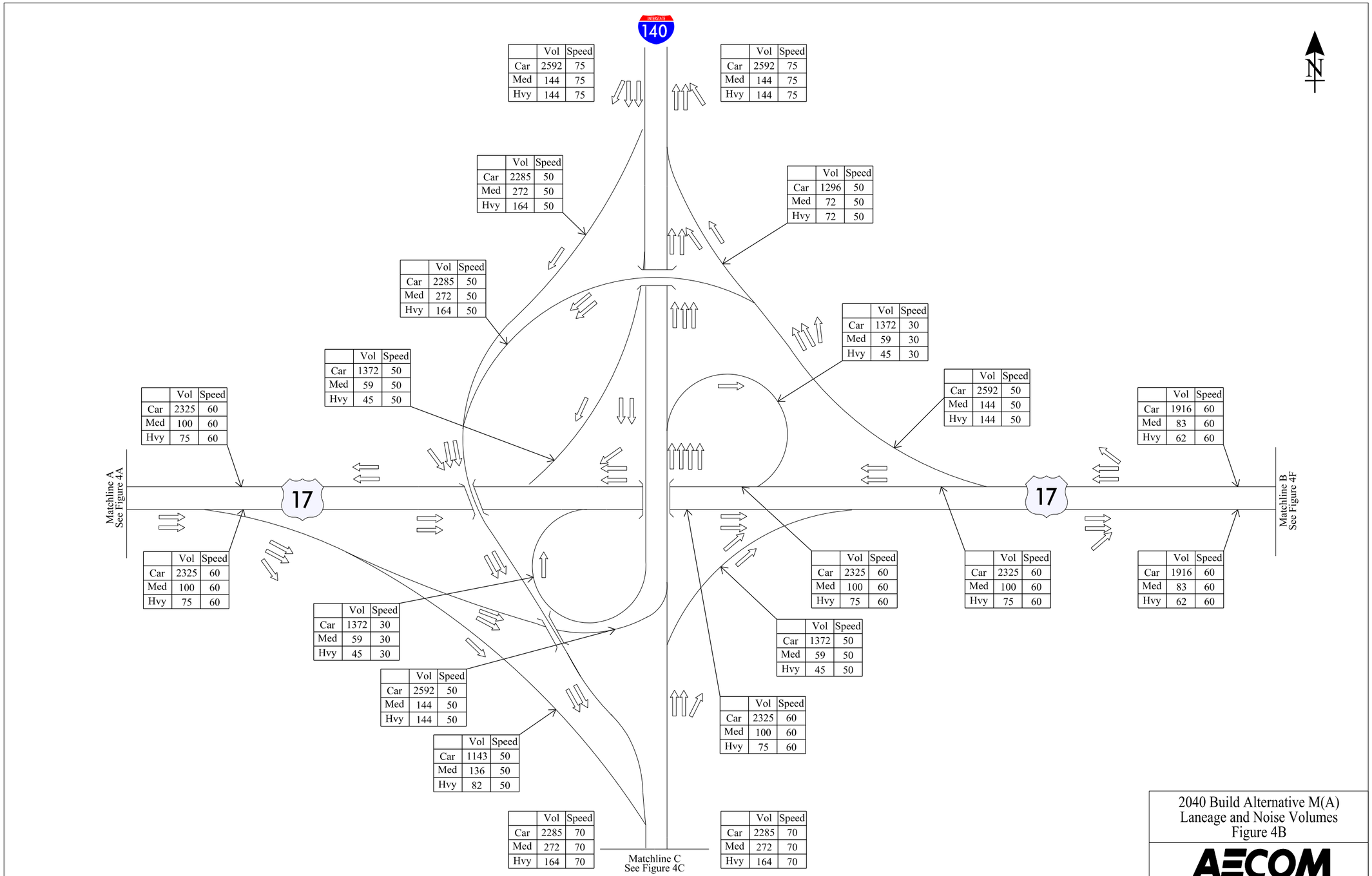

N
BUSINESS
17
Third St
Fifth Ave
76
Wooster St
76
Dawson St
17
421
Matchline L
See Figure 3K
Front St
Greenfield St
Greenfield St
Fifth Ave
S Front St
421
Carolina Beach Rd
Matchline N
See Figure 3M
BUSINESS
17
Third St
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3L
AECOM


Burnett Blvd
17th St
Independence Blvd
N
117
Shipyard Blvd
Bell St
Matchline P
See Figure 3E
Matchline O
See Figure 3E
Worth Dr
Worth Street
(Both Directions)
Sunnyvale Rd
Bryan Rd
Sunnyvale Rd
Matchline Q
See Figure 3E
Independence Blvd
River Rd
421
Carolina Beach Rd
17th St
2040 Build Alternative B
Laneage and Noise Volumes
Figure 3M
AECOM



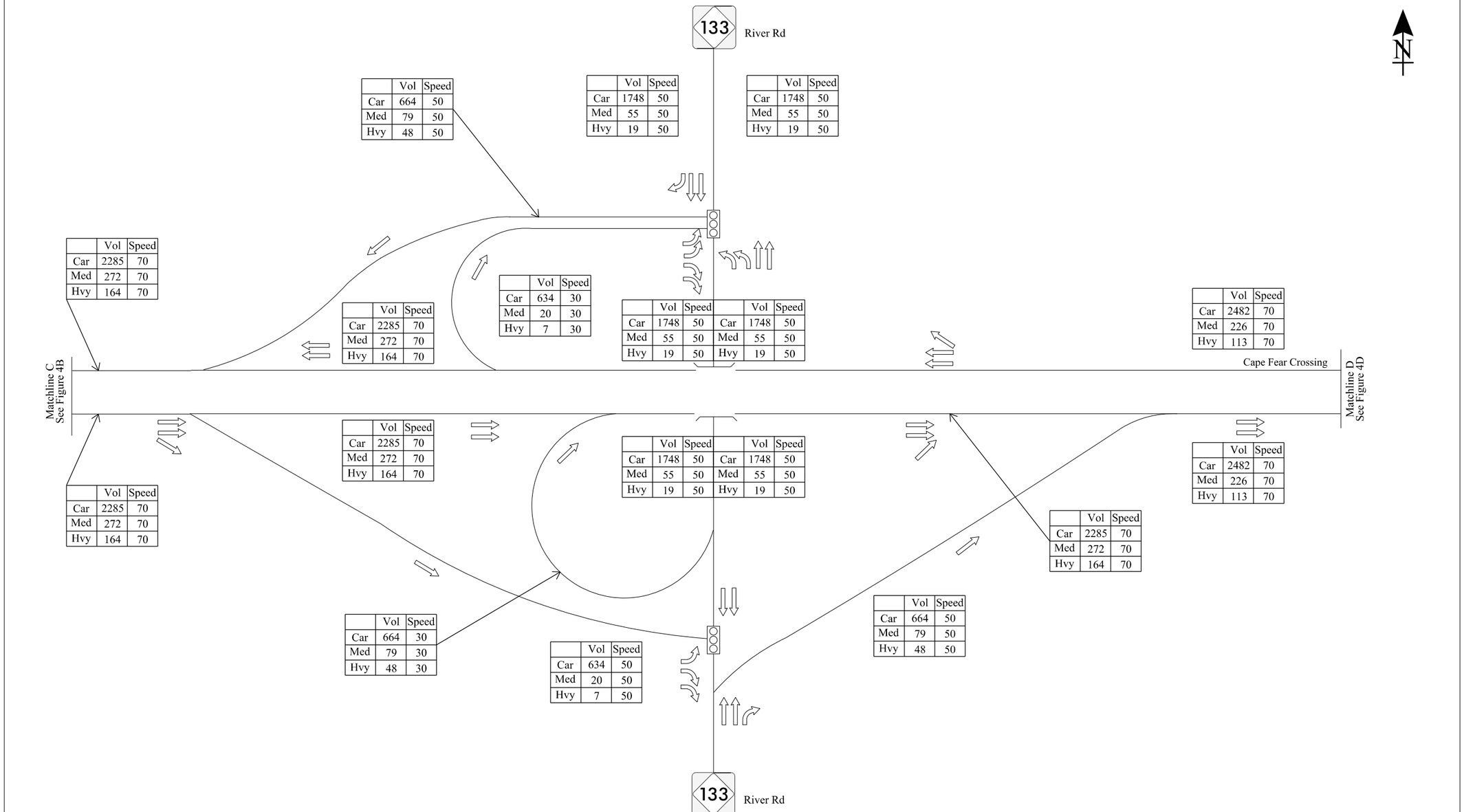
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4A

AECOM



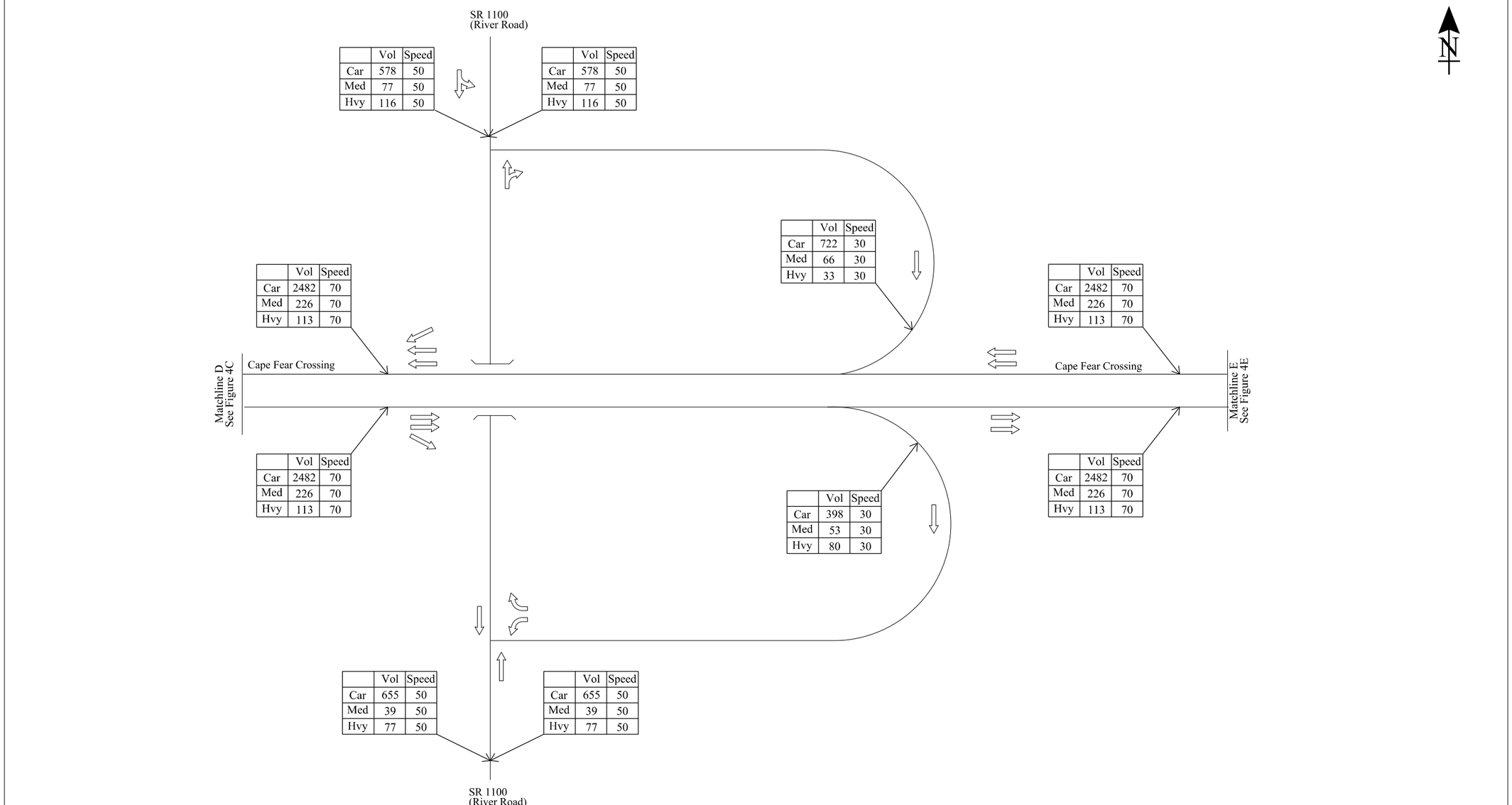
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4B

AECOM



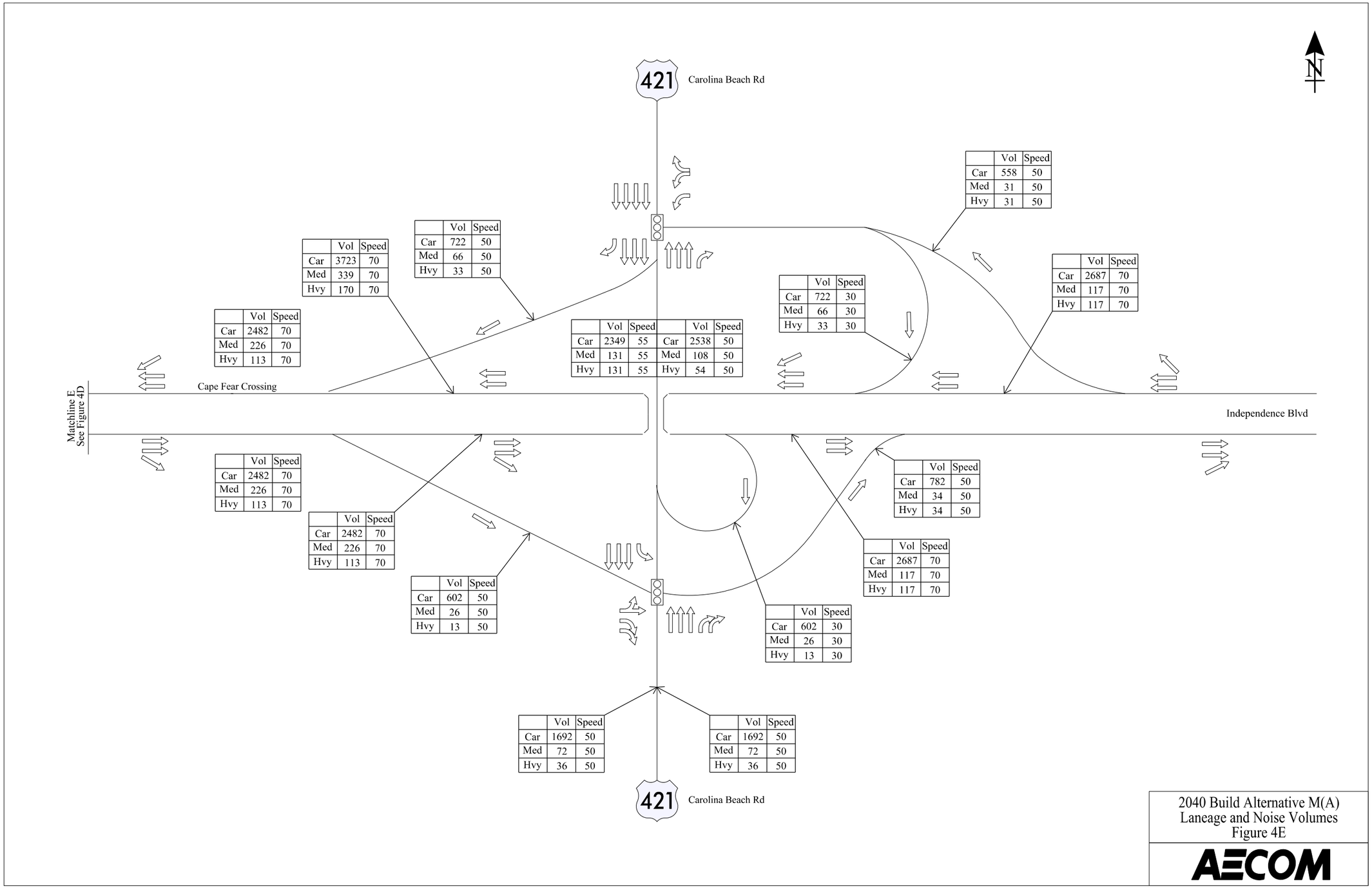
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4C

AECOM



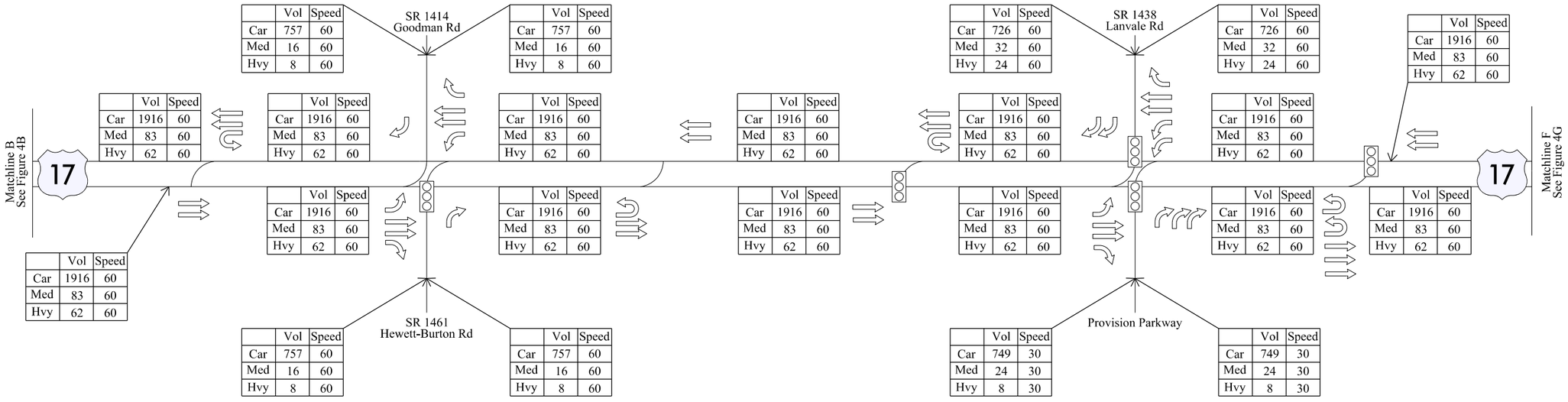
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4D

AECOM



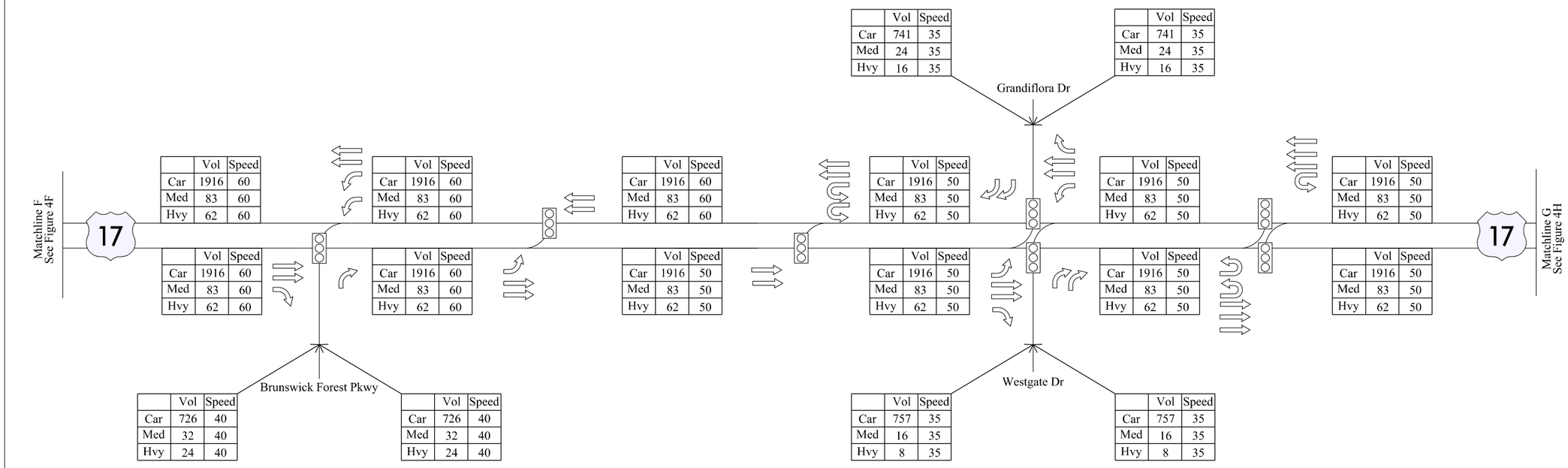
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4E

AECOM



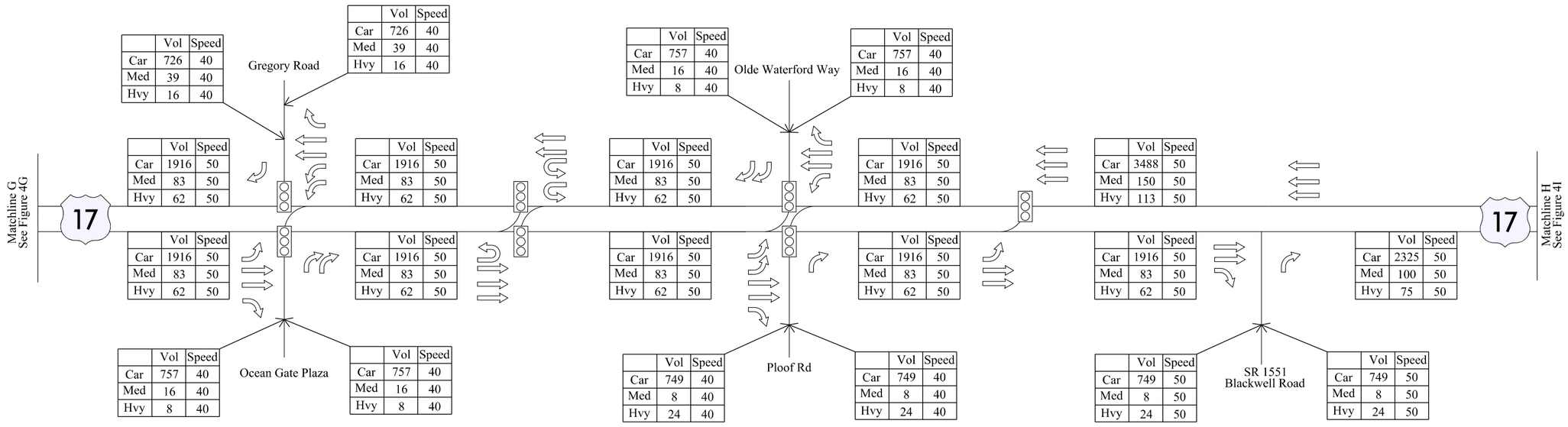
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4F

AECOM



2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4G

AECOM



	Vol	Speed
Car	726	40
Med	39	40
Hvy	16	40

	Vol	Speed
Car	726	40
Med	39	40
Hvy	16	40

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	757	40
Med	16	40
Hvy	8	40

	Vol	Speed
Car	757	40
Med	16	40
Hvy	8	40

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	3488	50
Med	150	50
Hvy	113	50

	Vol	Speed
Car	1916	50
Med	83	50
Hvy	62	50

	Vol	Speed
Car	2325	50
Med	100	50
Hvy	75	50

	Vol	Speed
Car	757	40
Med	16	40
Hvy	8	40

	Vol	Speed
Car	757	40
Med	16	40
Hvy	8	40

	Vol	Speed
Car	749	40
Med	8	40
Hvy	24	40

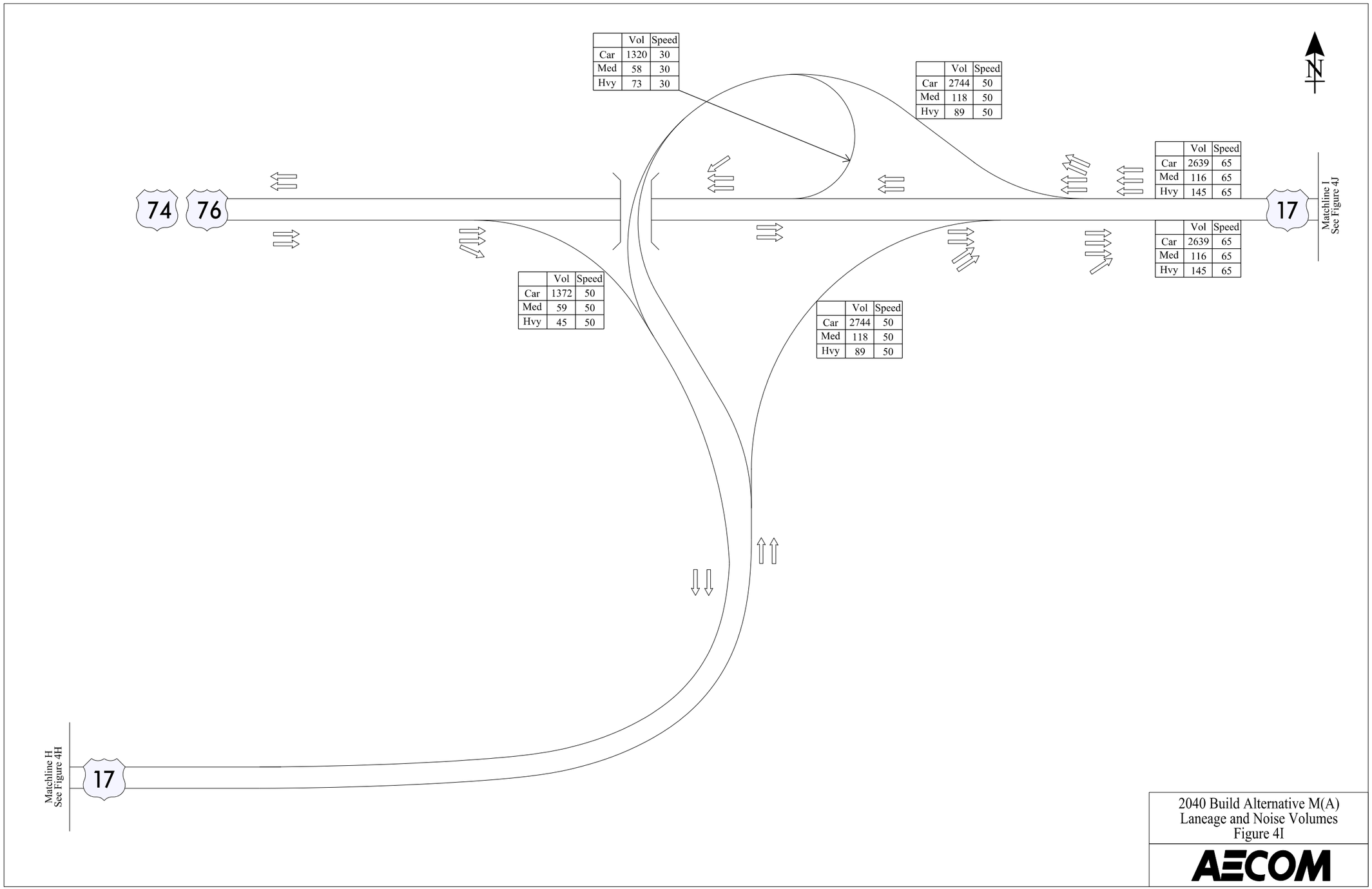
	Vol	Speed
Car	749	40
Med	8	40
Hvy	24	40

	Vol	Speed
Car	749	50
Med	8	50
Hvy	24	50

	Vol	Speed
Car	749	50
Med	8	50
Hvy	24	50

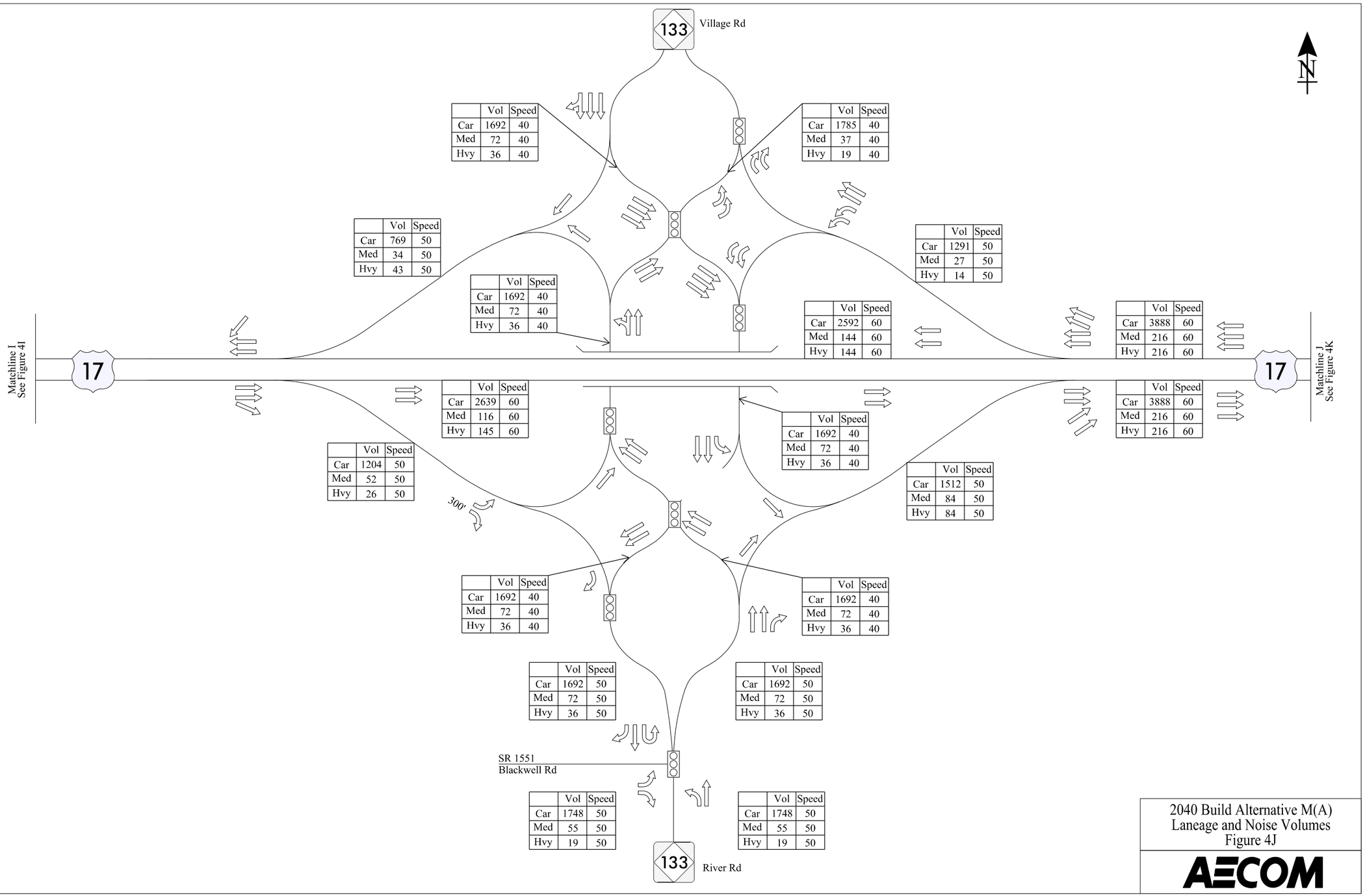
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4H

AECOM



2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4I

AECOM



2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4J

AECOM

	Vol	Speed
Car	1932	60
Med	138	60
Hvy	230	60

421

	Vol	Speed
Car	1932	60
Med	138	60
Hvy	230	60

	Vol	Speed
Car	1620	40
Med	106	40
Hvy	36	40

133 74

Isabel Holmes Bridge

	Vol	Speed
Car	1620	40
Med	106	40
Hvy	36	40

	Vol	Speed
Car	2013	50
Med	141	50
Hvy	188	50

	Vol	Speed
Car	2013	50
Med	141	50
Hvy	188	50

	Vol	Speed
Car	1296	60
Med	72	60
Hvy	72	60

	Vol	Speed
Car	1196	60
Med	84	60
Hvy	112	60

Matchline J
See Figure 4J

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

17

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

17 421

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

Matchline K
See Figure 4L

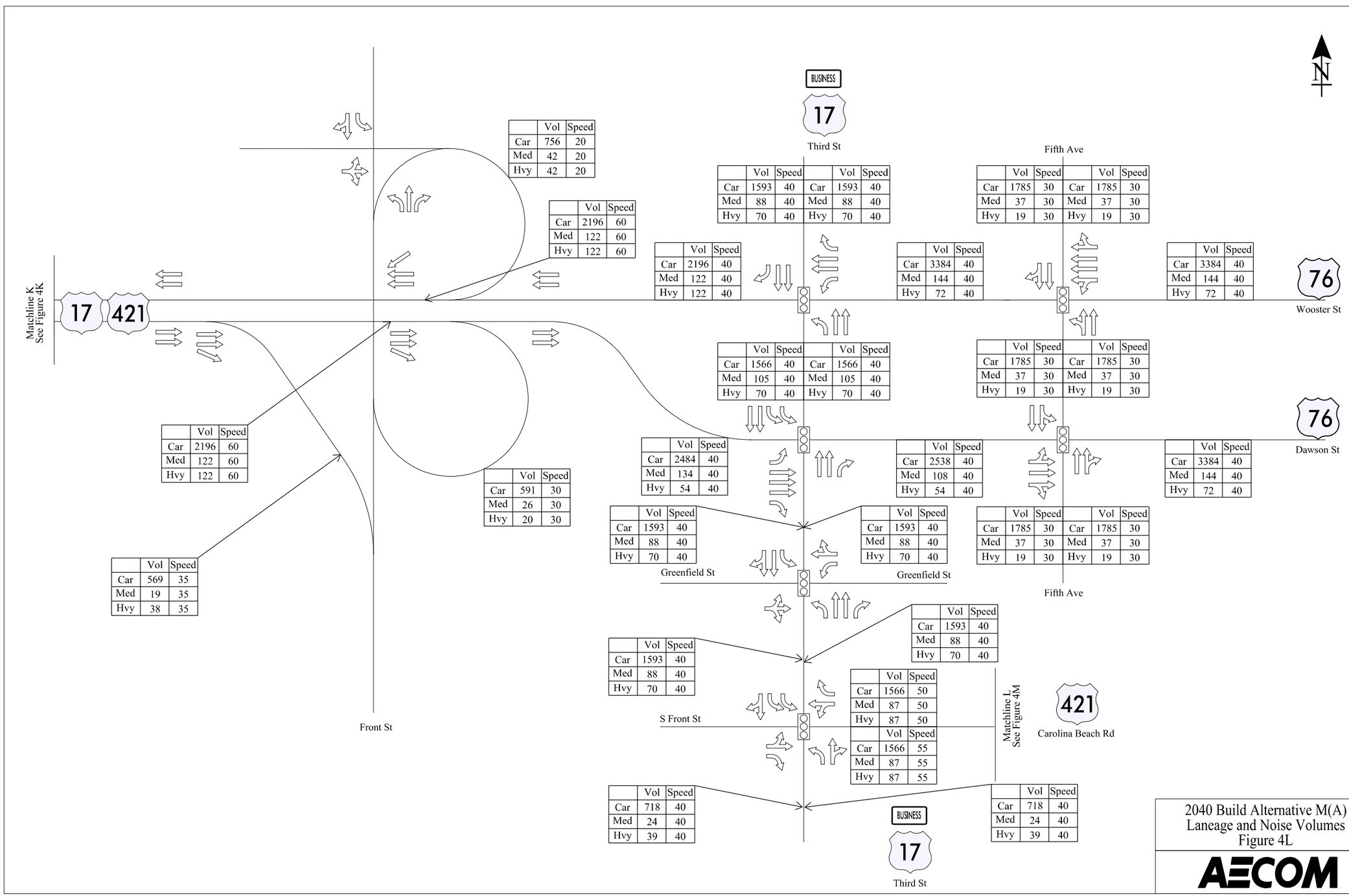
	Vol	Speed
Car	2592	60
Med	144	60
Hvy	144	60

	Vol	Speed
Car	1296	60
Med	72	60
Hvy	72	60

	Vol	Speed
Car	2391	60
Med	167	60
Hvy	223	60

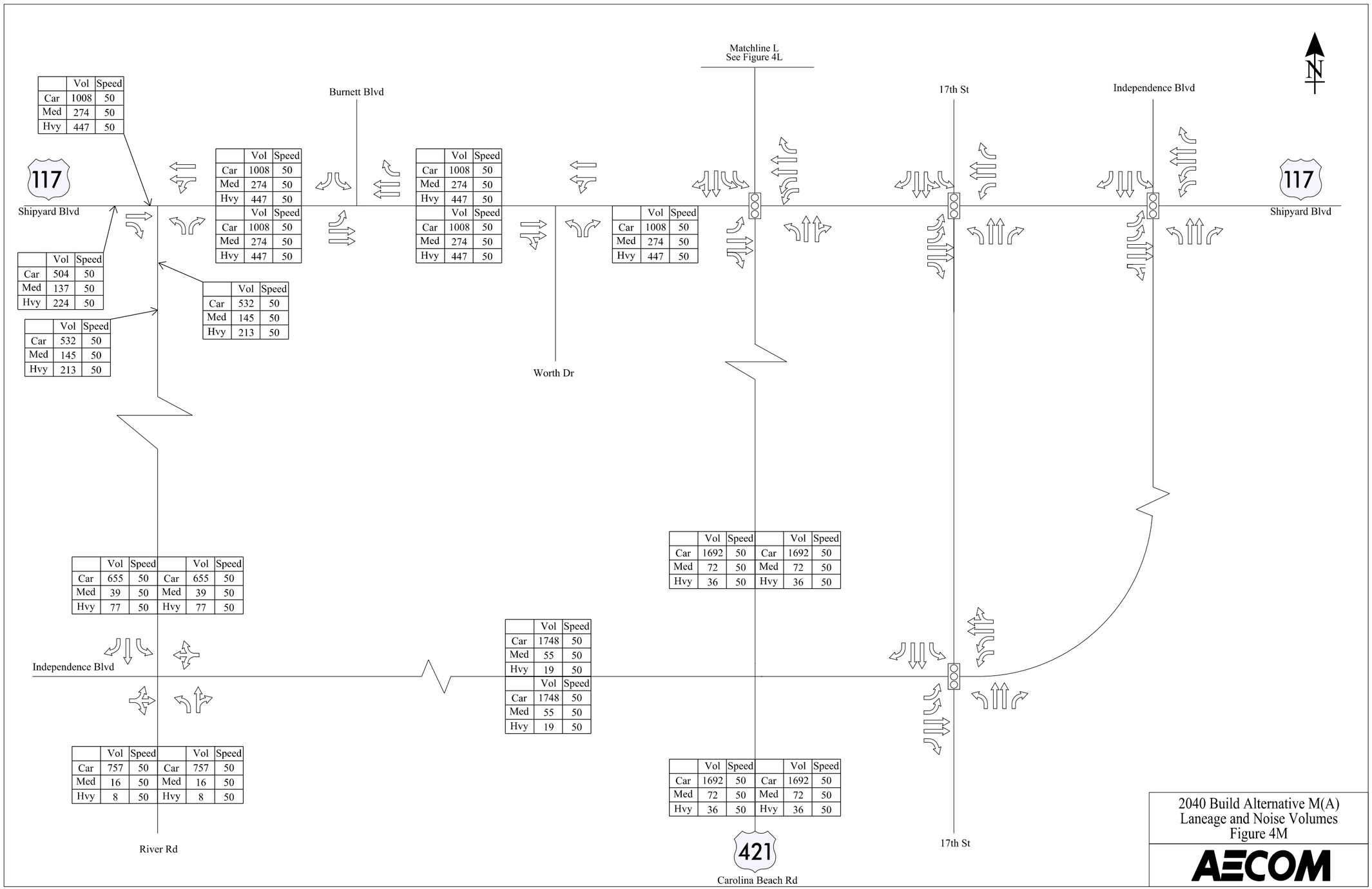
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4K

AECOM



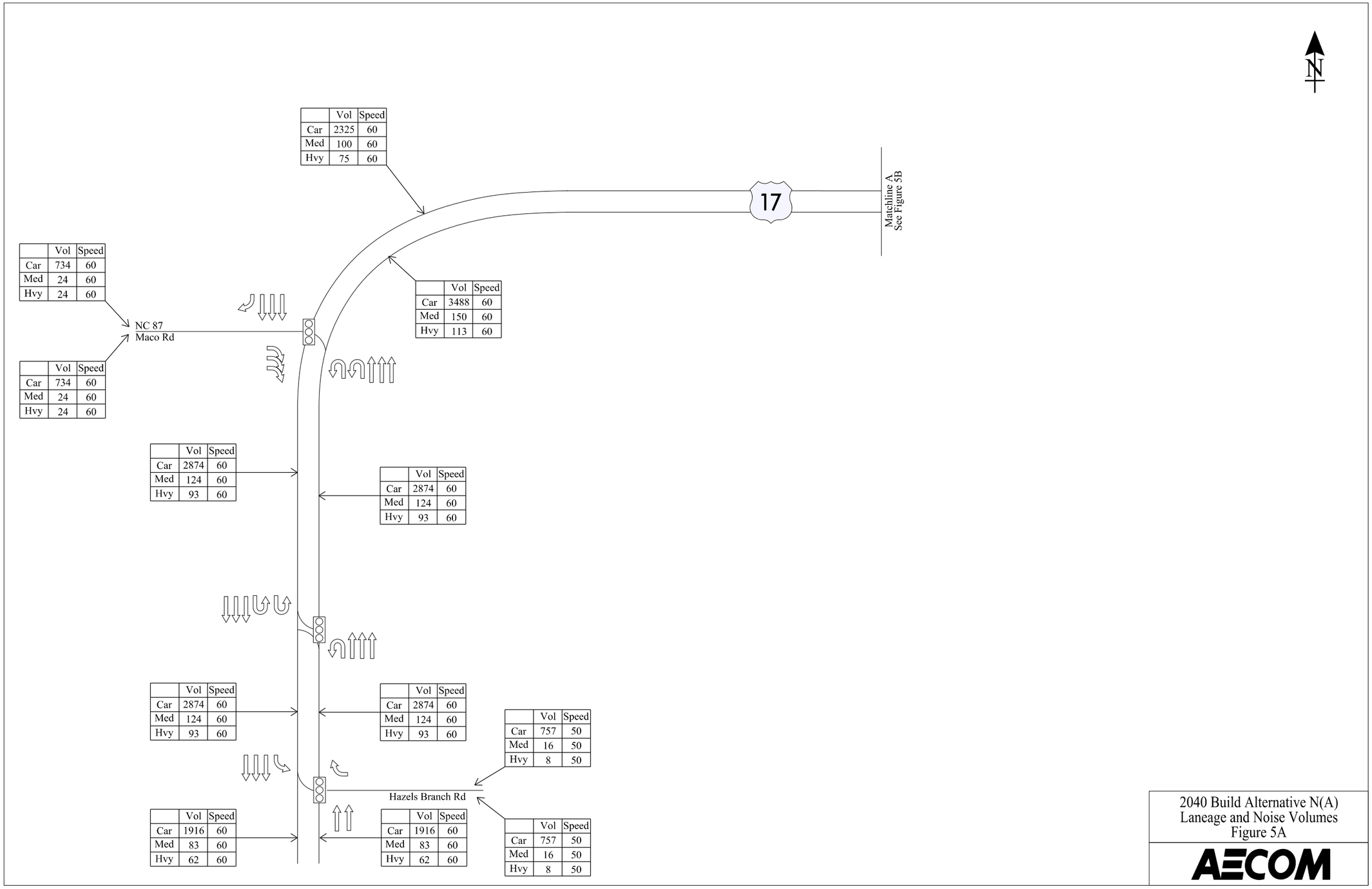
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4L

AECOM



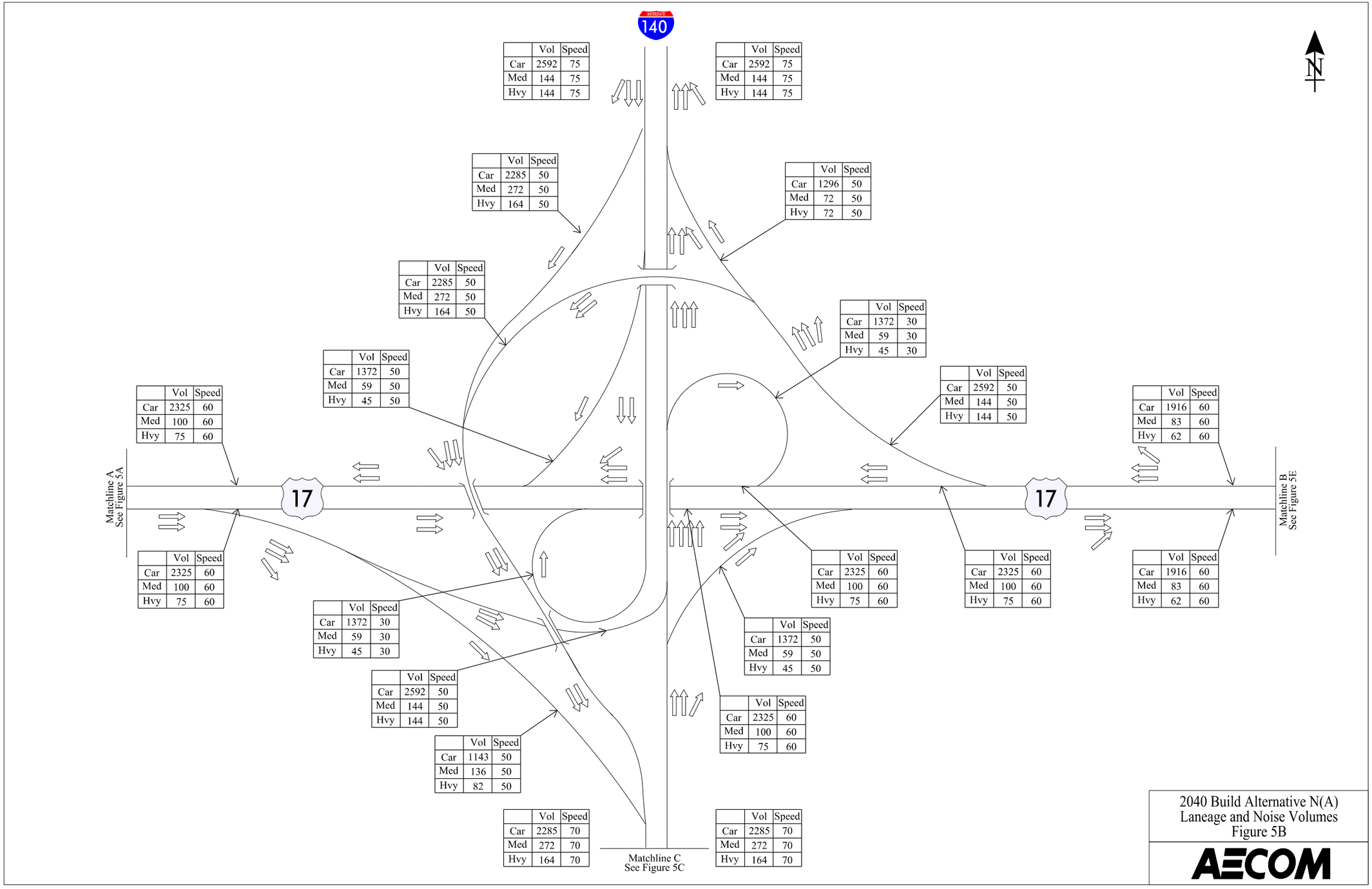
2040 Build Alternative M(A)
Laneage and Noise Volumes
Figure 4M

AECOM



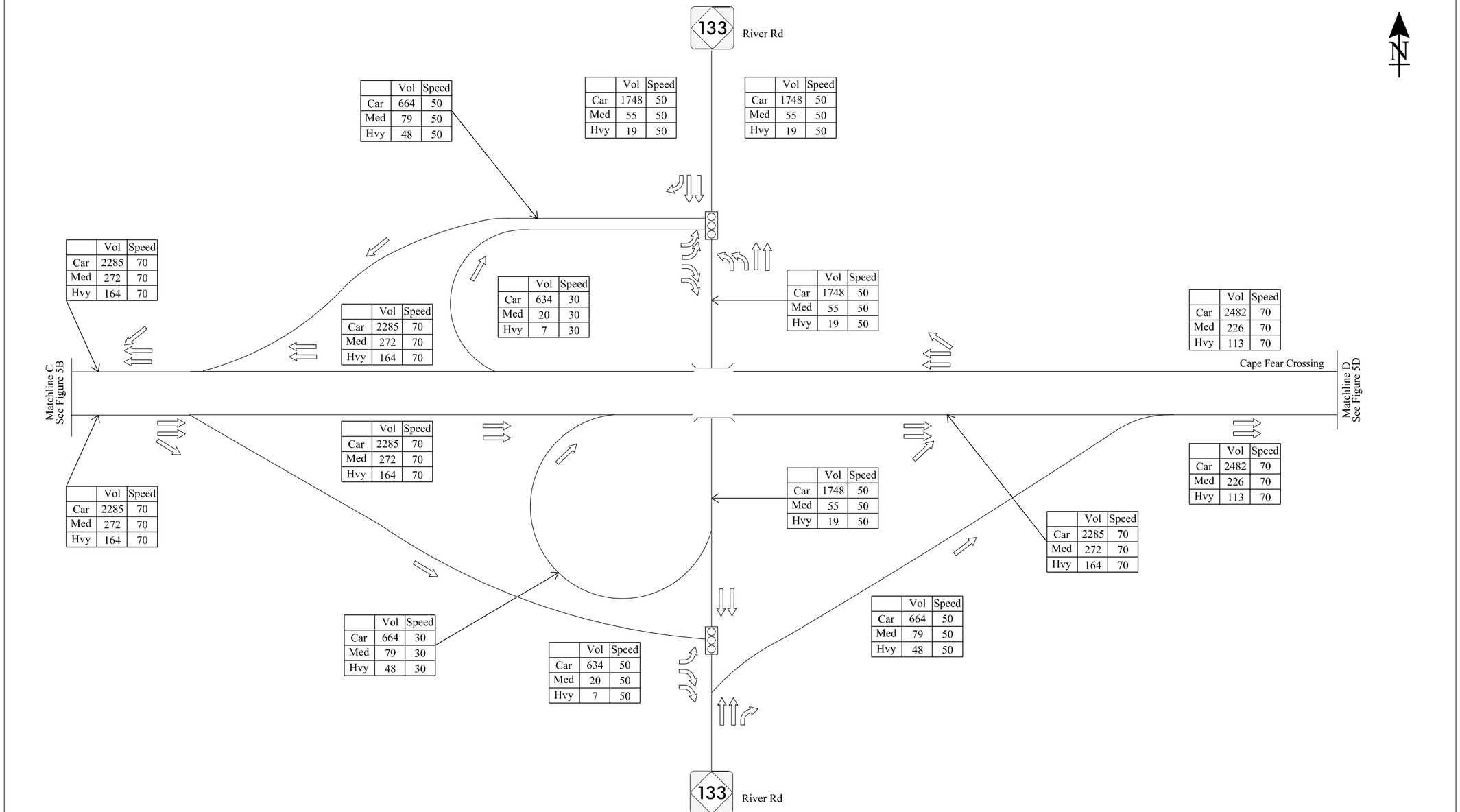
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5A

AECOM



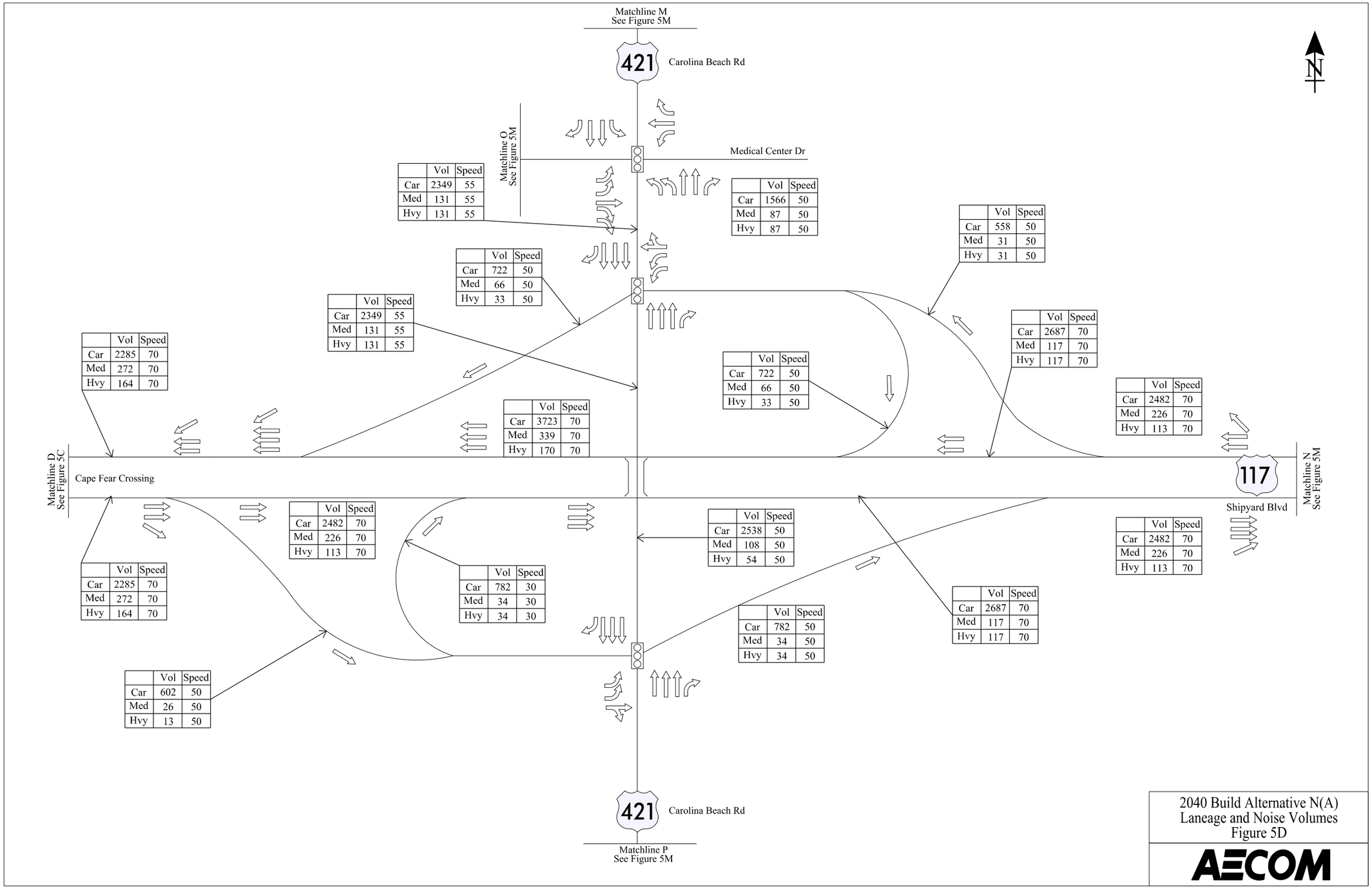
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5B

AECOM



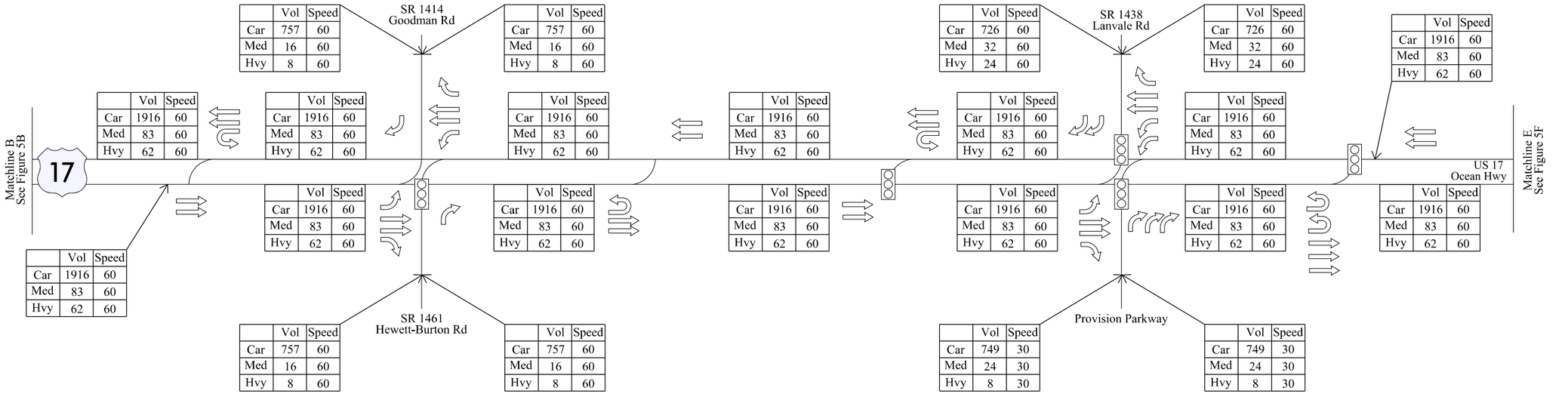
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5C

AECOM



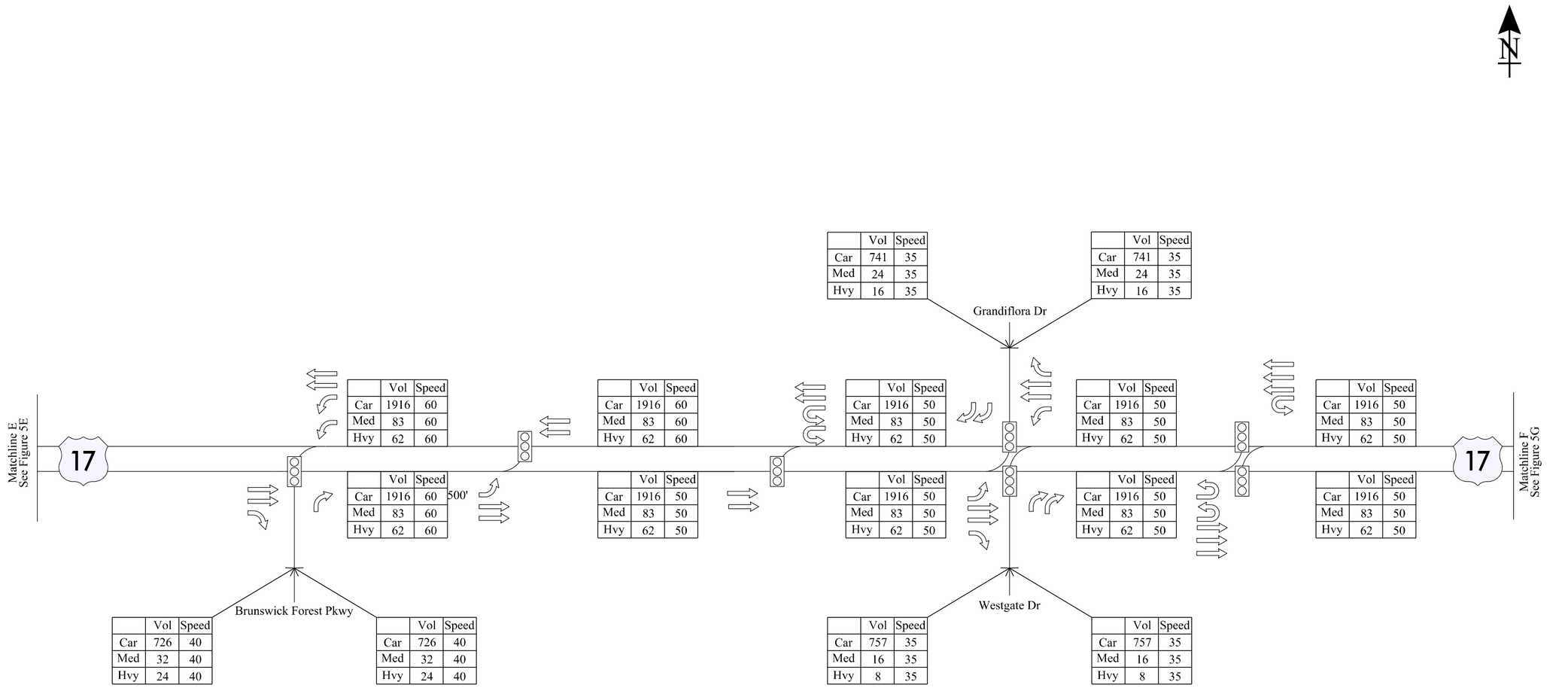
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5D

AECOM



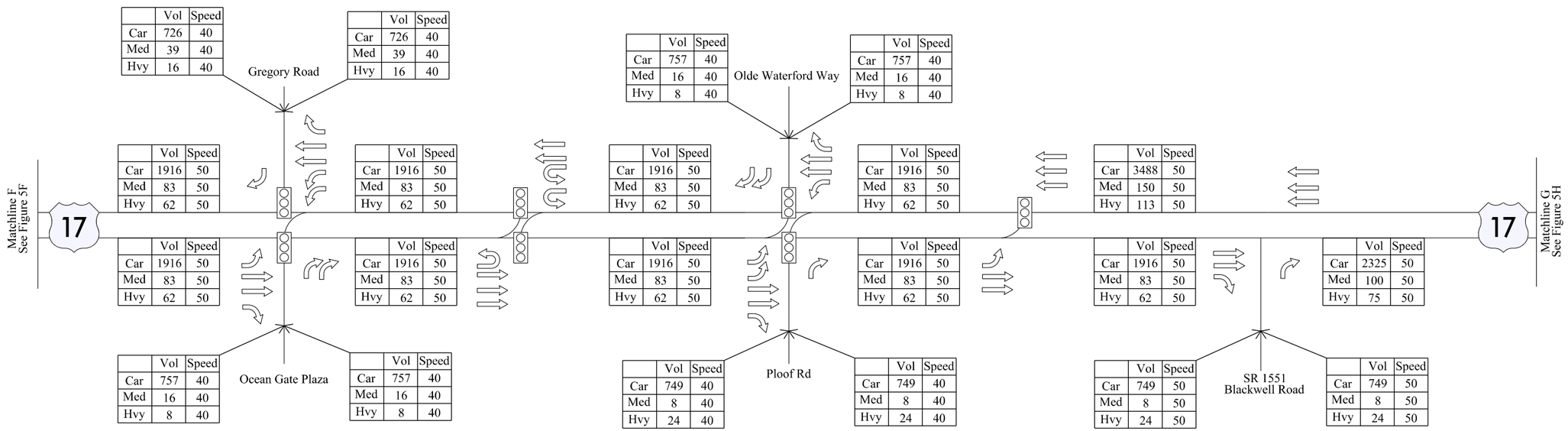
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5E

AECOM



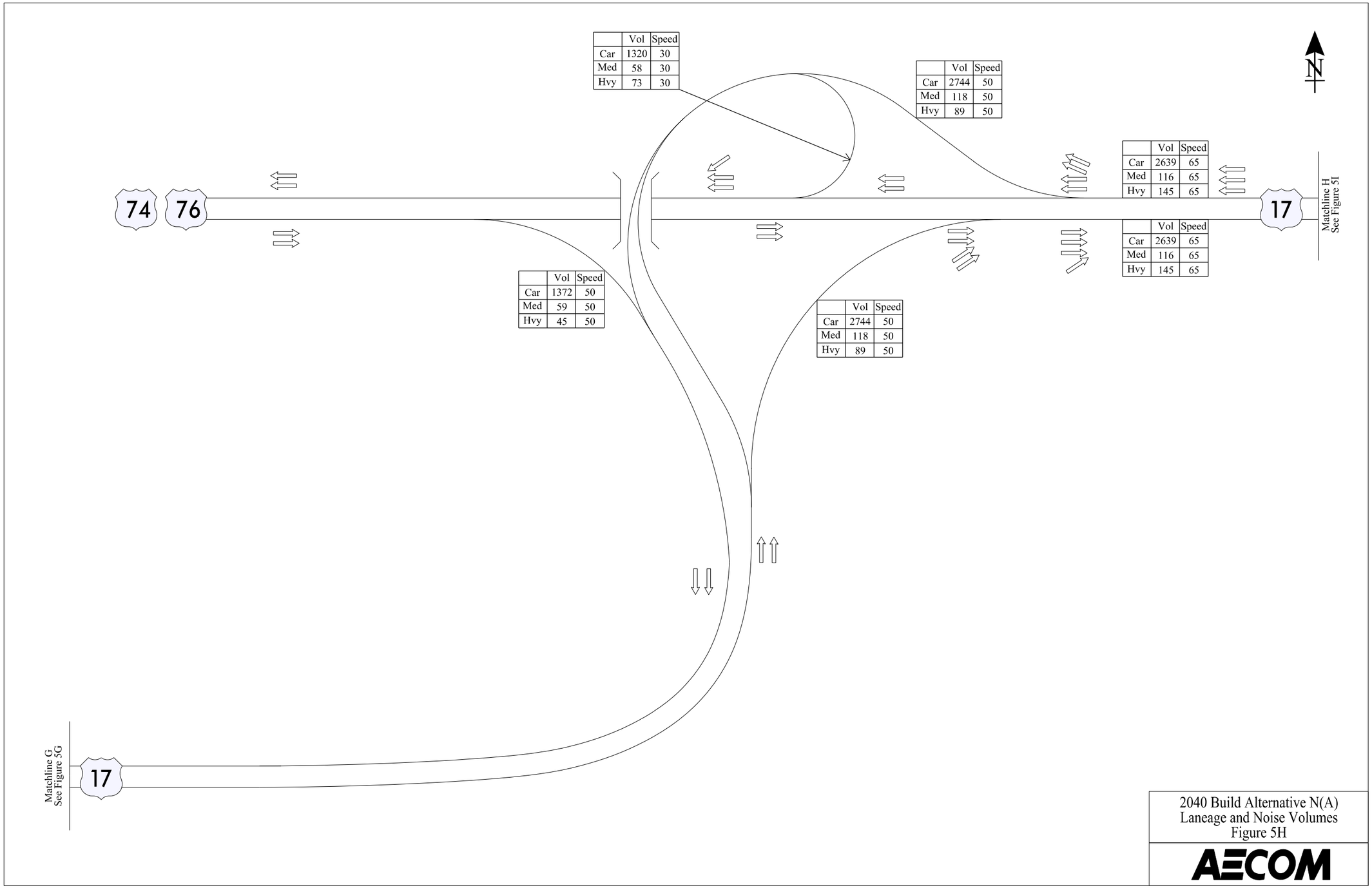
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5F

AECOM



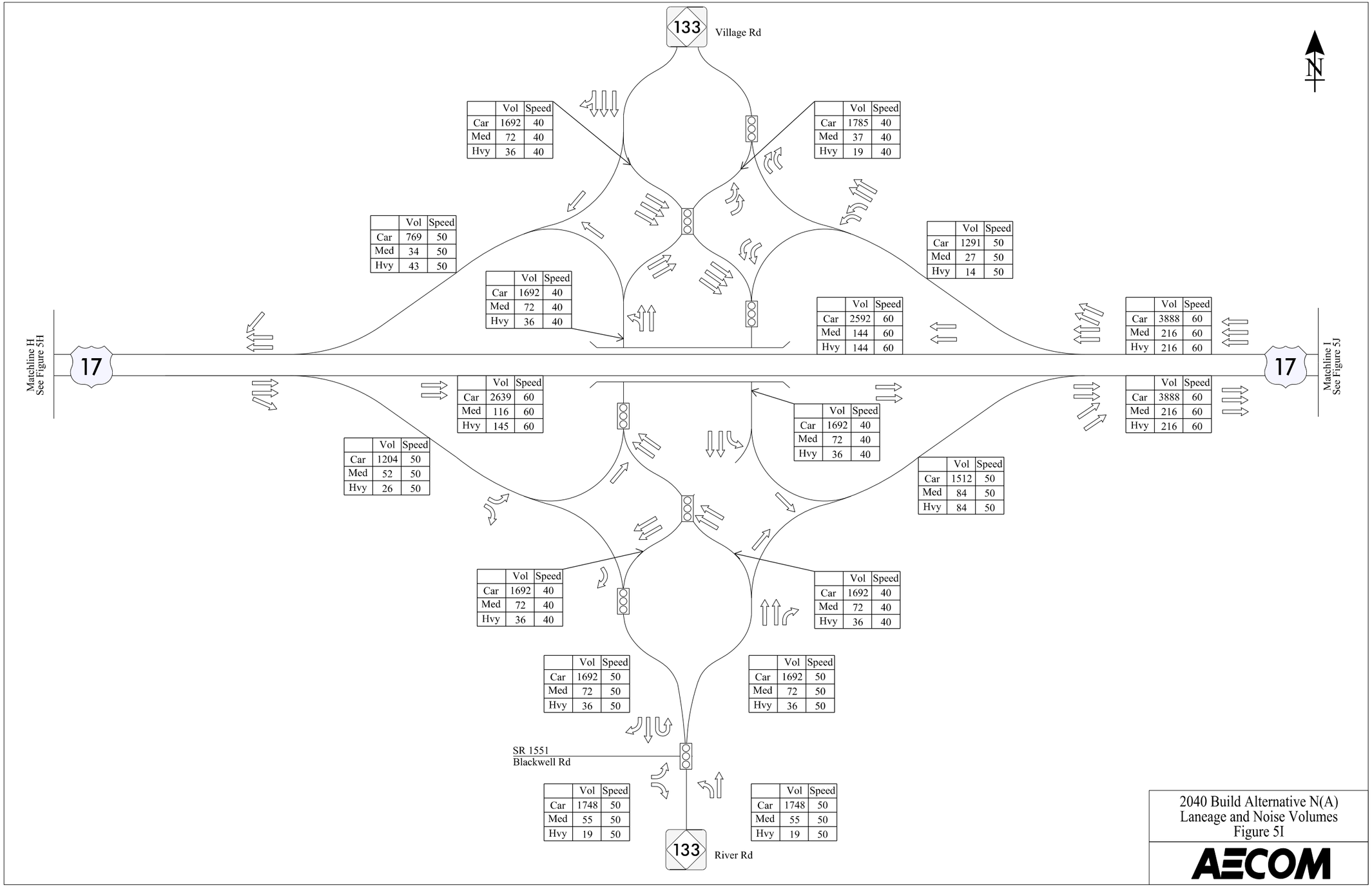
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5G

AECOM



2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5H

AECOM



	Vol	Speed
Car	1692	40
Med	72	40
Hvy	36	40

	Vol	Speed
Car	1785	40
Med	37	40
Hvy	19	40

	Vol	Speed
Car	769	50
Med	34	50
Hvy	43	50

	Vol	Speed
Car	1692	40
Med	72	40
Hvy	36	40

	Vol	Speed
Car	1291	50
Med	27	50
Hvy	14	50

	Vol	Speed
Car	2592	60
Med	144	60
Hvy	144	60

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

	Vol	Speed
Car	2639	60
Med	116	60
Hvy	145	60

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

	Vol	Speed
Car	1692	40
Med	72	40
Hvy	36	40

	Vol	Speed
Car	1204	50
Med	52	50
Hvy	26	50

	Vol	Speed
Car	1512	50
Med	84	50
Hvy	84	50

	Vol	Speed
Car	1692	40
Med	72	40
Hvy	36	40

	Vol	Speed
Car	1692	40
Med	72	40
Hvy	36	40

	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

	Vol	Speed
Car	1748	50
Med	55	50
Hvy	19	50

	Vol	Speed
Car	1748	50
Med	55	50
Hvy	19	50

2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5I

AECOM

	Vol	Speed
Car	1932	60
Med	138	60
Hvy	230	60

421

	Vol	Speed
Car	1932	60
Med	138	60
Hvy	230	60

	Vol	Speed
Car	1620	40
Med	106	40
Hvy	36	40

133 74

Isabel Holmes Bridge

	Vol	Speed
Car	1620	40
Med	106	40
Hvy	36	40

	Vol	Speed
Car	2013	50
Med	141	50
Hvy	188	50

	Vol	Speed
Car	2013	50
Med	141	50
Hvy	188	50

	Vol	Speed
Car	1296	60
Med	72	60
Hvy	72	60

	Vol	Speed
Car	1196	60
Med	84	60
Hvy	112	60

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

	Vol	Speed
Car	3888	60
Med	216	60
Hvy	216	60

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

	Vol	Speed
Car	2196	60
Med	122	60
Hvy	122	60

	Vol	Speed
Car	2592	60
Med	144	60
Hvy	144	60

	Vol	Speed
Car	1296	60
Med	72	60
Hvy	72	60

	Vol	Speed
Car	2391	60
Med	167	60
Hvy	223	60

Matchline I
See Figure 5I

17

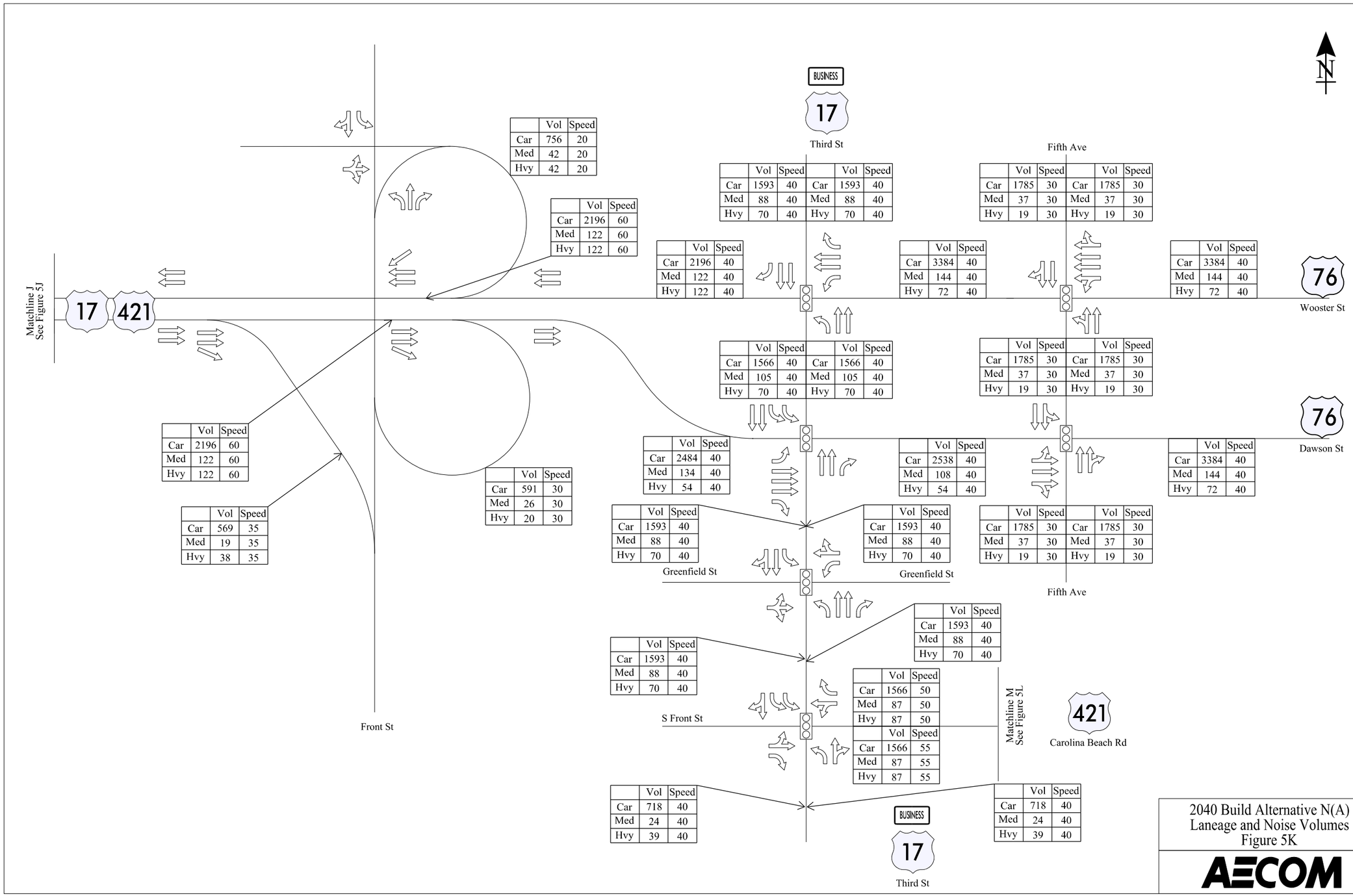
17 421

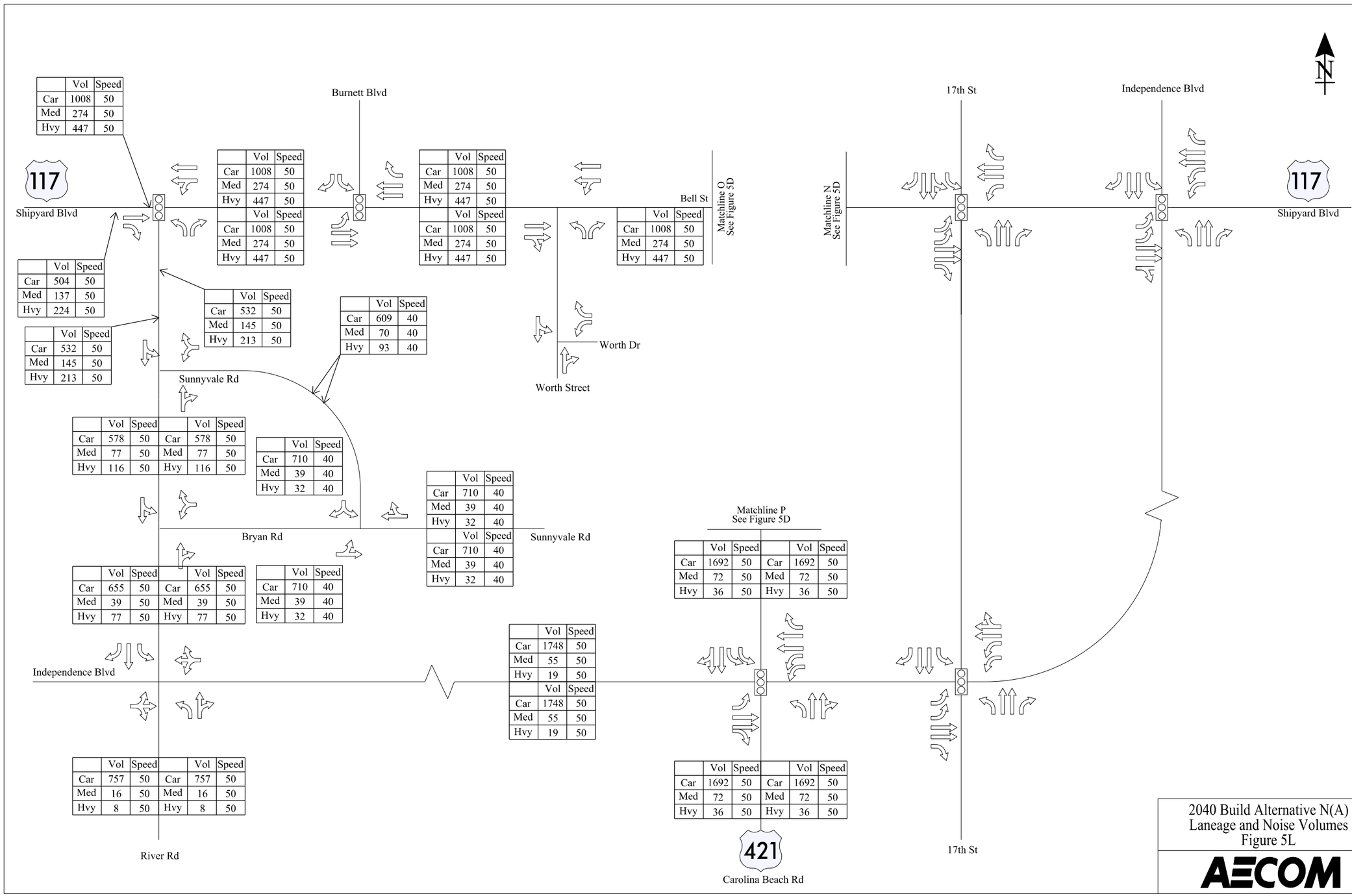
Matchline J
See Figure 5K

N

2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5J

AECOM


N
BUSINESS
17
Third St
Fifth Ave
76
Wooster St
Dawson St
Matchline J
See Figure 5J
17
421
Front St
Greenfield St
Greenfield St
Fifth Ave
S Front St
Matchline M
See Figure 5L
421
Carolina Beach Rd
BUSINESS
17
Third St
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5K
AECOM



	Vol	Speed
Car	1008	50
Med	274	50
Hvy	447	50

	Vol	Speed
Car	504	50
Med	137	50
Hvy	224	50

	Vol	Speed
Car	532	50
Med	145	50
Hvy	213	50

	Vol	Speed
Car	609	40
Med	70	40
Hvy	93	40

	Vol	Speed		Vol	Speed
Car	578	50	Car	578	50
Med	77	50	Med	77	50
Hvy	116	50	Hvy	116	50

	Vol	Speed
Car	710	40
Med	39	40
Hvy	32	40

	Vol	Speed		Vol	Speed
Car	655	50	Car	655	50
Med	39	50	Med	39	50
Hvy	77	50	Hvy	77	50

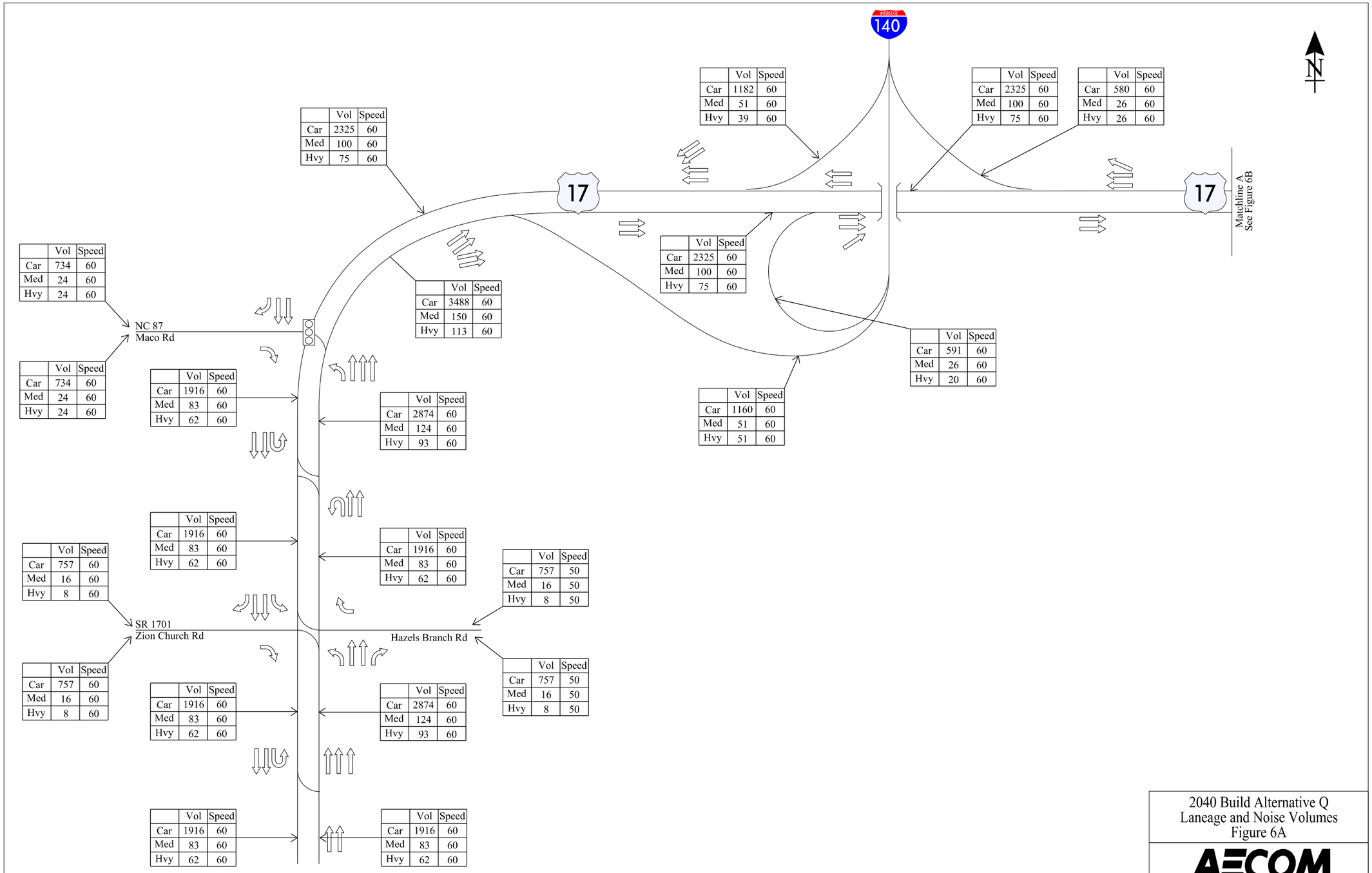
	Vol	Speed
Car	1748	50
Med	55	50
Hvy	19	50

	Vol	Speed		Vol	Speed
Car	1692	50	Car	1692	50
Med	72	50	Med	72	50
Hvy	36	50	Hvy	36	50

	Vol	Speed		Vol	Speed
Car	757	50	Car	757	50
Med	16	50	Med	16	50
Hvy	8	50	Hvy	8	50

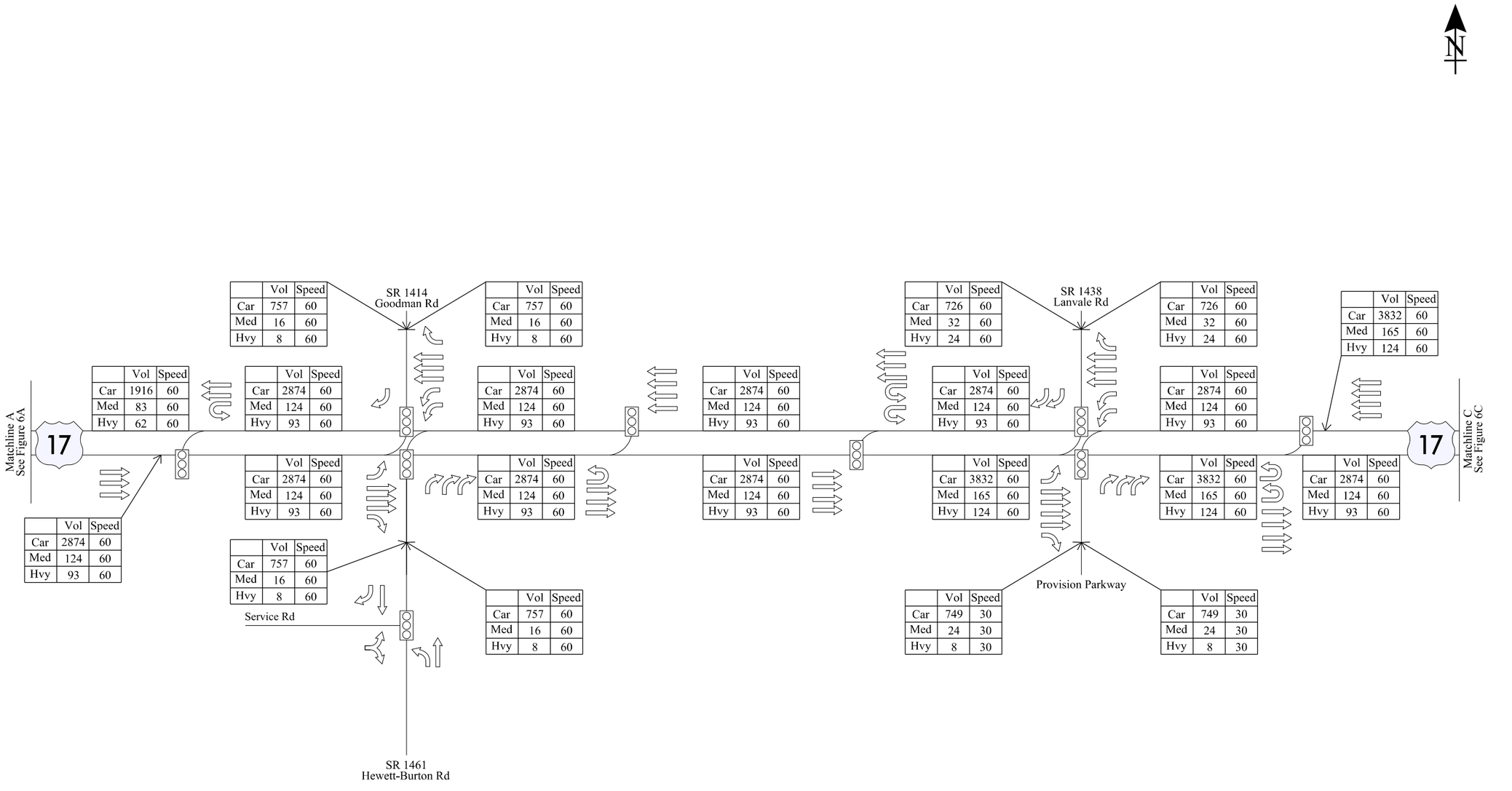
2040 Build Alternative N(A)
Laneage and Noise Volumes
Figure 5L

AECOM



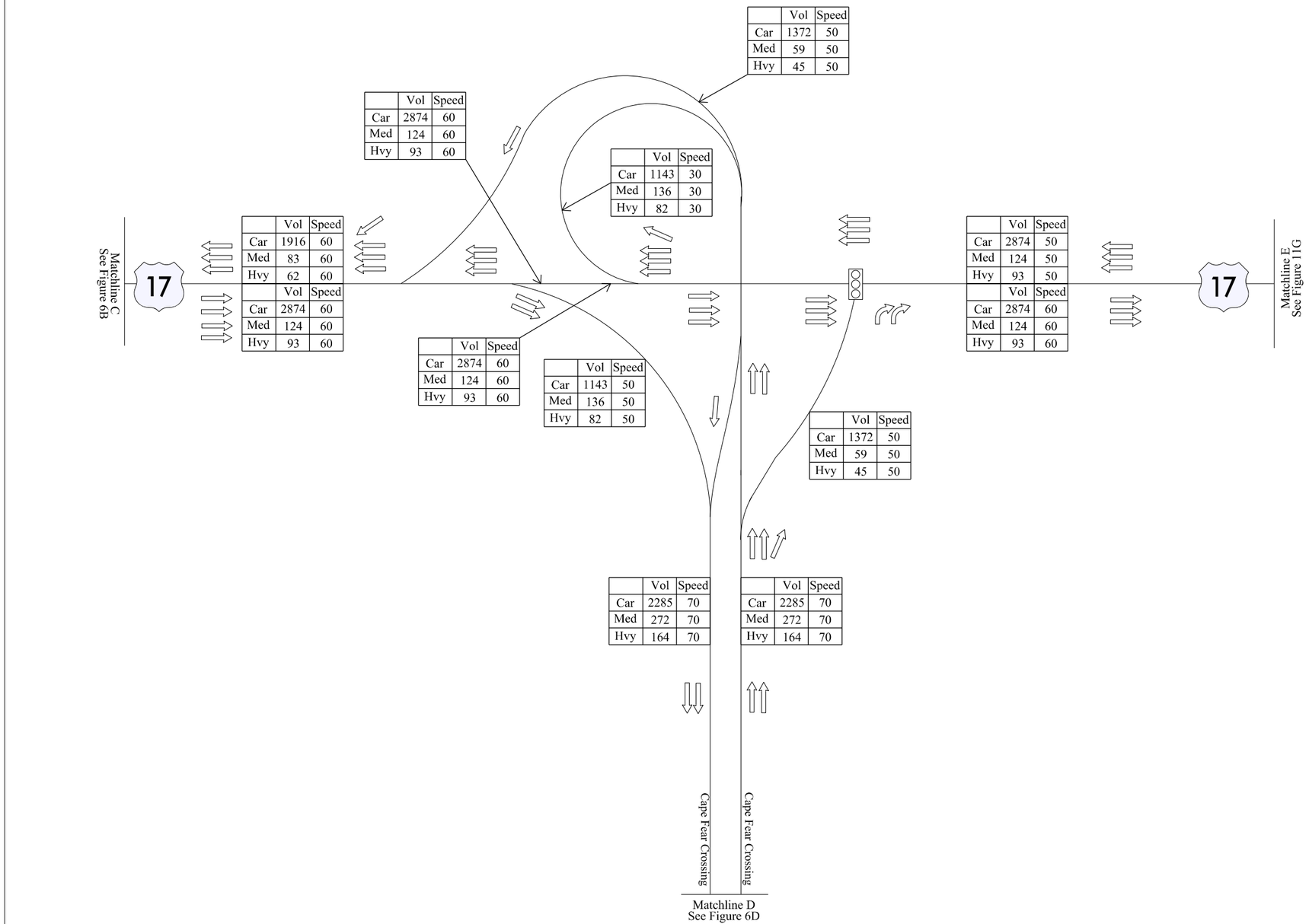
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6A

AECOM



2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6B

AECOM



2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6C

AECOM

Matchline D
See Figure 6C

133 River Rd

	Vol	Speed
Car	664	50
Med	79	50
Hvy	48	50

	Vol	Speed
Car	1748	50
Med	55	50
Hvy	19	50

	Vol	Speed
Car	1748	50
Med	55	50
Hvy	19	50

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	634	30
Med	20	30
Hvy	7	30

	Vol	Speed		Vol	Speed
Car	1748	50	Car	1748	50
Med	55	50	Med	55	50
Hvy	19	50	Hvy	19	50

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

Cape Fear Crossing

Matchline E
See Figure 6E

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	664	30
Med	79	30
Hvy	48	30

	Vol	Speed
Car	634	50
Med	20	50
Hvy	7	50

	Vol	Speed		Vol	Speed
Car	1748	50	Car	1748	50
Med	55	50	Med	55	50
Hvy	19	50	Hvy	19	50

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

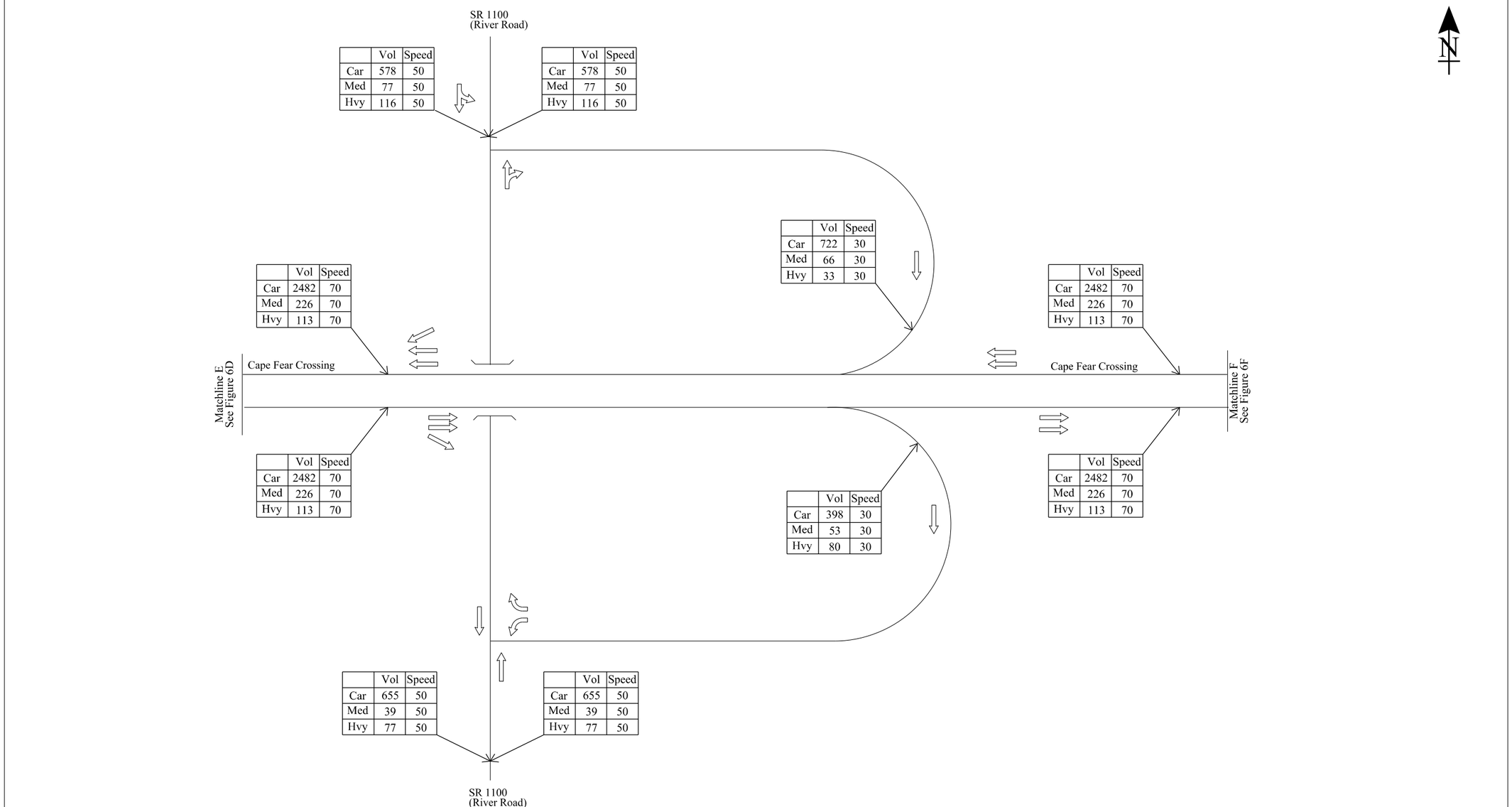
	Vol	Speed
Car	2285	70
Med	272	70
Hvy	164	70

	Vol	Speed
Car	664	50
Med	79	50
Hvy	48	50

133 River Rd

2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6D

AECOM



2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6E

AECOM

421 Carolina Beach Rd

N

	Vol	Speed
Car	3723	70
Med	339	70
Hvy	170	70

	Vol	Speed
Car	722	50
Med	66	50
Hvy	33	50

	Vol	Speed
Car	558	50
Med	31	50
Hvy	31	50

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed		Vol	Speed
Car	2349	55	Car	2538	50
Med	131	55	Med	108	50
Hvy	131	55	Hvy	54	50

	Vol	Speed
Car	722	30
Med	66	30
Hvy	33	30

	Vol	Speed
Car	2687	70
Med	117	70
Hvy	117	70

Matchline F
See Figure 6E

Cape Fear Crossing

117 Shipyard Blvd

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed
Car	2482	70
Med	226	70
Hvy	113	70

	Vol	Speed
Car	782	50
Med	34	50
Hvy	34	50

	Vol	Speed
Car	782	50
Med	34	50
Hvy	34	50

	Vol	Speed
Car	602	50
Med	26	50
Hvy	13	50

	Vol	Speed
Car	2687	70
Med	117	70
Hvy	117	70

	Vol	Speed
Car	602	30
Med	26	30
Hvy	13	30

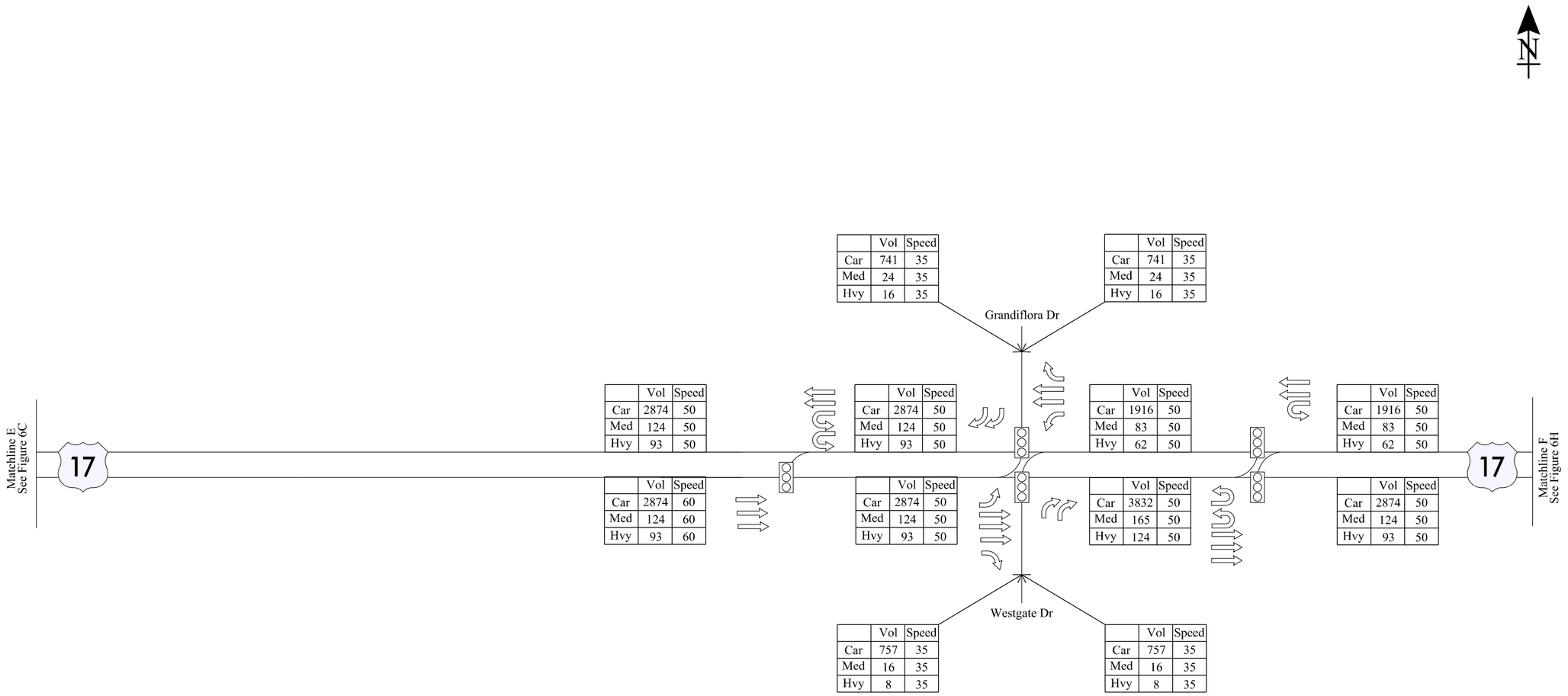
	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

	Vol	Speed
Car	1692	50
Med	72	50
Hvy	36	50

421 Carolina Beach Rd

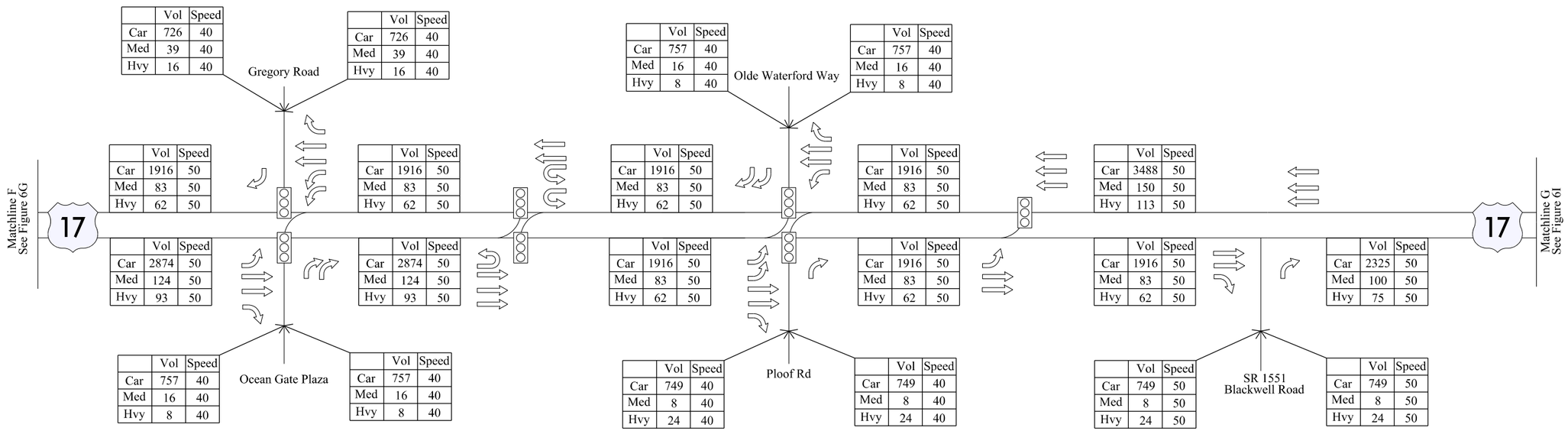
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6F

AECOM



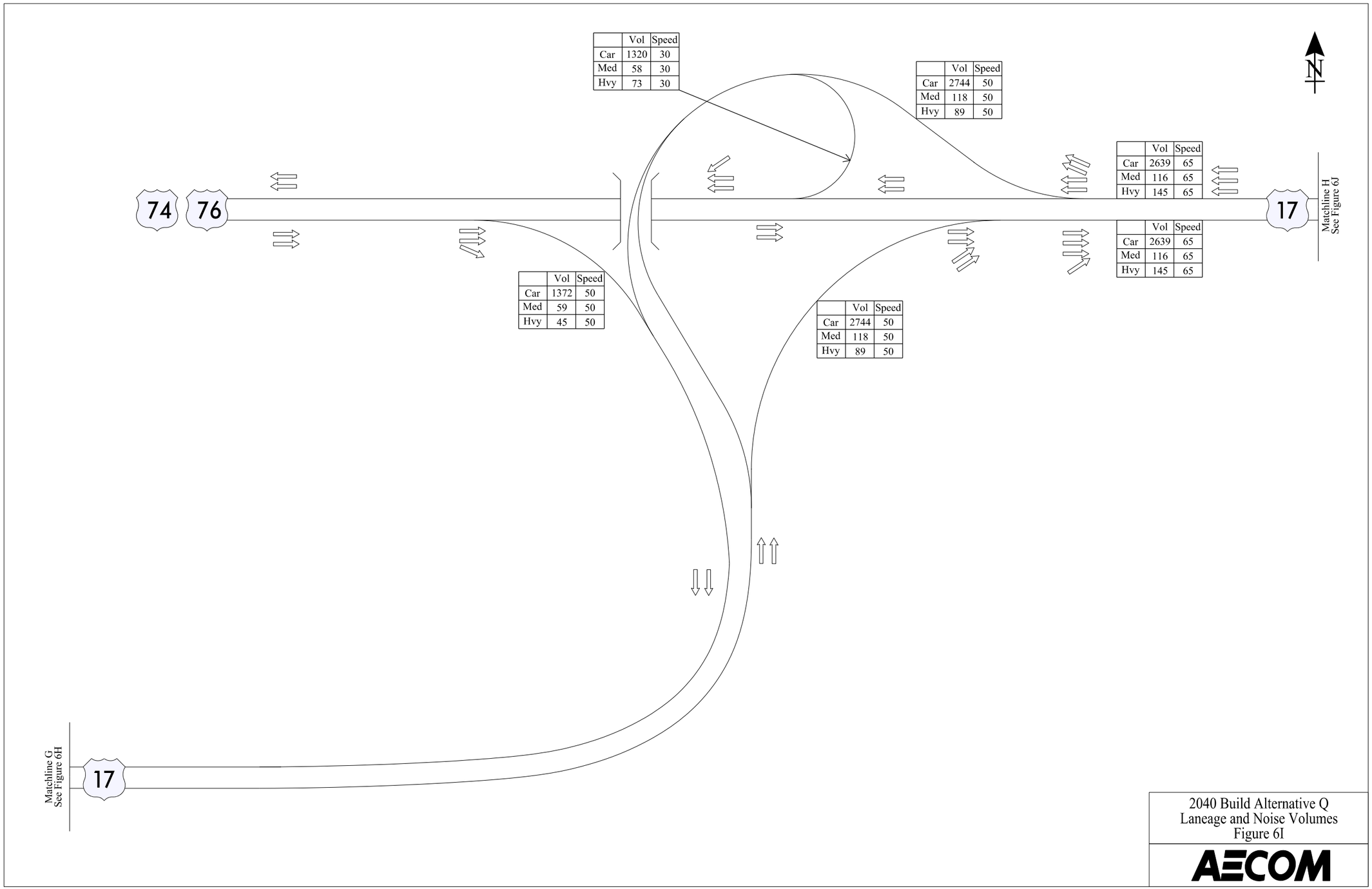
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6G

AECOM



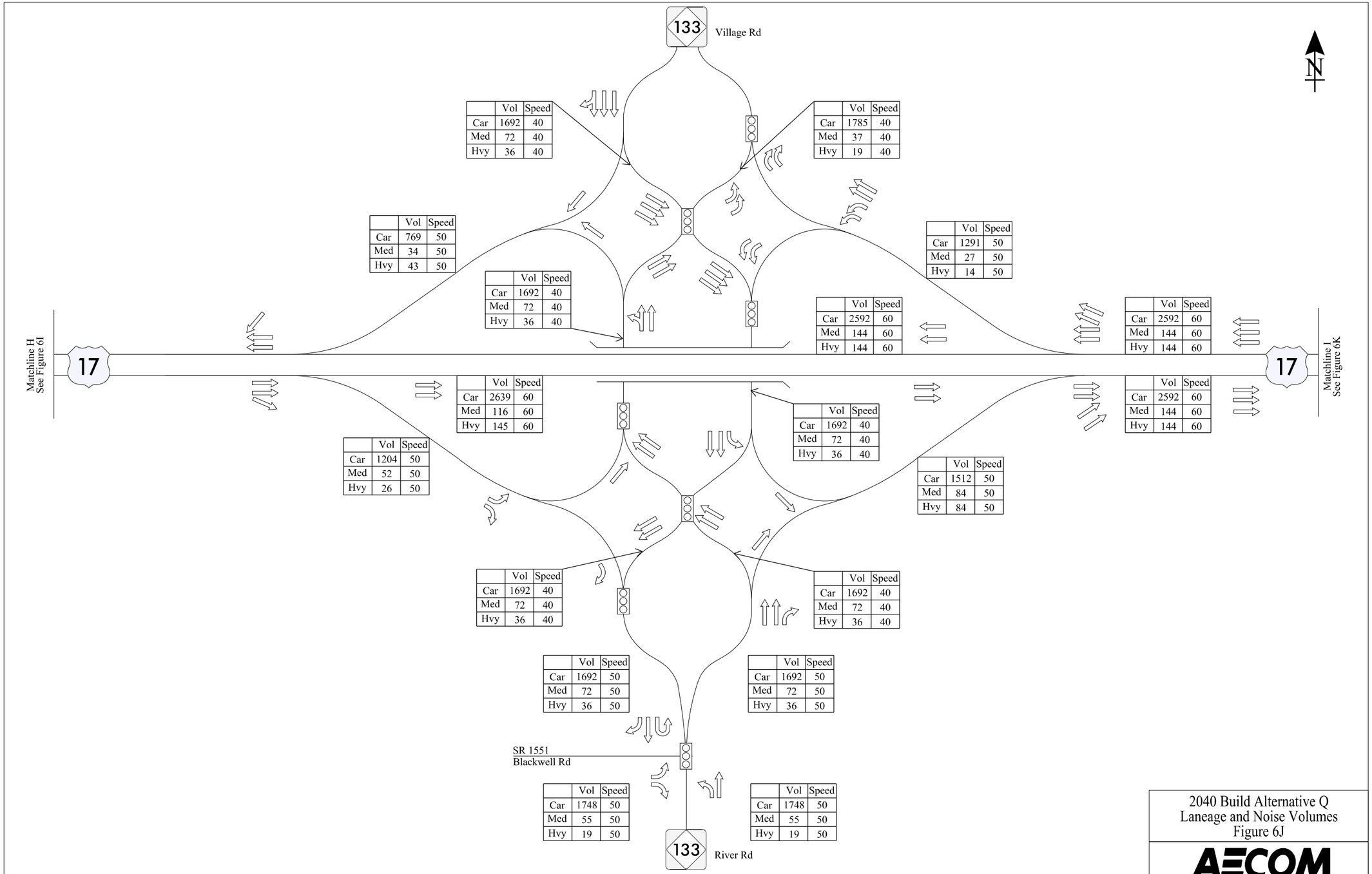
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6H

AECOM



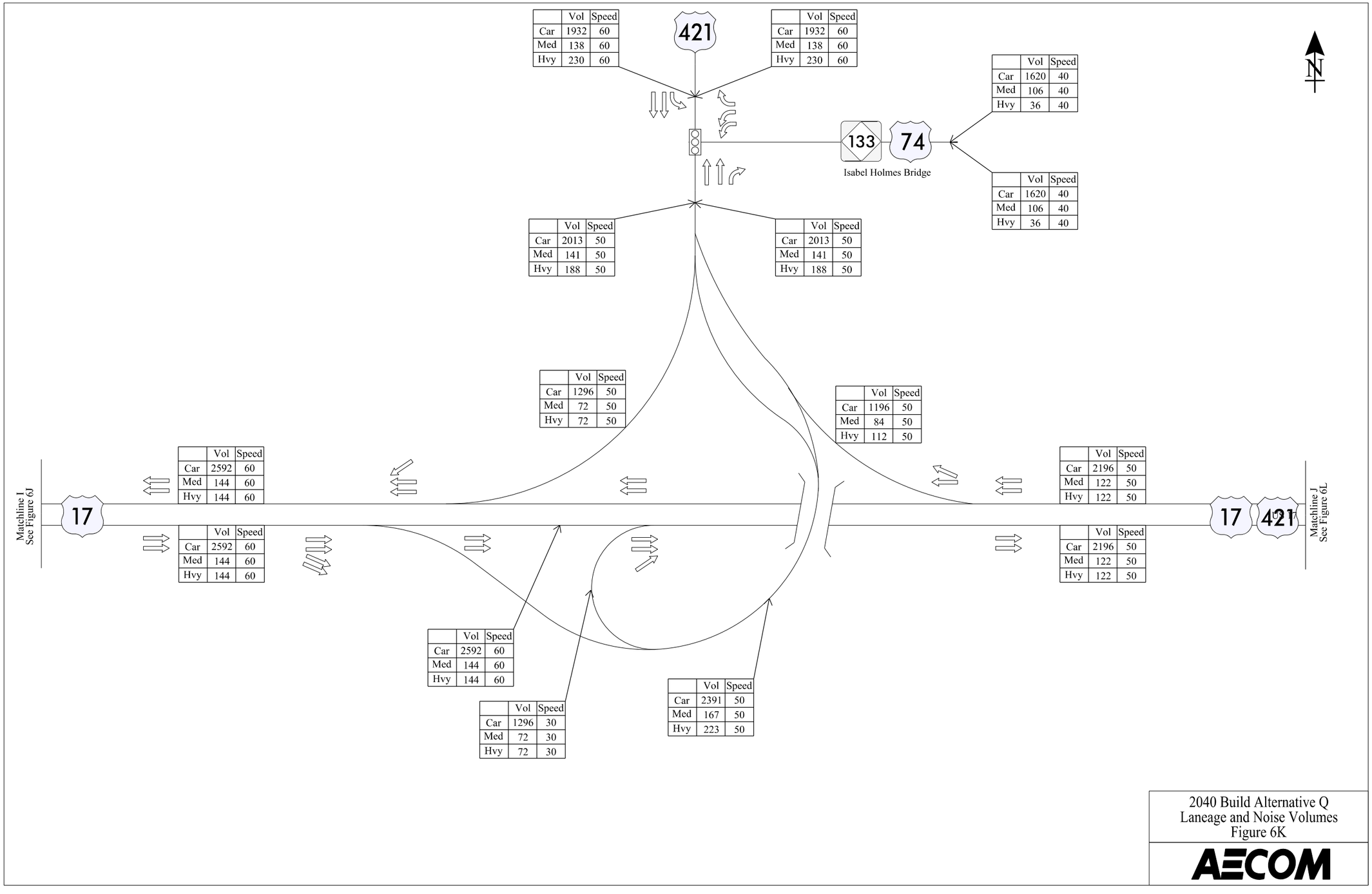
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6I

AECOM



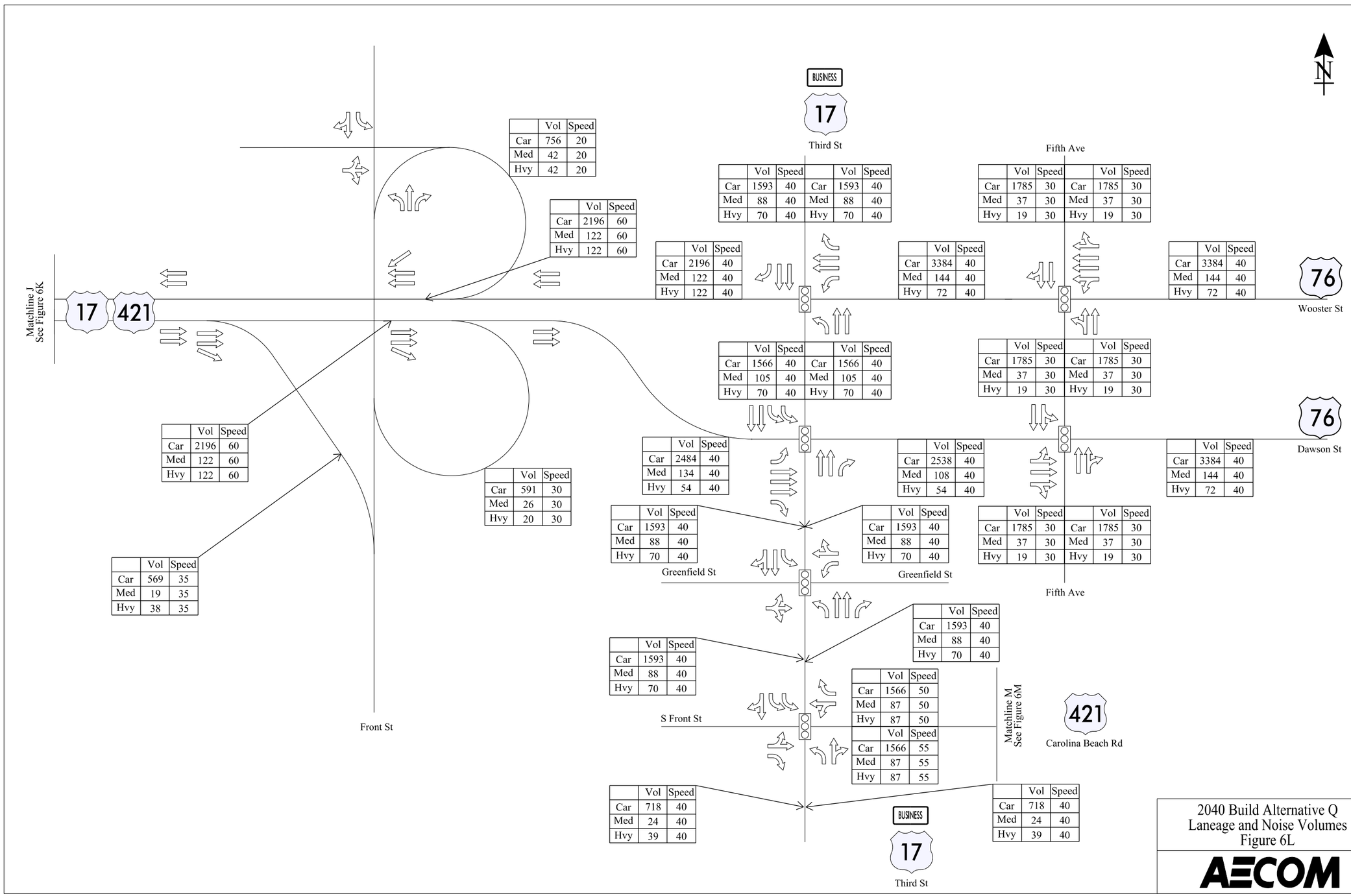
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6J

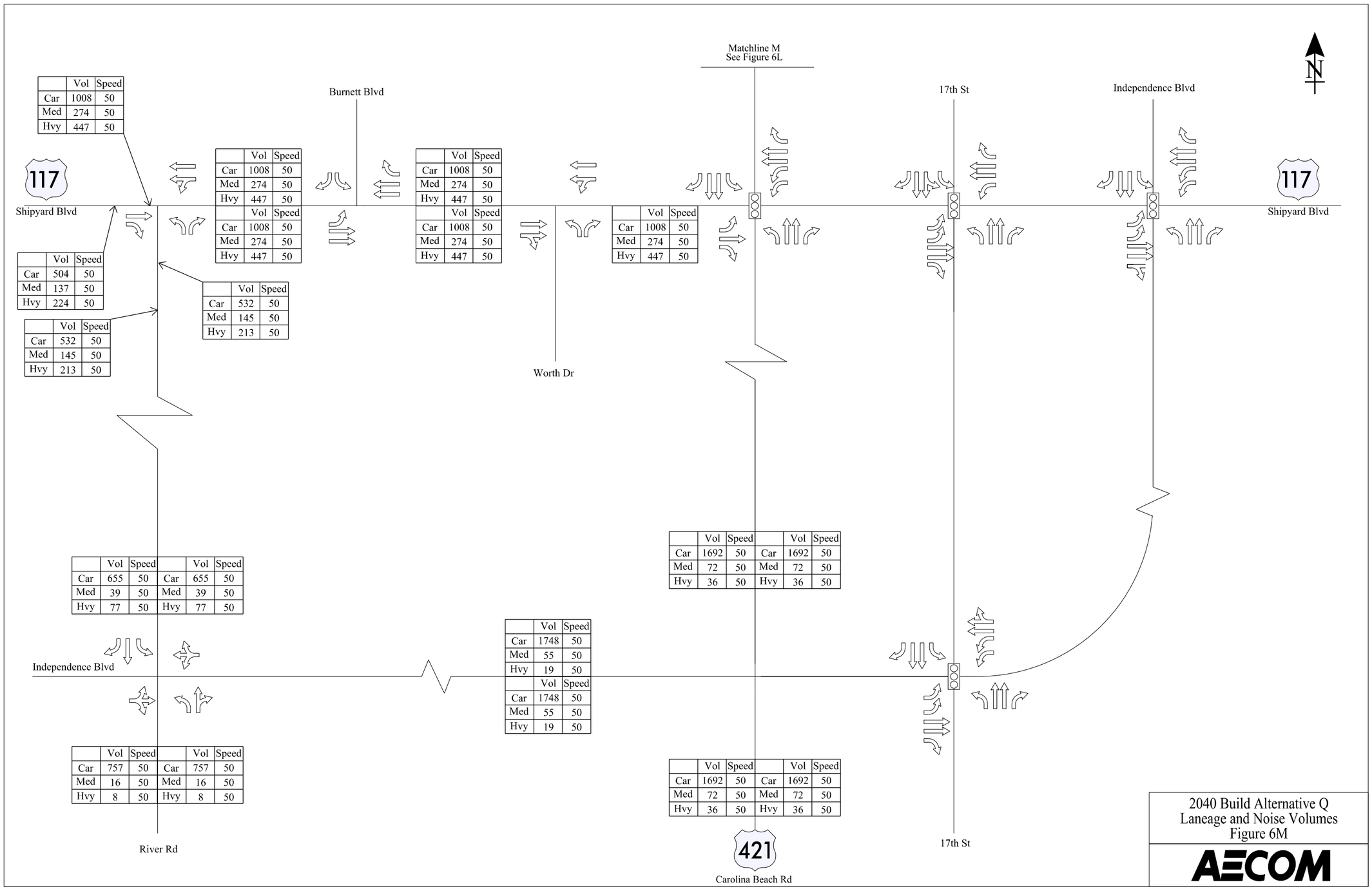
AECOM



2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6K

AECOM


N
BUSINESS
17
Third St
Fifth Ave
76
Wooster St
Dawson St
Matchline J
See Figure 6K
17
421
Front St
Greenfield St
Fifth Ave
S Front St
Matchline M
See Figure 6M
421
Carolina Beach Rd
BUSINESS
17
Third St
2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6L
AECOM



2040 Build Alternative Q
Laneage and Noise Volumes
Figure 6M

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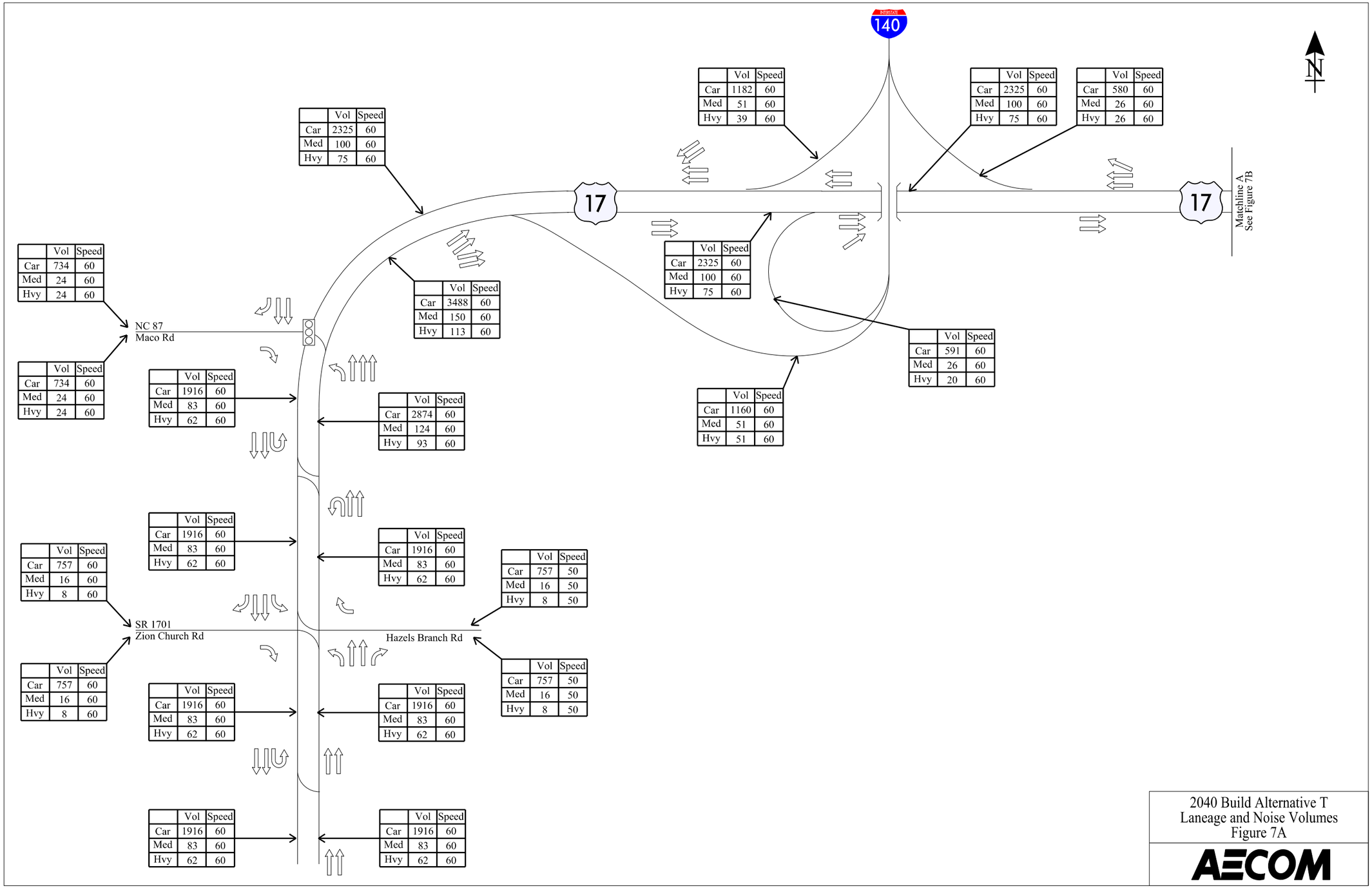

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7A

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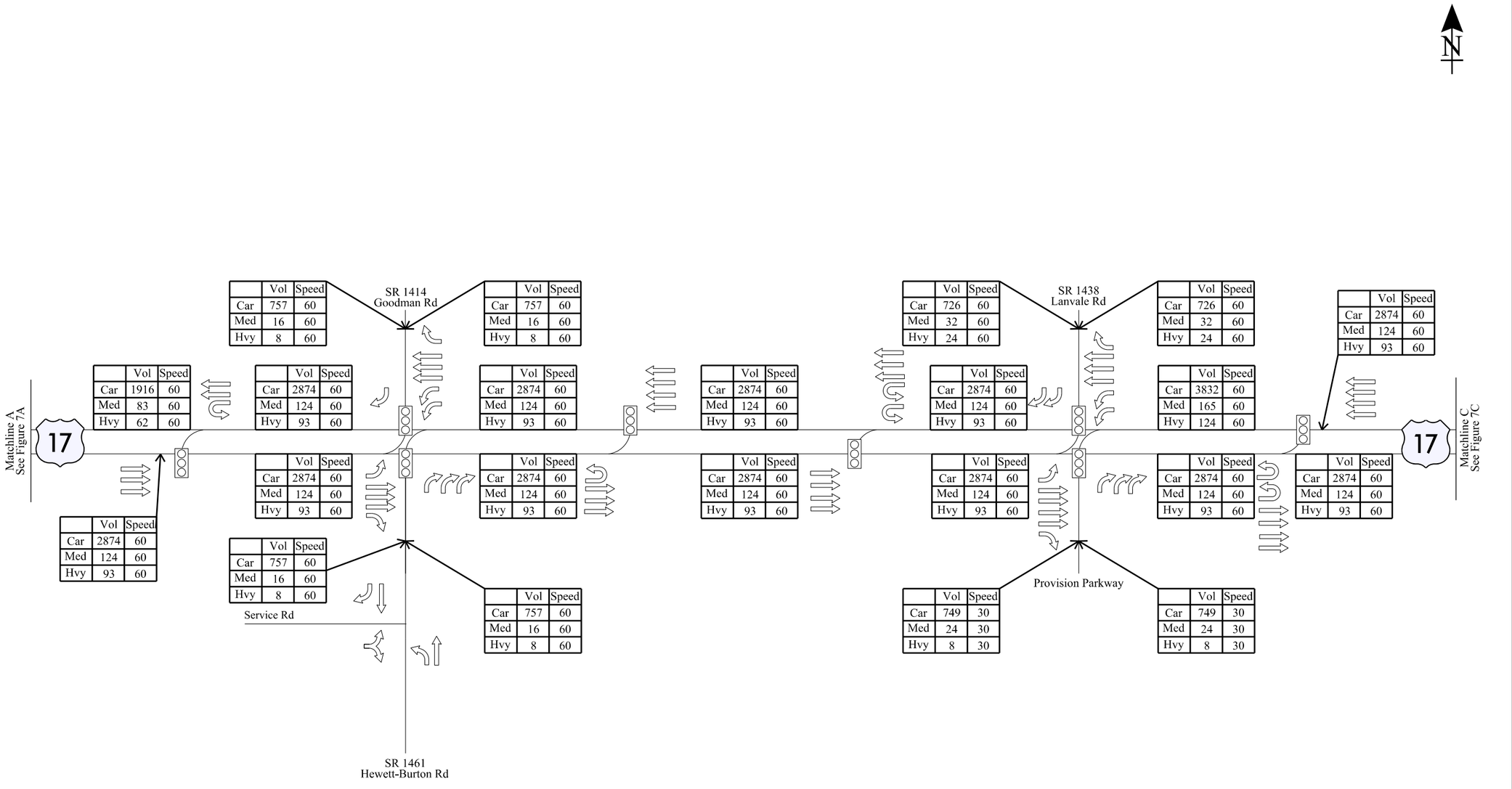

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7B

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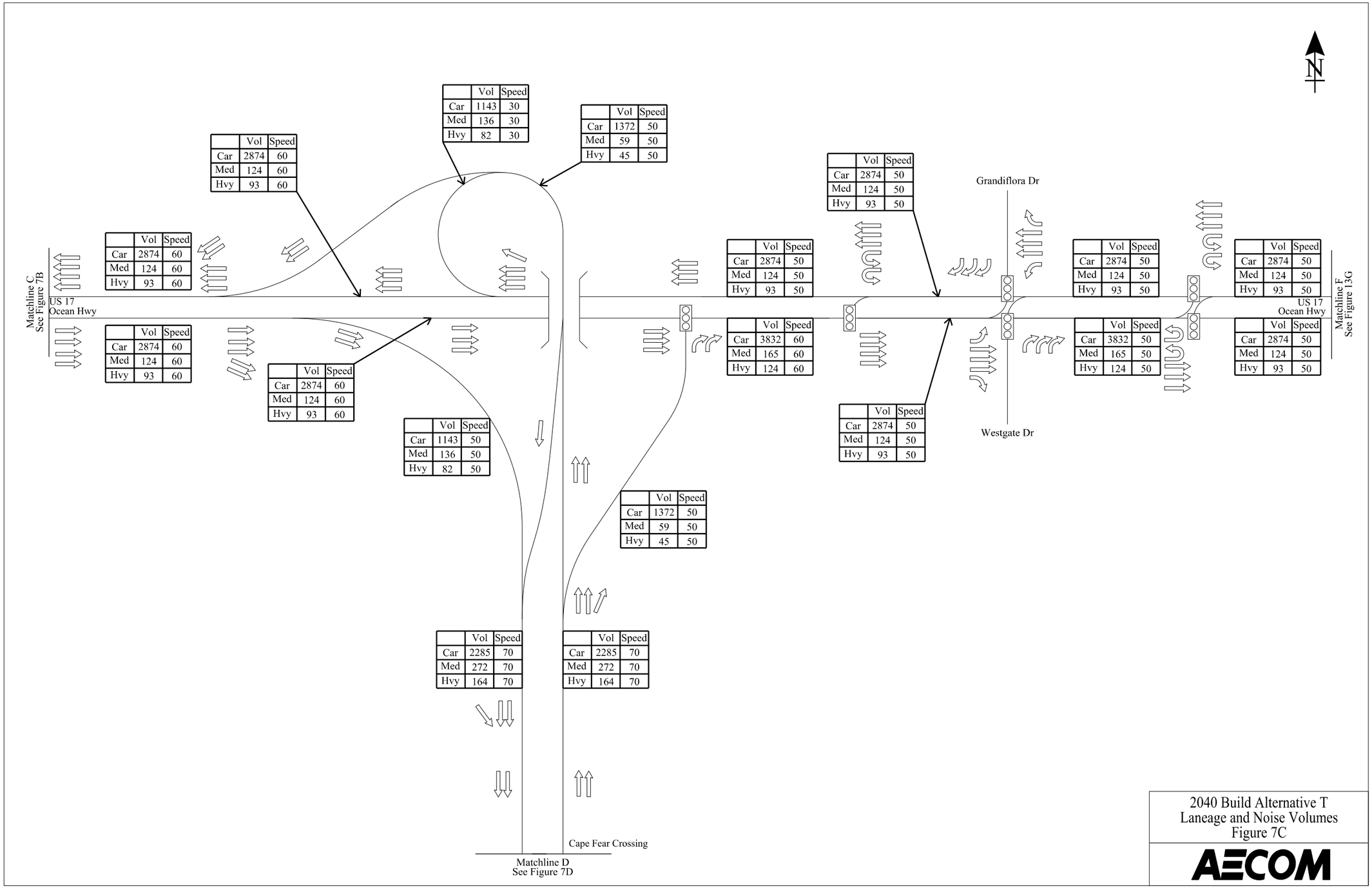

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7C

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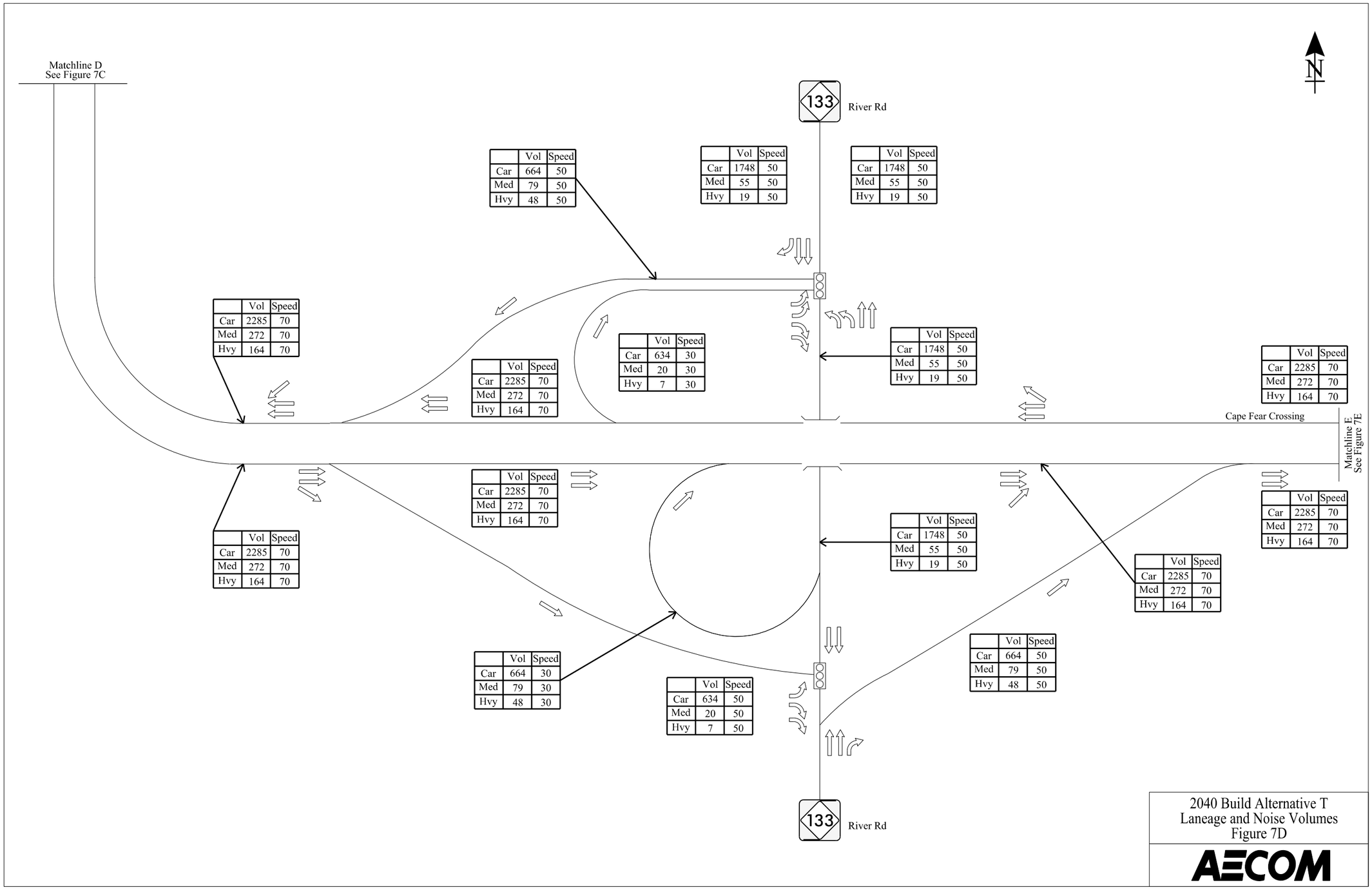
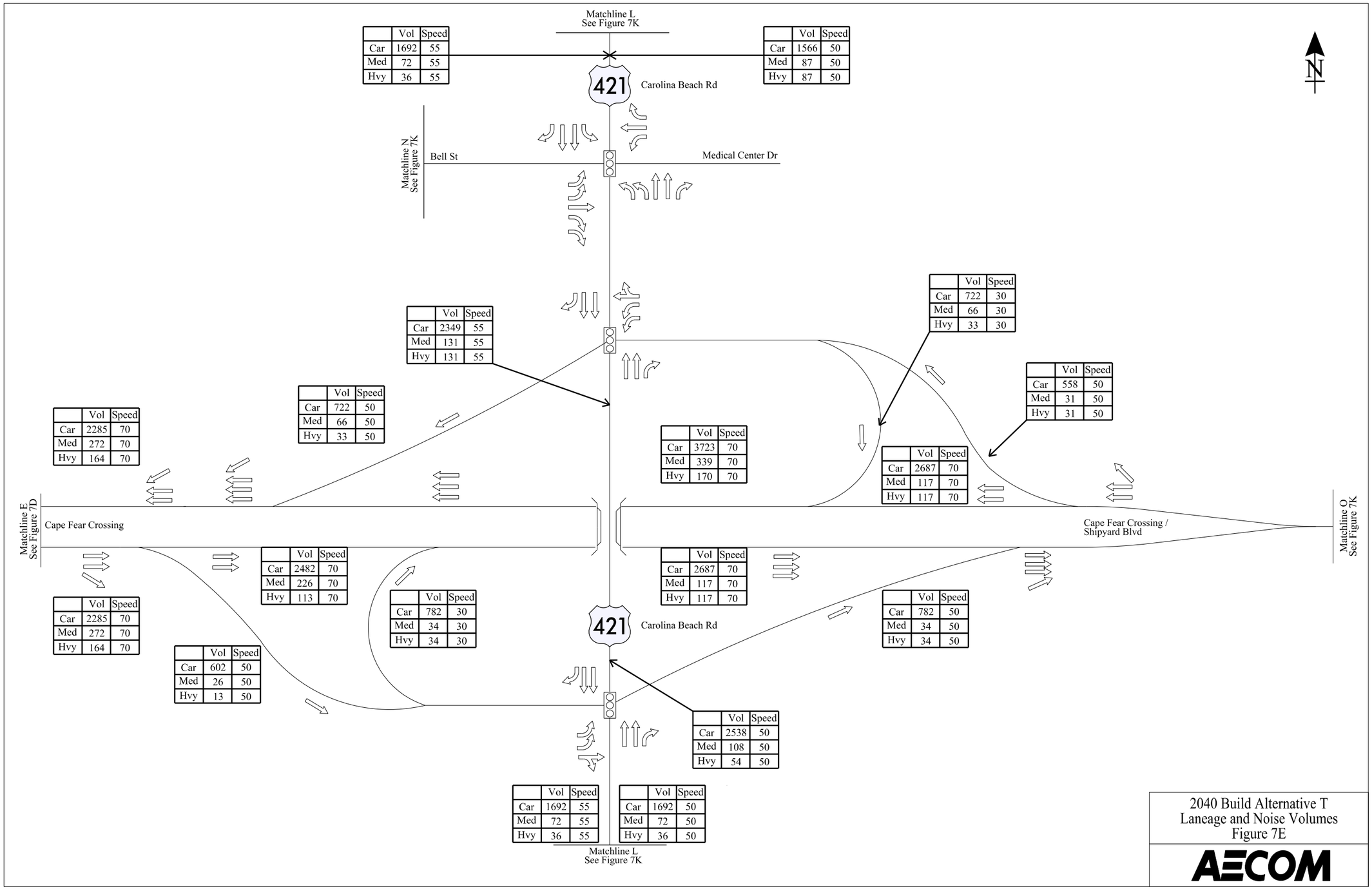


2040 Build Alternative T
Laneage and Noise Volumes
Figure 7D

AECOM


Matchline L
See Figure 7K
421
Carolina Beach Rd
Bell St
Medical Center Dr
Matchline N
See Figure 7K
Cape Fear Crossing
Matchline E
See Figure 7D
Cape Fear Crossing /
Shipyard Blvd
Matchline O
See Figure 7K
421
Carolina Beach Rd
Matchline L
See Figure 7K
N
2040 Build Alternative T
Laneage and Noise Volumes
Figure 7E
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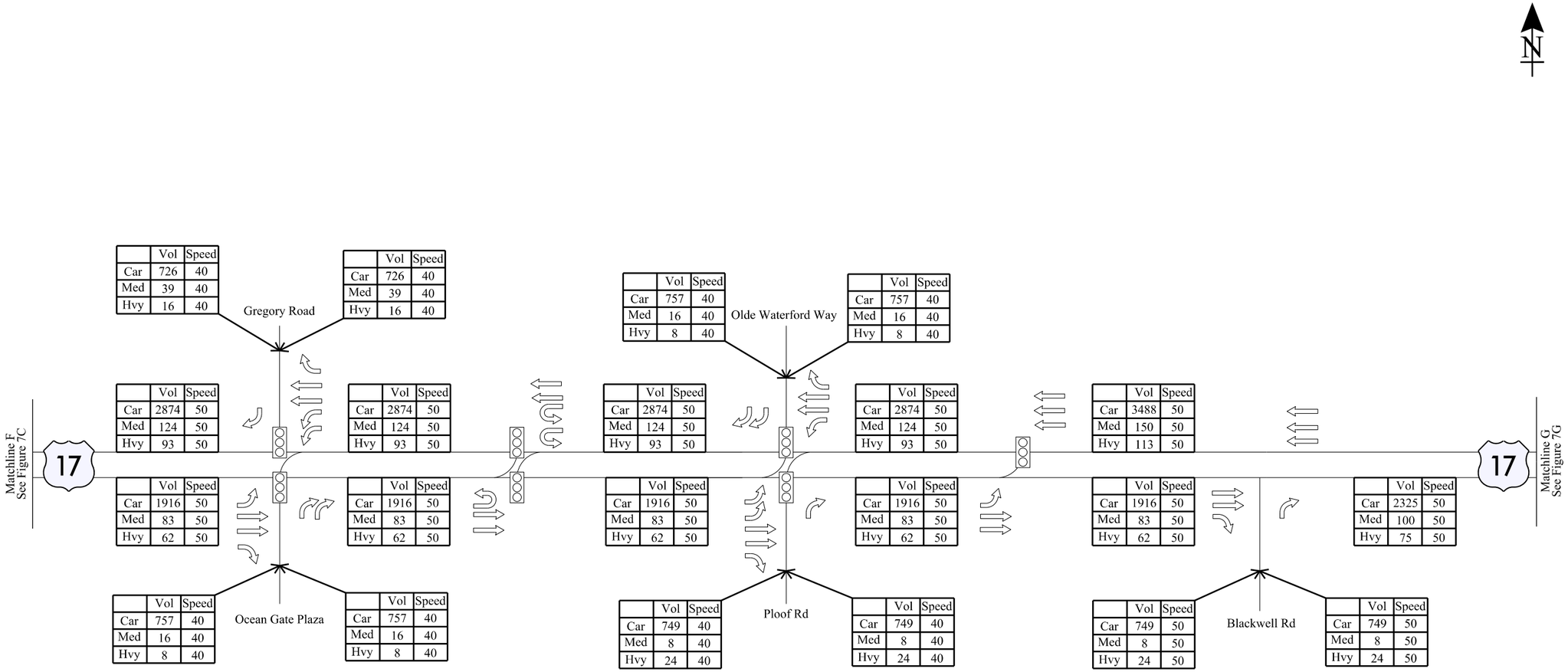

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7F

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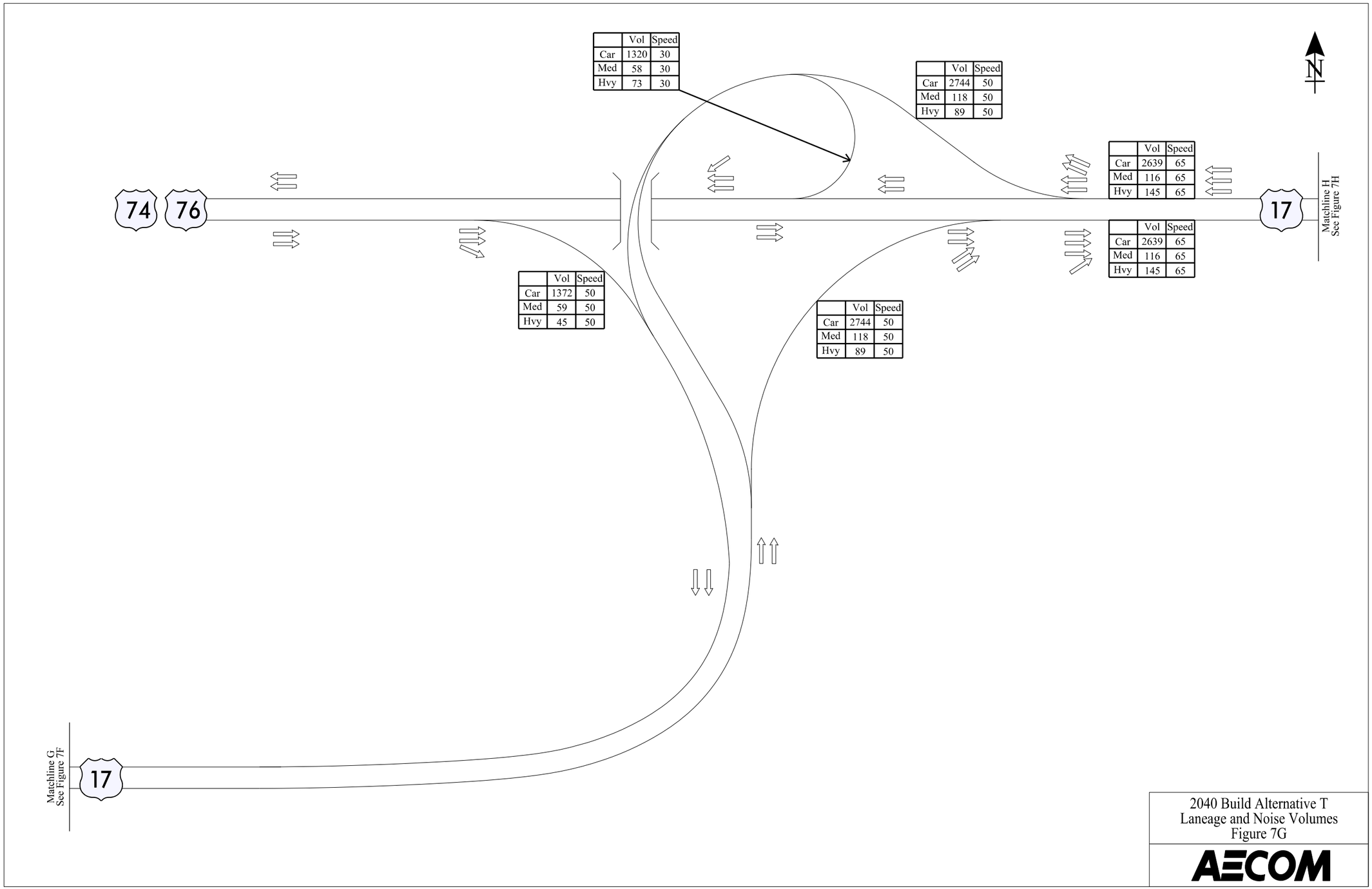

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7G

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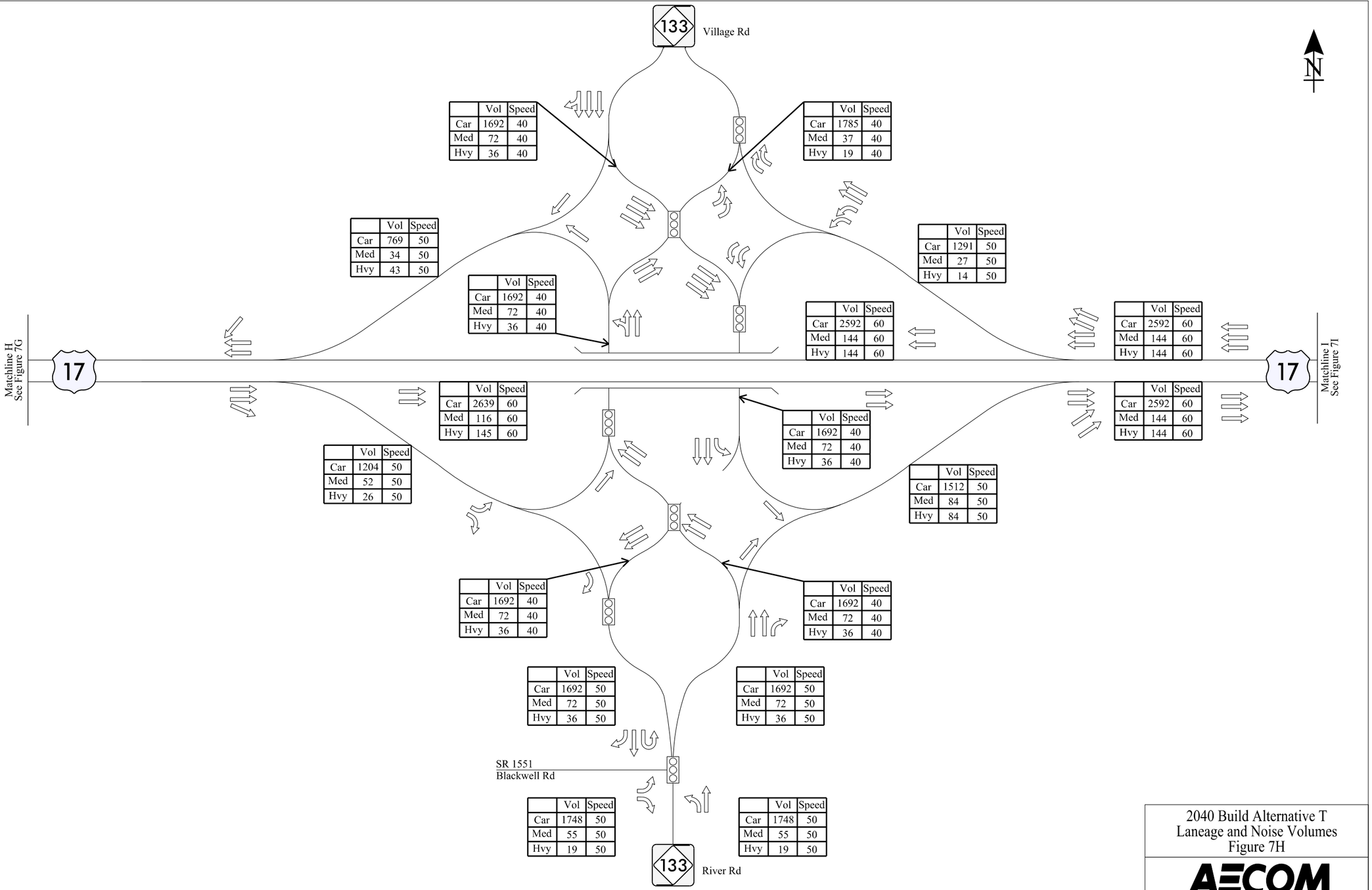

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7H

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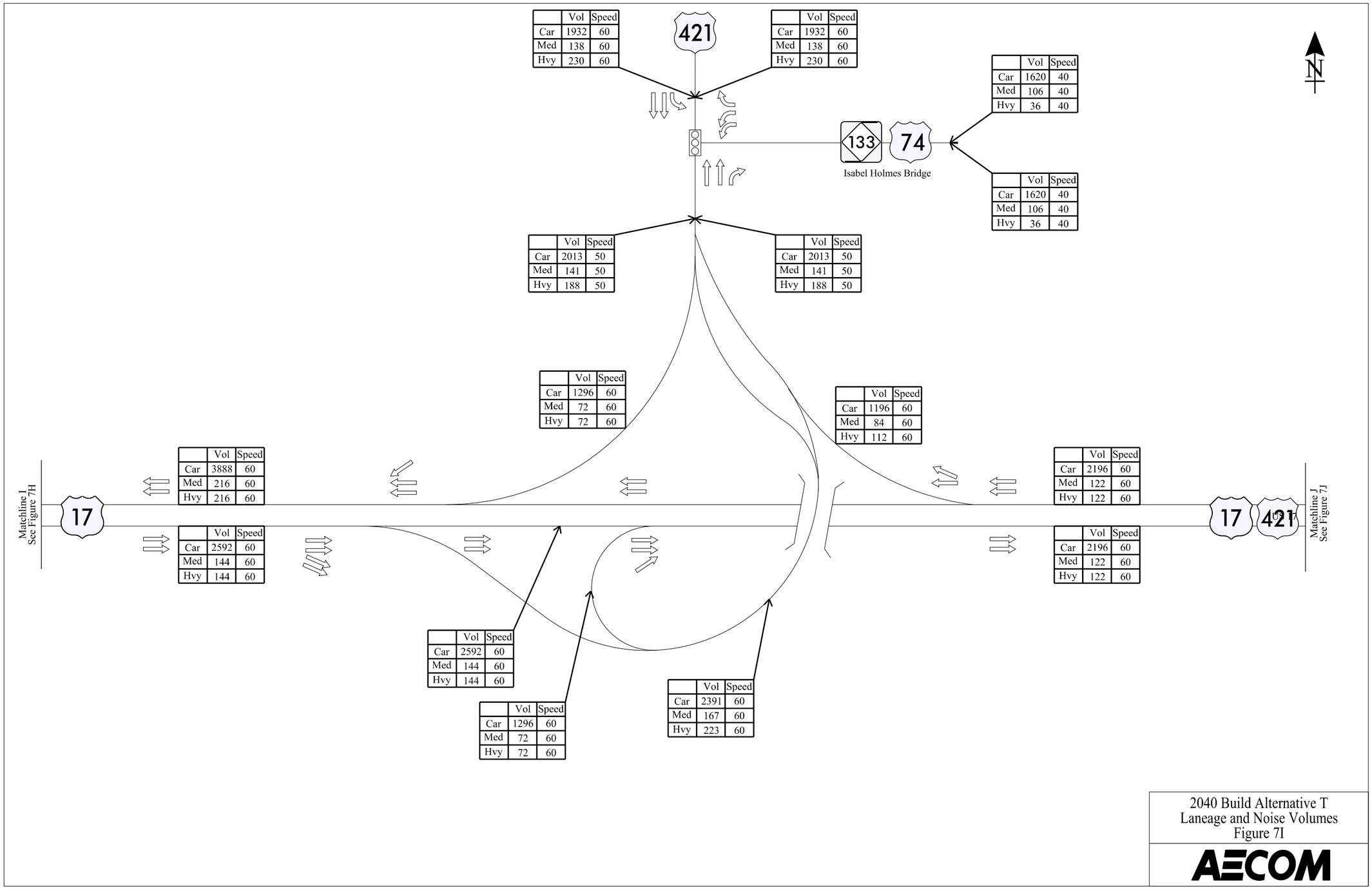

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7I

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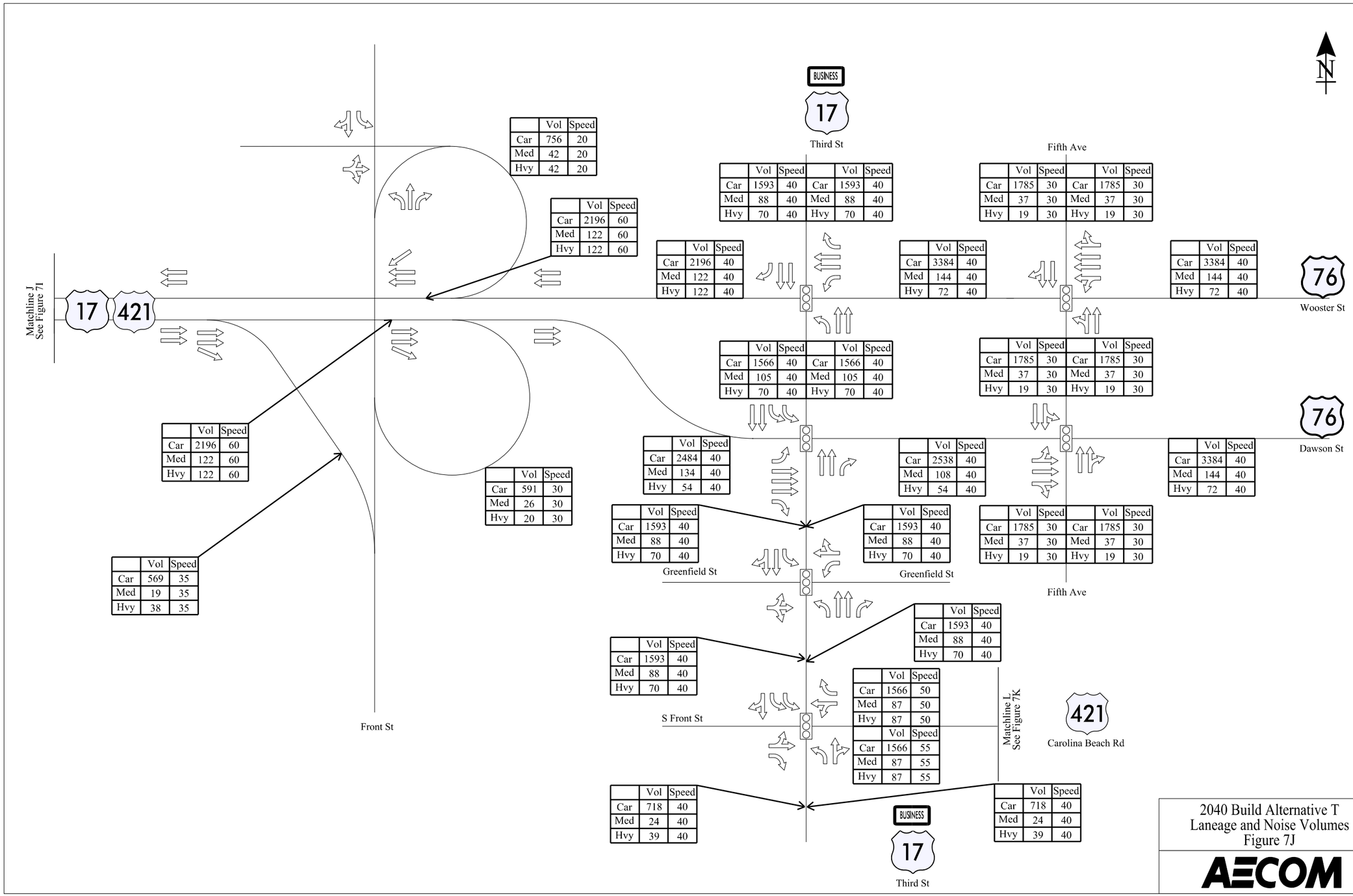

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7J

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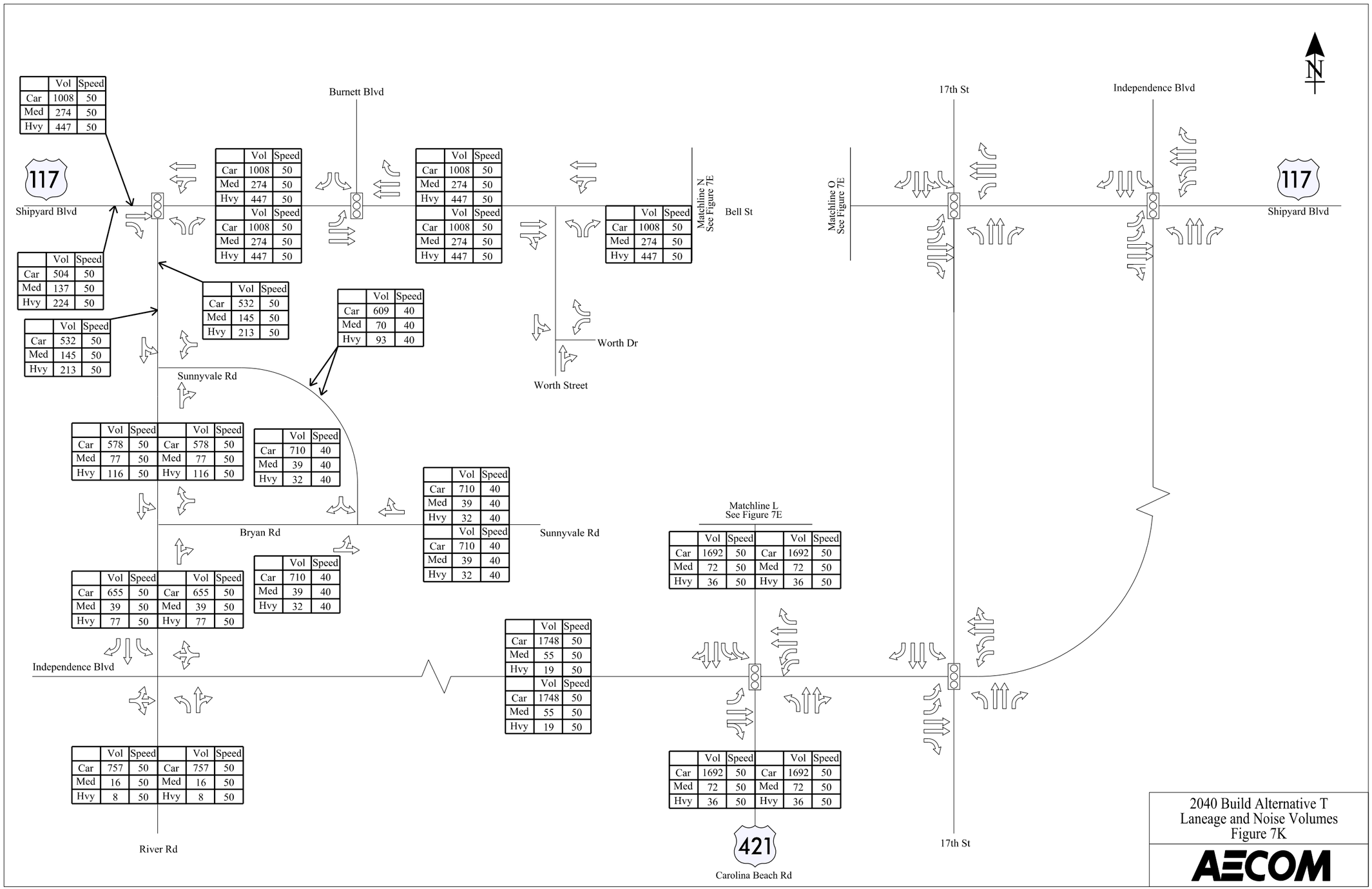

2040 Build Alternative T
Laneage and Noise Volumes
Figure 7K

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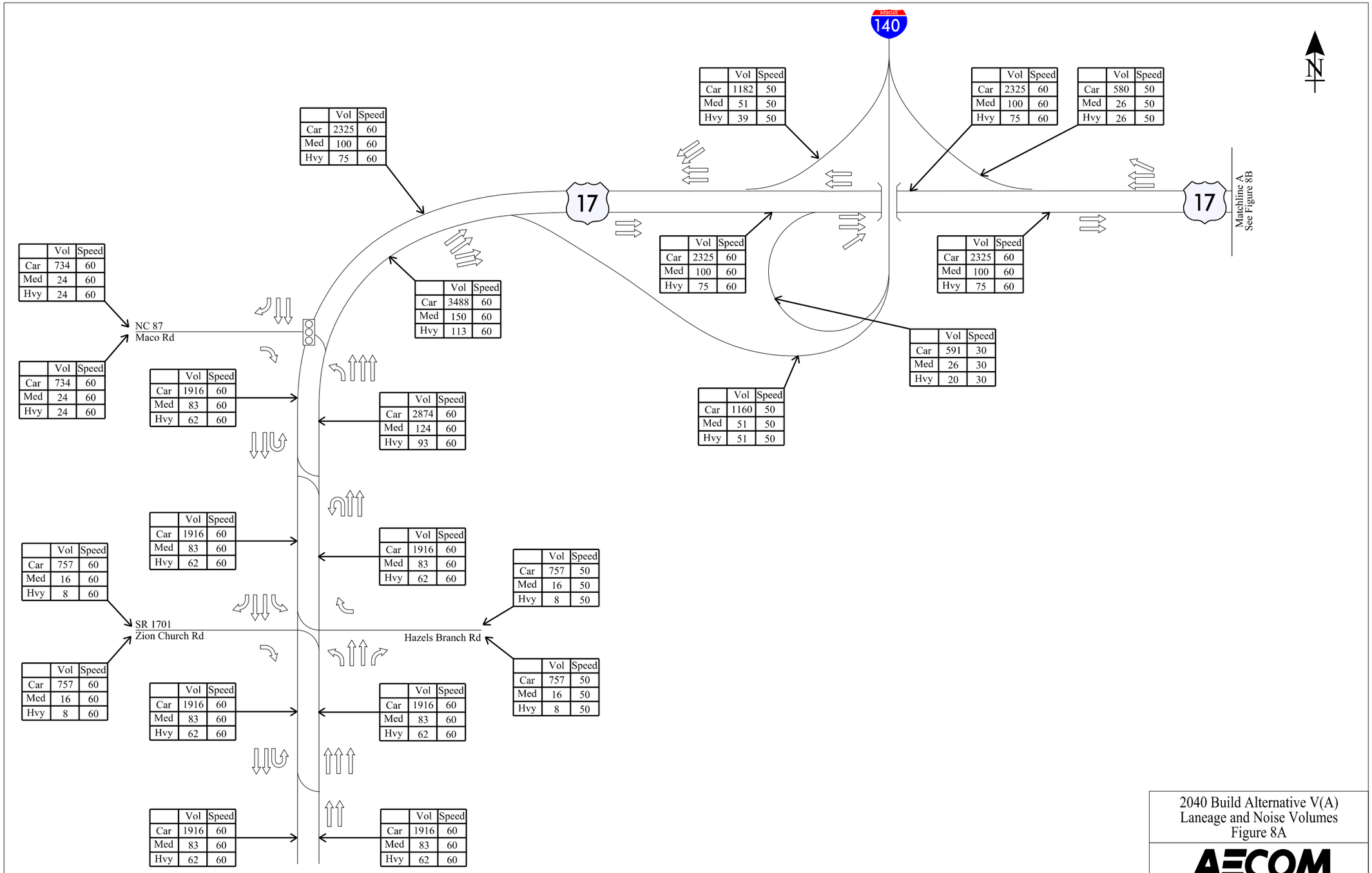

2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8A

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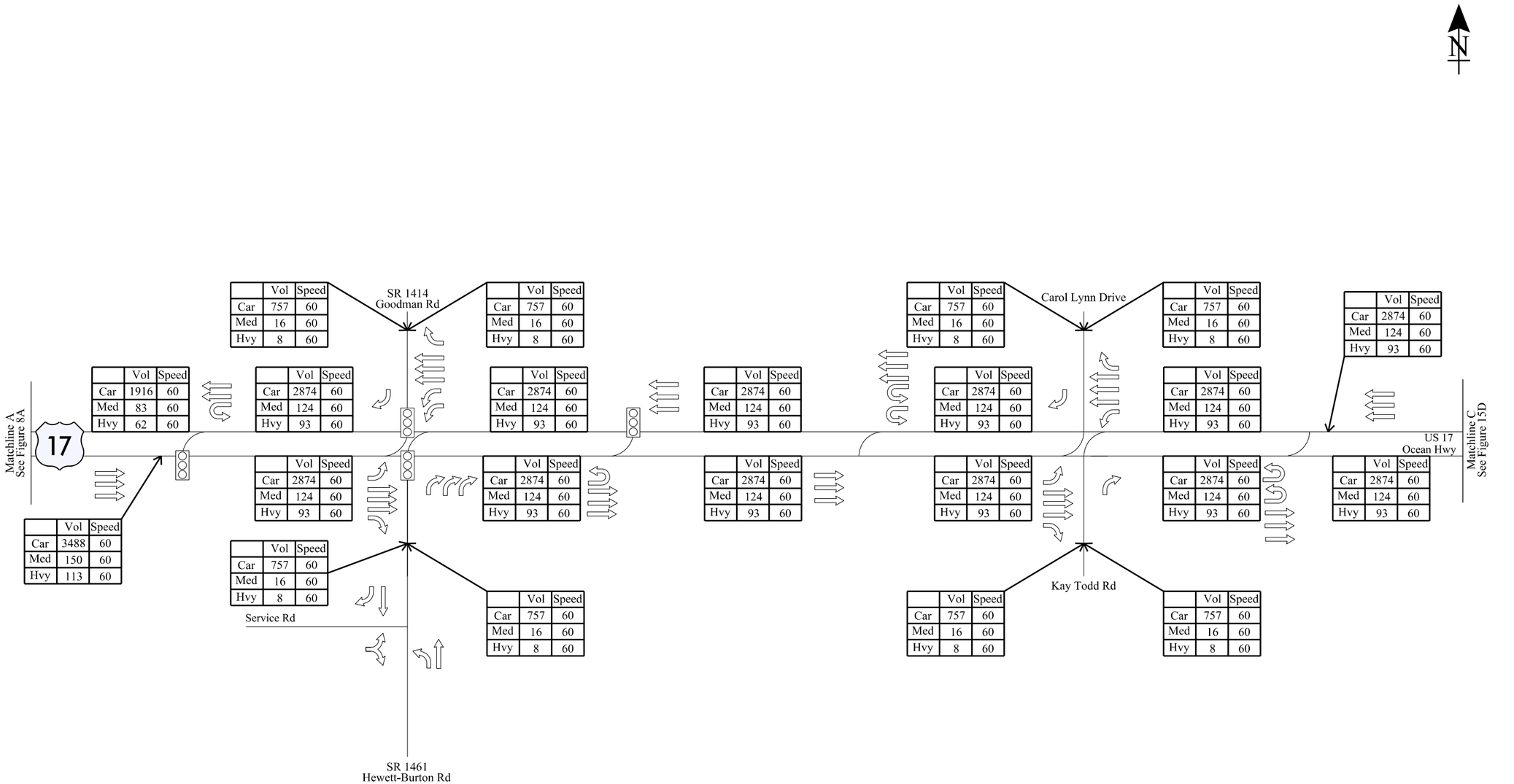

2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8B

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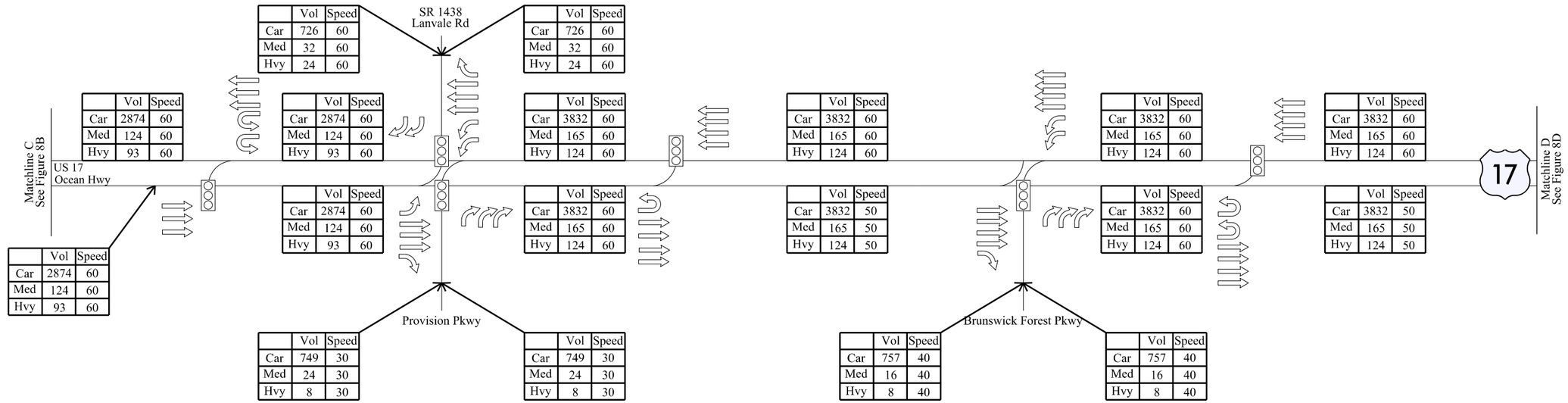
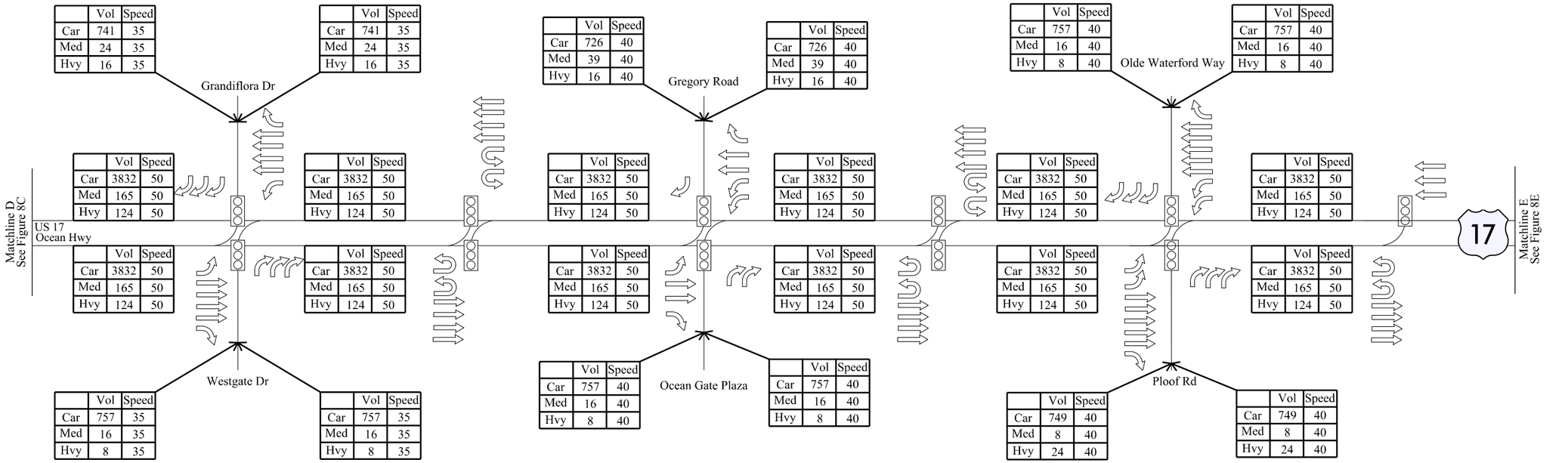


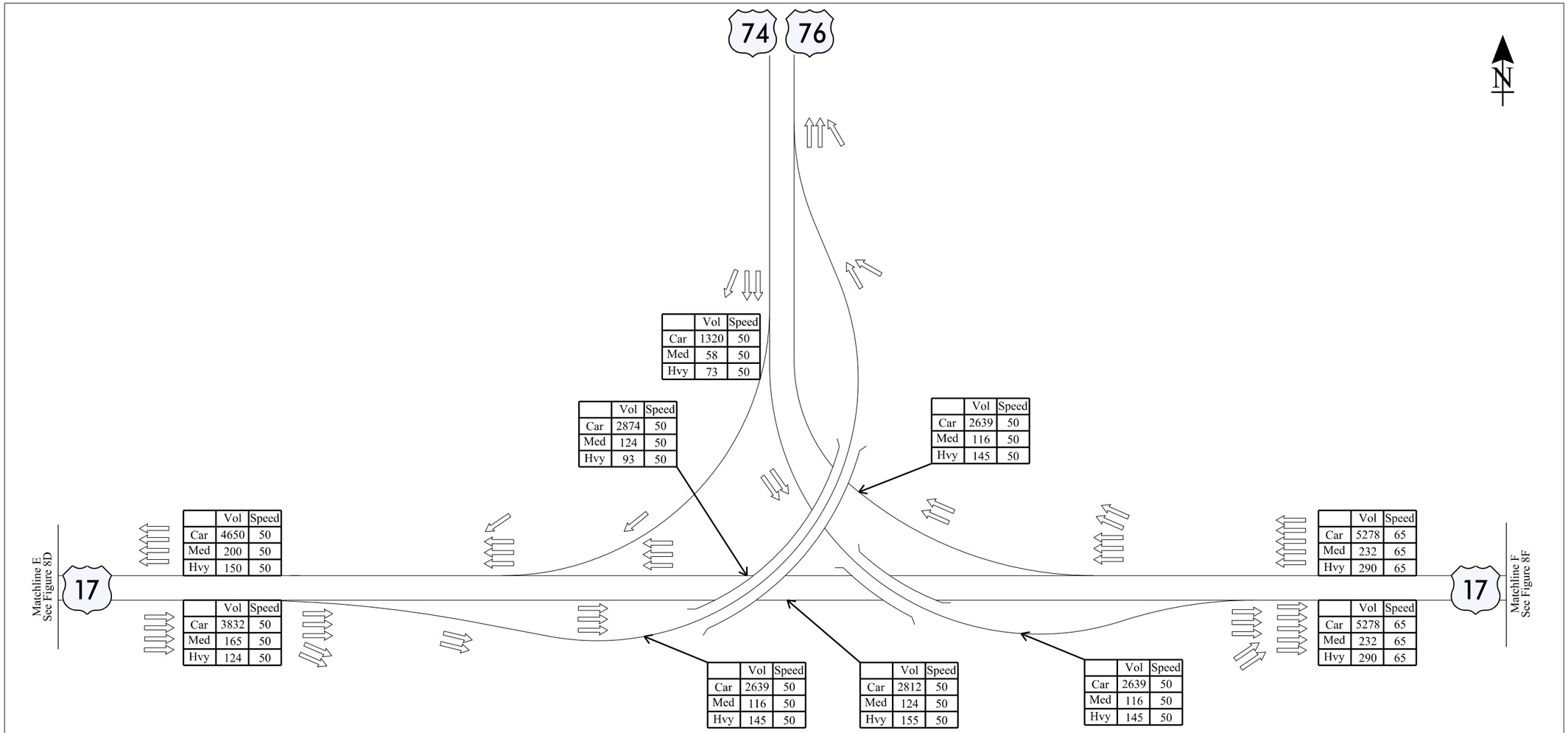
2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8C

AECOM



2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8D

AECOM



2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8E

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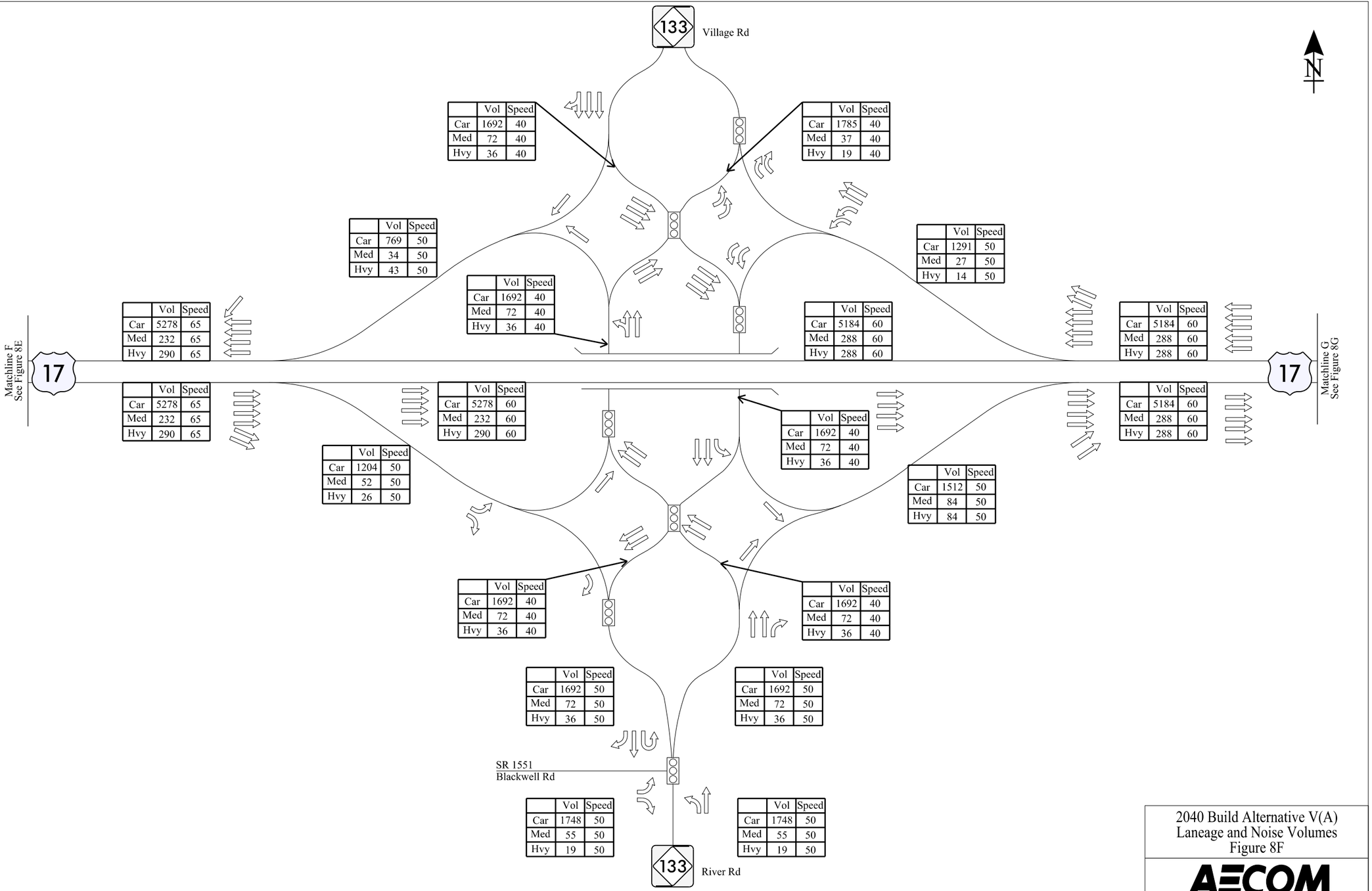
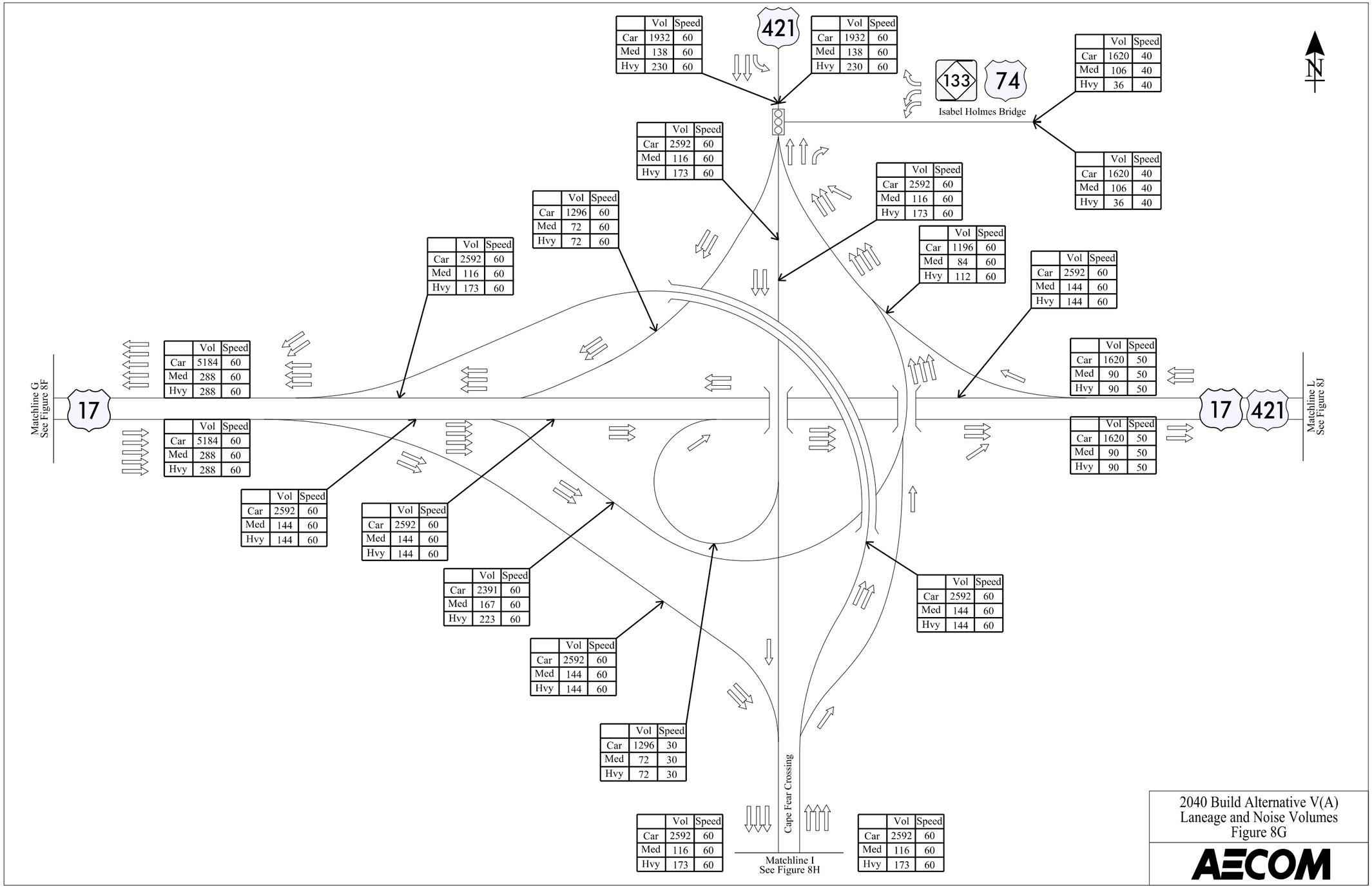


2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8F

AECOM



2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8G

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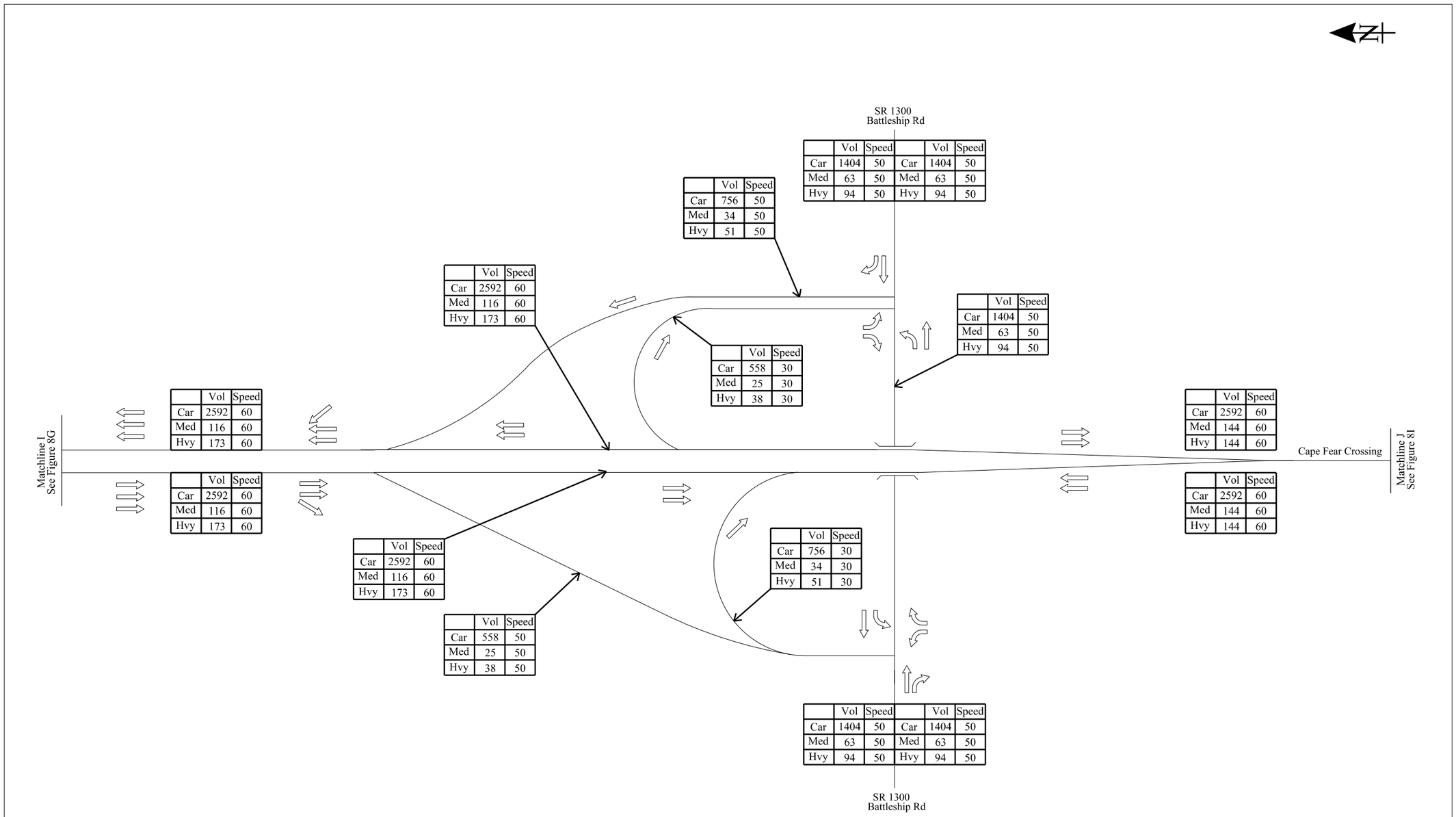

2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8H

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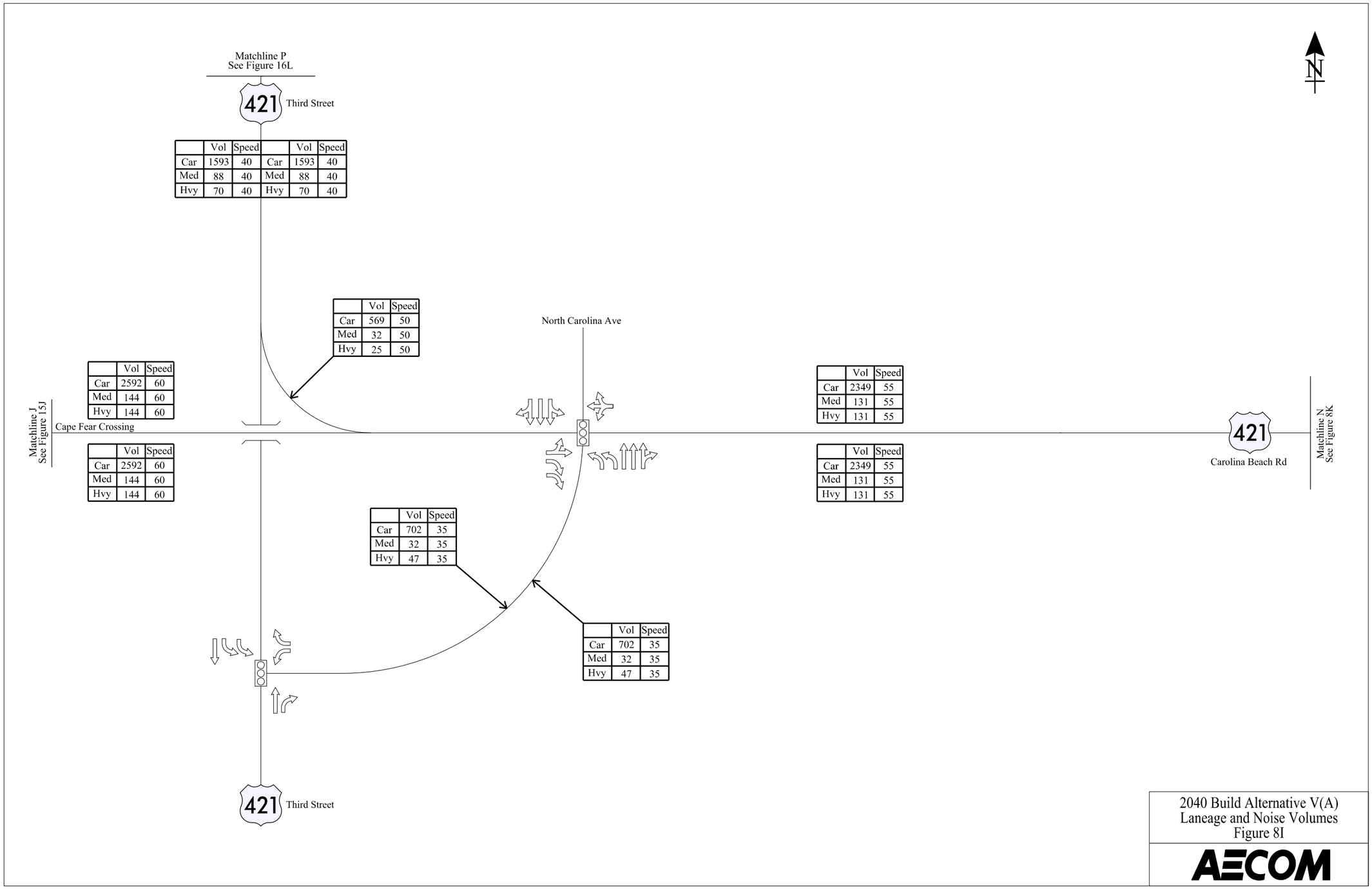
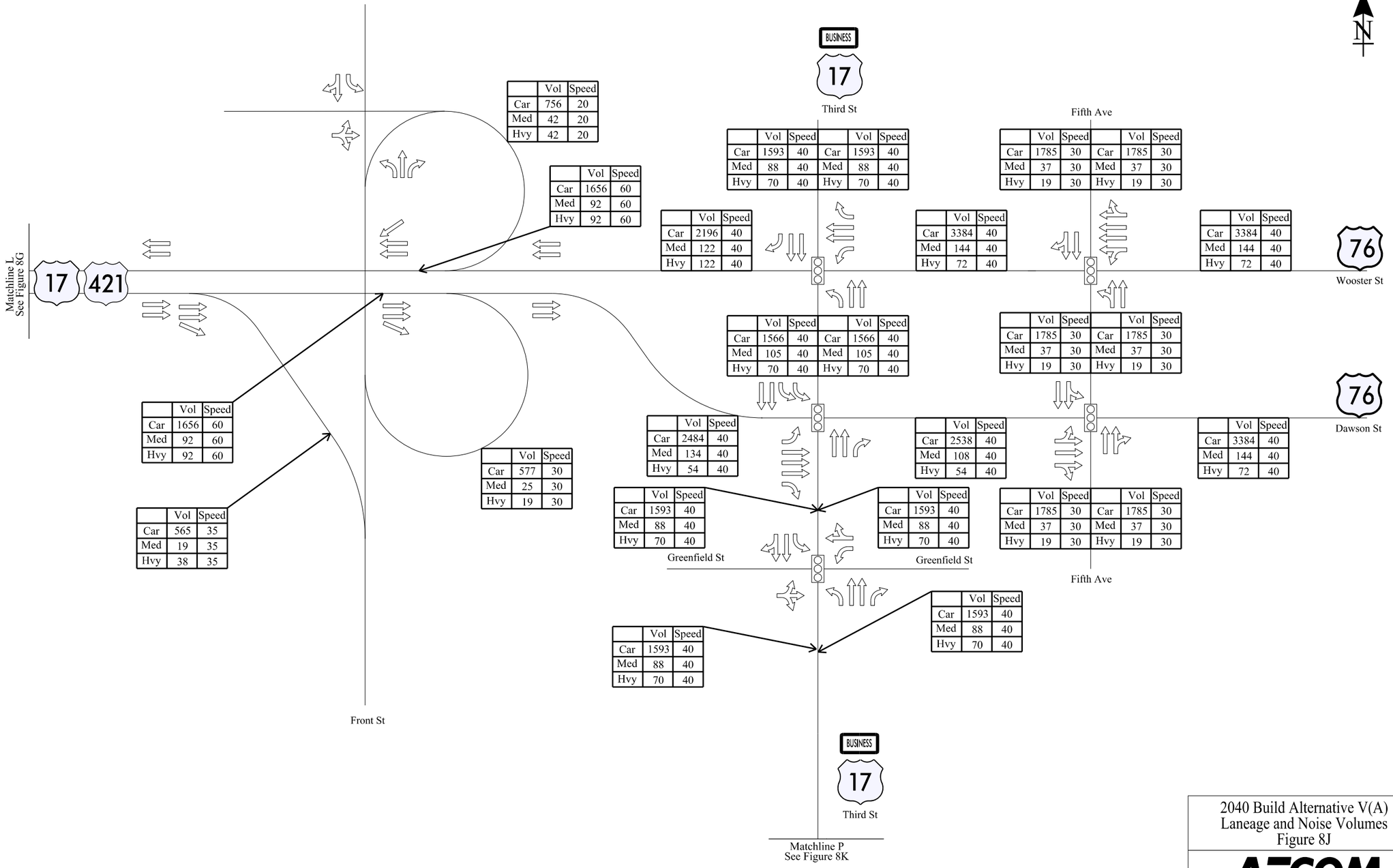


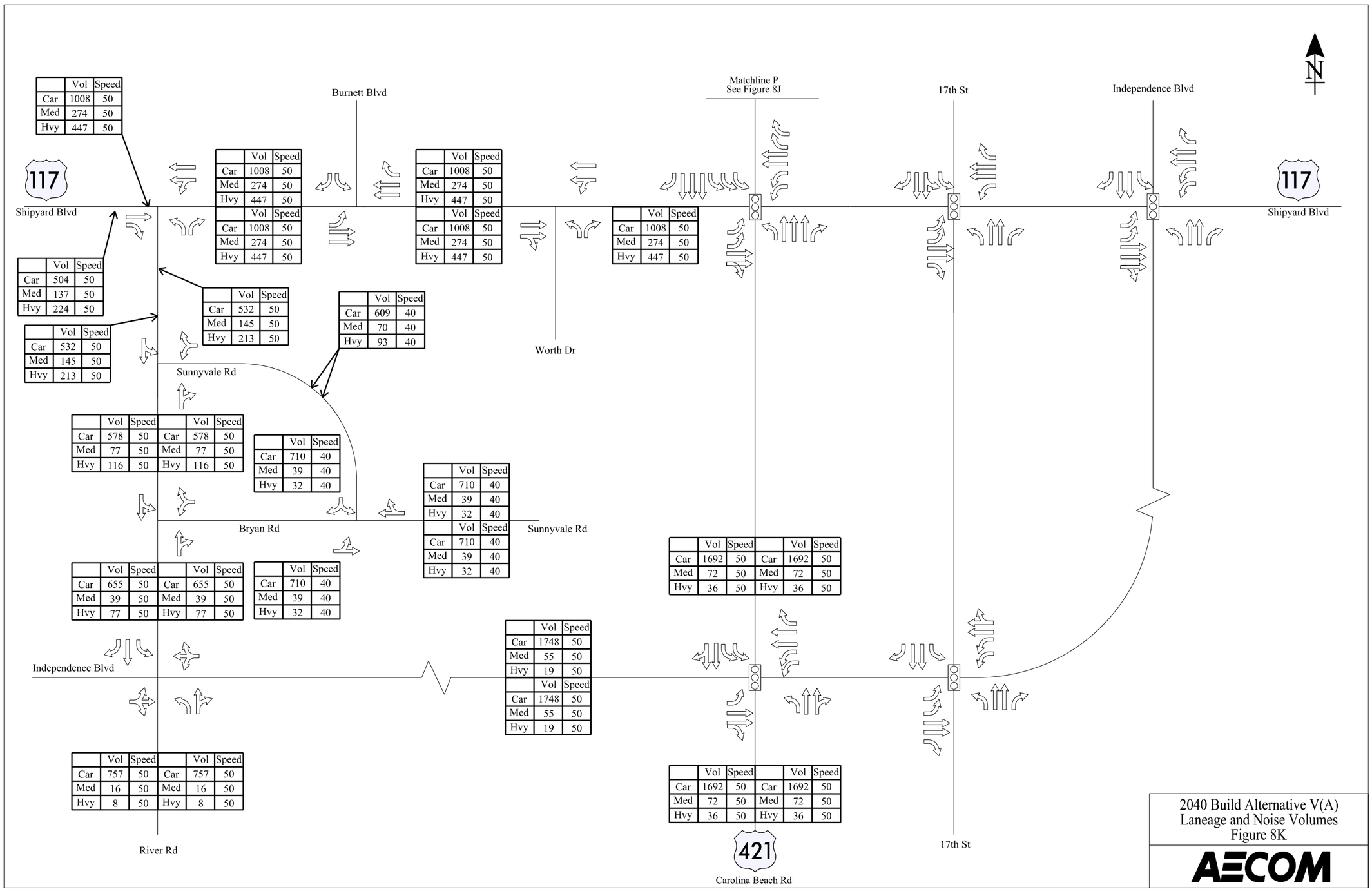
2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8I

AECOM



2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8J

AECOM


Shipyard Blvd
117
Burnett Blvd
Worth Dr
Matchline P
See Figure 8J
17th St
Independence Blvd
Shipyard Blvd
117
Sunnyvale Rd
Bryan Rd
Sunnyvale Rd
Independence Blvd
River Rd
17th St
421
Carolina Beach Rd
N
2040 Build Alternative V(A)
Laneage and Noise Volumes
Figure 8K
AECOM

Appendix F

North Carolina Department of Transportation

Traffic Noise Policy

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TRAFFIC NOISE POLICY

Effective Date: October 6, 2016

Noise Policy Committee:

Glenn Mumford, PE .....Roadway Design Unit
Drew Joyner, PE.....Human Environment Section
Brian Hanks, PE.....Structures Management Unit
Daniel Keel, PE.....Division of Highways
Mike Mills, PE.....Division Engineer
Pat Ivey, PE.....Division Engineer
Greg Smith, PE.....Human Environment Section

Sponsors:

Clarence Coleman, PE .....Federal Highway Administration
Felix Davila, PE.....Federal Highway Administration
Edward L. Curran.....Board of Transportation

APPROVED BY:

10-6-16
Date of Approval

John F. Sullivan, III, PE, Division Administrator
Federal Highway Administration

10.6.16
Date of Approval

Nicholas J. Tennyson
Secretary of Transportation

10-5-16
Date of Approval

Edward L. Curran, Chairman
Board of Transportation

Person Responsible for Policy:

Traffic Noise & Air Quality Supervisor
Human Environment Section
1598 Mail Service Center
Raleigh, North Carolina 27699-1598
(919) 707-6087

DEFINITIONS

a) Decibel (dB) - The logarithmic unit for measuring sound pressure levels. For traffic noise measurements, decibels are most commonly reported in terms of the A-weighing frequency scale, which best includes the frequencies to which human hearing is typically most sensitive and is denoted by the abbreviation dB(A).

b) Leq – The equivalent steady -state sound level which, in a defined period of time, contains the same amount of acoustic energy as a time-varying sound level during the same period of time.

c) Receptor – Any location that receives traffic noise.

d) Impacted Receptor – A receptor for which the predicted hourly equivalent traffic noise level 1) meets or exceeds the approach criteria value found in Table 1 of this policy or 2) exceeds the existing ambient noise level by 10 dB(A) or more.

e) Benefited Receptor - All receptors, both impacted and non-impacted, that receive a noise level reduction of 5 dB(A) or more through placement of a noise abatement measure.

f) Noise Abatement Measure – Any method used to reduce traffic noise levels, such as noise walls and earthen berms.

g) Worst Noise Hour – The hour within a day in which the highest magnitude hourly equivalent sound level occurs. The worst traffic noise hour typically occurs when traffic is flowing freely at a high volume relative to the peak traffic hour volume, with a high percentage of trucks.

h) Practicable – Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

INTRODUCTION

This document represents the North Carolina Department of Transportation (hereinafter NCDOT) policy on highway traffic noise and construction noise and describes the implementation of the requirements of the Federal Highway Administration (hereinafter FHWA) Noise Standard at 23 Code of Federal Regulations Part 772 (23 CFR 772) as they relate to federal-aid and select state-funded highway construction in North Carolina. This policy was developed by the NCDOT and reviewed and approved by the FHWA.

The North Carolina Department of Transportation Traffic Noise Manual and 23 CFR 772 are intended to be companion documents to this policy.

PURPOSE

This policy describes the NCDOT process that is used in determining traffic noise impacts and abatement measures and the equitable and cost-effective expenditure of public funds for noise abatement. Where the FHWA has given highway agencies flexibility in implementing the 23 CFR 772 standards, this policy describes the NCDOT approach to implementation.

APPLICABILITY

Projects with a Date of Public Knowledge on or after the effective date of this policy shall comply with the criteria of this policy.

Federal–Aid Projects

This policy applies to all "Type I" federal or federal-aid highway projects in the State of North Carolina, including federal projects that are administered by local public agencies. Therefore, this policy applies to any highway project that is funded with federal-aid highway funds or requires FHWA approval regardless of funding sources. NCDOT does not participate in nor fund Type II (retrofit) projects along existing transportation facilities. Noise analyses are not required for Type III projects. Each of these project types are defined below. This policy shall be applied uniformly and consistently to all Type I federal projects throughout North Carolina.

Type I Project

(a) The construction of a highway on new location; or,

(b) The physical alteration of an existing highway where there is either:
   (i) Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or,
   (ii) Substantial Vertical Alteration. A project that removes shielding, therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or,

(c) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane; or,

(d) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or,

(e) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or,

(f) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or,

(g) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.

(h) If a project is determined to be a Type I project under this definition then the entire project area as defined in the environmental document is a Type I project.

Type II Project.

A Federal or Federal-aid highway project for noise abatement on an existing highway. For a Type II project to be eligible for Federal-aid funding, the highway agency must develop and implement a Type II program in accordance with 23 CFR 772.7(e).

Type III Project

A Federal or Federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

The highway traffic noise prediction requirements, noise analyses, noise abatement criteria, and requirements for informing local officials in 23 CFR 772 and this policy constitute the noise standards mandated by 23 U.S.C. 109(1). All federally-funded highway projects which are developed in conformance with this policy shall be deemed to be in accordance with the FHWA noise standards.

State-Funded Projects

Projects that are State funded do not use the federal project type designation for applicability.

This policy will apply to State funded projects located on a US or Interstate route that is full control of access where the project involves adding a through-traffic lane.

All other State-funded projects for which a State Environmental Assessment (EA) or State Environmental Impact Statement (EIS) is prepared will comply with the North Carolina Environmental Policy Act (SEPA) and the North Carolina Administrative Code. For these projects, noise barriers will be considered where practicable.

DATE OF PUBLIC KNOWLEDGE

The Date of Public Knowledge of the location and potential noise impacts of a proposed highway project is the approval date of the final environmental document, e.g., Categorical Exclusion (CE), State or Federal Finding of No Significant Impact (FONSI) or State or Federal Record of Decision (ROD).

NCDOT is not responsible for evaluating or implementing any noise barriers to protect developed lands that were not permitted before the Date of Public Knowledge.

The criterion for determining when undeveloped land is permitted for development is the approval date of a building permit for an individual lot or site. Approval of a development plat or any other development plan does not meet the permitted criteria.

NCDOT advocates use of local government authority to regulate land development, planning, design and construction in such a way that noise impacts are minimized.

TRAFFIC NOISE PREDICTION

All traffic noise analyses performed by or for NCDOT must utilize the most current version of the FHWA Traffic Noise Model (TNM®) or any other model determined by the FHWA to be consistent with the methodology of the TNM® model, pursuant to 23 CFR 772.9.

Average pavement type shall be used in the FHWA TNM® for future noise level prediction.

Noise contour lines may be used only for project alternative screening or for providing information to local officials for their land use planning efforts associated with undeveloped lands as per 23 CFR 772.17. Noise contours shall not be used for determining highway traffic noise impacts or assessing noise barriers.

Traffic characteristics that yield the worst noise hour equivalent traffic noise levels, expressed in Leq(h), for the Design Year shall be used in predicting noise levels and assessing noise impacts.

Traffic noise prediction must adhere to all direction contained in the NCDOT Traffic Noise Manual.

NOISE IMPACT DETERMINATION

Noise abatement measures for NCDOT highway projects must be considered when traffic noise impacts are created by either of the following two conditions:

(a) The predicted worst noise hour Leq(h) traffic noise levels for the Design Year approach (reach one decibel less than) or exceed the Noise Abatement Criteria (NAC) contained in 23 CFR 772 and in Table 1, found on page 4 of this policy, OR

(b) The predicted worst noise hour Leq(h) traffic noise levels for the Design Year substantially exceed existing noise by 10 dB(A) or more.

A receptor is a discrete or representative location within a noise sensitive area(s) for any of the land uses listed in Table 1. For multifamily dwellings, each residence shall be counted as one receptor when determining impacted and benefited receptors. Non-residential receptors shall be represented by Equivalent Receptors calculated according to direction contained in the NCDOT Traffic Noise Manual.

Primary consideration shall be given to exterior areas where frequent human use occurs in the determination of traffic noise impacts.

A traffic noise analysis shall be completed for each project alternative under detailed study and for all receptors and Equivalent Receptors defined to represent land use activities A, B, C, D, and E listed in Table 1 that are present in the study area. FHWA approval is required for designating a Category A Activity on federally-funded projects. Traffic noise analyses are not required for Activity Category F land uses. Noise predictions are required for Activity Category G land uses to the extent needed to develop estimated noise levels to provide to local officials for planning purposes.

Table 1

Noise Abatement Criteria

Hourly Equivalent A-Weighted Sound Level (decibels (dB(A))

Activity Category	Activity Criteria[1] Leq(h)[2]	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 [3]	67	Exterior	Residential
C [3]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare 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, Section4(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 [3]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
F	--	--	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

[1] The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

[2] The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with Leq(h) being the hourly value of Leq.

[3] Includes undeveloped lands permitted for this activity category.

ANALYSIS OF NOISE ABATEMENT MEASURES

When traffic noise impacts are identified, noise abatement measures shall be considered and evaluated for feasibility for all impacted receptors and reasonableness for all benefited receptors. All of the following conditions must be met in order for noise abatement measures to be justified and incorporated into project design, as applicable. Failure to achieve any single element of feasibility or reasonableness will result in the noise abatement measure being deemed not feasible or not reasonable, whichever applies.

NCDOT will provide noise barriers for all possible impacted receptors that meet the feasibility and reasonableness criteria found in this policy. Noise barriers will not be extended solely to provide noise reduction for non-impacted receptors. Benefits for non-impacted receptors will only occur when they are incidental in noise barriers designed for impacted receptors.

Feasibility

The combination of acoustical and engineering factors considered in the evaluation of a noise barrier.

(a) Any receptor that receives a minimum noise level reduction of five dB(A) due to a noise barrier shall be considered a benefited receptor. Noise reduction of five dB(A) must be achieved for at least two impacted receptors.

(b) Engineering feasibility of noise barriers shall consider adverse impacts created by or upon property access, drainage, topography, utilities, safety, and maintenance requirements.

Reasonableness

The combination of social, economic, and environmental factors considered in the evaluation of a noise barrier.

(a) Property owners and tenants of all benefited receptors shall be solicited to obtain their preferences for or against a proposed noise barrier. No tenant ballots are distributed for vacant rental property. Points per ballot shall be distributed in the following weighted manner:

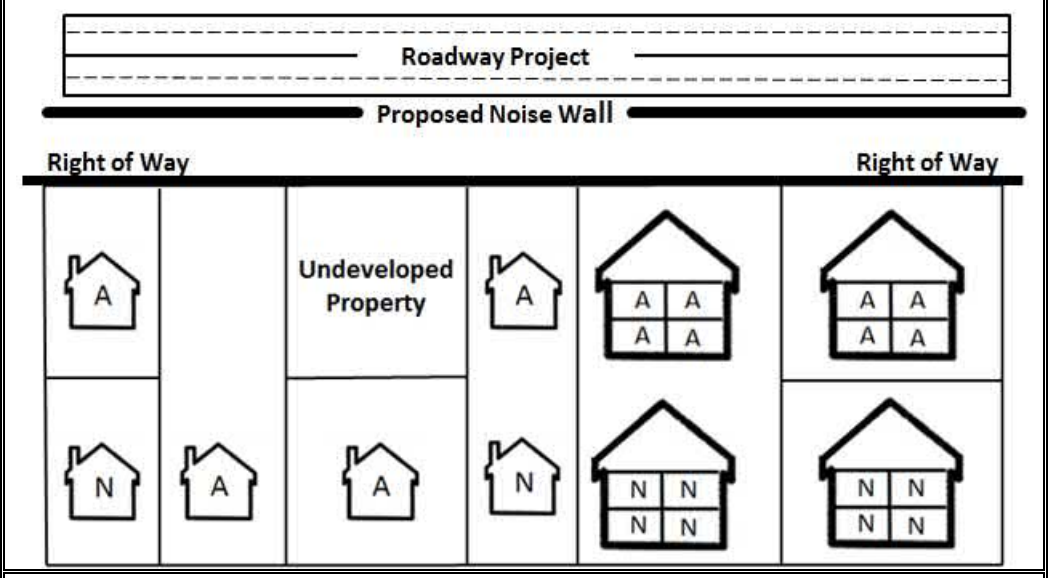
- 5 points/ballot for adjacent property owners who reside at property
- 4 points/ballot for adjacent property owners who rent property to others
- 3 points/ballot for all non-adjacent property owners who reside at property
- 2 points/ballot for all non-adjacent property owners who rent property to others
- 1 point/ballot vote for all tenants of rental property

Adjacent Receptor is a benefited receptor that 1) represents a property that abuts the highway right of way or 2) has no benefited receptor between it and the highway. Where multiple buildings containing benefited receptors are on the same property, such as an apartment or condominium complex, only the building closest to the highway is an adjacent receptor. Adjacent receptors will most often, but not always, be part of the front row of benefited receptors. Figure 1 provides graphic examples of Adjacent Receptors.

Owners of multi-unit rental locations will receive the applicable number of owner points for each individual benefited receptor (rental unit) owned.

Figure 1

Examples of Adjacent Receptors



A = Adjacent Receptor N = Non-Adjacent Receptor
Undeveloped Property = Vacant property for which no building permit has been issued and is not a park or recreation area

If 50% or greater of all possible voting points from benefited receptors for each noise barrier are received on the first solicitation, a simple majority of voting points cast will be used to determine if the proposed noise barrier will be constructed.

If less than 50% of all possible points for each noise barrier are received on the first solicitation, a second solicitation will be sent to benefited receptors who did not respond to the first solicitation.

If a second solicitation is conducted and 50% or greater of all possible voting points for each noise barrier are received after the second solicitation, a simple majority of voting points cast will be used to determine whether or not the proposed noise barrier will be constructed.

If less than 50% of total possible points for a noise barrier are received after the second solicitation, the noise barrier will not be constructed.

Noise barriers will be constructed in the case of a tie (equal number of points for and against a noise barrier).

All balloting soliciting the viewpoints of benefited property owners and applicable residents/tenants that occurs after the effective date of this policy, regardless of the Date of Public Knowledge, shall comply with the criteria of this policy.

(b) The allowable quantities for noise barriers per benefited receptor, with allowances for incremental increases based upon existing and predicted noise levels of all impacted receptors within each noise study area, are shown in Table 2.

For the purpose of calculating the incremental increase, the Noise Abatement Criteria (NAC) values for Activity Categories A, B, C, D, and E, as shown in Table 1, are to be used and not the NCDOT "approach" values used in traffic noise impact determinations.

Table 2

Allowable Noise Barrier Base Quantities

Maximum Allowable Base Quantity	Noise Level Consideration	Noise Wall	Earthen Berm
		1,500 ft^2	4,200 yd^3
Average dB(A) Increase Between Existing and Future Build for All Impacted Receptors	< 5 dB(A)	+ 0 ft^2	+ 0 yd^3
	5-10 dB(A)	+ 500 ft^2	+ 1,400 yd^3
	> 10 dB(A)	+ 1,000 ft^2	+ 2,800 yd^3
Average Exposure to Absolute Noise Levels for All Impacted Receptors	< 5 dB(A) Over NAC Activity Category	+ 0 ft2	+ 0 yd^3
	5-10 dB(A) Over NAC Activity Category	+ 500 ft^2	+ 1,400 yd^3
	> 10 dB(A) Over NAC Activity Category	+ 1,000 ft^2	+ 2,800 yd^3

(c) A noise reduction design goal of at least 7 dB(A) must be evaluated for all benefited receptors. At least one benefited receptor must achieve the noise reduction design goal of 7 dB(A) to indicate the proposed noise barrier effectively reduces traffic noise.

Other Considerations

Prior to CE approval or issuance of a FONSI or ROD, NCDOT shall identify in all applicable environmental documents:

(a) Noise barriers that are feasible and reasonable,

(b) Noise impacts for which no noise barrier appears to be feasible and reasonable;

(c) Locations where noise impacts will occur, where noise barriers are feasible and reasonable, and the locations that have no feasible and reasonable noise barriers.

(d) Whether it is “likely” or “unlikely” that noise barriers will be installed for each noise sensitive area identified. "Likely" does not mean a firm commitment. The final decision on the installation of noise barriers shall be made upon completion of the project design, the public involvement process, compliance with the NCDOT Policy, and FHWA approval.

Third Party Participation

(a) Third party funding of noise barriers cannot be used to make up the difference between the reasonable quantity allowance and the actual quantity of noise barriers. Third party funding is allowed only by local, state and federal government agencies, and can only be used to pay for additional features such as landscaping and aesthetic treatments for noise barriers that meet all feasible and reasonable criteria previously detailed in this policy. Private parties may freely enter into agreements with government agencies to develop noise barrier enhancements; however, all funding for enhancements paid to NCDOT must come from government agencies

(b) Traditional highway construction resources pay for required noise barriers. Should a local government request that materials be used that are more costly than the standard materials proposed by NCDOT, the requesting entity must assume 100% of the actual additional construction cost.

(c) If a local government insists on the provision of a noise barrier deemed not reasonable by NCDOT, a noise barrier may be installed provided the local government assumes 100% of the costs and obtains an encroachment permit from NCDOT to perform the work. These costs include, but are not limited to, preliminary and final engineering, actual construction and all related maintenance. In addition, local governments must ensure that NCDOT's material, design and construction specifications are met. The local government must also assume 100% of the liability associated with the measure and hold harmless the NCDOT.

(d) For (b) and (c) above, the settlement agreement shall be signed before third party noise barrier design begins and payment shall be made to NCDOT in accordance with N.C.G.S. 136-66.3(e).

ARCHITECTURAL TREATMENT OF NOISE WALLS

The standard noise wall architectural treatment consists of:

(a) Concrete columns; Steel piles may be used when necessary to address site conditions adverse to the use of concrete columns;

(b) Precast concrete panels textured on both sides;

(c) No texture on the uppermost foot of each wall segment;

(d) A single color of stain in brown or gray tones applied to both sides of textured panels;

(e) No stain applied to the uppermost foot of each wall segment and the concrete columns.

All enhancements to this standard noise wall must be paid for in accordance with Third Party Participation provisions in this policy.

NCDOT Division Engineers are responsible for determining noise wall textures and colors in their respective Divisions.

PUBLIC INVOLVEMENT

Communication with the community regarding noise impacts and possible noise abatement shall occur at the start of the noise study process and continue throughout the development of the project. NCDOT will communicate with citizens to present information on the nature of highway traffic noise and discuss the effects of noise abatement and how public preferences for noise abatement is solicited via a balloting process.

Noise study areas showing "likely" noise barriers and/or proposed locations of any "recommended" noise barriers will be presented and discussed when holding Public Hearings and Public Meetings. Likely noise barriers are based on preliminary design traffic noise analyses and are described in environmental documents. Recommended noise barriers are based on final design noise analyses and are usually identified after the environmental document is completed. Property owners and tenants who are being balloted for a recommended noise barrier will be provided a visual of the noise barrier location prior to their casting a ballot.

COORDINATION WITH LOCAL OFFICIALS

NCDOT will provide all traffic noise analyses to local government officials within whose jurisdiction a highway project is proposed as early in the project planning process as possible to protect future development from becoming incompatible with traffic noise levels. Specifically, environmental documents and design noise reports will contain information identifying areas that may be impacted by traffic noise, predicted noise level contour information, the best estimation of future noise levels for developed and undeveloped lands or properties in the immediate vicinity of the project and other appropriate design information. If requested, NCDOT will assist local officials with coordination and distribution of this information to residents, property owners and developers. NCDOT will provide information to assist local jurisdictions in the development of local noise controls, when requested. NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourage its practice among planners, building officials, developers and others.

CONSTRUCTION NOISE

To minimize the impacts of construction noise on the public, NCDOT shall:

(a) Identify land uses or activities that may be affected by noise from construction of the project.

(b) Determine the measures that are needed in the plans and specifications to minimize or eliminate adverse construction noise impacts to the community. This determination shall consider the benefits achieved and the overall adverse social, economic, and environmental effects and costs of the abatement measures.

(c) Consider construction techniques and scheduling to reduce construction noise impacts to nearby receptors and incorporate the needed abatement measures in the project plans and specifications.

FEDERAL PARTICIPATION

The costs of noise barriers may be included in federal-aid participating project costs with the federal share being the same as that for the system on which the project is located when:

(a) Traffic noise impacts have been identified; and

(b) Noise barriers have been determined to be feasible and reasonable pursuant to 23 CFR 772 and this policy.

REVIEW OF POLICY

This policy shall be reviewed by the NCDOT Board of Transportation at least every five years.