

FINAL NOISE STUDY REPORT

**Bishopville By-Pass (SC 341)
From US 15 near Interstate 20 (I-20)
to US 15 near SC 341
Lee County, South Carolina
PIN 33261
State File: 31.033260A.1
Project No. 0330(009)**



Prepared For:

**SOUTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

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EXECUTIVE SUMMARY

The South Carolina Department of Transportation (SCDOT) proposes the construction of a new location truck bypass around the City of Bishopville, Lee County from US 15 near I-20 south of the city and reconnecting to US 15 near SC 341 north of the city. The typical cross section will consist of a two-lane roadway with a right-of-way width of 100 feet. There are five (5) preliminary build alternatives located on new alignment being considered for the proposed Bishopville By-Pass. In addition to the alternatives on new location, two (2) truck route alternatives that utilize existing roads or portions of existing roads are also being considered. The two in-town truck route alternatives would consist of a three-lane section due to the proximity of adjacent land uses and the frequency of cross streets and driveways.

A traffic noise analysis was performed to determine the highway-generated noise impacts associated with the proposed construction of the Bishopville By-pass. The traffic noise analysis was analyzed in accordance with the procedures established for the abatement of highway traffic noise and construction noise as outlined in Part 772 of Title 23 of the Code of Federal Regulations (CFR) and the *South Carolina Department of Transportation Traffic Noise Abatement Policy, July 2011*.

The objectives of the noise study was to first identify potential noise sensitive land uses in the study area and establish existing noise levels at these sites. Future (design year) noise levels were then predicted and compared with existing noise levels, future noise levels without the project (no-build) and design noise level guidelines to determine the noise impacts resulting from implementation of the project. Additional objectives included the evaluation of reasonable and feasible alternative noise abatement measures. The impacts due to construction noise were also addressed.

Land use in the project area consists primarily of rural agriculture, industrial and residential uses. Based on available local research and field reviews, there are no permitted lands for development within the project study corridors. Based on the Federal Highway Administration's (FHWA) Noise Abatement Criteria (NAC) and the overall rural nature of the Bishopville By-Pass study area, nine locations were selected as representative noise sensitive sites that were either located adjacent to the existing road (US 15/Main Street) or represent locations that would be potentially affected by the proposed By-Pass alternatives.

Preliminary Noise Analysis

Existing noise levels for these nine receptors ranged from 46 dBA Leq to 68 dBA Leq. For two of the sites (Sites 4 and 5), existing noise levels currently exceed their respective NAC of 67 dBA Leq. Existing noise levels were validated using the Traffic Noise Model (TNM) Version 2.5 and the TNM model was used to predict future noise levels. Traffic noise levels were predicted for the representative noise sensitive receiver sites along the No-Build Alternative, five (5) build alternatives and two (2) in-town truck route alternatives for the future design year (2035) conditions.

As defined by the *SCDOT Traffic Noise Abatement Policy*, traffic noise impacts occur when either the predicted highway traffic noise levels approach (within 1 dBA of the NAC) or exceed the NAC, or when the predicted traffic noise levels substantially exceeds (equal to or greater than 15 dBA) existing traffic noise levels in an area. Based on preliminary TNM modeling and future traffic conditions, noise impacts for the proposed Bishopville By-Pass are predicted to occur for

all of the build alternatives on new alignment and for both Truck Routes 1 and 2. Traffic noise impacts are also predicted to occur for the No-Build Alternative, which assumes the Bishopville By-Pass would not be constructed.

When traffic noise impacts are predicted to occur, noise abatement must be considered and evaluated for feasibility and reasonableness. Noise abatement measures including traffic management measures, alteration of horizontal and vertical alignments, acquisition of property rights, construction of noise barriers, and noise insulation of public use or nonprofit institutional structures were considered as a means to reduce or eliminate traffic noise impacts.

The construction of noise barriers was evaluated for those residences and noise-sensitive sites located near the intersection of SC 341 and English Mill Road/Wags Drive and adjacent to the proposed Alternative 2 alignment. However, based on a preliminary noise barrier analysis conducted at these locations, the construction of noise barriers was determined to be not cost-effective and therefore, not reasonable. Abatement measures were investigated for the remaining preliminary build alternatives and the two in-town truck route alternatives but none of them were determined to be feasible or reasonable and therefore, none were proposed.

Detailed Noise Analysis

Based on the evaluation of social, cultural and environmental impacts and other factors, Alternative 1 was identified and recommended as the Preferred Alternative for the Bishopville By-Pass. In accordance with the *SCDOT Traffic Noise Abatement Policy*, a detailed noise analysis was conducted for the Preferred Alternative alignment.

In terms of potential noise impacts, the proposed alignment for the Preferred Alternative bypasses Bishopville to the southeast. Approximately 14 receivers were modeled to represent the closest residences to the proposed alignment. Predicted noise levels for the Preferred Alternative ranged from 49.6 to 62.9 dBA Leq. None of the modeled receivers were determined to have predicted noise levels that would approach or exceed the 67 dBA Leq NAC or substantially exceed existing noise levels. Therefore, noise abatement measures were not considered or deemed necessary for these receivers and none were proposed.

Future noise levels were also predicted for those receptors along existing US 15. For the Preferred Alternative, predicted noise levels for Site 4 (St. Johns AME Church) would increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under Alternative 1 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would remain at its existing level of 68 dBA Leq and would exceed the NAC. With traffic on US 15 diverted to the Bishopville By-Pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 2 dBA Leq from its existing noise level with a predicted noise level of 59 dBA Leq. This noise level would not approach or exceed the NAC.

Sites 4 and 5 represent locations along existing US 15 and are not located along the Preferred Alternative. Based on their locations, it would be impractical to consider constructing a noise wall or walls along existing US 15. Access or driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. Therefore, constructing noise barriers for these existing noise sensitive areas were not considered feasible or reasonable and none were proposed.

1.0 INTRODUCTION

A preliminary and detailed traffic noise analysis was performed to determine the highway-generated noise impacts associated with the proposed construction of the Bishopville By-pass in Lee County, South Carolina. Traffic noise impacts were analyzed in accordance with the procedures established for the abatement of highway traffic noise and construction noise as outlined in Part 772 of Title 23 of the Code of Federal Regulations (CFR) and the *South Carolina Department of Transportation Traffic Noise Abatement Policy, July 2011*.

An effective, quantitative noise impact analysis must first identify potential noise sensitive land uses in the study area and establish existing noise levels at these sites. Future (design year) noise levels are then predicted and compared with existing noise levels, future noise levels without the project (no-build) and design noise level guidelines to determine the noise impacts resulting from implementation of the project. If necessary, the feasibility and reasonableness of alternative noise abatement measures for reducing or eliminating noise impacts will be addressed. The impacts due to construction noise will also be assessed.

1.1 Project Description

The South Carolina Department of Transportation (SCDOT) proposes the construction of a new location truck bypass around the City of Bishopville, Lee County, from US 15 near I-20 south of the city and reconnecting to US 15 near SC 341 north of Bishopville for approximately 6.2 miles (see Figure 1, Project Location Map). The project will consist of a 2-lane roadway with a right-of-way width of 100 feet.

1.2 Project Alternatives

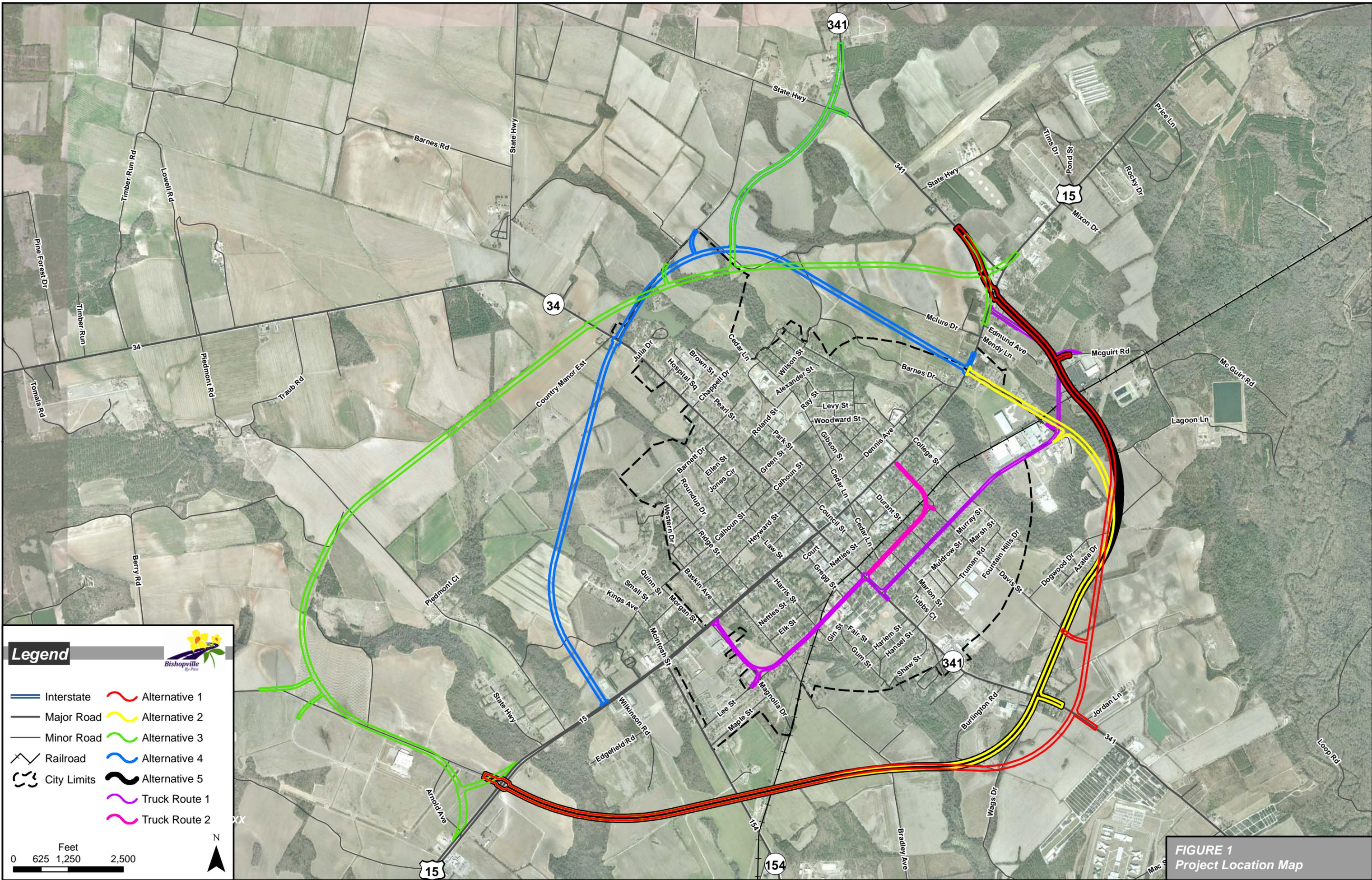
There are five (5) preliminary build alternatives located on new alignments being considered for the proposed Bishopville By-Pass. Two (2) alternatives are located east of US 15 and three (3) are located west of US 15. In addition to the alternatives on new location, two (2) truck route alternatives located west of US 15 that utilize existing roads or portions of existing roads are also being considered. The following is a brief description of those alternatives considered and evaluated for potential traffic noise impacts.

Alternative 1

The alignment for Alternative 1 bypasses the town of Bishopville to the southeast. This alternative would shift away from US 15 approximately 0.7 mile from the interchange at Interstate 20 (I-20), across from Browntown Road and crosses eastward south of the town. Alternative 1 crosses the CSX railroad line, near Road S-154. Continuing east, the alignment would cross SC 341 between Wags Drive and the Lee County Correction Institute. The alignment would then turn north and passes through primarily farmland. The alignment passes near the Bishopville Wastewater Treatment Facility and crosses the railroad corridor a second time. The bypass then turns northwest while crossing US 15, just north of Dixon Drive before tying into SC 341.

Alternative 2

The Alternative 2 alignment also bypasses Bishopville to the southeast. This alternative would depart from US 15 on the same alignment as Alternative 1, approximately 0.7 mile from the interchange at Interstate 20 (I-20) and crosses eastward south of the town. The



Legend



- Interstate
- Major Road
- Minor Road
- Railroad
- - - City Limits
- ~ Alternative 1
- ~ Alternative 2
- ~ Alternative 3
- ~ Alternative 4
- ~ Alternative 5
- ~ Truck Route 1
- ~ Truck Route 2

Feet
 0 625 1,250 2,500



FIGURE 1
 Project Location Map

alternative crosses the CSX railroad line, near Road S-154. Continuing east, it crosses SC 341 near the existing English Mill Road /Wags Drive intersection. The bypass would follow Wags Drive and then continue north through farmland. The alternative would turn westward, just north of the existing Coca-Cola plant and crosses the existing railroad corridor at Academy Road. The alternative would then follow Academy Road to an intersection with US 15.

Alternative 3

Alternative 3 bypasses the town of Bishopville to the northwest. This alternative would become the through route of US 15 along Browntown Road. The existing US 15 would be realigned to tie into the bypass at an intersection between Browntown Road and Arnold Avenue. The alignment would follow Browntown Road for approximately 0.5 mile and then turn northeastward, crossing Piedmont Road. Continuing northeastward, the bypass would parallel Country Manor Estates Road, approximately 0.15 mile to the west. The bypass would then cross SC 34, just outside of the city limits and then turn westward, crossing farmland to US 15. The alignment would tie back into US 15 near SC 341. In addition, SC 341 would be realigned to tie into the bypass at an intersection near State Road and Wilson Street.

Alternative 4

The alignment for Alternative 4 bypasses Bishopville to the northwest. This alignment would intersect US 15 approximately 0.2 mile northeast of Piedmont Road and continue northward across farmland. This alternative would cross SC 34 near the existing intersection of Country Manor Estates Road and continue northward along the existing Denny Pond Road. Approximately 0.3 mile along Denny Pond Road, the alignment turns east and then southeast, crossing through farmland to intersect US 15 north of the town across from Academy Road.

Alternative 5

The alignment for Alternative 5 represents a combination of Alternatives 1 and 2. The Alternative 5 alignment bypasses the town of Bishopville to the southeast. The alternative would shift away from US 15 approximately 0.7 mile from the interchange at Interstate 20 (I-20), across from Browntown Road and cross eastward south of the town. Alternative 5 crosses the CSX railroad line near Road S-154. Continuing east, the alignment crosses SC 341 near the existing English Mill Road/Wags Drive intersection. The alignment for Alternative 5 would continue to follow Wags Drive before continuing north through primarily farmland. The alternative passes by the Bishopville Wastewater Treatment Facility and crosses the railroad line a second time. The bypass then turns northwestward, crossing US 15, just north of Dixon Drive before intersecting with existing SC 341.

Truck Route 1

The alignment for Truck Route 1 uses existing Fairview Avenue and then turns northeast onto Lee Street. The route would cross the CSX rail line near the Harris Street intersection and continue along Lee Street to SC 341. The truck route would use SC 341 for one block and then follow Cousar Street through the Coca-Cola plant area and then turn northward to Dixon Drive, where it would tie back into US 15.

Truck Route 2

Truck Route 2 uses existing Fairview Avenue and then turns northeast onto Lee Street. The route would cross the CSX rail line near the Harris Street intersection and continue along Lee Street to Davis Street, where it would tie back into US 15.

1.3 Purpose and Need

The purpose of this project is to provide an alternate route for through-trucks and other traffic traveling through the area and to discourage truck traffic from the central business district. By alleviating the high percentage of through-truck traffic in downtown, the project would support the economic development plan of Bishopville and the recruitment of new businesses. Additionally, the proposed project encourages economic development and pedestrian movements in the central business district and is consistent with local comprehensive plans to help revitalize downtown Bishopville and to improve the overall quality of life for residents.

1.4 Existing Facilities

Currently, Main Street (US 15) serves as the primary corridor through the downtown area, connecting I-20 to Bishopville, Hartsville, Bennettsville and other towns in the northeastern portion of South Carolina. SCDOT traffic counts indicate that over 1,000 trucks pass through the Main Street corridor daily. Local businesses in and around Bishopville generate some commercial traffic on the area's road network. These businesses include the Coca-Cola Consolidated South Atlantic Cannery (estimated 75 truck trips, 150 round trips daily), the Lee County Landfill (estimated 90 truck trips, or 180 round trips daily), and other local businesses.

SC 341 between I-20 and S-156 is classified as a minor arterial. Based on this functional classification, SC 341 provides linkage between cities, towns, and traffic generators. It also provides integrated interstate and intercounty service. Along the project corridor, segments of SC 341, S-156 (Davis Street/Wags Drive), and S-111 (Dixon Street) could be utilized as elements of the proposed project. SC 341 consists of one 12-foot travel lane in each direction, with a posted speed limit of 45 mph. S-156 consists of one 12-foot travel lane in each direction, with a posted speed limit of 40 mph. S-111 consists of one 12-foot travel lane in each direction, with a posted speed limit of 35 mph.

1.5 Existing Land Uses

Land use in the project area consists primarily of rural agriculture, industrial and residential uses. Lee County has long been recognized as South Carolina's leading cotton-producing county. Industrial and commercial uses include a unique mixture of industries and businesses including the I-20 Industrial Center, James Industrial Park, and Coca-Cola. Other notable land uses in the project area include the nationally renowned Fryars Topiary Garden and the South Carolina Cotton Museum in downtown Bishopville. Land uses within the downtown area include several individual historic properties as well as two historic districts, including the Bishopville Commercial Historic District and the South Main Historic District.

2.0 TRAFFIC NOISE ANALYSIS

Noise is defined as unwanted or excessive sound. Sources of highway traffic noise include tire-pavement interaction, as well as vehicle engine and exhaust system operations. Noise is a vibrational energy that causes pressure variations in elastic media such as air and water. The human ear perceives these variations as sound. The ear can discern different levels of loudness as the intensity of pressure variations fluctuate. These pressure differences are commonly measured in decibels (dB). The decibel scale audible to humans spans approximately from 0 to 140 dBs. A level of zero decibels corresponds to the lowest limit of audibility, while a level of 140 decibels represents the threshold of pain. To closely resemble the nonlinear sensitivity of human hearing, the A-weighted scale is used to define the relative loudness of different frequencies. Sound levels measured using the A-weighted scale is expressed as dBA. For the purposes of this study, all references to sound levels will reflect dBA.

The procedures set forth by the Federal Highway Administration (FHWA) recommend noise analyses to be performed in terms of either L10(h) or Leq(h). L10 is the sound level exceeded 10 percent of the time. Leq(h) is defined as the equivalent, steady-state sound level that in a given period contains the same acoustical energy as the time-varying sound level during the same period. The Leq(h) noise descriptor was used in this study, because of its relative ease to monitor and compare with FHWA's noise abatement criteria (NAC).

For this project, the latest version of the FHWA Traffic Noise Model (TNM), Version 2.5 was used to predict the highway traffic noise levels associated with the Bishopville By-Pass. TNM takes into account factors from current and future traffic volumes and scenarios, topography, buildings and roadways. These factors are used to create a three-dimensional model that is used to calculate noise levels for an entire area and can be used to predict both existing and future noise levels using various criteria and information included in the model.

2.1 Noise Sensitive Receptor Sites

The FHWA's Noise Abatement Criteria (NAC) was used to select noise sensitive land uses within the project area (see Table 1). Seven land use activity categories have been identified by FHWA for use in noise impact analysis. Maximum noise level thresholds have been established for four of these activity categories. These maximum thresholds, or criteria levels, represent acceptable traffic noise conditions. Noise abatement measures must be considered when predicted noise levels approach (i.e. with 1 dBA) or exceed the NAC or when a substantial noise increase occurs. A substantial noise increase occurs when there is an increase in noise levels of 15 dBA or more in the design year over existing levels as a direct result of the transportation improvement project.

A field review of the project corridor was conducted to identify the noise sensitive receptor sites that may be impacted by traffic noise associated with the proposed improvements. Typical noise sensitive receptor sites include residences, parks, schools, hospitals, and churches. Noise sensitive receptor sites represent any property (owner occupied, rented, or leased) where frequent exterior human use occurs and where a lowered noise level would be of benefit. Based on a field review, all of the identified noise sensitive sites for the Bishopville By-Pass were determined to represent either NAC category B (residential) or category C (parks, schools and churches). Site 4 (St. Johns AME Church) and Site 5 (Bishopville Presbyterian Church) represent Category C type uses.

Table 1

Noise Abatement Criteria (NAC)				
Hourly A-Weighted Sound Level – Decibels (dBA)*				
Activity	Leq(h)[†]	L10(h)[†]	Evaluation Location	Description of Activity Category
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[‡]	67	70	Exterior	Residential
C[‡]	67	70	Exterior	Active sports areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[‡]	72	75	Interior	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.

* Either Leq(h) or L10(h) (but not both) may be used on a project.

[†]The Leq(h) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

[‡]Includes undeveloped lands permitted for this activity category.

2.2 Field Measurements of Existing Noise Levels

Based on the overall rural nature of the Bishopville By-Pass study area, 9 locations were selected as representative noise sensitive sites that were either located adjacent to the existing road (US 15/Main Street) or those locations that would be potentially affected by the proposed By-Pass alternatives (see Figure 2, Noise Measurement Sites). Existing noise levels were measured on March 23, 24 and 29, 2011 using a QUEST SoundPro-DL-2-10 Type 2 sound level meter. Prior to the measurements, the sound level meter was calibrated at 114.0 dBA using a QUEST QC-10 sound level calibrator. The procedures used to measure existing noise levels were conducted in accordance with the methodology established by the FHWA and documented in Report No. DP-96-046, *Measurement of Highway-Related Noise: Final Report, May 1996*. The dates, times, traffic data, and measured noise levels for each of the monitoring sites are presented in Table 2.

In order to represent the Leq(h), noise measurements were performed in fifteen-minute intervals and were taken 1.5 meters (5 feet) above the ground and within approximately 30 meters (100 feet) of the existing roads and proposed roadway alignment. The measurements were conducted during peak and off-peak traffic periods and under meteorologically acceptable conditions. Community noises and traffic information such as the number of cars, medium trucks, heavy trucks, buses and motorcycles, average speeds, were collected at the same time the noise monitoring took place. Vehicle speed observations while driving the existing facility and posted speed limits were used to obtain average operating speeds for each vehicle type. Since all noise levels in this report are based on a one-hour period, the field-recorded traffic volumes were adjusted upward to reflect hourly volumes. The traffic data, along with the existing roadway geometry, was used as input to TNM 2.5 to predict traffic noise levels at each of the sites monitored.

As shown in Table 2, measured existing noise levels ranged from 46 dBA Leq at Site 1 (Country Manor Estates Road) to 68 dBA Leq at Sites 4 (St. Johns AME Church) and 5 (Bishopville Presbyterian Church). Site 4 and Site 5 represent non-residential uses and are categorized as Activity Category C uses. Site 4 (St. Johns AME Church) has approximately 60 people in their congregation and regularly meets twice for a total of 4 hours per week. Based on 2006-2010 Census data, the average number of people per household in Lee County is 2.66 or approximately 3 people per residence. The equivalent number of impacted residents for the St. Johns AME Church is 1 based on the non-residential equivalent usage equation as outlined in the South Carolina DOT *Traffic Noise Abatement Policy*. Site 4 also represents approximately 3 adjacent single-family residences and 2-3 businesses in addition to the St. Johns AME Church.

Site 5 (Bishopville Presbyterian Church) has approximately 70 people who regularly attend the church and currently only has 1 service, which is held on Sunday. The equivalent number of impacted residents for the Bishopville Presbyterian Church is 1 based on the non-residential usage equation. The Bishopville Presbyterian Church includes an exterior recreational playground and basketball court and also represents approximately 5 single-family residences as well as the church. Existing noise levels for sites 4 and 5 currently exceed the NAC of 67 dBA Leq for Activity Category C.

Bishopville By-Pass

Noise Measurement Sites

FIGURE 2



- Alternative 1, 4.94 miles
- Alternative 2, 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Interstate
- Major Road
- Bishopville_Mjr_Rds
- streets
- Railroad

Noise Measurement Site Locations

- 1 Country Manor Estates
- 2 Chappell Park
- 3 Ezzell Parking Lot
- 4 St. Johns AME Church
- 5 Bishopville Presbyterian Church
- 6 Site adj. to Post Office
- 7 Site adj. to Historic Home
- 8 Site adj. to Alt. 1 / Alt. 2 Alignments
- 9 Lee Street - residences

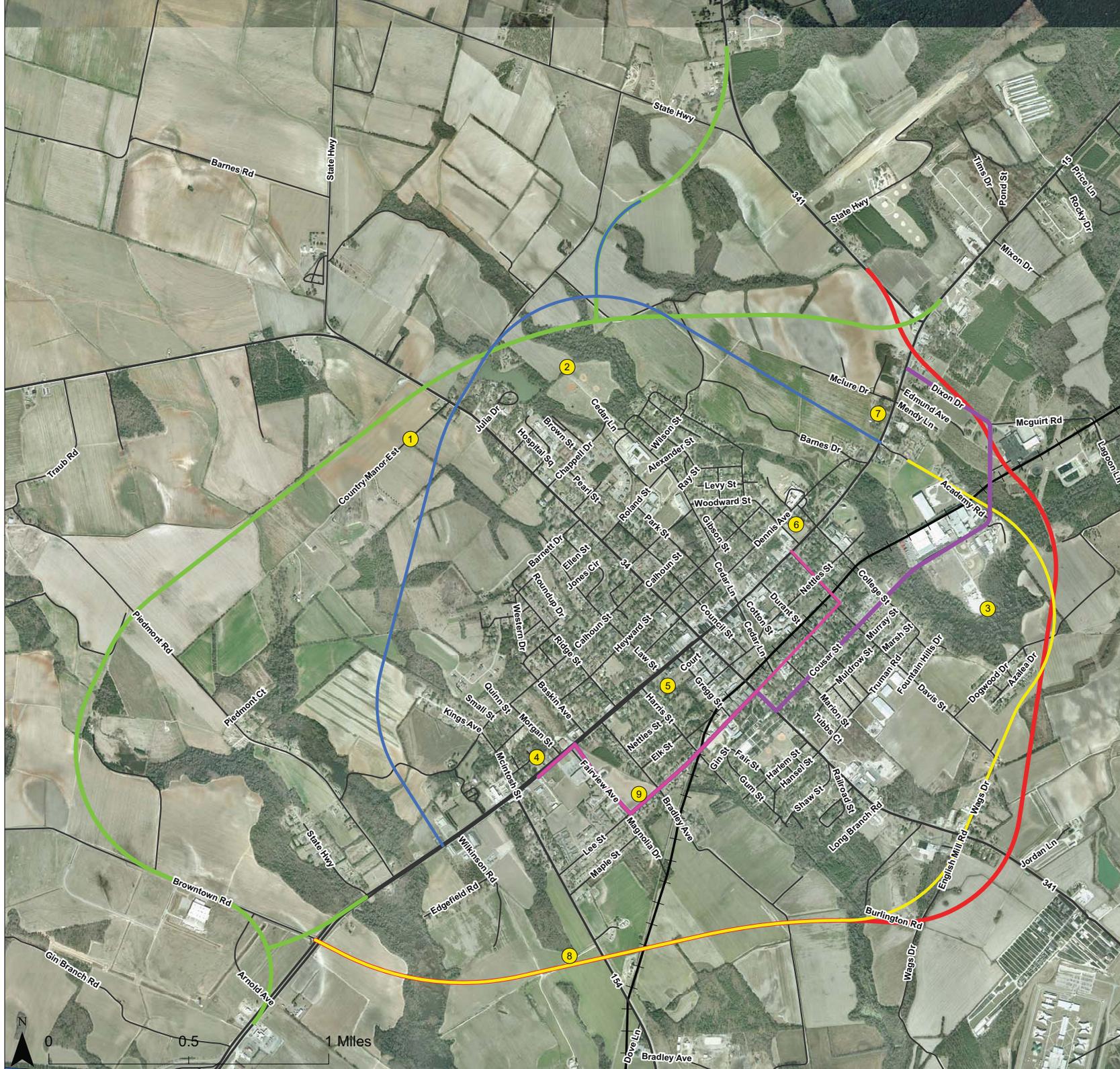


Table 2

Existing Noise Levels (dBA Leq)

Site #	Name	Time Period	Hourly Traffic Based on Concurrent Traffic Counts										Measured Leq	Sound Meter #	
			Northbound					Southbound							
			Autos	MT	HT	Bus	MC	Autos	MT	HT	Bus	MC			
1	Country Manor Estates	2:30 pm - 2:45 pm	-	-	-	-	-	-	-	-	-	-	-	45.9	S041
		2:47 pm - 3:02 pm	-	-	-	-	-	-	-	-	-	-	-	-	46.1
2	Chappell Park	3:12 pm - 3:27 pm	-	-	-	-	-	-	-	-	-	-	-	47.4	S043
3	Ezzell parking lot	9:47 am - 10:02 am	-	-	-	-	-	-	-	-	-	-	-	48.9	S049
		11:12 am - 11:28 am	-	-	-	-	-	-	-	-	-	-	-	48.6	S025
		11:28 am - 11:43 am	-	-	-	-	-	-	-	-	-	-	-	47.7	S026
4	St. Johns AME Church	8:05 am - 8:20 am	344	16	32	0	0	272	28	52	0	4	68.3	S028	
		8:21 am - 8:36 am	336	8	44	0	4	260	32	36	0	0	67.5	S029	
		11:55 am - 12:10 pm	376	24	40	0	0	444	20	52	0	0	67.4	S036	
		12:14 pm - 12:29 pm	420	8	60	0	0	432	24	48	0	0	68.4	S038	
		5:05 pm - 5:20 pm	524	0	8	0	0	512	8	20	0	0	66.5	S062	
5	Bishopville Presbyterian Church	8:49 am - 9:04 am	356	36	52	4	0	292	20	72	0	0	67.5	S030	
		9:04 am - 9:20 am	348	12	48	0	0	300	28	64	4	0	66.9	S031	
		12:41pm - 12:56 pm	456	20	24	0	0	444	20	48	12	8	66.6	S039	
		12:57pm - 1:12 pm	304	20	40	0	0	452	20	52	4	0	66.5	S040	
		4:25 pm - 4:40 pm	488	8	21	0	0	492	20	40	4	0	66.3	S060	
		4:45 pm - 5:00 pm	428	24	24	0	0	508	12	12	4	0	65.5	S061	

Site #	Name	Time Period	Hourly Traffic Based on Concurrent Traffic Counts										Measured Leq	Sound Meter #
			Northbound					Southbound						
			Autos	MT	HT	Bus	MC	Autos	MT	HT	Bus	MC		
6	Site adjacent to Post Office	9:25 am - 9:40 am	208	20	56	0	0	172	12	72	0	0	60.6	S048
		11:09 am - 11:25 am	228	8	36	0	0	220	0	44	8	0	58.5	S034
		11:25 am - 11:40 am	228	8	28	0	0	216	8	48	0	0	58.3	S035
		11:20 am - 11:35 am	224	8	52	4	0	260	32	56	0	0	60.7	S052
		3:45 pm - 4:00 pm	264	8	16	4	4	352	24	36	0	0	61.1	S058
		4:00 pm - 4:15 pm	336	8	20	0	0	320	16	24	0	0	60.3	S059
7	Site adjacent to Historic Home	9:45 am - 10:00 am	184	28	44	0	4	172	4	32	0	0	58.8	S032
8	Site adjacent to Alt. 1/Alt. 2 alignments	10:23 am - 10:38 am	-	-	-	-	-	-	-	-	-	-	53.4	S033
		2:40 pm - 3:00 pm	-	-	-	-	-	-	-	-	-	-	54.9	S056
9	Lee Street - residences	12:45 pm - 1:00 pm	84	0	0	0	0	72	0	8	0	0	59.2	S055

2.3 Model Validation

Existing noise levels were measured directly by a sound level meter to establish ambient noise levels at those representative locations along existing roadways and along those areas of the proposed Bypass where traffic noise was not considered the predominant noise source. Existing noise levels are also measured by a sound level meter to calibrate or validate the noise prediction model. In accordance with 23 CFR 772.11(d)(2), FHWA requires validating predicted values with actual measured levels to verify the accuracy of the noise model to predict existing or future noise levels. The model is considered validated if existing highway noise levels are within +/- 3.0 dBA for all measured sites. Model validation was performed for three of the measured noise sites where highway traffic was considered as the predominant noise source. As shown in Table 3, the measured noise levels were within +/- 3.0 dBA of the TNM 2.5-predicted levels and as a result, the model was considered to be validated and therefore capable of predicting future traffic noise levels for this project.

Table 3**TNM 2.5 Model Validation Results**

Site #	Receiver Name	Time Period	Measured Leq	Model Leq	Difference
4	St. Johns AME Church	8:05 am - 8:20 am	68.3	68.2	0.1
5	Bishopville Presbyterian Church	8:49 am - 9:04 am	67.5	67.7	-0.2
6	Site adjacent to Post Office	9:25 am - 9:40 am	60.6	58.6	2.0

3.0 PREDICTED NOISE LEVELS

Once TNM 2.5 had been validated, the next step in the highway traffic noise analysis involved a comparison of predicted noise levels for each project alternative with the noise abatement criteria and existing noise levels. Traffic noise levels were predicted for the representative noise sensitive receiver sites along the No-Build Alternative, five (5) preliminary build alternatives, and two (2) in-town truck route alternatives for the future design year (2035) conditions.

3.1 Traffic Data

In order to simulate a worst case scenario, TNM uses traffic volumes that will produce the noisiest traffic condition likely to occur for the design year. The “worst hourly traffic noise impact” has been determined to occur when truck volumes and vehicles speeds are the greatest, typically when traffic flow is free flowing and at or near level of service (LOS) C conditions.

Design year 2035 Average Daily Traffic (ADT) volumes for the Bishopville By-Pass were based on the *Bishopville Bypass Environmental Assessment: Average Daily Traffic and Truck Traffic Technical Memorandum* prepared for the development of the Bishopville By-Pass Purpose and Need Statement. Based on the preliminary traffic data developed for the project’s purpose and need, the proposed project will operate at LOS C or better during the design year 2035. Therefore, for purposes of the preliminary noise analysis, hourly traffic volumes developed from the traffic memorandum were used in the TNM modeling. Other traffic assumptions included a 9 percent peak hour factor, a 55/45 directional split percentage percent, a 70/30 heavy truck/medium truck factor and a design speed of 60 miles per hour (mph). Peak one-hour traffic volumes for the design year for the proposed Bishopville By-Pass are shown in Table 4.

3.2 No-Build

In order to satisfy National Environmental Policy Act (NEPA) requirements, an evaluation of the no-build scenario was performed. The analysis of the No-Build Alternative was conducted assuming the current roadway configuration and year 2035 No-Build traffic data. For those sites, where existing traffic noise was non-existent or not the predominant noise source, No-Build noise levels were assumed to remain the same as existing levels. The results of the noise analysis conducted for the No-Build Alternative indicate that noise levels would range from 46 dBA Leq at Site 1 to 71 dBA Leq at Site 4 (St. Johns AME Church). No-Build noise levels represent an average increase of 2.3 dBA over existing levels. No-Build noise levels for Sites 4 and 5 would exceed the NAC of 67 dBA Leq.

3.3 Alternative 1

As described in Section 1.2, the proposed alignment for Alternative 1 bypasses Bishopville to the southeast. Approximately 14 receivers were modeled to represent the closest residences to the proposed alignment. Predicted noise levels for Alternative 1 ranged from 49.6 to 62.9 dBA Leq.

Table 4**Summary of Traffic Data**

Facility	From	To	Speed Limit	Average Daily Traffic (ADT)*	Peak Hour Demand Volume (VPH)†
<i>Existing Conditions</i>					
US 15	McIntosh St.	Fairview Ave.	45 mph	10,900	748
US 15	Harris St.	SC 34/SC 341	25 mph	12,000	832
US 15	Cedar Ln.	Davis St.	35 mph	11,300	540
<i>2035 - No Build Alternative</i>					
US 15	McIntosh St.	Fairview Ave.	45 mph	14,389	1,295
US 15	Harris St.	SC 34/SC 341	25 mph	14,389	1,295
US 15	Cedar Ln.	Davis St.	35 mph	14,566	1,311
<i>2035 - Alternative 1</i>					
US 15	McIntosh St.	Fairview Ave.	45 mph	9,367	843
US 15	Harris St.	SC 34/SC 341	25 mph	9,367	843
US 15	Cedar Ln.	Davis St.	35 mph	6,320	569
Alternative 1	SC 34/SC 341	US 15 North	60 mph	8,493	765
<i>2035 - Alternative 2 and Alternative 5</i>					
US 15	McIntosh St.	Fairview Ave.	45 mph	9,137	822
US 15	Harris St.	SC 34/SC 341	25 mph	9,137	822
US 15	Cedar Ln.	Davis St.	35 mph	7,426	668
Alternative 2 and 5	Davis St.	Cousar St.	60 mph	6,855	620
Alternative 2 and 5	Cousar St.	US 15	60 mph	9,561	860

Facility	From	To	Speed Limit	Average Daily Traffic (ADT)*	Peak Hour Demand Volume (VPH) [†]
2035 - Alternative 3					
US 15	McIntosh St.	Fairview Ave.	45 mph	7,170	645
US 15	Harris St.	SC 34/SC 341	25 mph	7,170	645
US 15	Cedar Ln.	Davis St.	35 mph	8,948	805
Alternative 3	Browntown Rd.	SC 34/SC 341	60 mph	7,557	680
2035 - Alternative 4					
US 15	McIntosh St.	Fairview Ave.	45 mph	7,145	645
US 15	Harris St.	SC 34/SC 341	25 mph	7,145	645
US 15	Cedar Ln.	Davis St.	35 mph	8,620	776
Alternative 4	US 15 South	SC 34/SC 341	60 mph	8,276	745
Alternative 4	SC 341	US 15 North	60 mph	4,021	362
2035 - Truck Route 1					
US 15	McIntosh St.	Fairview Ave.	45 mph	10,733	966
US 15	Harris St.	SC 34/SC 341	25 mph	6,397	576
US 15	Cedar Ln.	Davis St.	35 mph	11,081	997
Truck Route 1	Fairview Ave.	SC 34/SC 341	25 mph	5,111	460
Truck Route 1	SC 34/SC 341	Davis St.	25 mph	3,733	336
2035 - Truck Route 2					
US 15	McIntosh St.	Fairview Ave.	45 mph	6,400	645
US 15	Harris St.	SC 34/SC 341	25 mph	6,400	645
US 15	Cedar Ln.	Davis St.	35 mph	11,076	776
Truck Route 2	Fairview Ave.	SC 34/SC 341	25 mph	3,732	335
Truck Route 2	SC 34/SC 341	Davis St.	25 mph	5,993	539

*ADT's are based on *Bishopville Bypass Environmental Assessment: Average Daily Traffic and Truck Traffic Technical Memorandum*

[†]Volumes used in TNM modeling.

Future noise levels were also calculated for those receptors along existing US 15. For Alternative 1, predicted noise levels for Site 4 (St. Johns AME Church) would increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under Alternative 1 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would remain at its existing level of 68 dBA Leq and would exceed the NAC. With traffic on US 15 diverted to the Bishopville By-Pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 2 dBA Leq from its existing noise level with a predicted noise level of 59 dBA Leq. This noise level would not approach or exceed the NAC.

3.4 Alternative 2

The Alternative 2 alignment also bypasses the town of Bishopville to the southeast and generally follows the same alignment as Alternative 1 until just northeast of Bradley Avenue. Near the SC 341 and English Mill Road/Wags Drive intersection, approximately 24 receivers (Receivers 9-38) were modeled to represent the nearest single-family homes. Predicted noise levels for Receivers 9-38 ranged from 53.2 dBA Leq at Receiver 14 to 74.9 dBA Leq at Receiver 10. For Receiver 10 and approximately 9 other receivers, this represents both a substantial increase over existing levels and an exceedance of the 67 dBA Leq NAC. For 7 of the remaining receivers, predicted noise levels would also exceed the 67 dBA Leq NAC.

For those residences near the Dogwood Drive/Azalea Drive subdivision (Receivers 40-54), predicted noise levels ranged from 56.3 dBA Leq at Receiver 54 to 64.1 dBA Leq at Receiver 51. None of the receiver sites would have noise levels that approach or exceed the 67 dBA Leq NAC. Only one receiver, Receiver 51, was predicted to experience a substantial increase over existing levels with a predicted increase of 15.1 dBA Leq.

As the Alternative 2 alignment shifts west to follow existing Academy Road to its terminus at US 15, the proposed bypass passes between a couple of single-family homes (Receiver 7) and the Lynches River Apartments (Receivers 1-6) located at 121 Academy Road. Predicted noise levels for these receivers ranged from 56.8 dBA Leq at Receiver 6 to 71.3 dBA Leq at Receiver 1. For two of the apartment buildings (Receivers 1 and 4) and the nearest residence (Receiver 7), predicted noise levels would exceed the 67 dBA Leq NAC.

For Alternative 2, predicted noise levels for Site 4 (St. Johns AME Church) would also increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would remain at its existing level of 68 dBA Leq and would exceed the NAC. With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 1 dBA Leq from its existing noise level with a predicted noise level of 60 dBA Leq. This noise level would not approach or exceed the NAC.

3.5 Alternative 3

For Alternative 3, 5 receivers (Receivers 1-5) were modeled to represent 5 single-family residences along Country Manor Estates Road. In the area where the proposed bypass crosses SC 34, 5 receivers (Receivers 6-10) were modeled to represent 5 additional single-family homes along Julia Drive. Just north of where the bypass will be realigned to cross

over Wilson Street, 3 receivers (Receivers 12-14) were modeled to represent 3 additional single-family residences.

Predicted noise levels for Alternative 3 ranged from 44.0 dBA Leq at Receiver 1 to 64.9 dBA Leq at Receiver 12. None of the receivers modeled were predicted to have future noise levels that would approach or exceed the 67 dBA Leq NAC. However, Receivers 10 and 12-14 are anticipated to experience substantial noise level increases over their existing levels. These increases ranged from 16.1 dBA Leq to 18.9 dBA Leq.

Predicted noise levels for Site 4 (St. Johns AME Church) would remain at its existing level of 68 dBA Leq and would be 3 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would be 1 dBA Leq lower than its existing level of 68 dBA Leq and would approach or exceed the NAC. With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 1 dBA Leq from its existing noise level with a predicted noise level of 60 dBA Leq. The predicted noise level would not approach or exceed the NAC.

3.6 Alternative 4

For those residences along Country Manor Estates Road, 2 receivers (Receivers 12 and 15) were modeled for Alternative 4. Where the proposed alignment crosses SC 34, 4 receivers (Receivers 2, 4, 5 and 10) were modeled to represent those single-family homes west of Julia Drive. Receivers 17-19 were modeled to represent those homes where the bypass crosses Wilson Street.

At the point where the proposed bypass intersects with US 15 at its northern terminus, approximately 11 receivers (Receivers 21-33) were modeled to represent those noise sensitive sites just north of Barnes Drive.

Predicted noise levels for Alternative 4 ranged from 46.6 dBA Leq at Receiver 2 to 70.2 dBA Leq at Receiver 4. Two of the receivers modeled, Receivers 4 and 17 were predicted to have future noise levels that would either approach or exceed the 67 dBA Leq NAC. Receivers 5, 10, 15 and 18-19 are anticipated to experience substantial noise level increases over their existing levels. These increases ranged from 15.3 dBA Leq to 18.6 dBA Leq.

For Alternative 4, predicted noise levels for Site 4 (St. Johns AME Church) would decrease 1 dBA from its existing level of 68 dBA Leq and would be 3 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under Alternative 4 would approach or exceed the 67 dBA Leq NAC.

The predicted noise level for Site 5 (Bishopville Presbyterian Church) would be 1 dBA Leq lower than its existing level of 68 dBA Leq and would be considered to approach or exceed the NAC.

With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 1 dBA Leq from its existing noise level with a predicted noise level of 60 dBA Leq. This noise level would not approach or exceed the NAC.

3.7 Alternative 5

The Alternative 5 alignment bypasses the town of Bishopville to the southeast and generally follows the same alignment as Alternative 2 until just east of the railroad crossing near the Bishopville Wastewater Treatment Facility. At this point until its terminus at US 15, the alignment for Alternative 5 generally follows the same alignment as Alternative 1.

Near the SC 341 and English Mill Road/Wags Drive intersection, approximately 24 receivers (Receivers 9-38) were modeled to represent the nearest single-family homes. Predicted noise levels for Receivers 9-38 ranged from 53.2 dBA Leq at Receiver 14 to 74.9 dBA Leq at Receiver 10. For Receiver 10 and approximately 9 other receivers, this represents both a substantial increase over existing levels and an exceedance of the 67 dBA Leq NAC. For 7 of the remaining receivers, predicted noise levels would also exceed the 67 dBA Leq NAC.

For those residences near the Dogwood Drive/Azalea Drive subdivision (Receivers 40-54), predicted noise levels ranged from 56.3 dBA Leq at Receiver 54 to 64.1 dBA Leq at Receiver 51. None of the receiver sites would have noise levels that approach or exceed the 67 dBA Leq NAC. Only one receiver, Receiver 51, was predicted to experience a substantial increase over existing levels with a predicted increase of 15.1 dBA Leq.

At this point the alignment for Alternative 5 would begin following the same alignment as Alternative 1 and would turn northwest while intersecting US 15 just north of Dixon Drive before tying into SC 341.

For Alternative 5, predicted noise levels for Site 4 (St. Johns AME Church) would increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would remain at its existing level of 68 dBA Leq and would exceed the NAC. With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would decrease 1 dBA Leq from its existing noise level with a predicted noise level of 60 dBA Leq. This noise level would not approach or exceed the NAC.

3.8 Truck Route 1

Approximately 102 receivers (Receivers 1-102) were modeled to represent existing noise sensitive sites along the proposed Truck Route 1 through the downtown Bishopville area. Predicted noise levels ranged from 58.0 dBA Leq at Receiver 28 to 72.1 dBA Leq at Receiver 35. Based on the TNM modeling, at least 30 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC. None of the modeled receivers would experience substantial noise level increases over their existing levels.

For Truck Route 1, with traffic primarily diverted to Cousar Street, predicted noise levels for Site 4 (St. Johns AME Church) would increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under Truck Route 1 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would decrease 2 dBA Leq from its existing level of 68 dBA Leq and would approach the NAC. With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the

Post Office) would remain at its existing noise level with a predicted noise level of 61 dBA Leq. This noise level would not approach or exceed the NAC.

3.9 Truck Route 2

Approximately 86 receivers (Receivers 1-89) were modeled to represent existing noise sensitive sites along the proposed Truck Route 2 through the downtown Bishopville area. Predicted noise levels ranged from 57.5 dBA Leq at Receiver 11 to 73.1 dBA Leq at Receiver 36. Based on the TNM modeling, at least 33 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC. None of the modeled receivers would experience substantial noise level increases over their existing levels.

Predicted noise levels for Site 4 (St. Johns AME Church) under the Truck Route 2 alternative would decrease 1 dBA over its existing level of 68 dBA Leq and would be 4 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under this alternative would approach or exceed the 67 dBA Leq NAC.

The predicted noise level for Site 5 (Bishopville Presbyterian Church) would decrease 2 dBA Leq from its existing level of 68 dBA Leq and would approach the NAC. With traffic on US 15 diverted to the Bishopville By-pass, predicted noise levels for Site 6 (site adjacent to the Post Office) would remain at its existing noise level with a predicted noise level of 61 dBA Leq. This noise level would not approach or exceed the NAC.

4.0 TRAFFIC NOISE IMPACTS

As defined by the *SCDOT Traffic Noise Abatement Policy*, dated March 2011, a traffic noise impact occurs when either of the following is determined:

- 1) The predicted highway traffic noise levels approach or exceed the noise abatement criteria as established in 23 CFR 772. **“Approach” is defined as within 1 dBA of the FHWA noise abatement criteria for the applicable land use category.**
- 2) The predicted traffic noise levels substantially exceed existing traffic noise levels in an area. **“Substantially exceed” is defined as an increase in noise levels of 15 dBA or more in the design year over the existing noise level.**

Based on the TNM modeling and future traffic conditions, noise impacts for the proposed Bishopville By-Pass are predicted to occur for the No-Build Alternative, Alternatives 1, 2, 3, 4 and 5 of the proposed bypass alternatives and both Truck Routes 1 and 2. Noise impacts were based on 2035 traffic conditions for each of the preliminary alternatives and are summarized in Table 5 and described as follows:

No-Build - The results of the noise analysis conducted for the No-Build Alternative indicate that predicted noise levels for Site 4 (St. Johns AME Church) and Site 5 (Bishopville Presbyterian Church) would exceed the NAC of 67 dBA Leq.

Alternative 1 - Approximately 14 receivers were modeled to represent the closest residences to the proposed alignment (Site 3 - Ezzell parking lot) as shown in Table 5. Predicted noise levels for Alternative A ranged from 49.6 to 62.9 dBA Leq. None of the modeled receivers were determined to have predicted noise levels that would approach or exceed the 67 dBA Leq NAC or substantially exceed existing noise levels.

Alternative 2 - Approximately 24 receivers (Receivers 9-38) were modeled to represent the closest single-family homes near the SC 341 and English Mill Road/Wags Drive intersection. Predicted noise levels for 10 receivers were determined to approach or exceed the 67 dBA Leq NAC and would represent a substantial increase over existing levels. For 7 of the modeled receivers, predicted noise levels would exceed the 67 dBA Leq NAC.

For those residences near the Dogwood Drive/Azalea Drive subdivision (Receivers 40-54), predicted noise levels for only one receiver, Receiver 51, was predicted to experience a substantial increase over existing levels with a predicted increase of 15.1 dBA Leq. None of the receivers would have noise levels that approach or exceed the 67 dBA Leq NAC.

In the area where the proposed Alternative 2 alignment ties back into its terminus at US 15 along Academy Road, predicted noise levels would exceed the 67 dBA Leq NAC for two of the Lynches River Apartment buildings (Receivers 1 and 4) and the nearest residence (Receiver 7).

Alternative 3 – Approximately 13 receivers (Receivers 1-14) were modeled for Alternative 3. None of the receivers modeled were predicted to have future noise levels that would approach or exceed the 67 dBA Leq NAC. However, Receivers 10 and 12-14 are anticipated to experience substantial noise level increases over their existing levels. These increases ranged from 16.1 dBA Leq to 18.9 dBA Leq.

Table 5

Summary of Predicted Noise Levels (dBA Leq)

Site No.	Receptor	No. of Sites Represented	Noise Abatement Criteria	Existing Noise Levels	No-Build	Design Year 2035 Build Alternatives					
						Alt. 1	Alt. 2	Alt. 3	Alt. 4	Truck Route 1	Truck Route 2
Site 1	Country Manor Estates	10 single-family units	67	46	46	46	46	54	55	46	46
Site 2	Chappell Park	3 single-family units 1 ballpark & playground	67	47	47	47	47	47	60	47	47
Site 3	Ezzell parking lot	14 single-family units	67	49	49	62	49	49	49	49	49
Site 4	St. Johns AME Church	3 sf units, 1 church 2 businesses	67	68	71	69	69	68	68	69	67
Site 5	Bishopville Presbyterian Church	5 single-family units 1 church	67	68	70	68	68	67	67	66	66
Site 6	Site adj to Post Office	6 single-family units 1 hotel, 1 post office 3 businesses	67	61	63	59	60	60	60	61	61
Site 7	Site adj to Historic Home	3 single-family units	67	59	59	59	59	59	59	59	59
Site 8	Site adj to Alt. 1/Alt. 2	25 single-family units	67	55	55	55	55	55	55	55	55
Site 9	Lee Street - residences	34 residences 2 churches	67	59	59	59	59	59	59	72	73

Alternative 4 – Approximately 20 receivers (Receivers 2-33) were modeled for Alternative 4. Two of the receivers modeled, Receivers 4 and 17 were predicted to have future noise levels that would either approach or exceed the 67 dBA Leq NAC. Receivers 5, 10, 15 and 18-19 are anticipated to experience substantial noise level increases over their existing levels. These increases ranged from 15.3 dBA Leq to 18.6 dBA Leq.

Alternative 5 – The alignment for Alternative 5 is essentially the same alignment as Alternative 2 in regards to potential noise impacts. Approximately 24 receivers (Receivers 9-38) were modeled to represent the closest single-family homes near the SC 341 and English Mill Road/Wags Drive intersection. Predicted noise levels for 10 receivers were determined to approach or exceed the 67 dBA Leq NAC and would represent a substantial increase over existing levels. For 7 of the modeled receivers, predicted noise levels would exceed the 67 dBA Leq NAC.

For those residences near the Dogwood Drive/Azalea Drive subdivision (Receivers 40-54), predicted noise levels for only one receiver, Receiver 51, was predicted to experience a substantial increase over existing levels with a predicted increase of 15.1 dBA Leq. None of the receivers would have noise levels that approach or exceed the 67 dBA Leq NAC.

Truck Route 1 – Approximately 102 receivers (Receivers 1-102) were modeled to represent existing noise sensitive sites along the proposed Truck Route 1 through the downtown Bishopville area. Based on the TNM modeling, at least 30 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC. None of the modeled receivers would experience substantial noise level increases over their existing levels.

Truck Route 2 – Approximately 86 receivers (Receivers 1-89) were modeled to represent existing noise sensitive sites along the proposed Truck Route 2 through the downtown Bishopville area. At least 33 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC. None of the modeled receivers would experience substantial noise level increases over their existing levels.

It is also important to note that predicted noise levels for Sites 4 (St. Johns AME Church) and Site 5 (Bishopville Presbyterian Church) would approach or exceed the 67 dBA Leq NAC under existing conditions, the No-Build Alternative, and each of the preliminary build alternatives including the two Truck Route alternatives. Therefore, predicted noise levels for Sites 4 and 5 will approach or exceed the 67 dBA Leq NAC both with and without the proposed Bishopville By-pass.

In comparison, predicted noise levels for Sites 4 and 5 would be slightly less under Alternatives 3 and 4 than compared to Alternatives 1, 2 and 5. Predicted noise levels for Truck Route 1 would be the same as Alternatives 1, 2 and 5 for Site 4 (St. Johns AME Church) and would be slightly less than for existing, No-Build and Alternatives 1-5 for Site 5 (Bishopville Presbyterian Church). Predicted noise levels for Sites 4 and 5 under Truck Route 2 would be slightly less compared to those for existing, No-Build and Alternatives 1-5.

5.0 NOISE ABATEMENT MEASURES

When traffic noise impacts are identified, noise abatement must be considered and evaluated for feasibility and reasonableness. In abating noise impacts, primary consideration is given to exterior areas where frequent human use occurs. Planting of vegetation or landscaping is not considered an acceptable Federal-aid noise abatement measure because only dense stands of evergreen vegetation at least 100 feet deep will reduce noise levels.

In accordance with 23 CFR 772.13(c), the following noise abatement measures were considered as a means to reduce or eliminate traffic noise impacts.

5.1 Traffic Management Measures

Traffic management measures that limit vehicle type, speed, volume and time of operations are often ineffective noise abatement measures. The proposed speed limit for the bypass facility is designed for 60 mph. Any further reduction in the speed limit or use of other traffic management measures would be adversely detrimental to the project's ability to function as a bypass. Restricting truck traffic would be difficult to enforce and would severely conflict with the project's purpose and need to eliminate truck traffic and traffic congestion in the downtown area. Therefore, traffic management measures were not considered as a viable alternative.

5.2 Alignment Modification

The selection of a preferred highway alignment typically involves the horizontal or vertical orientation of the proposed project, wherever feasible, in such a way as to minimize impacts and costs. The selection of any of the proposed alternatives for noise abatement purposes must consider the balance between noise impacts and other engineering and environmental parameters. This method was used during the development of the preliminary build alternatives and was implemented throughout the entire process.

5.3 Property Acquisition

The acquisition of right of way is generally not considered a reasonable alternative for noise abatement. The acquisition of property from the noise sensitive properties impacted by the project would be more expensive and disruptive than other noise abatement measures. Therefore, this abatement measure was not considered reasonable and was dropped from further consideration.

5.4 Noise Barriers

This type of mitigation involves construction of solid mass barriers to effectively diffract, absorb and reflect highway traffic noise. These may include earth berms and/or noise walls. The evaluation of the reasonableness and feasibility of noise wall construction is based on many factors, some of which include constructability, cost, height, anticipated noise increase, noise reduction obtained, number of receptors benefited, residents' views, land use type and whether land use changes are expected.

The SCDOT Traffic Noise Abatement Policy has established criteria for determining the feasibility and reasonableness of noise barriers.

Feasibility - Feasibility is primarily concerned with the engineering aspects of a noise abatement measure, including:

- **Acoustic Feasibility.** It is SCDOT's policy that a noise reduction of at least 5 dBA be achieved for 75 percent of those receivers determined to be impacted for the noise abatement measure to be acoustically feasible.

- **Engineering Feasibility.** Feasibility deals with engineering considerations. The ability to achieve noise reduction may be limited by:

- 1) Topography – Determine if the abatement measure could be constructed given the topography of the location.
- 2) Safety - Maintain a clear recovery zone, sight distance and the accommodation of disabled vehicles.
- 3) Drainage - Issues created by directing water along, under, or away from an abatement measures.
- 4) Utilities - Large overhead power lines, underground water, sewer, gas, oil, etc., can have a significant impact on costs and design options.
- 5) Maintenance - Potential issues from location of abatement measure and construction materials.
- 6) Access - Refers to the ingress and egress to properties that would be affected by the noise abatement measure.
- 7) The exposed height of the noise abatement measure cannot exceed 25 feet based on constructability constraints.

Reasonableness - There are Three Mandatory Reasonable Factors that must be met for a noise abatement measure to be considered reasonable. The Three Mandatory Reasonable Factors must collectively be achieved in order for a noise abatement measure to be deemed reasonable. Failure to achieve any one of the reasonable factors will result in the noise abatement measure being deemed not reasonable.

1. Viewpoints of the property owners and residents of the benefited receptors.

The viewpoints of all of the benefited receptors will be solicited and documented as to a decision on either desiring or not desiring the noise abatement measure. The viewpoints will be solicited as part of the public involvement process through a voting procedure. The method of obtaining the votes will be determined on a project-by-project basis, but may include flyers, door-to-door surveys, a public meeting, or a mailing. The voting ballot will explain that the noise abatement shall be constructed unless a majority (greater than 50% of the benefited receptors) of votes not desiring noise abatement is received.

For non-owner occupied benefited receptors, both the property owner and the renter may vote on whether the noise abatement is desired. One owner ballot and one resident ballot shall be solicited for each benefited receptor.

Homeowner associations or local governments cannot be given authority over the desirability for abatement. The viewpoints of the abatement must be solicited from the property owners and tenants.

2. Cost effectiveness. The allowable cost of the abatement will be based on \$35.00 per square foot. This allowable cost is based on actual construction costs on recent SCDOT projects. This construction cost will be divided by the number of benefited receptors. If the cost per benefited receptor is less than **\$30,000** then the barrier is determined to be cost effective. This allowable cost will be reanalyzed every 5 years.

3. Noise reduction design goal. It is SCDOT's policy that a noise reduction of at least 8 dBA must be achieved for 80% of those receivers determined to be benefited.

The feasibility and reasonableness of constructing noise barriers as a means for noise abatement was investigated for those sites whose predicted noise levels would approach or exceed their respective NAC or whose noise levels would substantially exceed their existing levels. Consideration for constructing noise barriers was evaluated for those locations under each alternative meeting the SCDOT policy for noise abatement.

Alternative 2

Predicted noise levels for those residences near the SC 341 and English Mill Road/Wags Drive intersection would exceed the 67 dBA Leq NAC and would substantially exceed their existing levels (see Figure 3). In considering the severity of the noise impact, this area represents approximately 14 single-family residences after right of way acquisition. Eight of these residences are located on the east side of the proposed Bishopville By-pass and the remaining 6 residences are located on the west side.

In order to achieve a reasonable 8 dBA Leq noise reduction for at least 80 percent of the receivers, the cost-effectiveness of constructing a noise wall approximately 12 feet high and 960 feet long to shield those residences to the east (Receivers 9, 11, 16, 17-19, 26 and 27) was approximately \$50,455 (see Table 6). For the west side of the proposed bypass, constructing a noise wall approximately 12 feet high and 1,000 feet long to reduce predicted noise levels for six receivers (Receivers 28, 29, 31, 32, 33 and 37) would yield a cost-effectiveness of approximately \$70,146. Therefore, since the cost-effectiveness of constructing both noise walls would exceed the recommended \$30,000 cost per benefitted receptor as indicated in the *SCDOT Traffic Noise Abatement Policy*, constructing noise walls on either side of the proposed bypass was deemed not cost-effective and therefore, noise walls were not recommended.

Consideration for barriers was also given to shield those single-family residences located near the Dogwood Drive/Azalea Drive subdivision. However, based on the TNM modeling, only one receiver (residence) was predicted to experience a substantial increase over their existing levels. None of the receiver sites would have predicted noise levels that approach or exceed the 67 dBA Leq NAC. Therefore, it was considered neither reasonable nor cost-effective to provide noise walls for one receiver.



Bishopville By-Pass

Potential Sites Affected by Alternatives 2 & 5

FIGURE 3



- Alternative 1, 4.94 miles
- Alternative 2, 5 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites



Table 6**Noise Barrier Analysis Summary**

Alternative	Residences Affected	Location	Barrier Height (ft)	Barrier Length (ft)	Barrier Cost*	Cost-Effectiveness Ratio
2, 5	Receivers 9, 11, 16, 17, 18, 19, 26, and 27	East side of Bypass	12	961	\$403,622	\$50,453
2, 5	Receivers 28, 29, 31, 32, 33, and 37	West side of Bypass	12	1,002	\$420,878	\$70,146

*assumes construction cost of \$35/sq. ft.

The proposed alignment for Alternative 2 includes using a segment of an existing roadway, Academy Street, which connects the by-pass facility with US 15 at the northern end of the project. Academy Street provides access from the existing road network to the Lynches River Apartments, whose predicted future noise levels would exceed the 67 dBA Leq NAC (see Figure 4). Access for the residents of these apartments will need to be maintained by the two existing driveway entrances on Academy Street. Access or driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. In addition, land uses such as apartments typically desire a large amount of visibility to maintain their economic viability. Therefore, noise barriers were not considered feasible or reasonable for this location.

Alternative 3

None of the receivers modeled were predicted to have future noise levels that would approach or exceed the 67 dBA Leq NAC. However, Receivers 10 and 12-14 are anticipated to experience substantial noise level increases over their existing levels (see Figure 5). Receiver 10 represents an isolated single-family residence located along Denny Pond Lane, just north of Julia Drive and west of Chappell Park. Since this receiver represents only one residence, it was considered neither reasonable nor cost-effective to provide noise walls for one receiver.

Receivers 12-14 represents two rural single-family residences and an associated building located along Barnes Drive just east of Denny Pond Lane and northeast of Chappell Park (see Figure 6). Since this receiver represents only two residences located on a single large parcel of land, it was considered neither reasonable nor cost-effective to provide noise walls for this location.

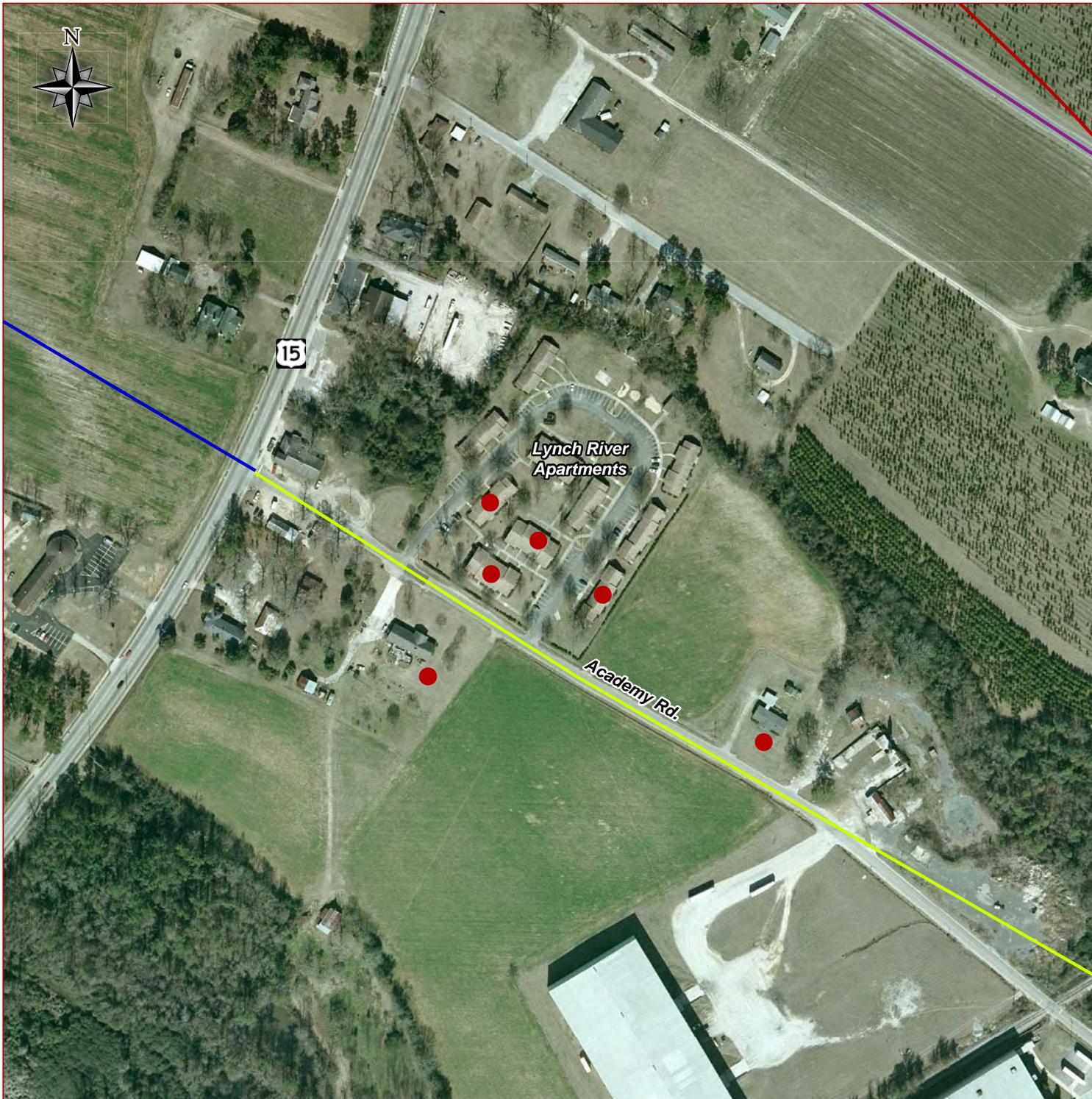
Alternative 4

Two of the receivers modeled, Receivers 4 and 17 were predicted to have future noise levels that would either approach or exceed the 67 dBA Leq NAC. Receivers 5, 10, 15 and 18-19 are anticipated to experience substantial noise level increases over their existing levels.

Receivers 4, 5 and 15 represent approximately 3 rural single-family residences located near the intersection of SC 34 and Country Manor Estates Road. Since access along SC 34, Country Manor Estates Road and for the driveways to these residences will remain or continue to be provided, constructing a noise wall at this location was not considered either reasonable or cost-effective. Access or driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed.

As indicated for Alternative 3, Receiver 10 represents an isolated single-family residence located along Denny Pond Lane, just north of Julia Drive and west of Chappell Park (Figure 5). Since this receiver represents only one residence, it was considered neither reasonable nor cost-effective to provide noise walls for one receiver.

Receivers 17-19 represent the two rural single-family residences and an associated building located along Barnes Drive just east of Denny Pond Lane and northeast of Chappell Park (Figure 6).



Bishopville By-Pass

Potential Sites Affected by
Alternatives 2 & 5

FIGURE 4



- Alternative 1, 4.94 miles
- Alternative 2,5 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites





Bishopville By-Pass

Potential Sites Affected by
Alternative 3 & 4

FIGURE 5

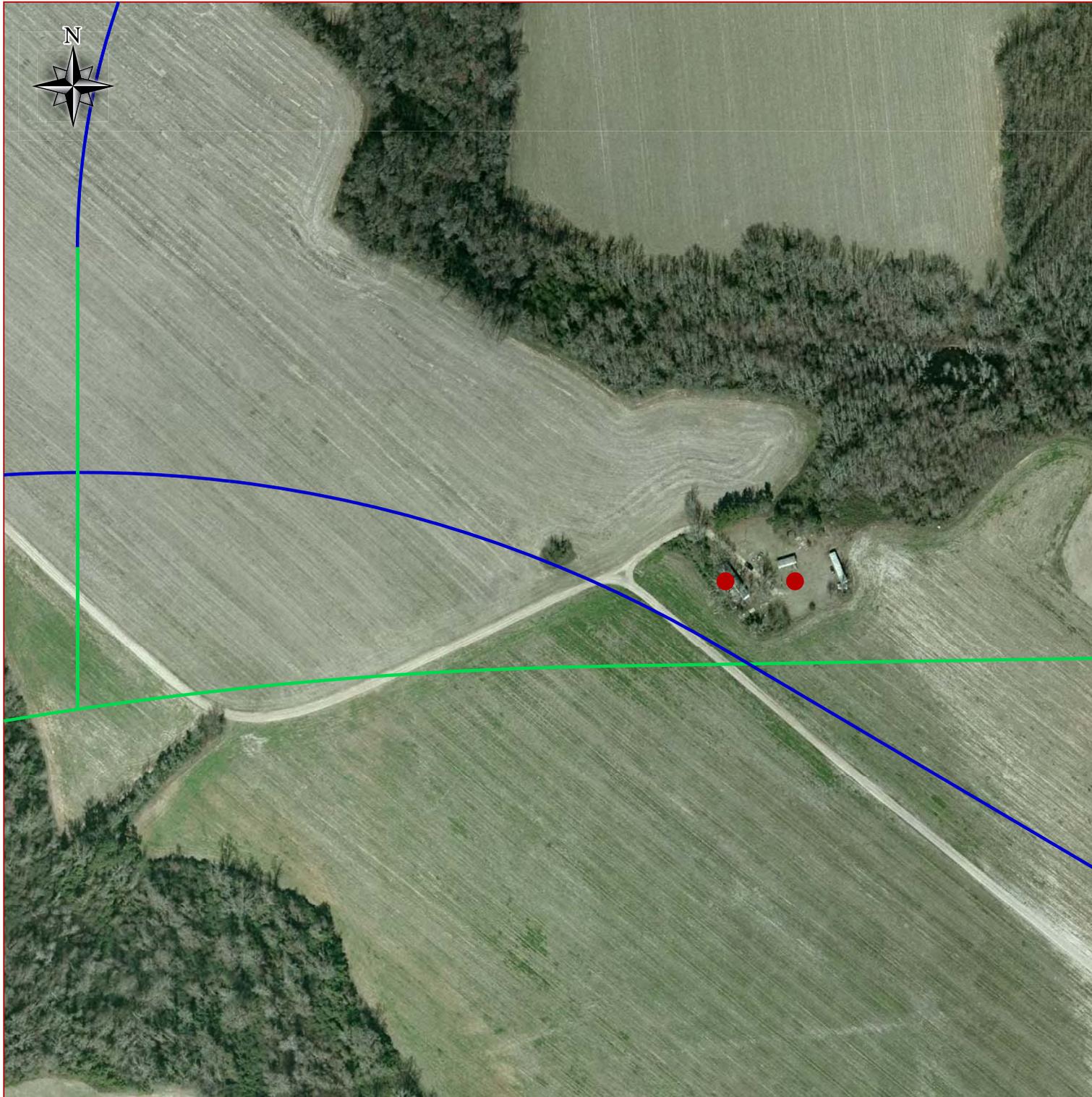


- Alternative 1, 4.94 miles
- Alternatives 2,5 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites





Bishopville By-Pass

Potential Sites Affected by
Alternative 3 & 4

FIGURE 6



- Alternative 1, 4.94 miles
- Alternative 2,5 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites

Since this site represents only two residences located on a single large parcel of land, it was considered neither reasonable nor cost-effective to provide noise walls for this location.

Alternative 5

As described previously for Alternative 2, predicted noise levels for those residences near the SC 341 and English Mill Road/Wags Drive intersection would exceed the 67 dBA Leq NAC and would substantially exceed their existing levels (see Figure 3). In considering the severity of the noise impact, this area represents approximately 14 single-family residences after right of way acquisition. Eight of these residences are located on the east side of the proposed Bishopville By-pass and the remaining 6 residences are located on the west side.

In order to achieve a reasonable 8 dBA Leq noise reduction for at least 80 percent of the receivers, the cost-effectiveness of constructing a noise wall approximately 12 feet high and 960 feet long to shield those residences to the east (Receivers 9, 11, 16, 17-19, 26 and 27) was approximately \$50,455 (see Table 6). For the west side of the proposed bypass, constructing a noise wall approximately 12 feet high and 1,000 feet long to reduce predicted noise levels for six receivers (Receivers 28, 29, 31, 32, 33 and 37) would yield a cost-effectiveness of approximately \$70,146. Therefore, since the cost-effectiveness of constructing both noise walls would exceed the recommended \$30,000 cost per benefitted receptor as indicated in the *SCDOT Traffic Noise Abatement Policy*, constructing noise walls on either side of the proposed bypass was deemed not cost-effective and therefore, noise walls were not recommended.

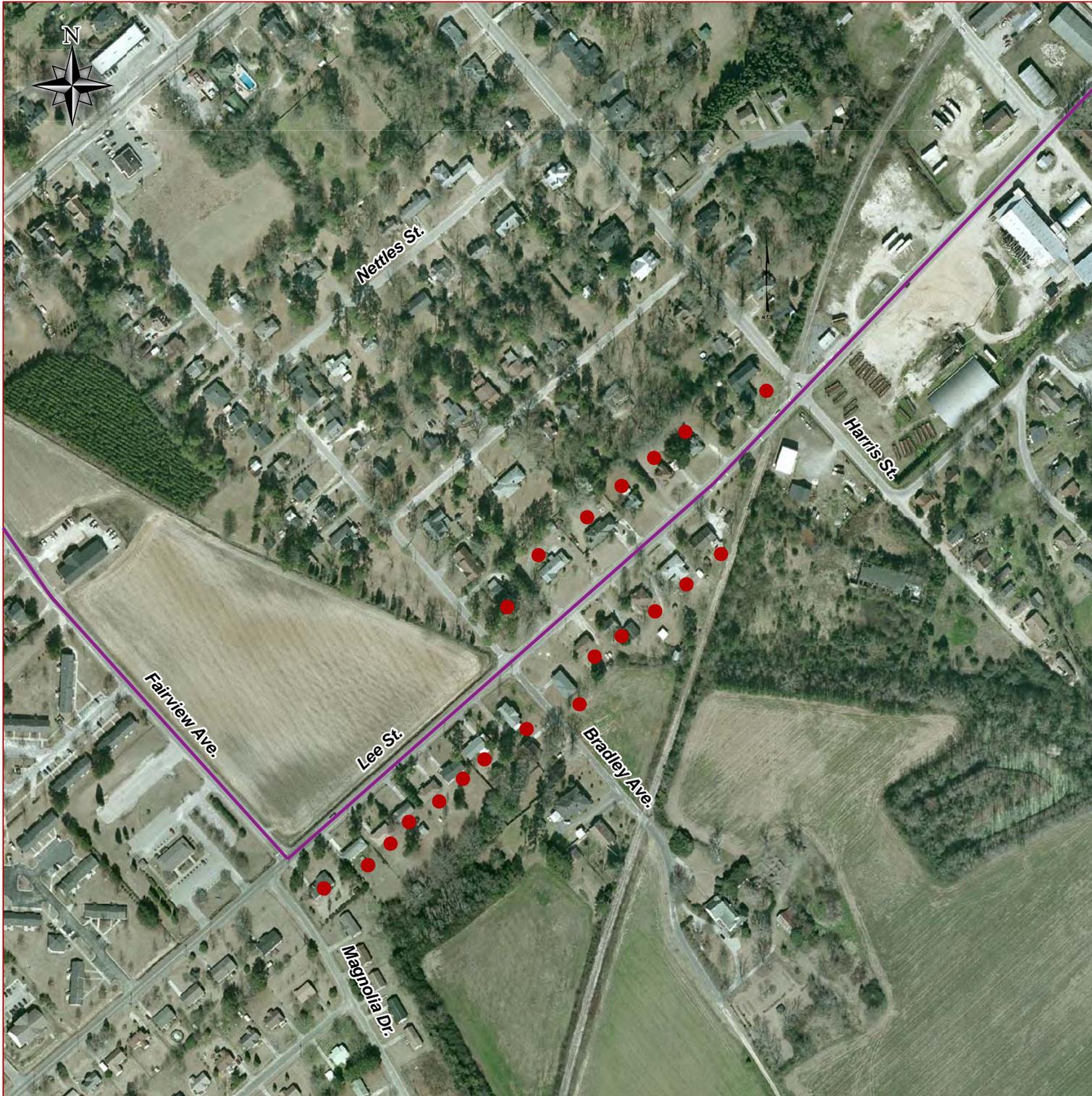
Consideration for barriers was also given to shield those single-family residences located near the Dogwood Drive/Azalea Drive subdivision. However, based on the TNM modeling, only one receiver (residence) was predicted to experience a substantial increase over their existing levels. None of the receiver sites would have predicted noise levels that approach or exceed the 67 dBA Leq NAC. Therefore, it was considered neither reasonable nor cost-effective to provide noise walls for one receiver.

Truck Routes 1 and 2

In addition to those alternatives proposed on new location, two alternative truck routes that utilize existing downtown Bishopville streets were considered. Approximately 102 receivers (Receivers 1-102) were modeled to represent existing noise sensitive sites along the proposed Truck Route 1 through the downtown Bishopville area. Based on the TNM modeling, at least 30 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC.

Approximately 86 receivers (Receivers 1-89) were modeled to represent existing noise sensitive sites along the proposed Truck Route 2 through the downtown Bishopville area. At least 33 of the modeled receivers would have predicted noise levels that either approach or exceed the 67 dBA Leq NAC.

Nearly all of the modeled receivers for both Truck Routes 1 and 2 have direct access onto the local streets, Cousar Street and Lee Street (see Figures 7-8). It would be impractical to consider constructing a noise wall or walls along these existing streets. Access or



Bishopville By-Pass

Potential Sites Affected by
Truck Routes 1 & 2

FIGURE 7

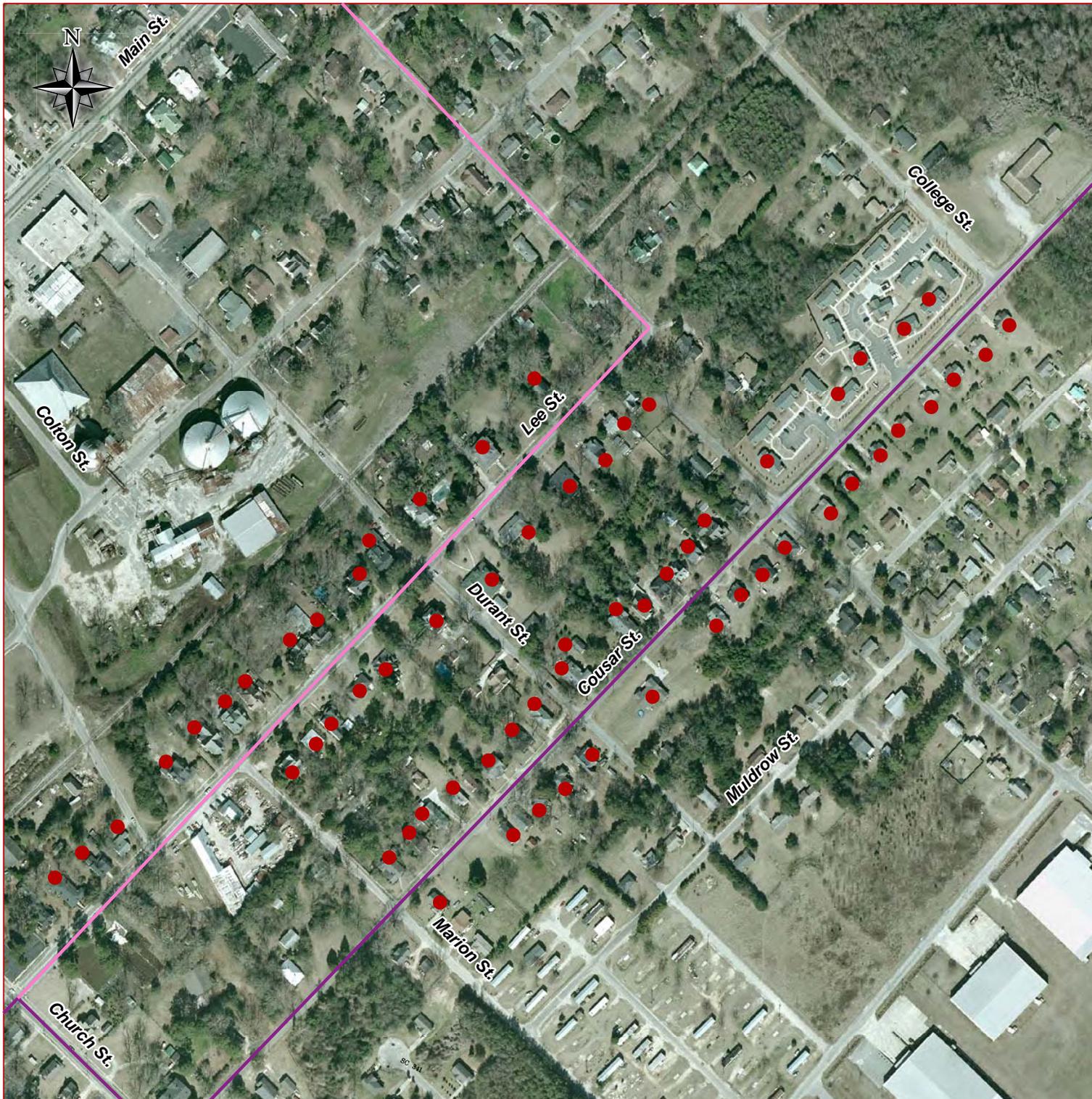


- Alternative 1, 4.94 miles
- Alternative 2, 5 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites





Bishopville By-Pass

Potential Sites Affected by
Truck Routes 1 & 2

FIGURE 8

- Alternative 1, 4.94 miles
- Alternative 2, 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites



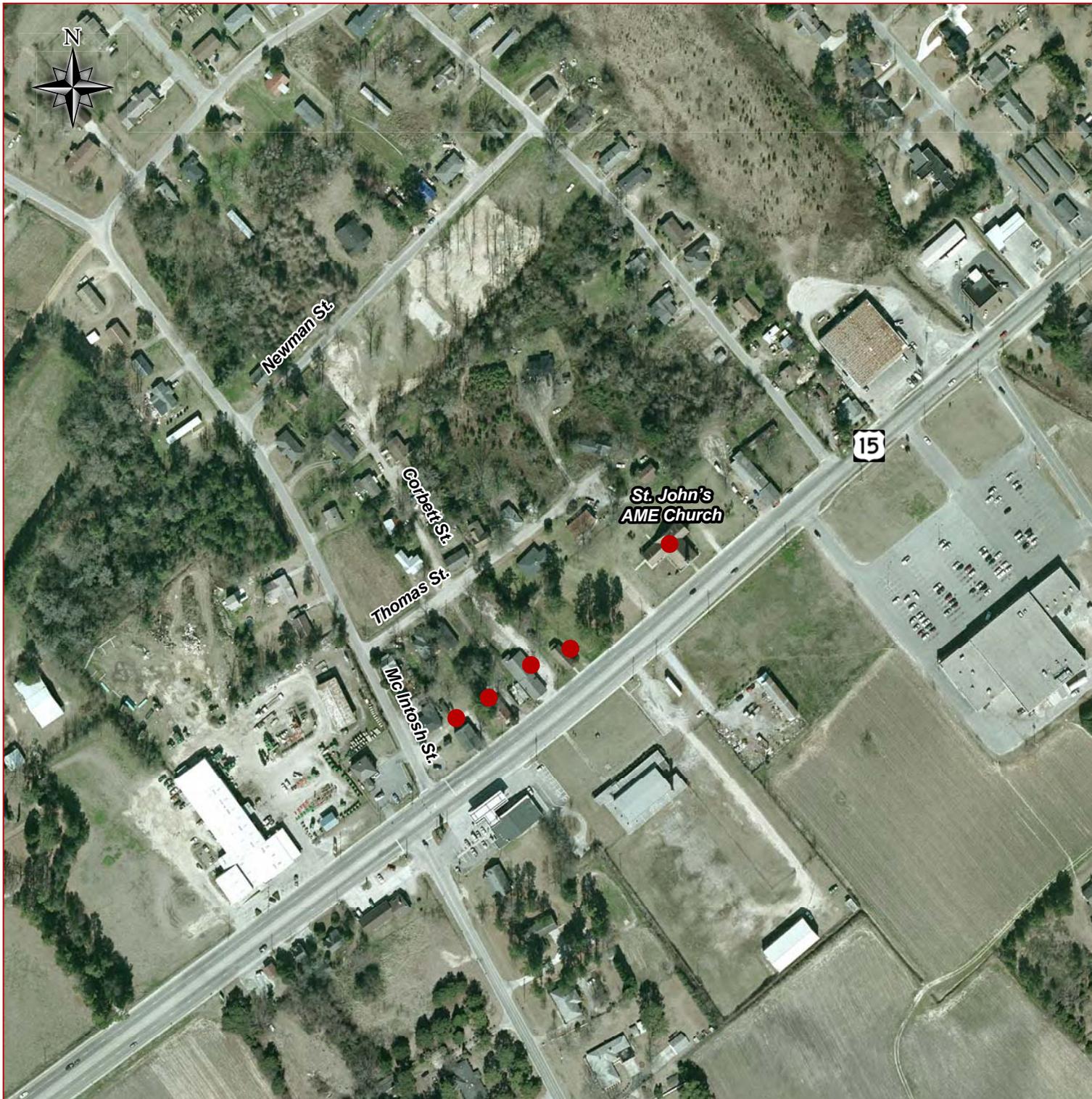
driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. Therefore, constructing noise barriers for Truck Routes 1 and 2 were not considered feasible or reasonable and none were proposed.

Preferred Alternative

Based on the evaluation of social, cultural and environmental impacts and other factors, Alternative 1 was identified and recommended as the Preferred Alternative for the Bishopville By-Pass. In terms of potential noise impacts, the proposed alignment for the Preferred Alternative bypasses Bishopville to the southeast. Approximately 14 receivers were modeled to represent the closest residences to the proposed alignment. Predicted noise levels for the Preferred Alternative ranged from 49.6 to 62.9 dBA Leq. None of the modeled receivers were determined to have predicted noise levels that would approach or exceed the 67 dBA Leq NAC or substantially exceed existing noise levels. Therefore, noise abatement measures were not considered or deemed necessary for these receivers and none were proposed.

Existing Noise Sensitive Areas Affected by All Build Alternatives

As demonstrated by the preliminary noise analysis, two existing noise sensitive site areas, the St. Johns AME Church (see Figure 9) and the Bishopville Presbyterian Church (Figure 10), are predicted to have future noise levels that will either approach or exceed the 67 dBA Leq NAC. Based on their locations, it would be impractical to consider constructing a noise wall or walls along existing US 15. Access or driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. Therefore, constructing noise barriers for these existing noise sensitive areas were not considered feasible or reasonable and none were proposed.



Bishopville By-Pass
*Potential Sites Affected by
 All Alternatives*
 FIGURE 9

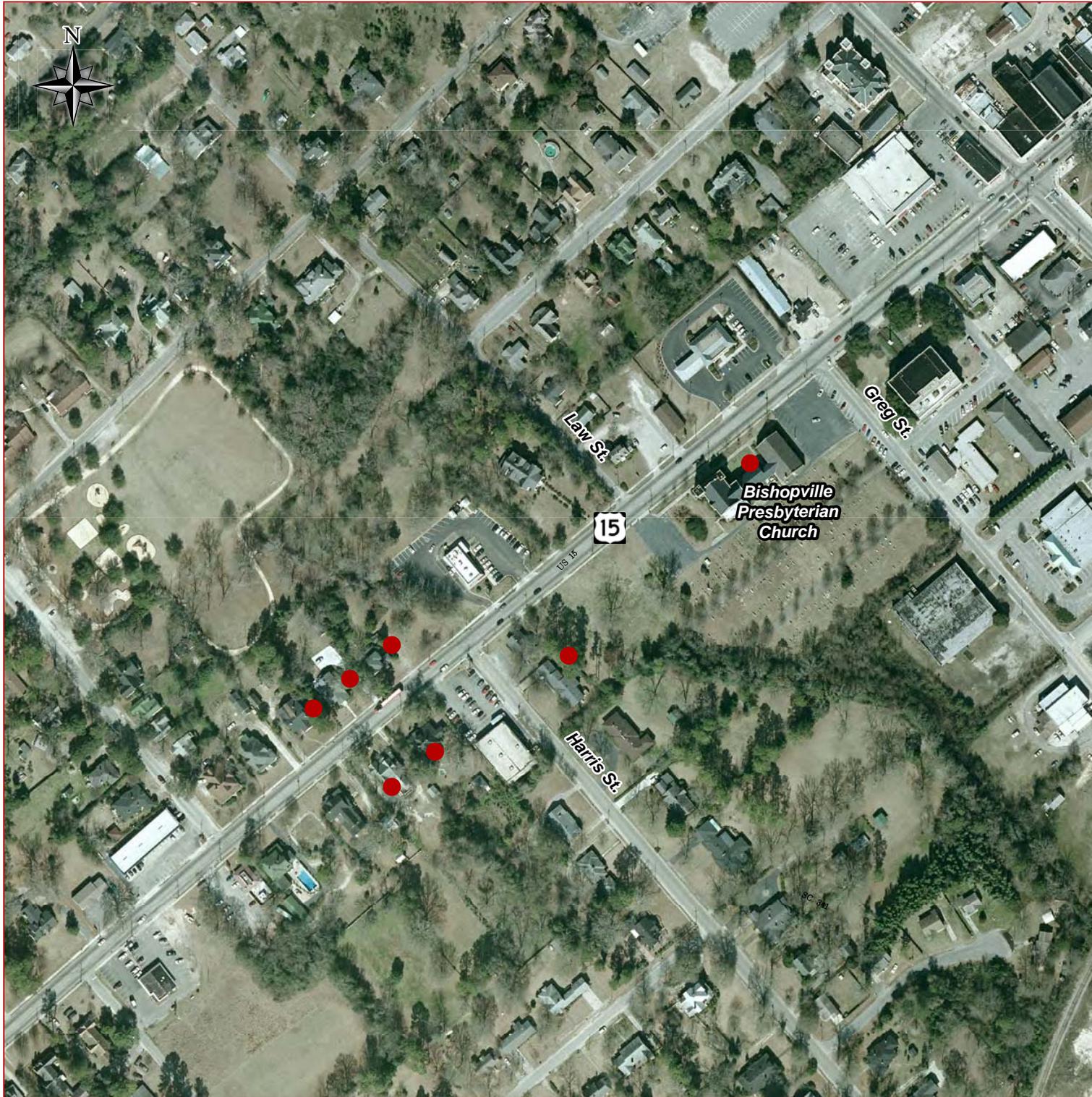


- Alternative 1, 4.94 miles
- Alternative 2, 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend

- Affected Noise Sites





Bishopville By-Pass
Potential Sites Affected by All Alternatives
FIGURE 10



- Alternative 1, 4.94 miles
- Alternative 2, 4.16 miles
- Alternative 3, 6.69 miles
- Alternative 4, 3.90 miles
- Truck Route 1, 2.94 miles
- Truck Route 2, 1.80 miles

Legend
● Affected Noise Sites



6.0 SUMMARY AND CONCLUSIONS

A preliminary and detailed noise analysis was conducted for the proposed construction of the Bishopville By-Pass project. The analysis was performed in accordance with the SCDOT's *Traffic Noise Abatement Policy, March 2011* and with Title 23 CFR (Code of Federal Regulations) Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.

Traffic noise impacts occur when noise levels generated by the proposed project approach or exceed the NAC or when predicted noise levels substantially exceed existing noise levels. As demonstrated by the preliminary noise analysis conducted for the Bishopville By-Pass, traffic noise impacts are predicted to occur for the No-Build Alternative, Alternatives 1, 2, 3, 4 and 5 of the proposed bypass alternatives, and both Truck Routes 1 and 2.

For Alternative 2, future noise levels for three of the Lynches River Apartment buildings are anticipated to exceed the 67 dBA NAC. The proposed alignment for Alternative 2 includes a segment of an existing roadway, Academy Street, which connects the by-pass facility with US 15 at the northern end of the project. Academy Street provides direct access to the Lynches River Apartments. Access for residents of these apartments will need to be maintained by the two existing driveway entrances on Academy Street. Access or driveway openings would severely compromise the overall effectiveness of a noise barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. In addition, land uses such as apartments typically desire a large amount of visibility to maintain their economic viability. Therefore, noise barriers were not considered reasonable for this location.

The construction of noise barriers was evaluated for those residences and noise-sensitive sites located near the intersection of SC 341 and English Mill Road/Wags Drive and adjacent to the proposed Alternative 2 and Alternative 5 alignments. However, based on a preliminary and detailed noise barrier analysis conducted at these locations, the construction of noise barriers was determined to be not cost-effective and therefore, not reasonable.

Based on the evaluation of social, cultural and environmental impacts and other factors, Alternative 1 was identified and recommended as the Preferred Alternative for the Bishopville By-Pass. Predicted noise levels along the new alignment portion of the Preferred Alternative ranged from 49.6 to 62.9 dBA Leq. None of the modeled receivers were determined to have predicted noise levels that would approach or exceed the 67 dBA Leq NAC or substantially exceed existing noise levels. Therefore, noise abatement measures were not considered or deemed necessary for these receivers and none were proposed.

Abatement measures were also investigated for those noise sensitive receivers located along existing US 15. For Alternative 1, predicted noise levels for Site 4 (St. Johns AME Church) would increase 1 dBA over its existing level of 68 dBA Leq and would be 2 dBA Leq lower than noise levels predicted for the No-Build Alternative. The resultant noise level for Site 4 under Alternative 1 would exceed the 67 dBA Leq NAC. The predicted noise level for Site 5 (Bishopville Presbyterian Church) would remain at its existing level of 68 dBA Leq and would exceed the NAC.

Sites 4 and 5 represent locations along existing US 15 and are not located along the Preferred Alternative. Based on their locations, it would be impractical to consider constructing a noise

wall or walls along existing US 15. Access or driveway openings would severely compromise the overall effectiveness of the barrier and would create a safety concern due to restricted sight distances at these openings if a barrier were constructed. Therefore, constructing noise barriers for these existing noise sensitive areas were not considered feasible or reasonable and none were proposed.

7.0 CONSTRUCTION AND VIBRATION

There would be unavoidable short-term noise impacts associated with project construction. Areas along the proposed build alternatives could be affected by noise generated from various construction activities. The major construction elements associated with the construction of the Bishopville By-Pass project are expected to be earth moving, hauling, grading and paving. General construction noise impacts to individuals living or working near the project would be expected, particularly from noise generated by paving operations and from earth-moving equipment. Bridge construction may include driving piles. Overall, construction noise impacts are expected to be minimal since construction noise would be relatively short in duration and could be restricted to daytime hours.

8.0 COORDINATION WITH LOCAL OFFICIALS

A copy of the Final Noise Study Report will be made available to the following local officials or representatives:

Pete Hipps, Planning Director
Santee-Lynches Council of Governments
PO Box 1837
36 West Liberty Street
Sumter, South Carolina 29151

Appendix

- **Field data sheets**
- **Traffic data**
- **TNM data files (on CD)**

Field Data Sheets

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/24/11

Time Study Started: 2:30 pm Time Study Ended: 2:45 pm

Project Identification:

Financial Management Number: PIN 33261, State file: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Site 1 - Country Manor Estates Rd

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 80° Wind Speed 5mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: D2-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 45.9 dBA Leg

Major Sources: trucks on SC 34

Unusual Events: NONE

Other Notes: none



Site 1
Country Manor Estates Road

Site 1 - Country Manor Est (midday)

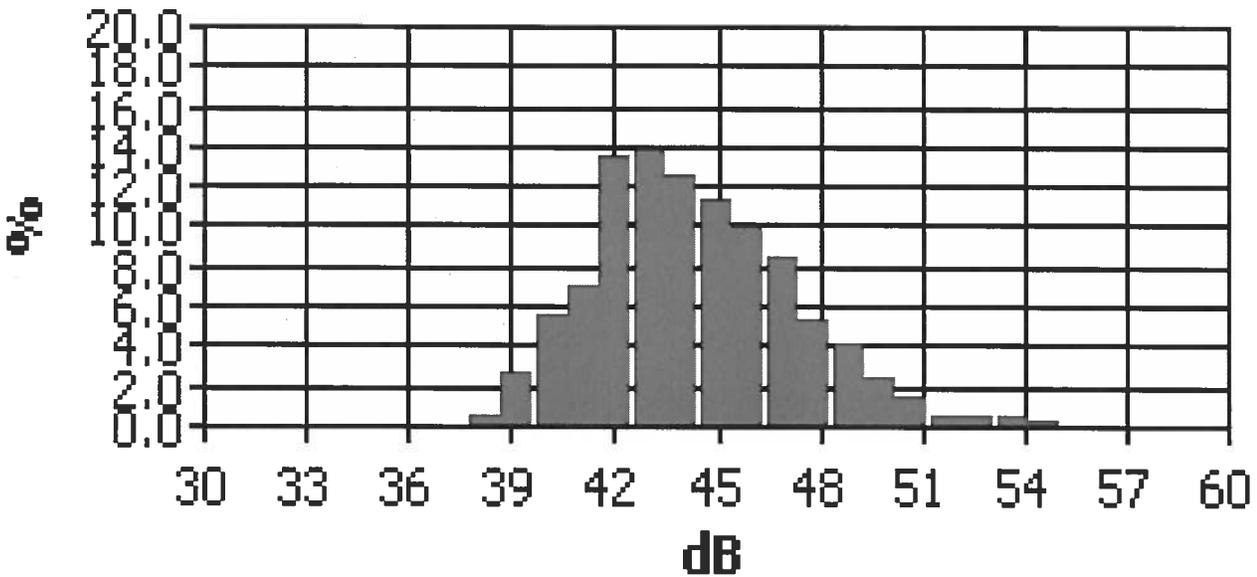
Information Panel

Name BGH040004_25032011_161336
Start Time Thursday, March 24, 2011 14:31:47
Stop Time Thursday, March 24, 2011 14:46:53
Device Model Type SoundPro DL
Comments

General Data Panel

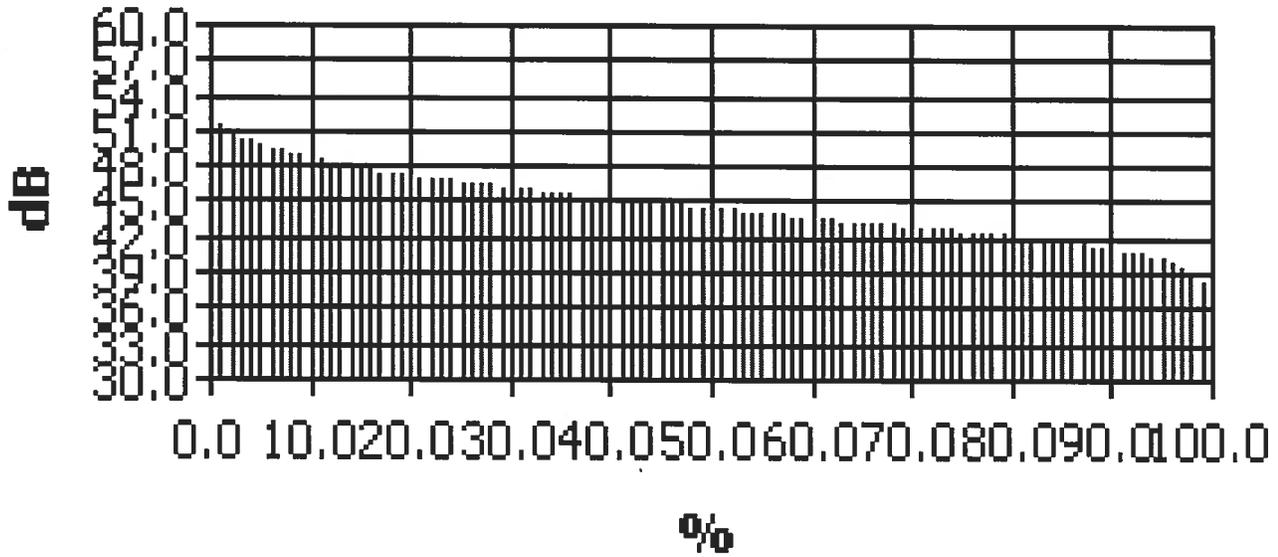
Description	Meter	Value	Description	Meter	Value
Leq	1	45.9 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5
39.0	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.5	2.7
40.0	0.5	0.3	0.3	0.6	0.6	0.5	0.7	0.7	0.7	0.8	5.5
41.0	0.8	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.7	0.9	7.0
42.0	0.9	1.1	1.3	1.1	1.2	1.5	1.5	1.5	1.7	1.7	13.4
43.0	1.7	0.8	1.4	1.7	1.5	1.4	1.2	1.2	1.2	1.5	13.6
44.0	1.4	1.2	1.1	1.2	1.4	1.5	1.3	1.1	1.1	1.3	12.6
45.0	1.1	1.1	1.0	1.1	1.1	1.1	1.3	1.2	1.2	1.1	11.4
46.0	1.3	0.8	1.0	1.0	1.1	1.0	1.0	0.9	1.0	1.0	10.0
47.0	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.7	0.6	8.5
48.0	0.7	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.6	5.3
49.0	0.5	0.3	0.4	0.5	0.4	0.4	0.3	0.4	0.4	0.4	4.1
50.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	2.4
51.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4
52.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.5
53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.4
54.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5
55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		52.9	51.4	50.8	50.3	50.0	49.7	49.4	49.2	48.9
10%	48.7	48.5	48.3	48.1	47.9	47.8	47.6	47.5	47.4	47.3
20%	47.2	47.1	47.0	46.9	46.8	46.7	46.6	46.5	46.4	46.3
30%	46.2	46.1	45.9	45.9	45.8	45.7	45.6	45.5	45.4	45.4
40%	45.3	45.2	45.1	45.0	44.9	44.8	44.7	44.6	44.6	44.5
50%	44.4	44.3	44.3	44.2	44.1	44.0	43.9	43.9	43.8	43.7
60%	43.6	43.6	43.5	43.4	43.3	43.3	43.2	43.1	43.1	43.0
70%	42.9	42.8	42.8	42.7	42.7	42.6	42.5	42.5	42.4	42.3
80%	42.2	42.1	42.1	42.0	41.9	41.8	41.6	41.5	41.4	41.2
90%	41.0	40.9	40.8	40.6	40.5	40.3	40.1	39.8	39.5	39.2
100%	38.3									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/24/11

Time Study Started: 3:10 pm Time Study Ended: 3:25 pm

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Chappell Park (softball/baseball fields)
(site 2)

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 80°F Wind Speed 3 mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 47.4 dBA Leg

Major Sources: background

Unusual Events: maintenance man spraying for weeds, small plane in

Other Notes: distance



Site 2
Chappell Park

Site 2 - Chappell Park (midday)

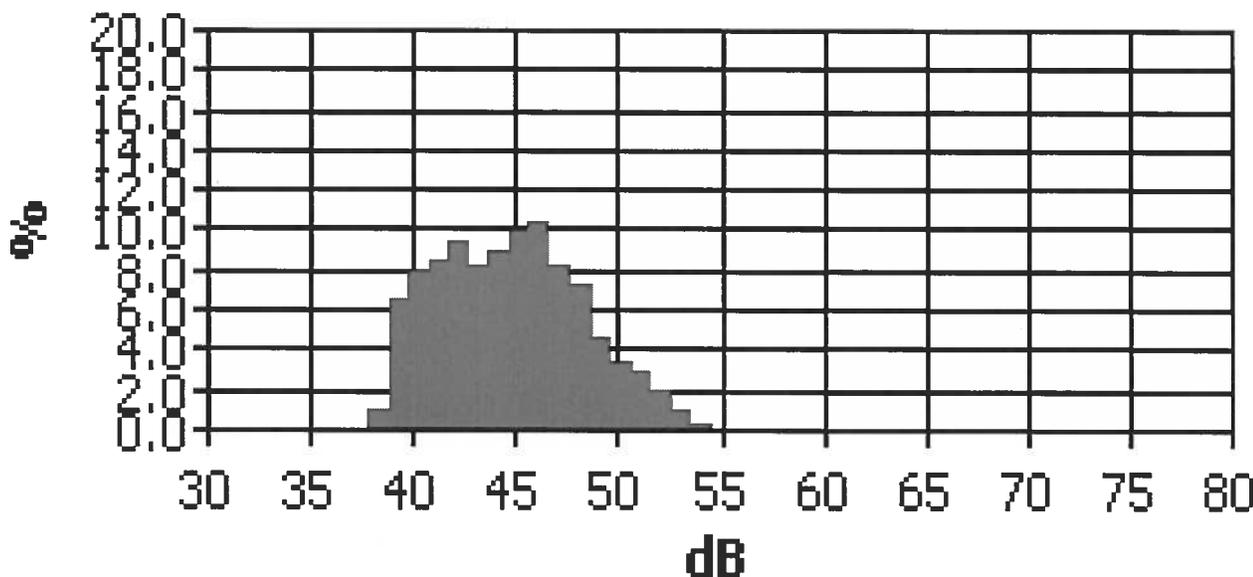
Information Panel

Name BGH040004_25032011_161337
Start Time Thursday, March 24, 2011 15:12:05
Stop Time Thursday, March 24, 2011 15:27:12
Device Model Type SoundPro DL
Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	47.4 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

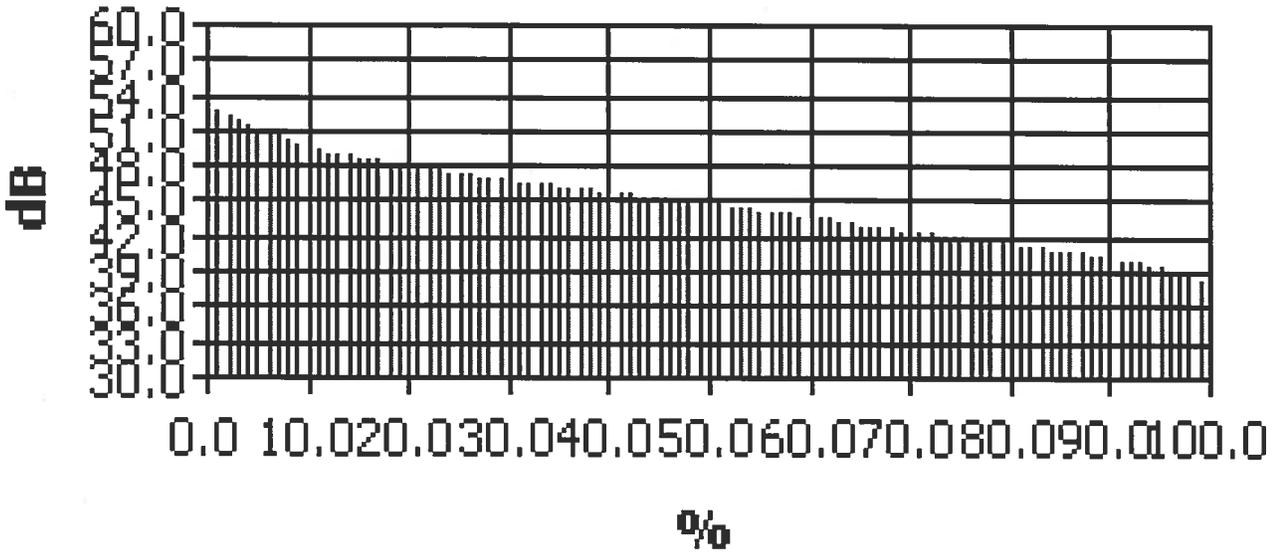
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.8
39.0	0.3	0.5	0.7	0.9	0.6	0.6	0.5	0.7	0.6	1.2	6.5
40.0	0.9	0.3	0.4	0.7	0.8	0.9	1.0	1.3	1.0	0.7	8.0
41.0	0.9	0.7	0.9	0.8	0.7	0.8	1.0	1.2	0.9	0.7	8.5
42.0	0.8	0.8	0.9	0.9	0.9	0.9	1.0	0.9	1.0	1.1	9.3
43.0	0.9	0.4	0.7	0.7	0.9	1.0	1.1	0.9	0.7	0.8	8.2
44.0	0.9	1.0	1.0	0.8	0.7	0.9	1.0	0.9	0.9	0.8	8.9
45.0	0.9	0.8	1.0	1.1	1.0	1.0	0.9	1.0	1.0	1.0	9.8
46.0	1.2	0.7	1.0	1.2	1.0	1.2	1.1	1.1	1.0	0.9	10.4
47.0	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	8.1
48.0	0.7	0.7	0.6	0.8	0.7	0.7	0.8	0.7	0.7	0.7	7.2
49.0	0.6	0.4	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	4.5
50.0	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	3.3
51.0	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.3	2.9
52.0	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.0
53.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	1.0
54.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		53.3	52.6	52.1	51.7	51.4	51.0	50.7	50.4	50.1
10%	49.8	49.5	49.3	49.1	48.9	48.7	48.6	48.5	48.3	48.2
20%	48.1	47.9	47.8	47.6	47.5	47.4	47.2	47.1	47.0	46.9
30%	46.8	46.7	46.6	46.5	46.4	46.3	46.2	46.2	46.1	45.9
40%	45.8	45.7	45.6	45.5	45.4	45.3	45.2	45.1	45.0	44.9
50%	44.8	44.7	44.6	44.5	44.4	44.2	44.1	44.0	43.9	43.8
60%	43.7	43.6	43.5	43.4	43.3	43.1	42.9	42.8	42.7	42.6
70%	42.5	42.4	42.3	42.2	42.1	42.0	41.9	41.7	41.6	41.5
80%	41.4	41.3	41.2	41.1	40.9	40.8	40.7	40.6	40.5	40.4
90%	40.3	40.1	39.9	39.8	39.7	39.6	39.4	39.2	39.1	38.9
100%	38.2									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/23/11

Time Study Started: 11:13 am Time Study Ended: 11:28 am

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Site 3 - Ezzell parking lot (across from Coca-Cola plant)

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 70°F Wind Speed 5mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 48.6 dBA Leg

Major Sources: background

Unusual Events: some activity at Coca-Cola plant

Other Notes: NONE



Site 3
Ezzell Parking Lot

Site 3 - Ezzell parking lot (midday peak)

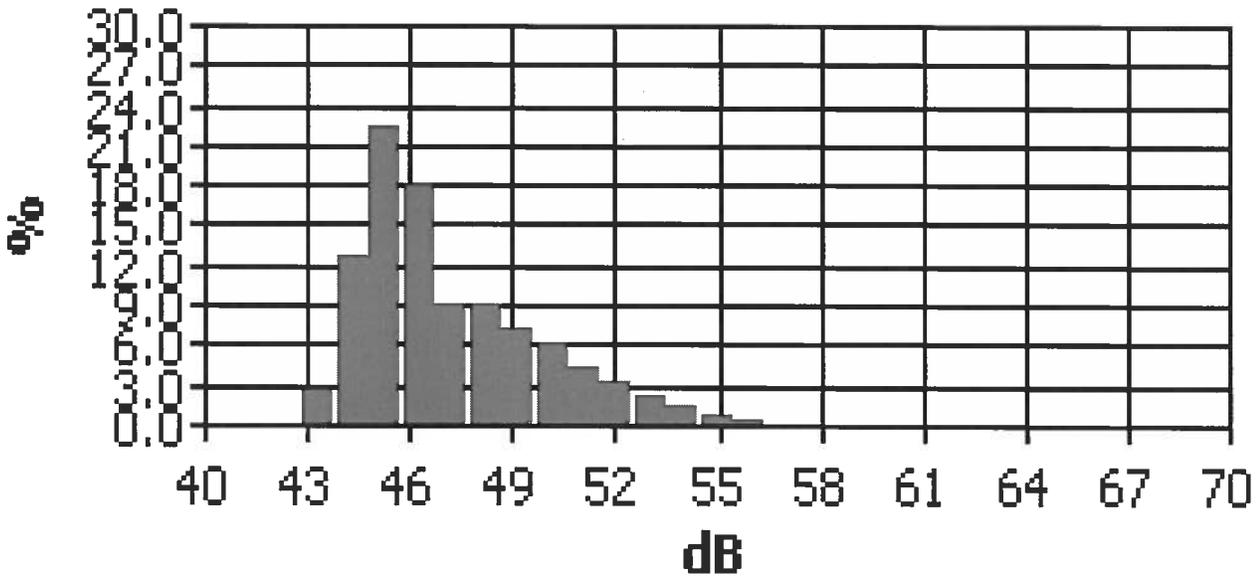
Information Panel

Name BGH040004_25032011_161333
Start Time Wednesday, March 23, 2011 11:12:47
Stop Time Wednesday, March 23, 2011 11:28:00
Device Model Type SoundPro DL
Comments

General Data Panel

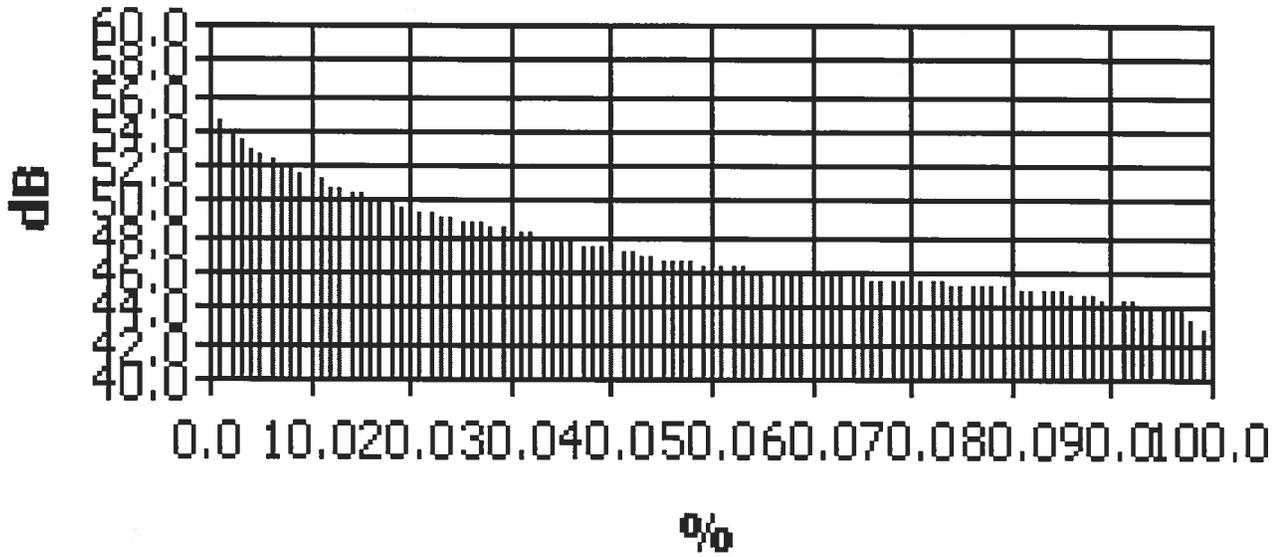
Description	Meter	Value	Description	Meter	Value
Leq	1	48.6 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
43.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.5	0.6	2.5
44.0	0.6	0.9	0.9	1.0	1.1	1.4	1.6	1.5	1.4	2.0	12.5
45.0	1.8	1.9	1.8	2.0	2.7	2.9	3.0	2.3	2.1	2.1	22.5
46.0	2.7	2.2	2.6	2.2	2.0	1.6	1.3	1.2	1.3	1.1	18.1
47.0	1.1	1.2	1.0	0.9	0.8	0.7	0.8	0.8	0.8	0.8	9.0
48.0	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	8.9
49.0	1.0	0.7	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.5	7.3
50.0	0.6	0.6	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.5	6.1
51.0	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	4.3
52.0	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.2	3.4
53.0	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.3
54.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.3
55.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.7
56.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.5
57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		55.7	54.4	53.8	53.3	52.9	52.6	52.3	52.0	51.8
10%	51.5	51.3	51.1	50.8	50.7	50.5	50.3	50.2	50.0	49.8
20%	49.7	49.5	49.4	49.2	49.1	49.0	48.9	48.8	48.7	48.5
30%	48.4	48.3	48.2	48.1	48.0	47.9	47.8	47.6	47.5	47.4
40%	47.3	47.1	47.0	47.0	46.9	46.8	46.7	46.6	46.5	46.5
50%	46.4	46.3	46.3	46.2	46.2	46.1	46.1	46.1	46.0	46.0
60%	45.9	45.9	45.9	45.8	45.8	45.7	45.7	45.6	45.6	45.5
70%	45.5	45.5	45.4	45.4	45.4	45.3	45.3	45.3	45.2	45.2
80%	45.1	45.1	45.0	44.9	44.9	44.8	44.8	44.7	44.7	44.6
90%	44.5	44.5	44.4	44.3	44.2	44.1	44.0	43.9	43.7	43.4
100%	42.8									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/24/11

Time Study Started: 8:05 am Time Study Ended: 8:20 am

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Site 4 - St. Johns AME Church

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 65°F Wind Speed — Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 68.3 dBA Leg

Major Sources: traffic on US15

Unusual Events: None

Other Notes: _____

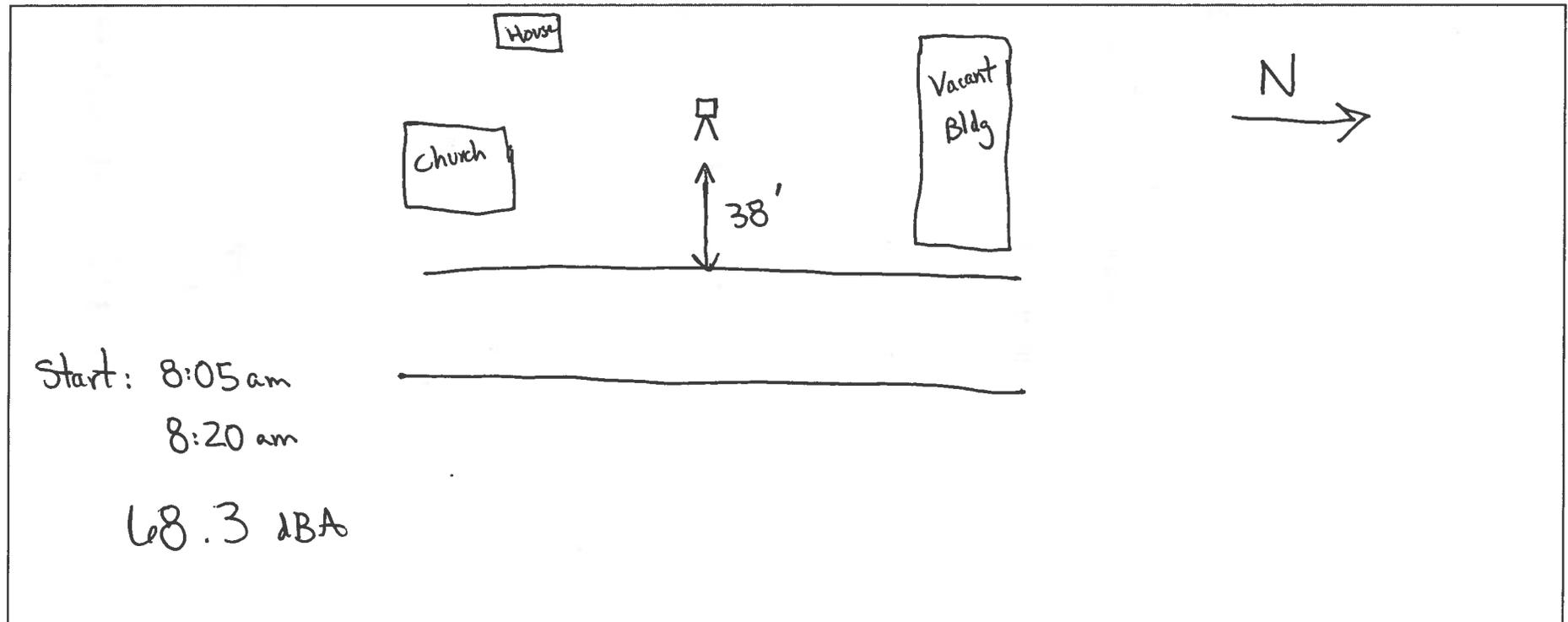


Site 4
St. Johns AME Church

TRAFFIC DATA

Roadway Identification	US15		US15		Roadway 3		Roadway 4	
	Roadway 1 NB		Roadway 2 SB		Volume	Speed	Volume	Speed
Vehicle Type	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
Autos	86	35	68	35				
Medium Trucks	4	35	7	35				
Heavy Trucks	8	35	13	35				
Buses	0	—	0	—				
Motorcycles	0	—	1	35				
Duration	15 minutes		15 minutes					

SITE SKETCH



Site 4
St. Johns AME Church

Site 4 - St. John's AME Church (am peak)

3/25/2011

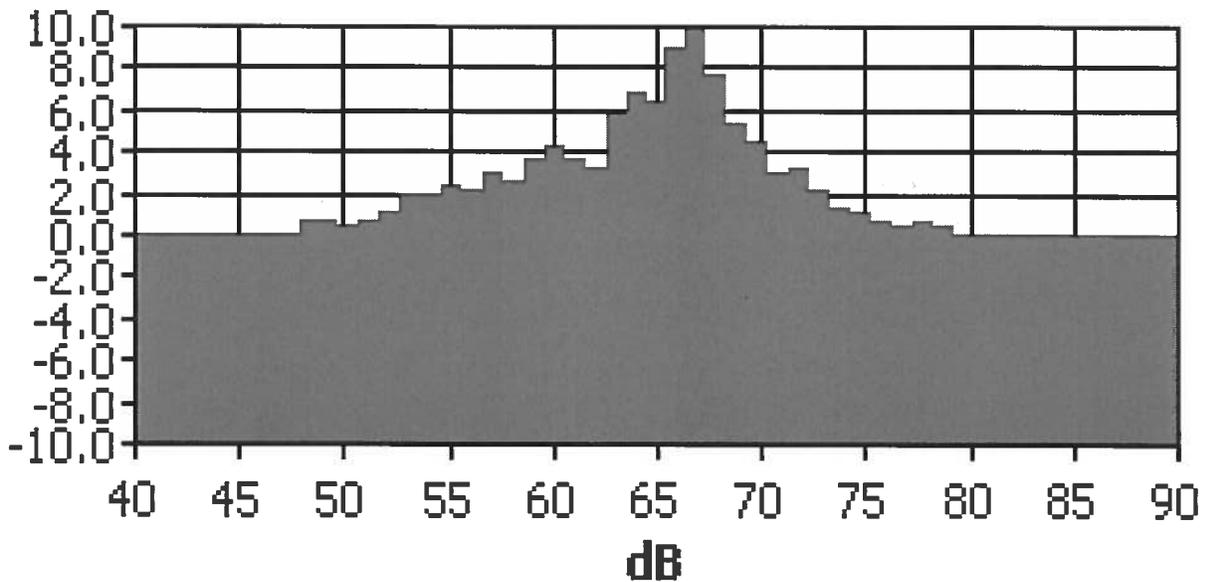
Information Panel

Name BGH040004_25032011_161332
 Start Time Thursday, March 24, 2011 08:05:23
 Stop Time Thursday, March 24, 2011 08:20:31
 Device Model Type SoundPro DL
 Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	68.3 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

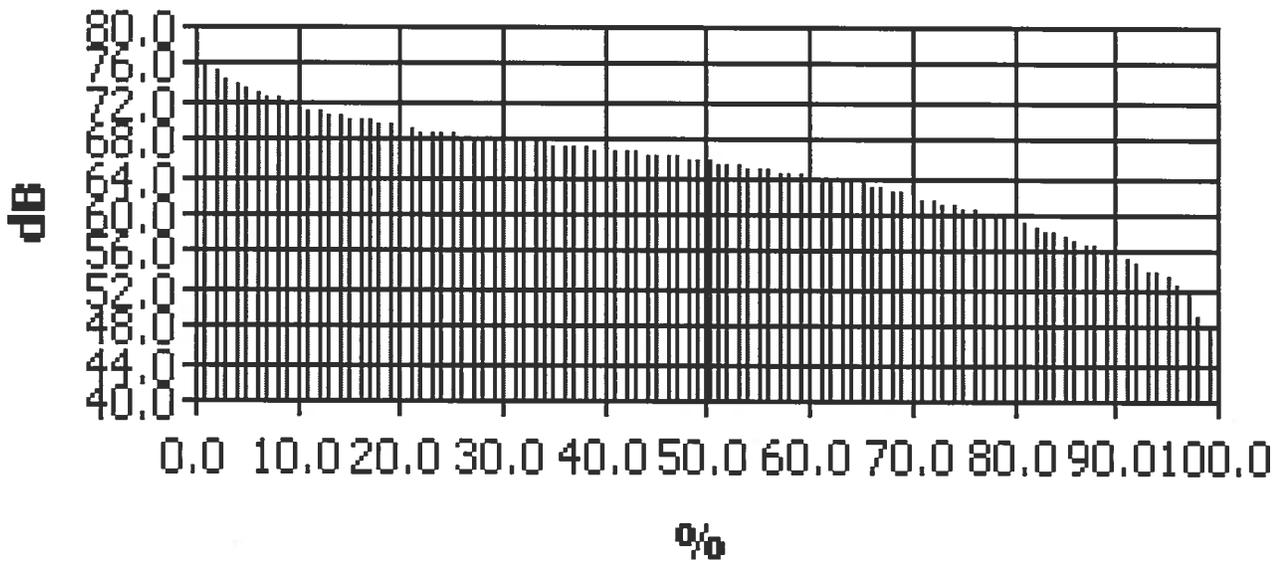
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.7
49.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.7
50.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6
52.0	0.1	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	1.1
53.0	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.2	1.9
54.0	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	1.9
55.0	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	2.3
56.0	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	2.2
57.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	3.0
58.0	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	2.6
59.0	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.6	3.6
60.0	0.5	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.5	4.2
61.0	0.5	0.5	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	3.6
62.0	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	3.2
63.0	0.7	0.6	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.7	5.7
64.0	0.7	0.7	0.4	0.8	0.7	0.7	0.8	0.7	0.6	0.6	6.8
65.0	0.7	0.7	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.6	6.4
66.0	0.7	0.6	0.7	0.7	0.7	0.9	1.2	1.1	1.1	1.2	8.9
67.0	1.2	1.2	0.7	1.0	1.0	0.9	0.8	0.9	1.0	1.0	9.8
68.0	0.9	0.8	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	7.6
69.0	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	5.2

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
70.0	0.6	0.6	0.4	0.5	0.6	0.4	0.3	0.4	0.4	0.3	4.6
71.0	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	3.0
72.0	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	3.2
73.0	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	2.1
74.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	1.3
75.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	1.2
76.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.6
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.5
78.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.6
79.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.5
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		78.2	76.2	75.2	74.5	73.6	73.2	72.8	72.4	72.2
10%	71.8	71.4	71.1	70.8	70.6	70.3	70.1	69.9	69.8	69.6
20%	69.4	69.2	69.0	68.8	68.7	68.5	68.4	68.2	68.1	68.0
30%	67.9	67.8	67.7	67.6	67.5	67.4	67.3	67.2	67.0	67.0
40%	66.9	66.8	66.7	66.6	66.5	66.4	66.3	66.2	66.0	65.9
50%	65.7	65.6	65.4	65.2	65.1	64.9	64.8	64.6	64.5	64.3
60%	64.2	64.0	63.9	63.8	63.6	63.4	63.2	63.0	62.9	62.6
70%	62.3	61.9	61.6	61.3	61.0	60.8	60.6	60.4	60.1	59.9
80%	59.6	59.3	59.1	58.7	58.3	57.9	57.6	57.3	56.9	56.5
90%	56.0	55.5	55.1	54.6	54.0	53.6	53.2	52.4	51.2	49.2
100%	47.8									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/24/11

Time Study Started: 8:49 am Time Study Ended: 9:05 am

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033240A.1

Project Location: Bishopville Bypass

Site Identification: Bishopville Presbyterian Church (Site 5)

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 65°F Wind Speed — Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 67.5 dBA Leg

Major Sources: existing traffic on US15

Unusual Events: birds in nearby trees

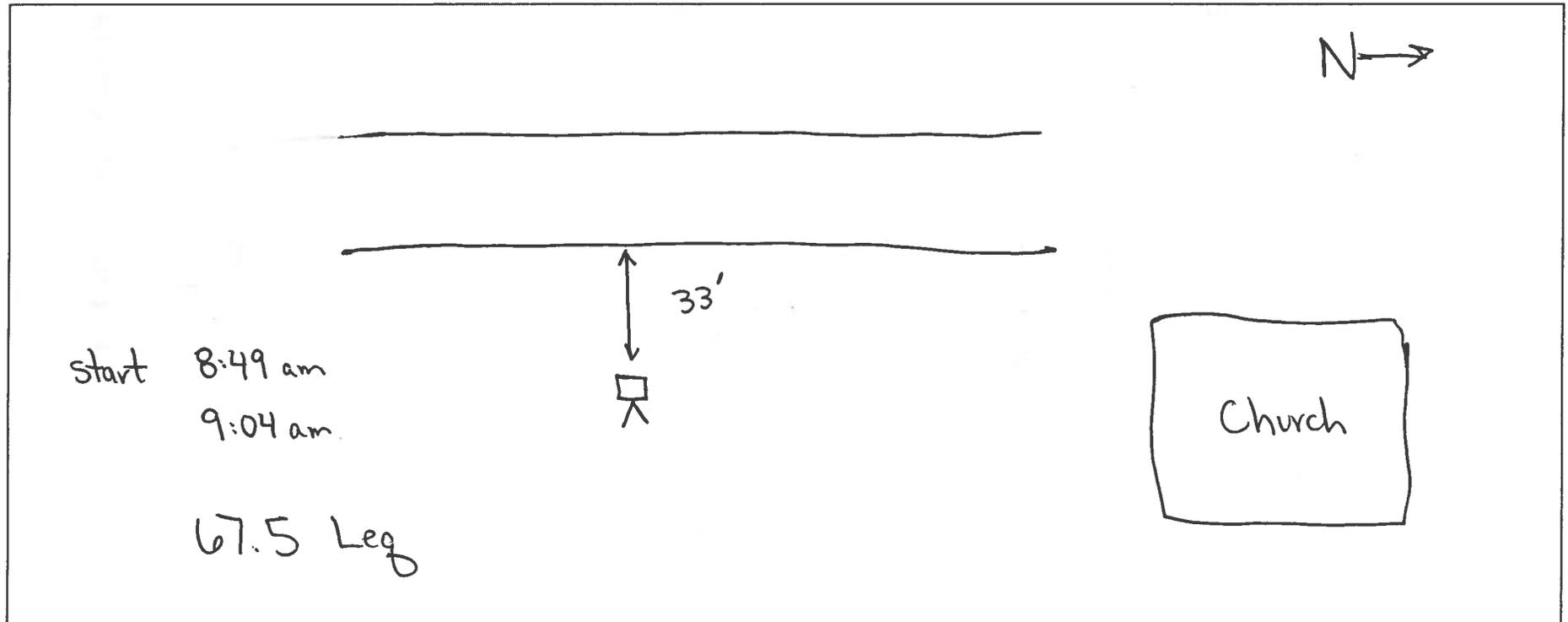
Other Notes: _____

Site 5 – No Photo Available

TRAFFIC DATA

Roadway Identification	US 15		US 15					
	Roadway 1 NB		Roadway 2 SB		Roadway 3		Roadway 4	
Vehicle Type	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
Autos	89	25	73	25				
Medium Trucks	9	25	5	25				
Heavy Trucks	13	25	18	25				
Buses	1	25	0	—				
Motorcycles	0	—	0	—				
Duration	15 minutes		15 minutes					

SITE SKETCH



Site 5
Bishopville Presbyterian Church

Site 5 - Bishopville Presbyterian Church (am peak)

3/25/2011

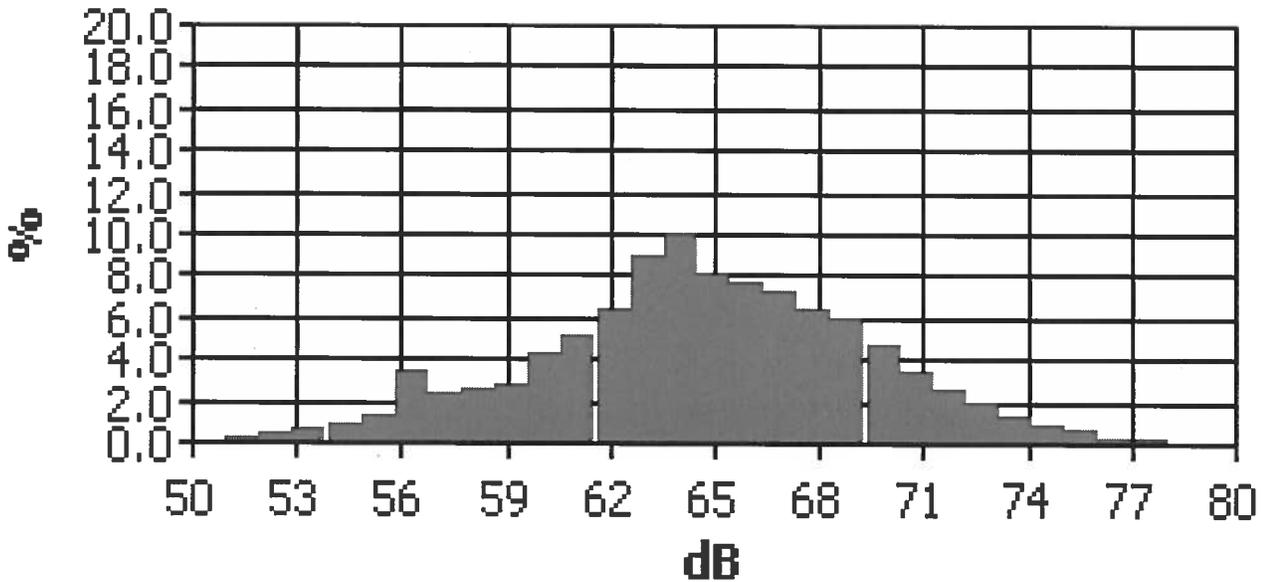
Information Panel

Name BGH040004_25032011_161332
 Start Time Thursday, March 24, 2011 08:49:17
 Stop Time Thursday, March 24, 2011 09:04:22
 Device Model Type SoundPro DL
 Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	67.5 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

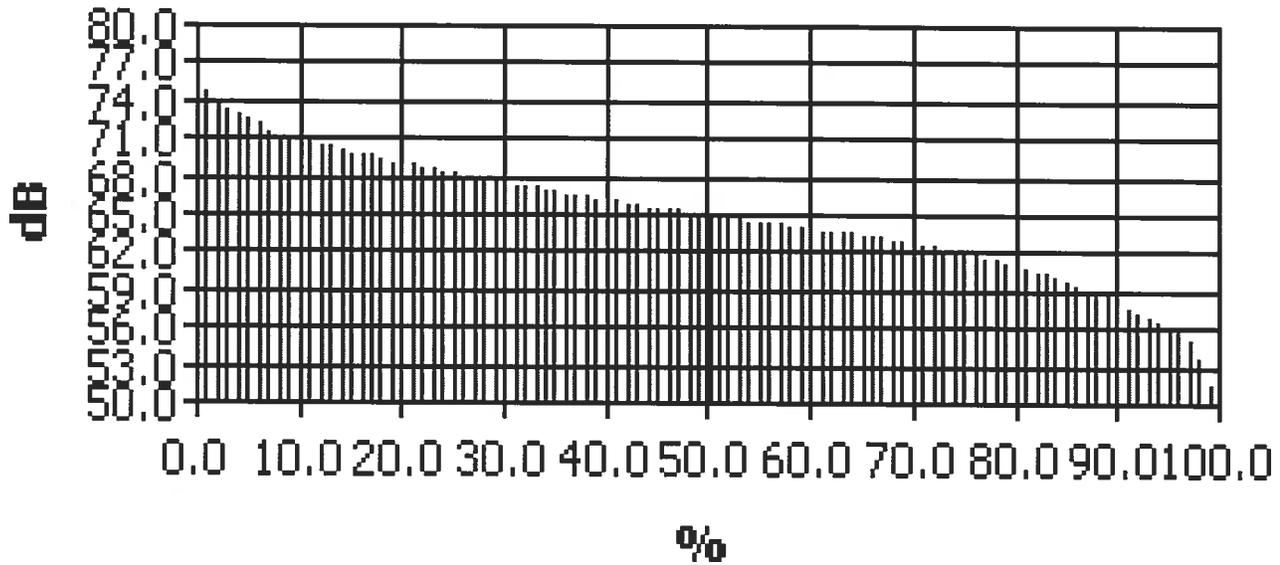
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
52.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4
53.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.6
54.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
55.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.3	0.3	0.1	1.2
56.0	0.1	0.3	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.4	3.3
57.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	2.4
58.0	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	2.6
59.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	2.7
60.0	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.6	0.5	0.5	4.2
61.0	0.5	0.8	0.3	0.5	0.5	0.5	0.5	0.4	0.5	0.5	5.1
62.0	0.7	0.6	0.5	0.6	0.5	0.6	0.7	0.7	0.7	0.7	6.3
63.0	0.8	0.9	0.9	0.9	0.9	0.8	0.8	1.0	0.9	1.0	9.0
64.0	1.1	1.1	0.7	1.1	1.1	1.1	1.0	0.9	1.0	1.0	10.1
65.0	0.9	0.8	1.0	0.9	0.7	0.8	0.9	0.9	0.7	0.6	8.1
66.0	0.9	0.9	0.8	0.7	0.7	0.6	0.7	0.7	0.9	0.8	7.7
67.0	0.9	1.0	0.6	0.7	0.6	0.7	0.6	0.7	0.8	0.7	7.2
68.0	0.7	0.8	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	6.3
69.0	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.7	6.0
70.0	0.6	0.5	0.3	0.5	0.5	0.4	0.5	0.5	0.4	0.5	4.7
71.0	0.6	0.4	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	3.4
72.0	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	2.6
73.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	1.8
74.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	1.2
75.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.9
76.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.6
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%										
10%	71.0	70.8	70.6	70.4	70.2	69.9	69.8	69.6	69.5	69.3
20%	69.1	69.0	68.8	68.6	68.4	68.3	68.1	68.0	67.8	67.7
30%	67.6	67.4	67.2	67.1	67.0	66.9	66.7	66.6	66.5	66.3
40%	66.2	66.1	65.9	65.8	65.7	65.5	65.4	65.3	65.2	65.1
50%	64.9	64.8	64.7	64.6	64.5	64.4	64.3	64.3	64.2	64.0
60%	63.9	63.8	63.7	63.6	63.5	63.4	63.3	63.2	63.1	63.0
70%	62.8	62.7	62.6	62.4	62.2	62.1	61.9	61.7	61.5	61.3
80%	61.1	60.9	60.7	60.5	60.3	60.0	59.8	59.3	59.0	58.7
90%	58.4	57.9	57.4	57.0	56.7	56.5	56.1	55.7	54.9	53.6
100%	51.6									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/29/11

Time Study Started: 9:25 am Time Study Ended: 9:40 am

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Site 6 - adjacent to Post Office

Weather Conditions:

Sky: Clear Partly Cloudy Cloudy Other

Temperature 45°F Wind Speed 5mph Wind Direction Humidity

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No:

Calibration Reading: Start: 114.0 dBA End:

Response Setting: Fast: Slow:

Weighting: A Other (identify)

Calibrator:

Type: QC-10 Calibrator Serial Number:

RESULTS

Background Noise: 60.6 dBA Leg

Major Sources: existing traffic on US15 and street adjacent to P.O.

Unusual Events: motor scooter

Other Notes: activity at Post Office

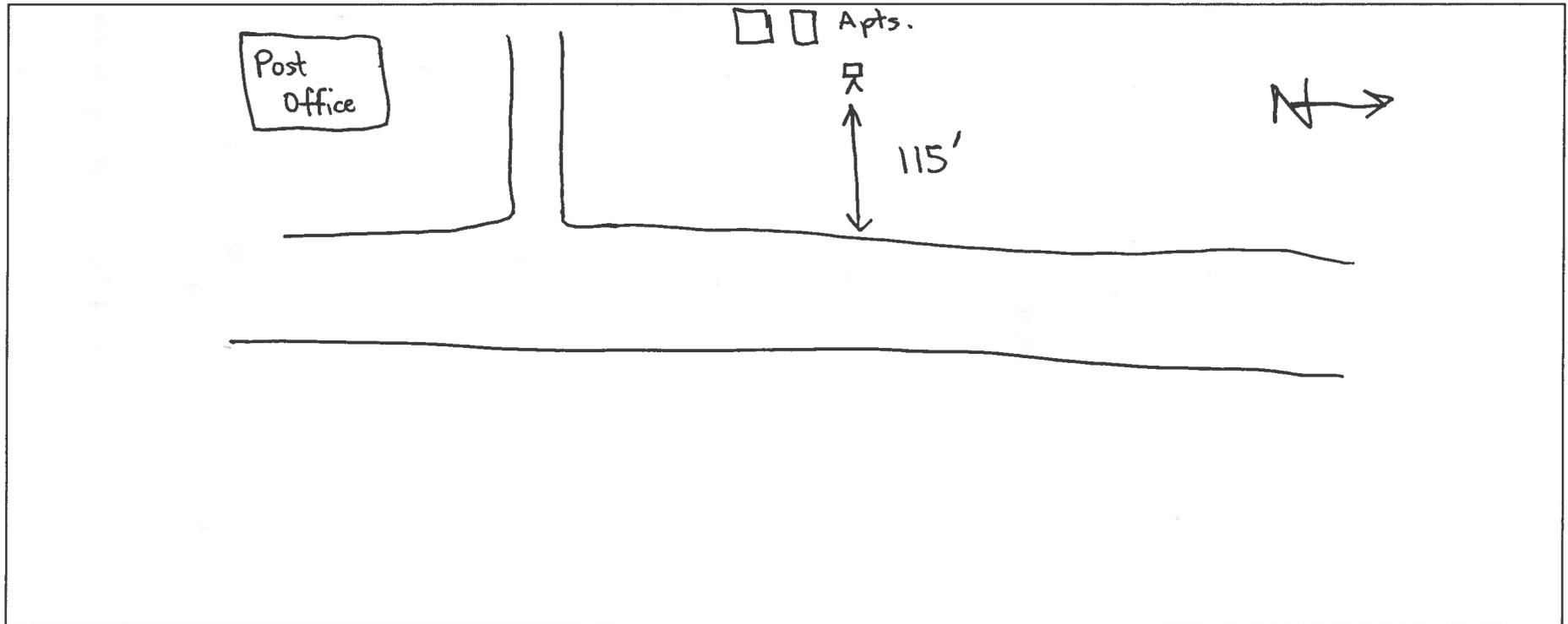


Site 6
Adjacent to Post Office

TRAFFIC DATA

Roadway Identification	US15		US15					
	Roadway 1 NB		Roadway 2 SB		Roadway 3		Roadway 4	
Vehicle Type	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
Autos	57	45	55	45				
Medium Trucks	2	45	0	—				
Heavy Trucks	9	45	11	45				
Buses	0	—	2	45				
Motorcycles	0	—	0	—				
Duration	15 minutes		15 minutes					

SITE SKETCH



Site 6
Adjacent to Post Office

Site 6 - Post Office (am peak)

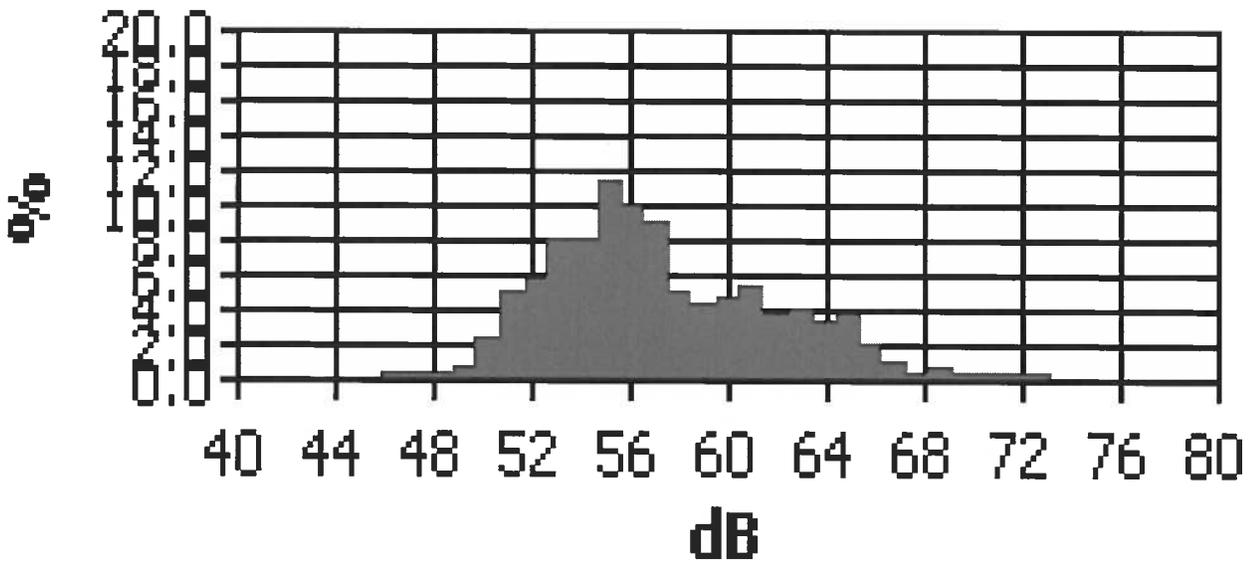
Information Panel

Name BGH040004_30032011_151534
Start Time Tuesday, March 29, 2011 09:23:44
Stop Time Tuesday, March 29, 2011 09:38:51
Device Model Type SoundPro DL
Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	60.6 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

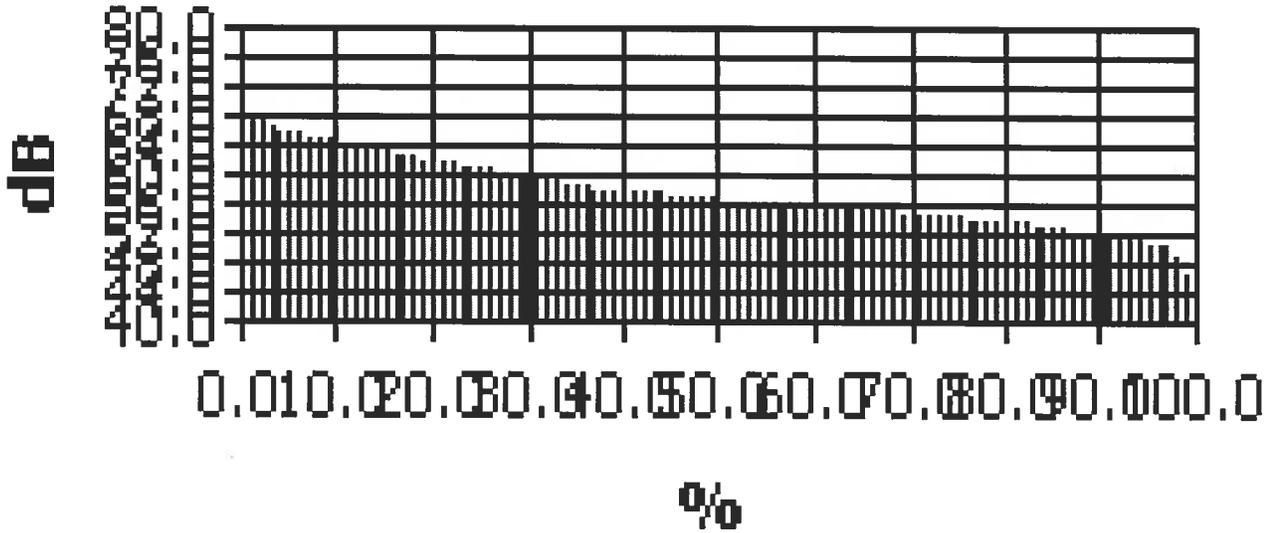
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3
47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
49.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.7
50.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	2.4
51.0	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.4	5.0
52.0	0.6	0.5	0.7	0.7	0.7	0.4	0.4	0.5	0.5	0.5	5.6
53.0	0.6	0.7	0.9	0.8	0.8	0.9	0.8	0.9	0.8	0.8	8.0
54.0	0.7	0.6	0.7	0.7	0.9	1.0	0.9	0.9	0.8	0.8	7.9
55.0	1.2	1.2	0.8	1.0	1.1	1.1	1.2	1.1	1.1	1.4	11.2
56.0	1.2	1.3	1.1	0.9	1.0	0.9	0.8	1.0	0.8	0.8	9.9
57.0	0.9	1.0	0.9	1.0	1.0	1.0	1.0	0.8	0.6	0.8	9.1
58.0	1.0	0.8	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.4	5.0
59.0	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.4	0.5	0.5	4.2
60.0	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.8	4.8
61.0	0.8	0.7	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	5.3
62.0	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.3	3.7
63.0	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.7	0.5	0.4	4.1
64.0	0.4	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.2
65.0	0.4	0.3	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.2	3.7
66.0	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	2.1
67.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	1.1
68.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
69.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.5
70.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.5
71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
73.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.3
74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		70.2	68.0	67.0	66.2	66.0	65.6	65.4	65.1	64.9
10%	64.5	64.2	63.9	63.7	63.5	63.2	63.0	62.6	62.4	62.1
20%	61.8	61.6	61.4	61.2	61.0	60.9	60.8	60.6	60.3	60.1
30%	59.8	59.7	59.4	59.2	58.9	58.6	58.4	58.2	58.0	57.9
40%	57.8	57.6	57.5	57.4	57.3	57.2	57.1	57.0	56.9	56.8
50%	56.7	56.6	56.4	56.3	56.2	56.1	56.0	56.0	55.9	55.8
60%	55.7	55.6	55.5	55.5	55.4	55.3	55.2	55.1	55.0	54.9
70%	54.8	54.7	54.5	54.4	54.3	54.2	54.1	53.9	53.8	53.7
80%	53.5	53.4	53.3	53.2	53.1	52.9	52.7	52.5	52.3	52.2
90%	52.0	51.8	51.6	51.4	51.3	51.1	50.8	50.5	50.1	48.9
100%	46.1									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/24/11

Time Study Started: 9:45 am Time Study Ended: 10:00 am

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260A.1

Project Location: Bishopville Bypass

Site Identification: Site 7 - site adjacent to Historic Home
located north of Academy Street

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 60°F Wind Speed 5 mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 58.8 dBA Leg

Major Sources: existing traffic on US 15

Unusual Events: continual dog barking at adjacent property

Other Notes: _____

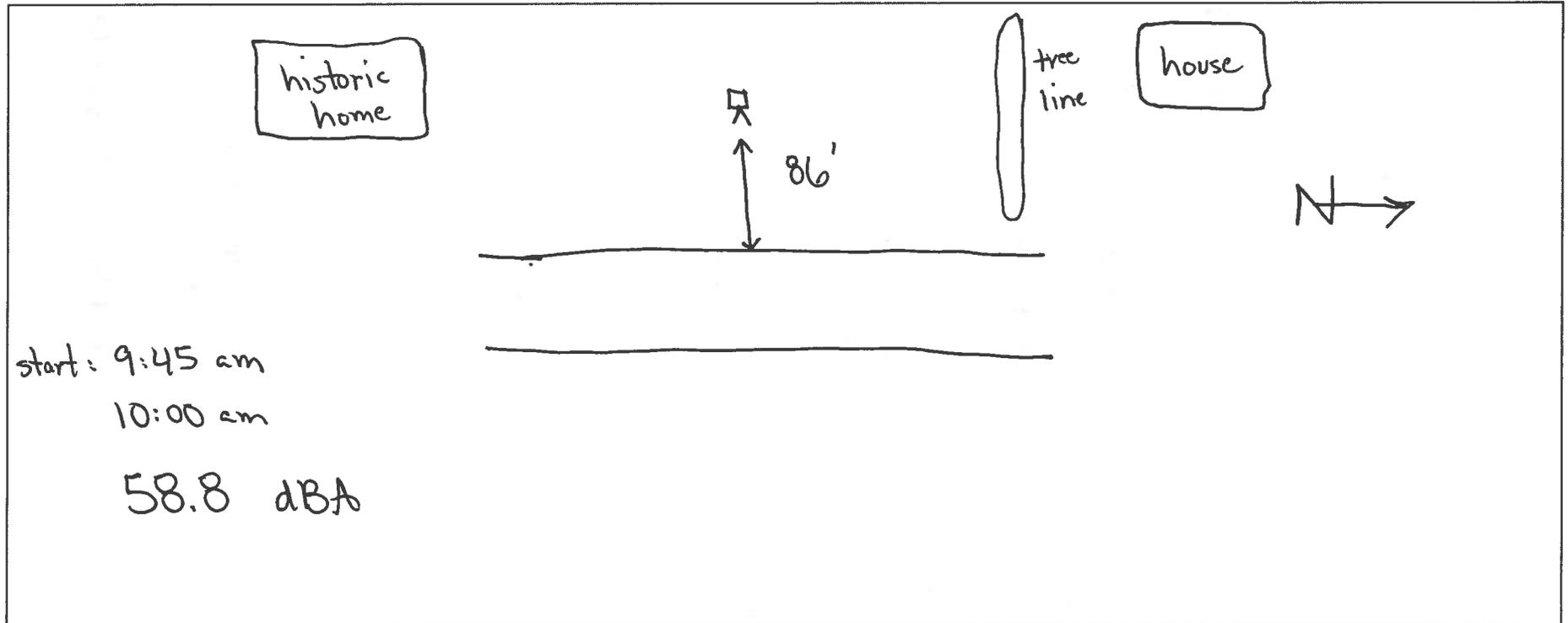


Site 7
Site Adjacent to Historic Home

TRAFFIC DATA

Roadway Identification	US15		US15					
	Roadway 1 NB		Roadway 2 SB		Roadway 3		Roadway 4	
Vehicle Type	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
Autos	46	45	43	45				
Medium Trucks	7	45	1	45				
Heavy Trucks	11	45	8	45				
Buses	0	—	0	—				
Motorcycles	1	45	0	—				
Duration	15 minutes		15 minutes					

SITE SKETCH



Site 7
Site Adjacent to Historic Home

Site 7 - site adjac to historic home (am peak)

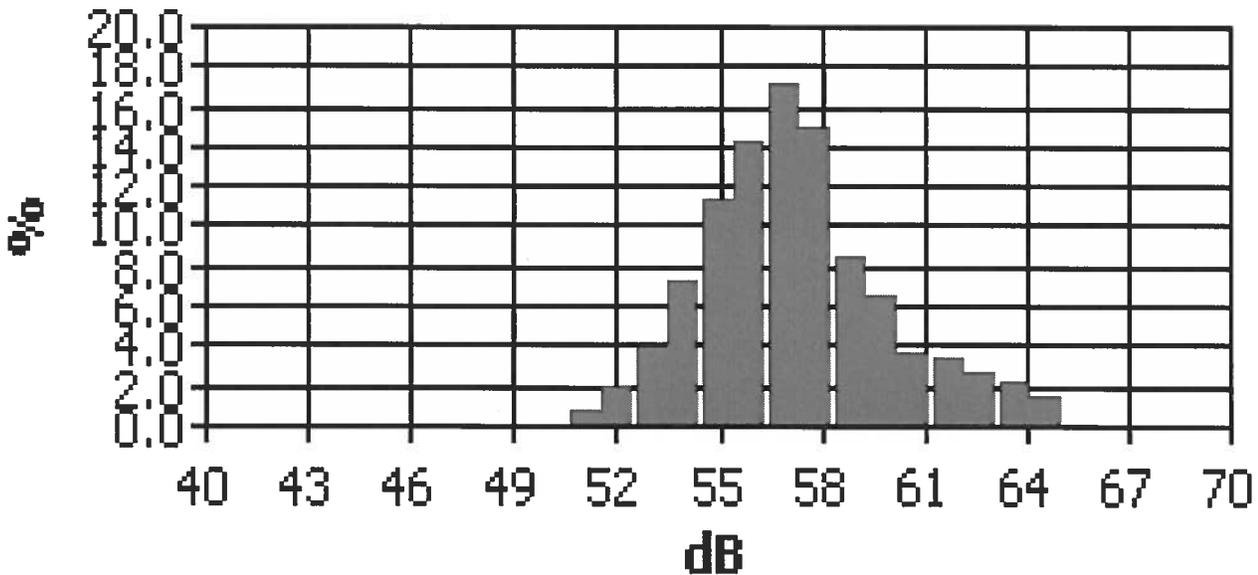
Information Panel

Name BGH040004_25032011_161334
Start Time Thursday, March 24, 2011 09:45:41
Stop Time Thursday, March 24, 2011 10:01:22
Device Model Type SoundPro DL
Comments

General Data Panel

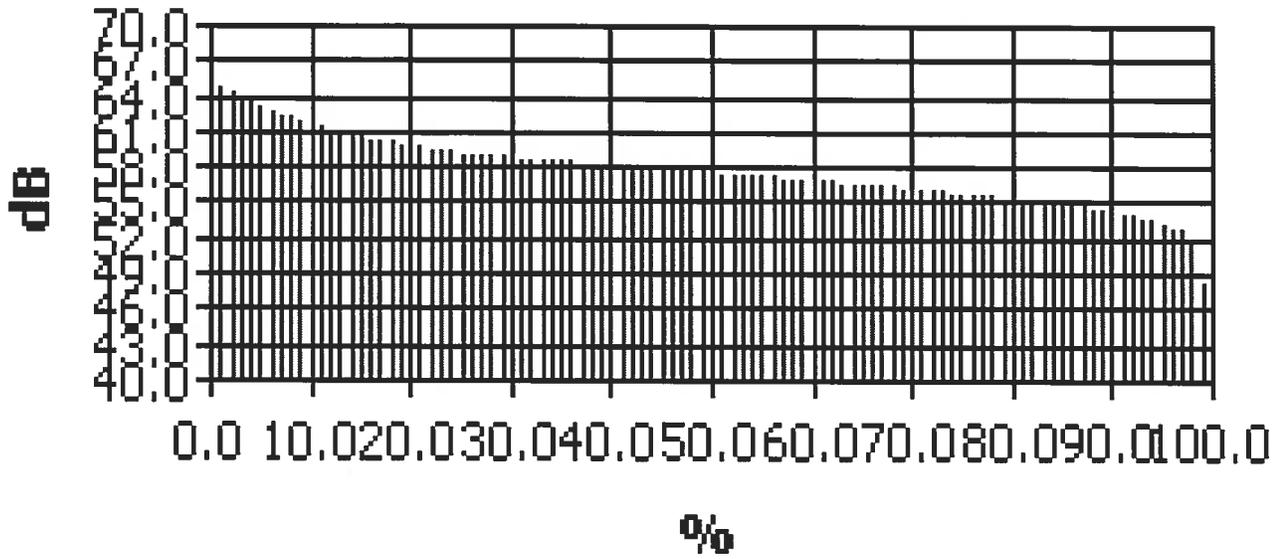
Description	Meter	Value	Description	Meter	Value
Leq	1	58.8 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
51.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.6
52.0	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.2	2.0
53.0	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.4	3.8
54.0	0.4	0.5	0.6	0.7	0.8	0.8	0.7	0.8	0.9	1.1	7.3
55.0	1.1	1.1	0.9	1.2	1.3	1.1	1.1	1.2	1.1	1.1	11.2
56.0	1.3	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.6	1.6	14.1
57.0	1.5	1.7	1.8	1.8	1.6	1.6	1.7	1.9	1.9	1.7	17.2
58.0	1.9	1.8	1.0	1.5	1.4	1.5	1.5	1.4	1.5	1.4	15.0
59.0	1.0	1.0	1.0	0.9	0.8	0.7	0.8	0.9	0.6	0.8	8.5
60.0	0.7	0.7	0.8	0.6	0.6	0.6	0.5	0.7	0.7	0.7	6.6
61.0	0.7	0.5	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	3.7
62.0	0.3	0.4	0.4	0.3	0.4	0.5	0.3	0.3	0.2	0.2	3.5
63.0	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.4	2.6
64.0	0.3	0.3	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	2.1
65.0	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.0	1.5
66.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		65.1	64.7	64.2	63.8	63.5	63.0	62.6	62.3	62.1
10%	61.8	61.5	61.2	60.9	60.8	60.6	60.5	60.3	60.2	60.0
20%	59.9	59.7	59.6	59.5	59.3	59.2	59.1	59.0	58.9	58.8
30%	58.8	58.7	58.6	58.5	58.5	58.4	58.4	58.3	58.2	58.1
40%	58.0	58.0	57.9	57.9	57.8	57.8	57.8	57.7	57.6	57.6
50%	57.5	57.4	57.4	57.3	57.2	57.2	57.1	57.1	57.0	57.0
60%	56.9	56.8	56.8	56.7	56.6	56.6	56.5	56.4	56.4	56.3
70%	56.2	56.1	56.1	56.0	55.9	55.8	55.8	55.7	55.6	55.5
80%	55.4	55.3	55.2	55.1	55.0	55.0	54.9	54.8	54.7	54.5
90%	54.4	54.3	54.1	53.9	53.7	53.5	53.3	52.9	52.6	52.0
100%	48.3									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/29/11

Time Study Started: 2:40 pm Time Study Ended: 2:55 pm

Project Identification:

Financial Management Number: PIN 33261, State File: 31.033260 A, 1

Project Location: Bishopville Bypass

Site Identification: Site 8 - site adjacent to Alternative 1 and Alternative 2 alignments (west of SC 154)

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 60°F Wind Speed 3 mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 54.9 dBA Leg

Major Sources: background

Unusual Events: train backing up

Other Notes: _____



Site 8
Site Adjacent to Alternative 1/2 Alignments

Site 8 - site adj to Alt.1/Alt.2 (midday)

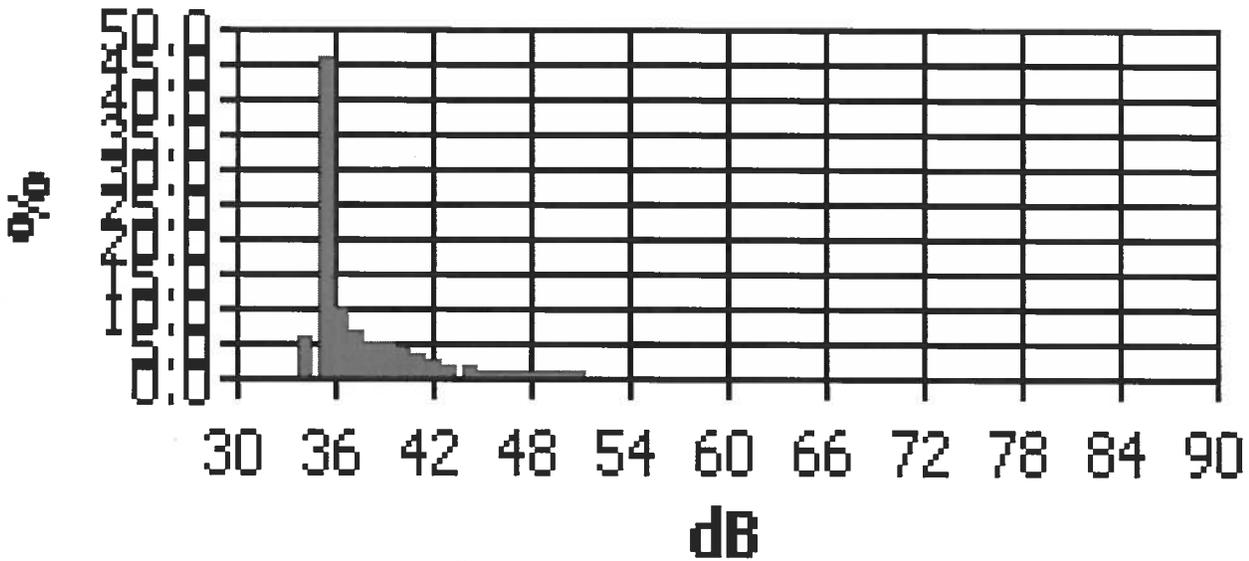
Information Panel

Name BGH040004_30032011_151536
Start Time Tuesday, March 29, 2011 14:39:50
Stop Time Tuesday, March 29, 2011 14:58:16
Device Model Type SoundPro DL
Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	54.9 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

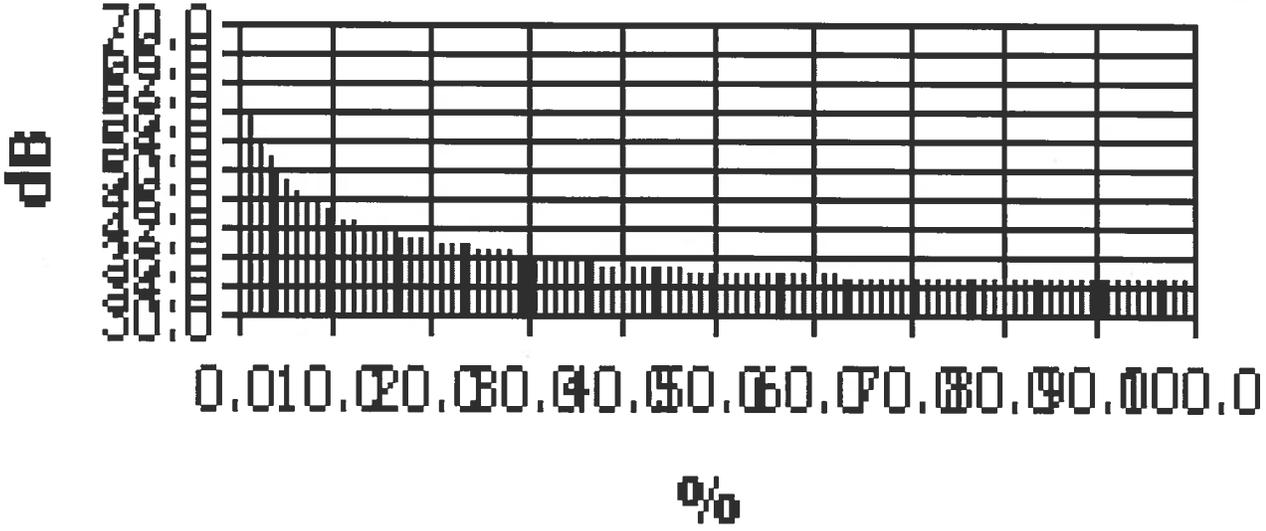
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.9	5.6
35.0	11.2	12.0	8.1	4.7	2.8	1.8	1.5	1.5	1.2	1.1	46.1
36.0	1.2	1.0	0.9	0.9	1.0	1.0	0.9	0.9	0.9	0.9	9.7
37.0	0.9	0.5	0.7	0.7	0.5	0.6	0.6	0.6	0.7	0.6	6.4
38.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	5.3
39.0	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	5.3
40.0	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	4.0
41.0	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.3	3.1
42.0	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	2.6
43.0	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	1.6
44.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.4
45.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
46.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
47.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
48.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
49.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
50.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
51.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.6
52.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
54.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
55.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
61.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
66.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		65.0	58.1	54.3	51.4	49.9	48.5	46.9	45.8	45.0
10%	44.2	43.6	42.9	42.5	42.1	41.7	41.4	41.1	40.8	40.5
20%	40.2	40.0	39.8	39.6	39.4	39.2	39.0	38.8	38.7	38.5
30%	38.3	38.1	37.9	37.7	37.6	37.4	37.2	37.1	36.9	36.8
40%	36.7	36.6	36.5	36.4	36.3	36.2	36.1	36.0	35.9	35.8
50%	35.7	35.6	35.6	35.5	35.4	35.4	35.3	35.3	35.3	35.2
60%	35.2	35.2	35.2	35.2	35.1	35.1	35.1	35.1	35.1	35.1
70%	35.1	35.1	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
80%	35.0	35.0	35.0	35.0	34.9	34.9	34.9	34.9	34.9	34.9
90%	34.9	34.9	34.9	34.9	34.9	34.8	34.8	34.8	34.8	34.8
100%	34.6									

NOISE MEASUREMENT DATA SHEET

Measurements Taken By JRS Date 3/29/11

Time Study Started: 12:45 pm Time Study Ended: 1:00 pm

Project Identification:

Financial Management Number: PIN 33261 State File: 31.033260 A.1

Project Location: Bishopville Bypass'

Site Identification: Site 9 - lot adjacent to Lee Street

Weather Conditions:

Sky: Clear Partly Cloudy _____ Cloudy _____ Other _____

Temperature 55°F Wind Speed 5mph Wind Direction _____ Humidity _____

Equipment:

Sound Level Meter:

Type: Quest SoundPro Serial Number: DL-2-10

Did you check the battery: Yes: No: _____

Calibration Reading: Start: 114.0 dBA End: _____

Response Setting: Fast: _____ Slow:

Weighting: A Other (identify) _____

Calibrator:

Type: QC-10 Calibrator Serial Number: _____

RESULTS

Background Noise: 59.2 dBA Leg

Major Sources: existing traffic on Lee Street

Unusual Events: slow moving train @ 12:45 pm

Other Notes: _____

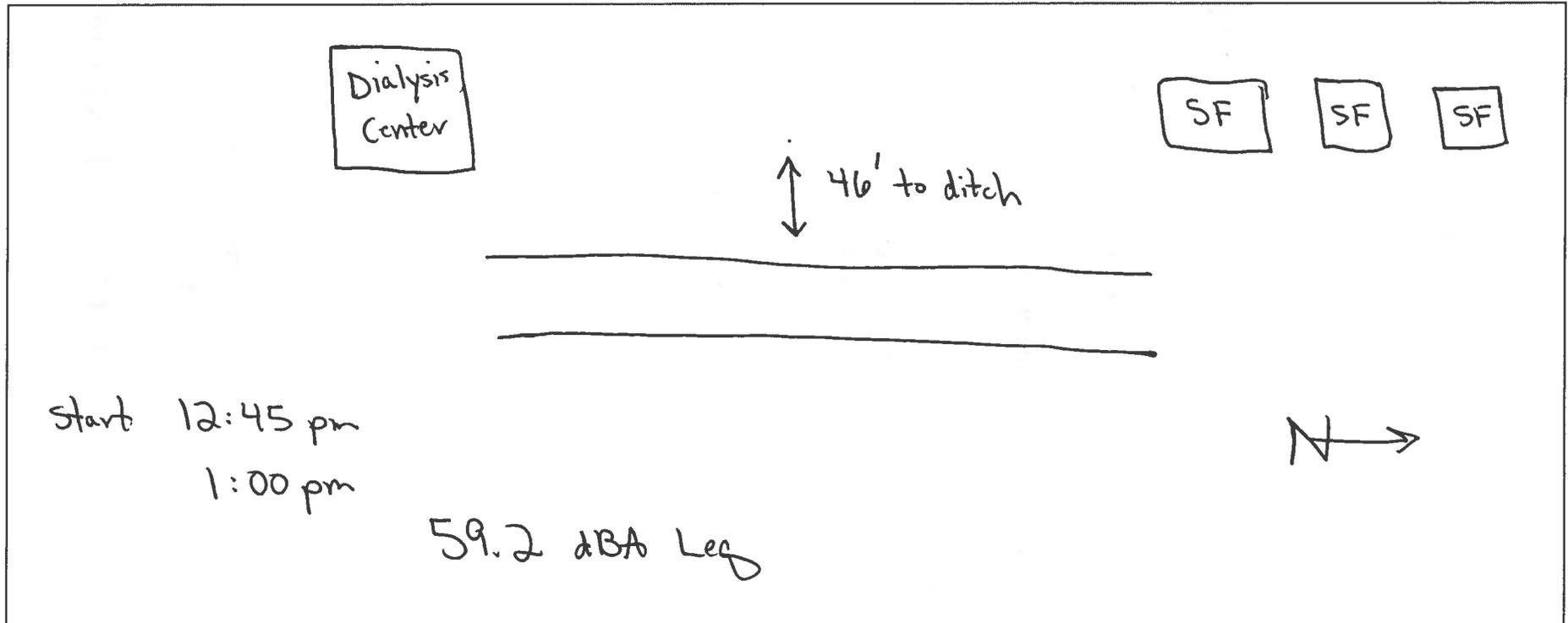


Site 9
Residences Along Lee Street

TRAFFIC DATA

Roadway Identification	Lee Street		Lee Street		Roadway 3		Roadway 4	
	Roadway 1 NB		Roadway 2 SB		Volume	Speed	Volume	Speed
Vehicle Type	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
Autos	21	35	18	35				
Medium Trucks	0	—	0	—				
Heavy Trucks	0	—	2	35				
Buses	0	—	0	—				
Motorcycles	0	—	0	—				
Duration	15 minutes		15 minutes					

SITE SKETCH



**Site 9
Residences Along Lee Street**

Site 10 - Lee St. residences (midday peak)

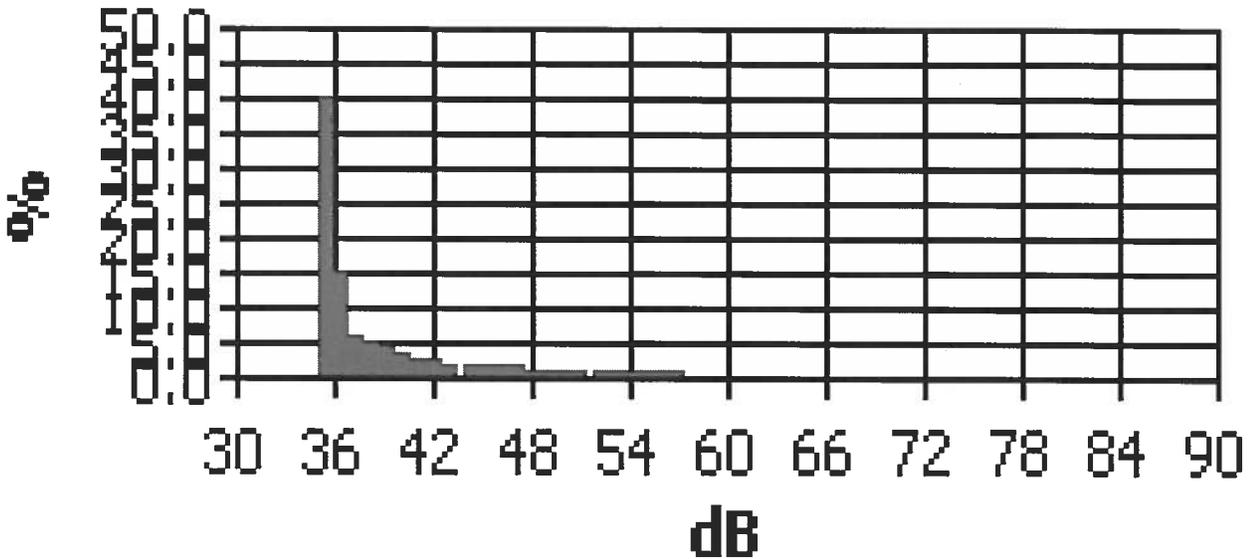
Information Panel

Name BGH040004_30032011_151536
Start Time Tuesday, March 29, 2011 12:45:14
Stop Time Tuesday, March 29, 2011 13:00:32
Device Model Type SoundPro DL
Comments

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	59.2 dB	Exchange Rate	1	3 dB
Weighting	1	A	Response	1	SLOW
Bandwidth	1	OFF	Exchange Rate	2	3 dB
Weighting	2	C	Response	2	SLOW

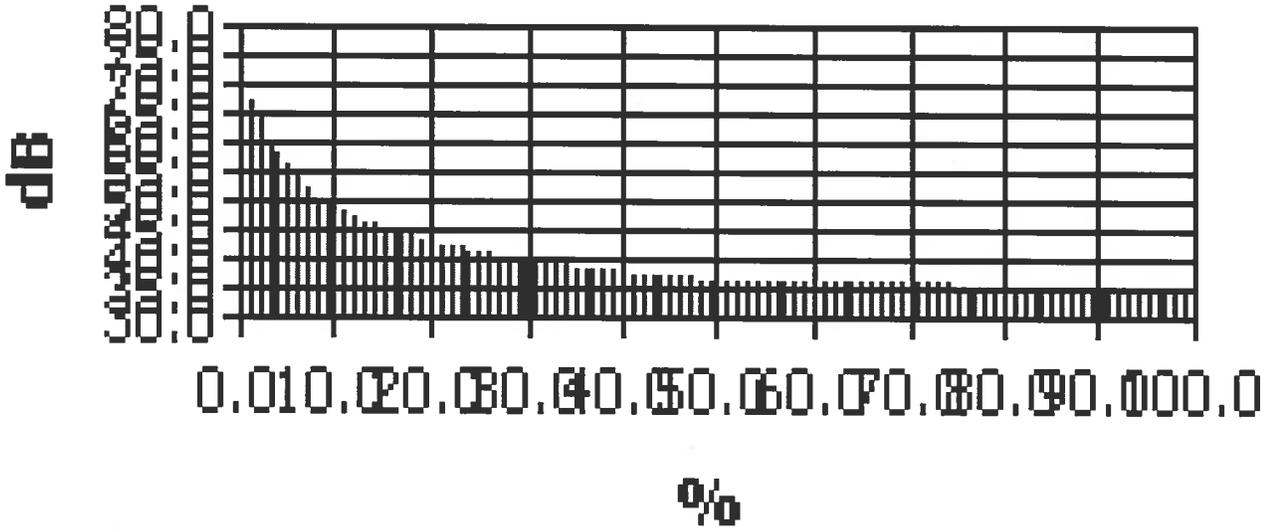
Statistics Chart



dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35.0	0.3	0.9	2.5	5.5	7.9	7.4	5.3	4.1	3.3	2.9	40.2
36.0	2.6	2.0	1.7	1.5	1.4	1.3	1.2	1.0	1.0	1.0	14.7
37.0	0.8	0.6	0.7	0.7	0.7	0.5	0.5	0.6	0.6	0.5	6.1
38.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4.9
39.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	4.2
40.0	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	3.7
41.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	2.9
42.0	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	2.6
43.0	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.1
44.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.0
45.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.8
46.0	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	1.6
47.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4
48.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2
49.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
50.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8
51.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
52.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
53.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.6
54.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6
55.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5
56.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5
57.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5
58.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
59.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
61.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

dB	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
65.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
66.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
67.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
69.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
71.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
72.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
73.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
74.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
76.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
78.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
79.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Exceedance Chart



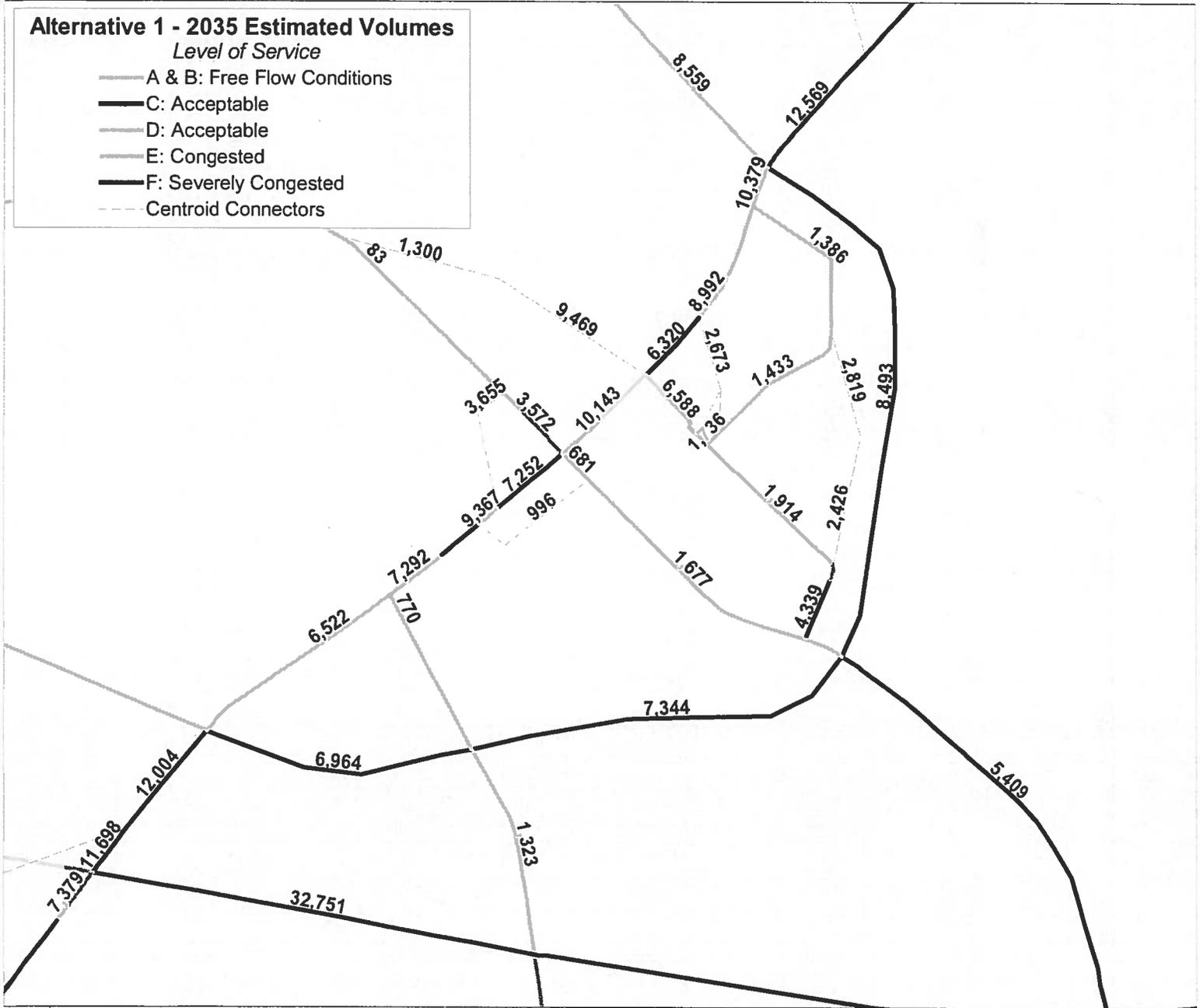
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%
0%		72.7	67.0	63.6	60.5	57.7	55.5	53.7	52.0	50.5
10%	49.3	48.5	47.7	46.9	46.3	45.7	45.2	44.6	44.1	43.7
20%	43.2	42.7	42.3	42.0	41.6	41.2	40.9	40.6	40.3	40.1
30%	39.8	39.6	39.4	39.1	38.9	38.7	38.4	38.3	38.1	37.8
40%	37.7	37.5	37.3	37.1	37.0	36.9	36.8	36.7	36.6	36.5
50%	36.4	36.3	36.3	36.2	36.1	36.1	36.0	36.0	35.9	35.9
60%	35.8	35.8	35.8	35.7	35.7	35.7	35.7	35.6	35.6	35.6
70%	35.6	35.5	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.4
80%	35.4	35.4	35.4	35.3	35.3	35.3	35.3	35.3	35.3	35.3
90%	35.3	35.2	35.2	35.2	35.2	35.2	35.2	35.1	35.1	35.0
100%	34.8									

Traffic Data

Alternative 1 - 2035 Estimated Volumes

Level of Service

- A & B: Free Flow Conditions
- C: Acceptable
- D: Acceptable
- E: Congested
- F: Severely Congested
- - - Centroid Connectors

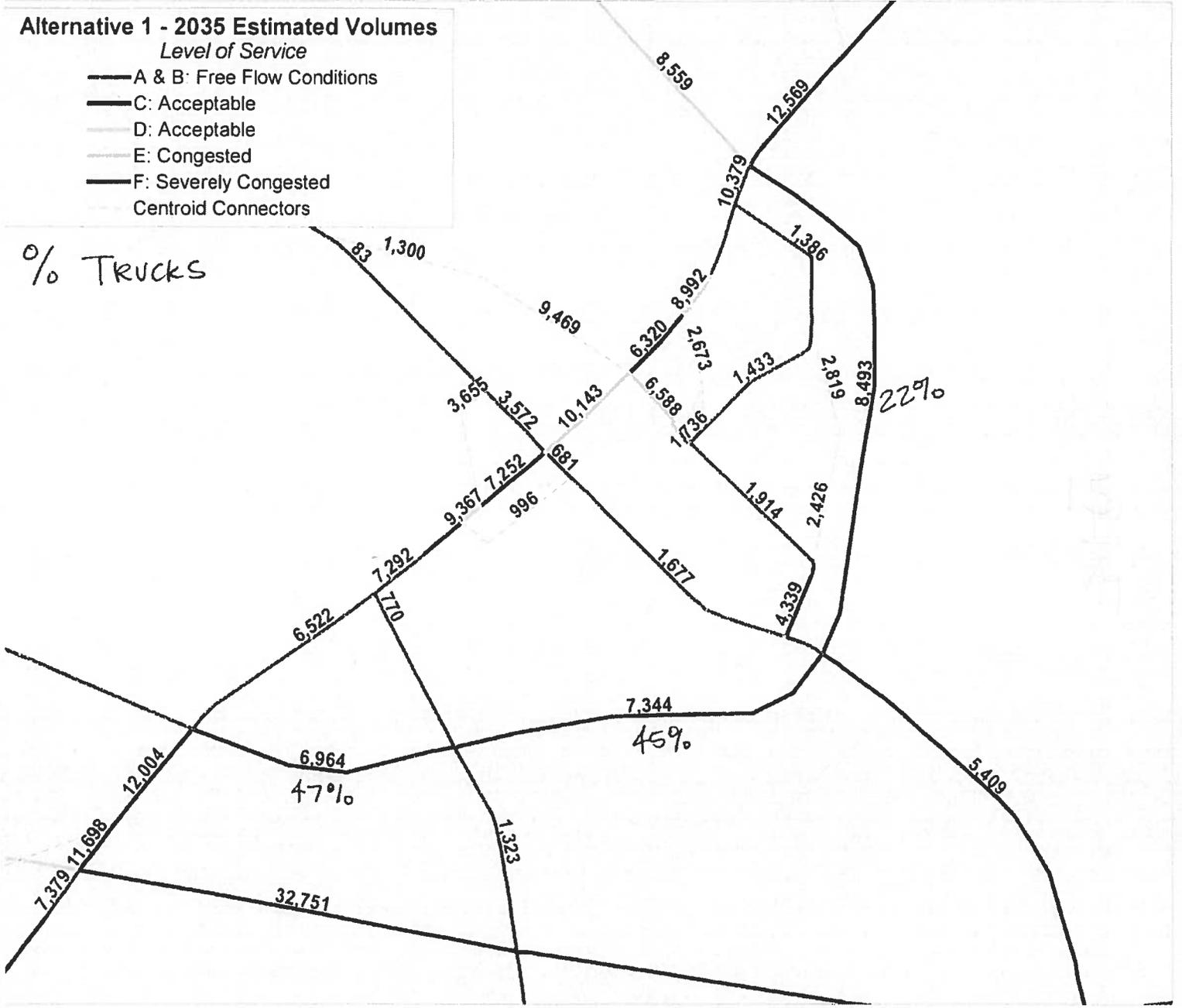


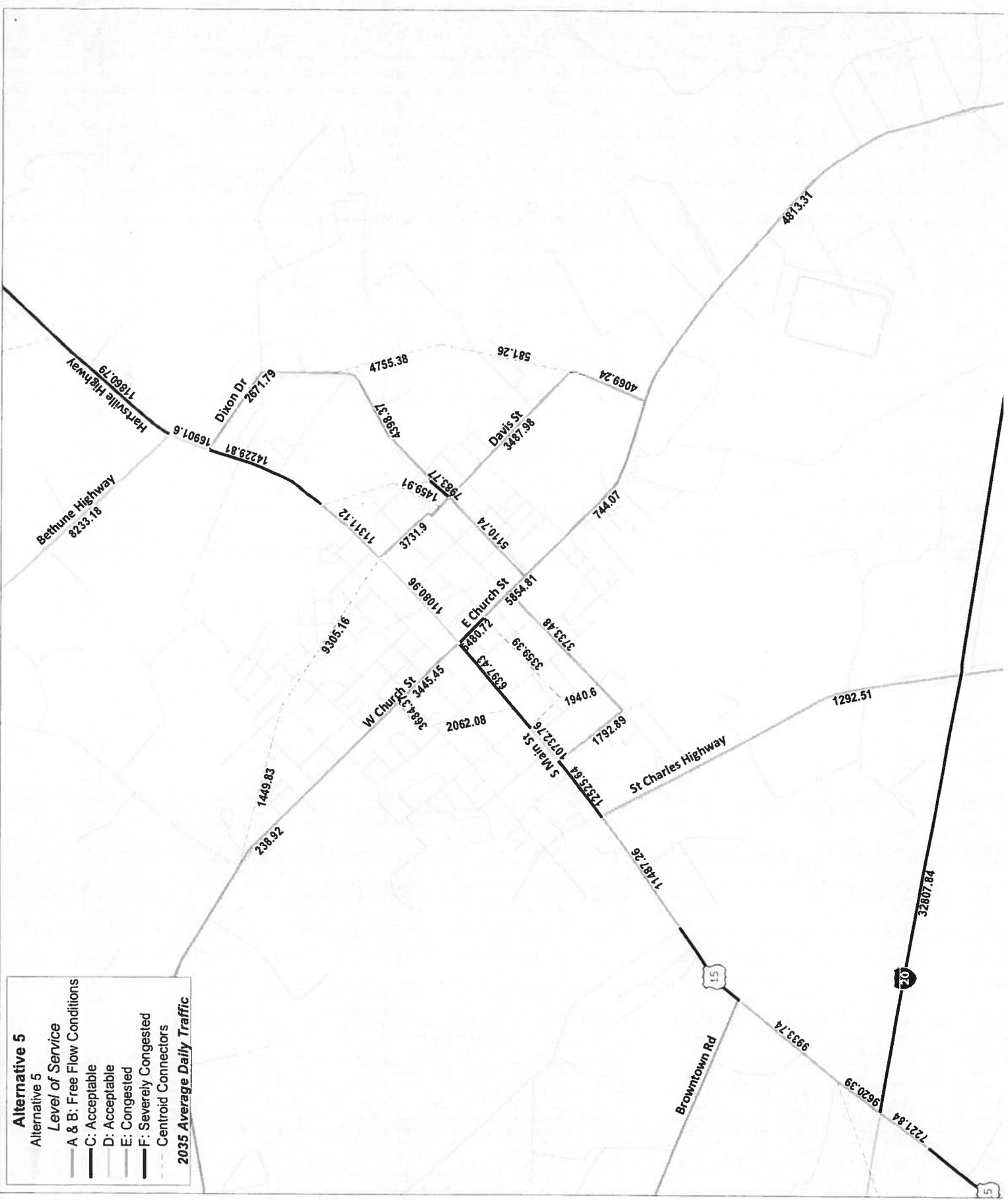
Alternative 1 - 2035 Estimated Volumes

Level of Service

- A & B: Free Flow Conditions
- C: Acceptable
- D: Acceptable
- E: Congested
- F: Severely Congested
- Centroid Connectors

% TRUCKS





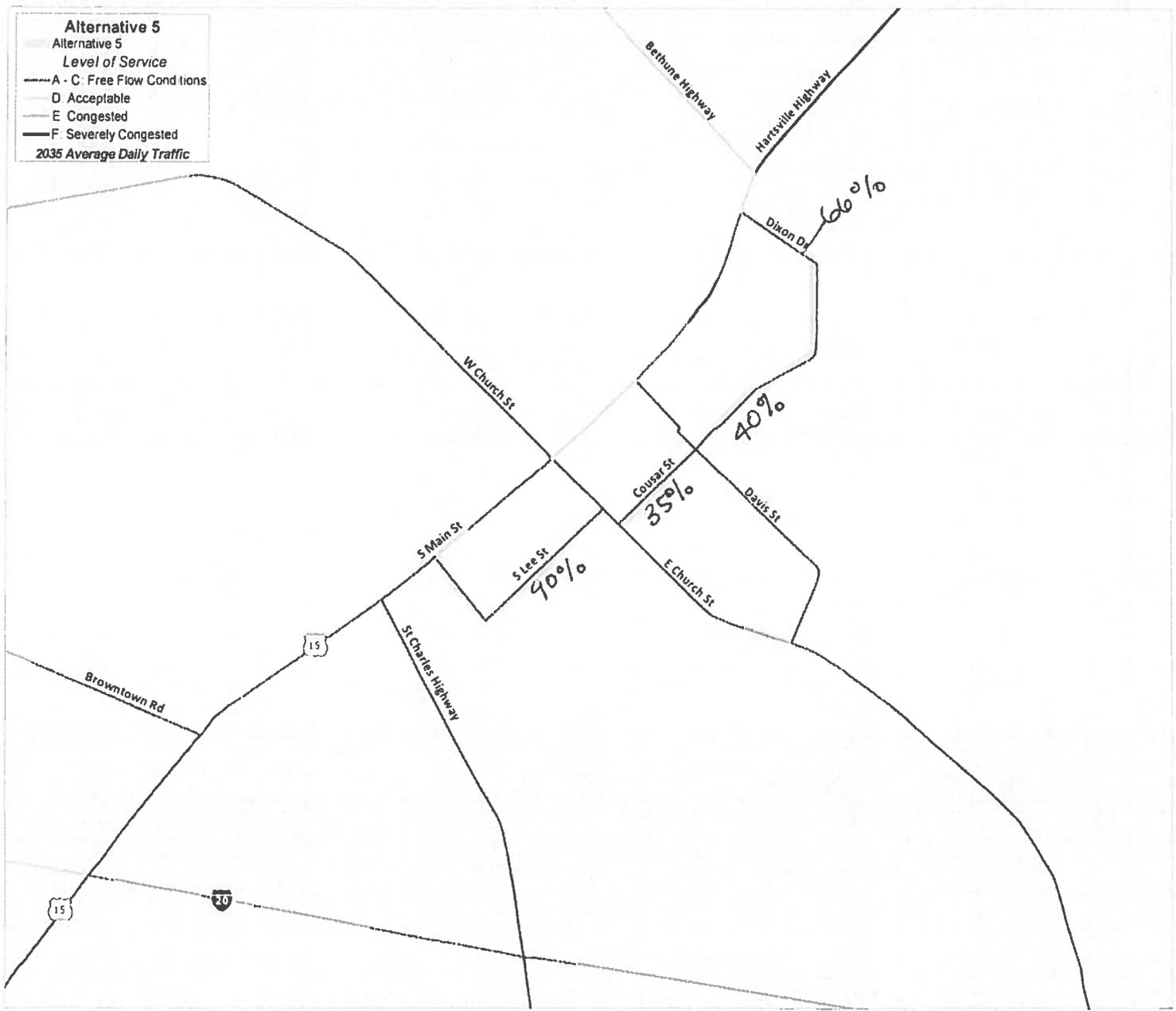
Alternative 5

Level of Service

- A & B: Free Flow Conditions
- C: Acceptable
- D: Congested
- E: Severely Congested
- F: Severely Congested

Centroid Connectors

ALT 5 LIKUCK ROULE #1) % TRUCKS



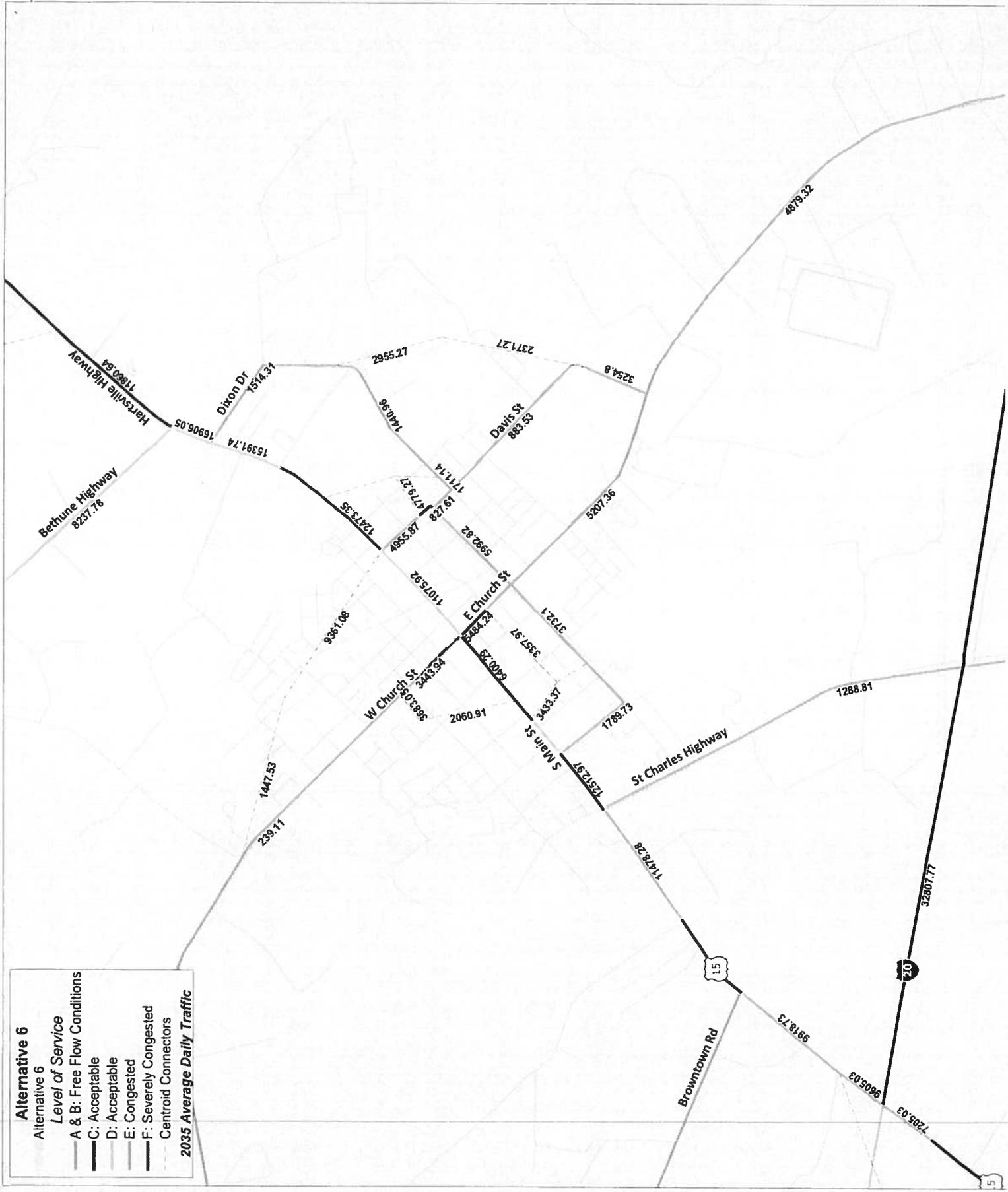
Alternative 6

Alternative 6

Level of Service

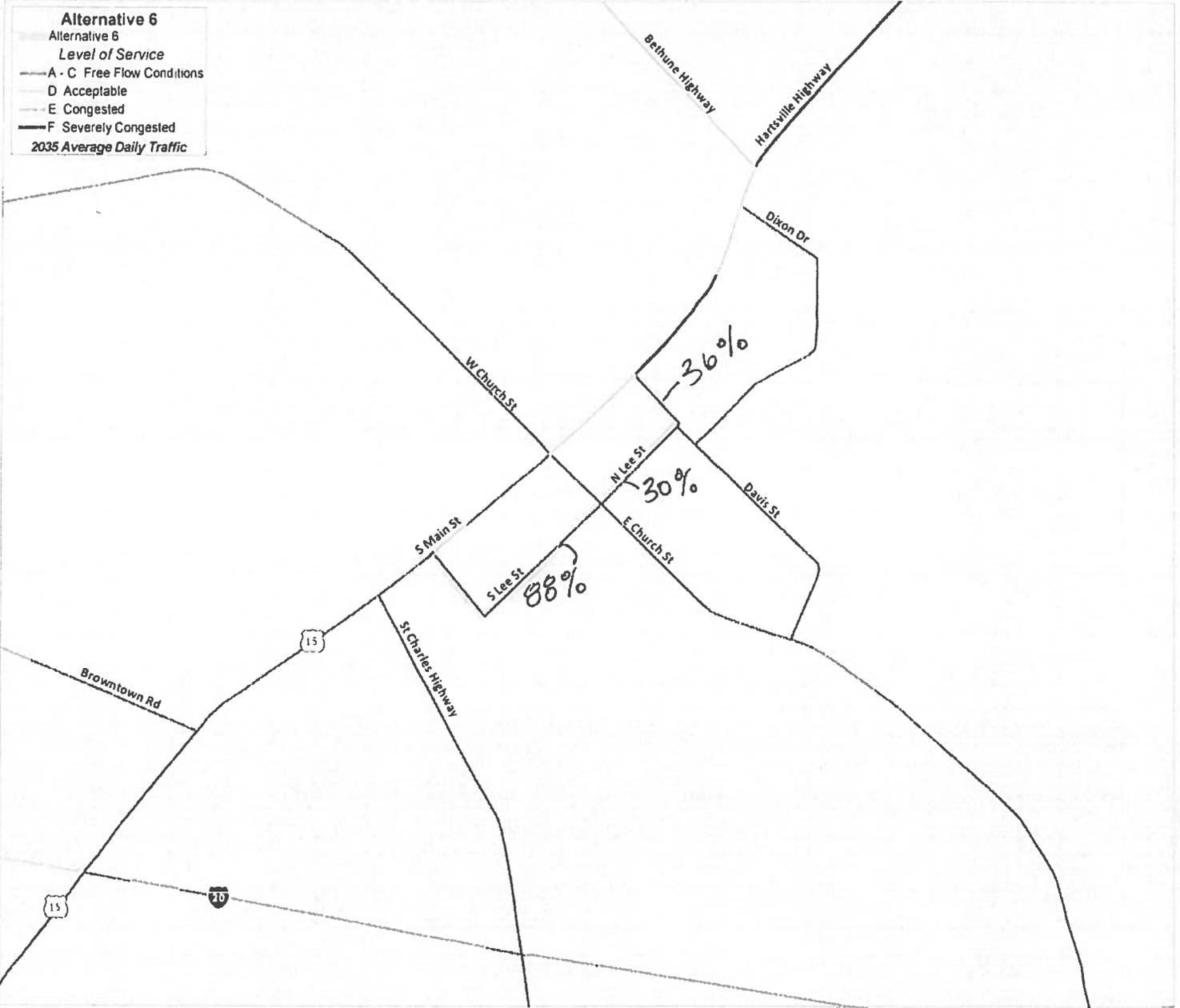
- A & B: Free Flow Conditions
- C: Acceptable
- D: Acceptable
- E: Congested
- F: Severely Congested
- Centroid Connectors

2035 Average Daily Traffic



ALT 6 (TRUCK ROUTE # 2)

% TRUCKS



Existing

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

23 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
RUN: Existing Site 4 AM
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Increase over existing			Type Impact	Noise Reduction		Calculated minus Goal dB		
					Calculated	Crit'n	Sub'l Inc		Calculated	Goal			
Site 4 - St. Johns AME Church	1	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction			Max dB								
		Min dB	Avg dB										
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

23 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
RUN: Existing Site 5 Bishopville Presbyterian
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction Calculated	Goal	Calculated minus Goal dB
				LAeq1h Calculated dBA	Crit'n dBA	Calculated dB	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Goal dB			
Site 5 - Bishopville Presbyterian	9	1	0.0	67.7	66	67.7	10	Snd Lvl	67.7	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction											
		Min dB	Avg dB	Max dB									
All Selected	1	0.0	0.0	0.0									
All Impacted	1	0.0	0.0	0.0									
All that meet NR Goal	0	0.0	0.0	0.0									

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP

JRS

23 June 2011

TNM 2.5

Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass
Existing Site 6 Post Office AM

RUN:

BARRIER DESIGN:

INPUT HEIGHTS

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB
Name	L_Aeq1h			L_Aeq1h	Calculated	Crit'n	Calculated	Crit'n	Calculated	Sub'l Inc	Calculated	Goal	Calculated	
Site 6 - Post Office	dB	7	1	0.0	58.6	66	58.6	10	---	58.6	8	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			1	0.0	0.0	0.0	0.0							
All Impacted			0	0.0	0.0	0.0	0.0							
All that meet NR Goal			0	0.0	0.0	0.0	0.0							

2035 No Build

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

23 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass

RUN:

2035 No Build Site 4 AM

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction		Calculated minus Goal dB
				LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated	Calculated	Goal	
			dB	dB	dB	dB	dB		dB	dB	dB	dB	
Site 4 - St. Johns AME Church	1	1	68.0	70.6	66	2.6	15	Snd Lvl	70.6	0.0	8	-8.0	
Dwelling Units													
# DUs	Noise Reduction			dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
	Min	Avg	Max										
All Selected	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

23 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 No Build Site 5
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n dBA	Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
						Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated Goal		
Site 5 - Bishopville Presbyterian	9	1	67.5	69.7	66	2.2	15	Snd Lvl	69.7	0.0	8	-8.0
Dwelling Units												
	# DUs	Noise Reduction			Max dB							
		Min dB	Avg dB									
All Selected	1	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

23 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 No Build Site 6
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver

Receiver Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
				LAeq1h Calculated dBA	Crit'n	Calculated dBA	Crit'n Sub'l Inc dB		Calculated LAeq1h dBA	Noise Reduction Calculated dB		Noise Reduction Goal dB
Site 6 - Post Office	7	1	60.6	62.5	66	1.9	15	----	62.5	0.0	8	-8.0

Dwelling Units

	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Alternative 1

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

28 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alternative 1
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal
Name	LAeq1h			LAeq1h	LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated	Calculated	
	dBA	dBA	dBA	dBA	dBA	dB	dB	dB	dB	dB	dB	dB	dB	dB
Receiver1	1	1	49.0	58.1	66	9.1	15	---	---	58.1	0.0	8	-8.0	
Receiver3	3	1	49.0	62.9	66	13.9	15	---	---	62.9	0.0	8	-8.0	
Receiver4	4	1	49.0	60.9	66	11.9	15	---	---	60.9	0.0	8	-8.0	
Receiver5	5	1	49.0	61.5	66	12.5	15	---	---	61.5	0.0	8	-8.0	
Receiver6	6	1	49.0	60.5	66	11.5	15	---	---	60.5	0.0	8	-8.0	
Receiver7	7	1	49.0	59.2	66	10.2	15	---	---	59.2	0.0	8	-8.0	
Receiver9	9	1	49.0	57.8	66	8.8	15	---	---	57.8	0.0	8	-8.0	
Receiver10	10	1	49.0	56.5	66	7.5	15	---	---	56.5	0.0	8	-8.0	
Receiver11	11	1	49.0	55.3	66	6.3	15	---	---	55.3	0.0	8	-8.0	
Receiver13	13	1	49.0	53.3	66	4.3	15	---	---	53.3	0.0	8	-8.0	
Receiver15	15	1	49.0	51.7	66	2.7	15	---	---	51.7	0.0	8	-8.0	
Receiver16	16	1	49.0	50.9	66	1.9	15	---	---	50.9	0.0	8	-8.0	
Receiver17	17	1	49.0	50.2	66	1.2	15	---	---	50.2	0.0	8	-8.0	
Receiver18	18	1	49.0	49.6	66	0.6	15	---	---	49.6	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction		Noise Reduction		Noise Reduction		Noise Reduction		Noise Reduction		Noise Reduction	
			Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
			dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
All Selected		14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Impacted		0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All that meet NR Goal		0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass

2035 Alt 1 Site 4

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver		Noise Reduction										
Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc dB	Calculated	Goal	Calculated	Goal	
Site 4 - St. Johns AME Church	1	1	68.0	68.7	66	0.7	15	Snd Lvl	68.7	8	0.0	-8.0
Dwelling Units		# DUs	Noise Reduction									
			Min dB	Avg dB	Max dB							
All Selected		1	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass

RUN: 2035 Alt 1 Site 5

BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver														
Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB	
			LAeq1h	dBA	LAeq1h	Crit'n	Calculated	Crit'n	Calculated	Sub'l Inc	Calculated	Goal		Calculated
Site 5 - Bishopville Presbyterian	9	1	68.0	67.8	66	-0.2	15	Snd Lvl	67.8	0.0	8	-8.0		
Dwelling Units														
# DUs	Noise Reduction													
	Min dB	Avg dB	Max dB											
All Selected	1	0.0	0.0											
All Impacted	1	0.0	0.0											
All that meet NR Goal	0	0.0	0.0											

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alt 1 Site 6
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		With Barrier											
Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact		Noise Reduction		Calculated minus Goal dB
			LAeq1h	Crit'n	LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc	Calculated	Goal	Calculated	Goal	
Site 6 - Post Office	7	1	61.0	58.8	66	-2.2	15	----	58.8	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction										
All Selected		1	0.0	0.0	0.0								
All Impacted		0	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

Alternative 2

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

28 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass

RUN: 2035 Alternative 2

BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
Name	LAeq1h				LAeq1h Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		LAeq1h Calculated	Noise Reduction Calculated		Goal
	dBA			dBA	dBA								
Receiver1		1	6	58.0	71.3	66	13.3	15	Snd Lvl	71.3	0.0	8	-8.0
Receiver2		2	6	58.0	64.1	66	6.1	15	----	64.1	0.0	8	-8.0
Receiver3		3	6	58.0	61.6	66	3.6	15	----	61.6	0.0	8	-8.0
Receiver4		4	3	58.0	68.4	66	10.4	15	Snd Lvl	68.4	0.0	8	-8.0
Receiver5		5	3	58.0	61.3	66	3.3	15	----	61.3	0.0	8	-8.0
Receiver6		6	3	58.0	56.8	66	-1.2	15	----	56.8	0.0	8	-8.0
Receiver7		7	1	58.0	69.7	66	11.7	15	Snd Lvl	69.7	0.0	8	-8.0
Receiver9		9	1	53.0	70.7	66	17.7	15	Both	70.7	0.0	8	-8.0
Receiver10		10	1	53.0	74.9	66	21.9	15	Both	74.9	0.0	8	-8.0
Receiver11		11	1	53.0	62.1	66	9.1	15	----	62.1	0.0	8	-8.0
Receiver12		12	1	53.0	58.7	66	5.7	15	----	58.7	0.0	8	-8.0
Receiver13		13	1	53.0	55.6	66	2.6	15	----	55.6	0.0	8	-8.0
Receiver14		14	1	53.0	53.2	66	0.2	15	----	53.2	0.0	8	-8.0
Receiver15		15	1	53.0	55.0	66	2.0	15	----	55.0	0.0	8	-8.0
Receiver16		16	1	53.0	60.4	66	7.4	15	----	60.4	0.0	8	-8.0
Receiver17		17	1	53.0	64.3	66	11.3	15	----	64.3	0.0	8	-8.0
Receiver18		18	1	53.0	67.1	66	14.1	15	Snd Lvl	67.1	0.0	8	-8.0
Receiver19		19	1	53.0	69.0	66	16.0	15	Both	69.0	0.0	8	-8.0
Receiver20		20	1	53.0	66.6	66	13.6	15	Snd Lvl	66.6	0.0	8	-8.0
Receiver21		21	1	53.0	57.9	66	4.9	15	----	57.9	0.0	8	-8.0
Receiver22		22	1	53.0	54.1	66	1.1	15	----	54.1	0.0	8	-8.0
Receiver24		24	1	53.0	67.0	66	14.0	15	Snd Lvl	67.0	0.0	8	-8.0

RESULTS: SOUND LEVELS

Bishopville Bypass

Dwelling Units	# DUs	Noise Reduction			66	14.0	15	Snd Lvl	67.0	0.0	8	-8.0
		Min		Max								
		dB	Avg	dB								
Receiver25	25	1	53.0	67.0	66	14.0	15	Snd Lvl	67.0	0.0	8	-8.0
Receiver26	26	1	53.0	67.3	66	14.3	15	Snd Lvl	67.3	0.0	8	-8.0
Receiver27	27	1	53.0	67.6	66	14.6	15	Snd Lvl	67.6	0.0	8	-8.0
Receiver28	28	1	53.0	72.6	66	19.6	15	Both	72.6	0.0	8	-8.0
Receiver29	29	1	53.0	72.6	66	19.6	15	Both	72.6	0.0	8	-8.0
Receiver31	31	1	53.0	72.0	66	19.0	15	Both	72.0	0.0	8	-8.0
Receiver32	32	1	53.0	69.4	66	16.4	15	Both	69.4	0.0	8	-8.0
Receiver33	33	1	53.0	68.8	66	15.8	15	Both	68.8	0.0	8	-8.0
Receiver34	34	1	53.0	72.3	66	19.3	15	Both	72.3	0.0	8	-8.0
Receiver35	35	1	53.0	64.1	66	11.1	15	---	64.1	0.0	8	-8.0
Receiver37	37	1	53.0	66.1	66	13.1	15	Snd Lvl	66.1	0.0	8	-8.0
Receiver38	38	1	53.0	69.0	66	16.0	15	Both	69.0	0.0	8	-8.0
Receiver40	40	1	49.0	56.5	66	7.5	15	---	56.5	0.0	8	-8.0
Receiver41	41	1	49.0	57.1	66	8.1	15	---	57.1	0.0	8	-8.0
Receiver42	42	1	49.0	57.7	66	8.7	15	---	57.7	0.0	8	-8.0
Receiver43	43	1	49.0	58.5	66	9.5	15	---	58.5	0.0	8	-8.0
Receiver44	44	1	49.0	59.7	66	10.7	15	---	59.7	0.0	8	-8.0
Receiver45	45	1	49.0	60.8	66	11.8	15	---	60.8	0.0	8	-8.0
Receiver46	46	1	49.0	61.2	66	12.2	15	---	61.2	0.0	8	-8.0
Receiver47	47	1	49.0	61.8	66	12.8	15	---	61.8	0.0	8	-8.0
Receiver48	48	1	49.0	62.3	66	13.3	15	---	62.3	0.0	8	-8.0
Receiver49	49	1	49.0	62.4	66	13.4	15	---	62.4	0.0	8	-8.0
Receiver50	50	1	49.0	62.9	66	13.9	15	---	62.9	0.0	8	-8.0
Receiver51	51	1	49.0	64.1	66	15.1	15	Sub'l Inc	64.1	0.0	8	-8.0
Receiver52	52	1	49.0	60.6	66	11.6	15	---	60.6	0.0	8	-8.0
Receiver54	54	1	49.0	56.3	66	7.3	15	---	56.3	0.0	8	-8.0
All Selected		69	0.0	0.0								
All Impacted		28	0.0	0.0								
All that meet NR Goal		0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alt 2 Site 4
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal dB
Name	LAeq1h			LAeq1h	LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated LAeq1h	Calculated	
				dB	dB	dB	dB	dB	dB		dB	dB	dB	
Site 4 - St. Johns AME Church		1	1	68.0	68.6	66	0.6	15	Snd Lvl	68.6	0.0	8	-8.0	
Dwelling Units		# DUs	Noise Reduction											
All Selected				Min	Avg	Max								
All Impacted				dB	dB	dB								
All that meet NR Goal		1	0.0	0.0	0.0	0.0								
		1	0.0	0.0	0.0	0.0								
		0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
Bishopville Bypass
2035 Alt 2 Site 5

BARRIER DESIGN:
INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:
68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal dB	Calculated dB
				LAeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc dB	Impact	Goal	Calculated LAeq1h dBA	Noise Reduction Calculated dB		
Site 5 - Bishopville Presbyterian	9	1	68.0	67.7	66	-0.3	15	Snd Lvl	67.7	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction											
		Min dB	Avg dB	Max dB									
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass

RUN: 2035 Alt 2 Site 6

BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal
Name	L _{Aeq1h}			L _{Aeq1h}	L _{Aeq1h}	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Impact	Calculated	Calculated	
Site 6 - Post Office		7	1	61.0	59.5	66	-1.5	15	----	59.5	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
				dB	dB	dB								
All Selected			1	0.0	0.0	0.0								
All Impacted			0	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

Alternative 3

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

8 July 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
2035 Alternative 3
INPUT HEIGHTS

Bishopville Bypass

2035 Alternative 3

BARRIER DESIGN:
68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver

Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal	
			LAeq1h	dB	LAeq1h	dB	Calculated	Crit'n	Calculated	Crit'n	Impact	Calculated		Goal
Receiver1	1	1	46.0	66	44.0	66	-2.0	15	----	15	44.0	0.0	8	-8.0
Receiver2	2	1	46.0	66	47.5	66	1.5	15	----	15	47.5	0.0	8	-8.0
Receiver3	3	1	46.0	66	49.4	66	3.4	15	----	15	49.4	0.0	8	-8.0
Receiver4	4	1	46.0	66	48.8	66	2.8	15	----	15	48.8	0.0	8	-8.0
Receiver5	5	1	46.0	66	47.3	66	1.3	15	----	15	47.3	0.0	8	-8.0
Receiver6	6	1	46.0	66	59.1	66	13.1	15	----	15	59.1	0.0	8	-8.0
Receiver7	7	1	46.0	66	57.8	66	11.8	15	----	15	57.8	0.0	8	-8.0
Receiver8	8	1	46.0	66	58.5	66	12.5	15	----	15	58.5	0.0	8	-8.0
Receiver9	9	1	46.0	66	56.1	66	10.1	15	----	15	56.1	0.0	8	-8.0
Receiver10	10	1	46.0	66	62.2	66	16.2	15	Sub'l Inc	15	62.2	0.0	8	-8.0
Receiver12	12	1	46.0	66	64.9	66	18.9	15	Sub'l Inc	15	64.9	0.0	8	-8.0
Receiver13	13	1	46.0	66	62.1	66	16.1	15	Sub'l Inc	15	62.1	0.0	8	-8.0
Receiver14	14	1	46.0	66	63.2	66	17.2	15	Sub'l Inc	15	63.2	0.0	8	-8.0

Dwelling Units

	# DUs	Noise Reduction	
		Min	Max
All Selected	13	0.0	0.0
All Impacted	4	0.0	0.0
All that meet NR Goal	0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass
2035 Alt 3 Site 4

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing	Type Impact	With Barrier		Noise Reduction	Calculated	Goal	Calculated minus Goal
				LAeq1h	Crit'n			Calculated	LAeq1h				
			dBA	dBA	dBA	dB		dB	dB	dB	dB	dB	dB
Site 4 - St. Johns AME Church	1	1	68.0	67.5	66	-0.5	15	67.5	0.0	8	-8.0		
Dwelling Units													
	# DUs	Noise Reduction			Max								
		Min	Avg	dB									
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass

RUN: 2035 Alt 3 Site 5

BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Increase over existing		Type Impact	With Barrier		Noise Reduction	Calculated	Goal	Calculated minus Goal
					Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated				
			dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
Site 5 - Bishopville Presbyterian	9	1	68.0	66.6	66.6	-1.4	15	Snd Lvl	66.6	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction			Max								
		Min	Avg	dB									
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass
2035 Alt 3 Site 6

RUN:

INPUT HEIGHTS

BARRIER DESIGN:

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal
Name	L			Aeq1h	L	Aeq1h	Calculated	Crit'n	Calculated	Crit'n	Impact	Calculated	Goal	
	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
Site 6 - Post Office		7	1	61.0	60.3	66	-0.7	15	----	60.3	0.0	8	-8.0	
Dwelling Units			# DUs	Noise Reduction										
				Min	Avg	Max								
	dB			dB	dB	dB								
All Selected			1	0.0	0.0	0.0								
All Impacted			0	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

Alternative 4

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

28 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alternative 4
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver		No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB	
No.	#DUs	Existing LAeq1h	LAeq1h	Calculated	Crit'n Sub'l Inc	Calculated	Crit'n Sub'l Inc	Calculated LAeq1h	Noise Reduction		
		dBA	dBA	dB	dB	dB	dB	dBA	dB	dB	
Receiver2	2	1	46.0	66	0.6	15	---	46.6	0.0	8	-8.0
Receiver4	4	1	46.0	66	24.2	15	Both	70.2	0.0	8	-8.0
Receiver5	5	1	46.0	66	18.6	15	Sub'l Inc	64.6	0.0	8	-8.0
Receiver10	10	1	46.0	66	15.4	15	Sub'l Inc	61.4	0.0	8	-8.0
Receiver12	12	1	46.0	66	6.0	15	---	52.0	0.0	8	-8.0
Receiver15	15	1	46.0	66	15.3	15	Sub'l Inc	61.3	0.0	8	-8.0
Receiver17	17	1	45.0	66	21.1	15	Both	66.1	0.0	8	-8.0
Receiver18	18	1	45.0	66	16.4	15	Sub'l Inc	61.4	0.0	8	-8.0
Receiver19	19	1	45.0	66	15.5	15	Sub'l Inc	60.5	0.0	8	-8.0
Receiver21	21	1	59.0	66	2.1	15	---	61.1	0.0	8	-8.0
Receiver23	23	1	59.0	66	1.1	15	---	60.1	0.0	8	-8.0
Receiver24	24	1	59.0	66	0.6	15	---	59.6	0.0	8	-8.0
Receiver26	26	1	59.0	66	-1.5	15	---	57.5	0.0	8	-8.0
Receiver27	27	1	59.0	66	-3.2	15	---	55.8	0.0	8	-8.0
Receiver28	28	1	59.0	66	-3.0	15	---	56.0	0.0	8	-8.0
Receiver29	29	1	59.0	66	-2.4	15	---	56.6	0.0	8	-8.0
Receiver30	30	1	59.0	66	-3.5	15	---	55.5	0.0	8	-8.0
Receiver31	31	1	59.0	66	-4.5	15	---	54.5	0.0	8	-8.0
Receiver32	32	1	59.0	66	-4.4	15	---	54.6	0.0	8	-8.0
Receiver33	33	1	59.0	66	-4.5	15	---	54.5	0.0	8	-8.0

Dwelling Units	# DUs Noise Reduction		
	Min	Avg	Max

RESULTS: SOUND LEVELS

Bishopville Bypass

	dB	dB	dB	dB
All Selected	20	0.0	0.0	0.0
All Impacted	7	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass
2035 Alt 4 Site 4

RUN:

INPUT HEIGHTS

BARRIER DESIGN:

ATMOSPHERICS:

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB
				LAeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc dB	Calculated	Goal	Calculated	Goal	
Site 4 - St. Johns AME Church	1	1	68.0	67.5	66	-0.5	15	Snd Lvl	67.5	0.0	8	-8.0
Dwelling Units												
		# DUs	Noise Reduction									
			Min	Avg	Max							
			dB	dB	dB							
All Selected		1	0.0	0.0	0.0							
All Impacted		1	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0							

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass

RUN:

2035 Alt 4 Site 5

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver		No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact		With Barrier		Snd Lvl	8	-8.0
Name	L Aeq1h			L Aeq1h	Calculated	Crit'n	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Calculated	Goal			
Site 5 - Bishopville Presbyterian			1	68.0	66.6	66.6	66.6	-1.4	15	15	66.6	66.6	0.0	0.0	8	-8.0
Dwelling Units			# DUs	Noise Reduction		Noise Reduction										
				Min	Avg	Max										
All Selected			1	0.0	0.0	0.0										
All Impacted			1	0.0	0.0	0.0										
All that meet NR Goal			0	0.0	0.0	0.0										

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

24 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alt 4 Site 6
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction	Calculated minus Goal	dB
				LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated			
Site 6 - Post Office	7	1	61.0	60.2	66	-0.8	15	----	60.2	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction			Max								
		Min	Avg	dB		dB							
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	0	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

Truck Route 1

RESULTS: SOUND LEVELS

Bishopville Bypass

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Truck Route 1
RUN: INPUT HEIGHTS
BARRIER DESIGN: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

Receiver		Without Barrier										With Barrier			
Name	No.	#DUs	Existing LAeq1h	LAeq1h Calculated	Increase over existing		Type Impact	Snd Lvl	No Barrier		With Barrier		Noise Reduction Calculated	Goal	Calculated minus Goal
					Crit'n	dBA			Calculated	dBA	Calculated	dB			
Receiver1	1	1	59.0	68.1	66	9.1	15	68.1	68.1	0.0	8	8	0.0	8	-8.0
Receiver2	2	1	59.0	68.2	66	9.2	15	68.2	68.2	0.0	8	8	0.0	8	-8.0
Receiver3	3	1	59.0	58.2	66	-0.8	15	58.2	58.2	0.0	8	8	0.0	8	-8.0
Receiver4	4	1	59.0	60.0	66	1.0	15	60.0	60.0	0.0	8	8	0.0	8	-8.0
Receiver5	5	1	59.0	60.7	66	1.7	15	60.7	60.7	0.0	8	8	0.0	8	-8.0
Receiver6	6	1	59.0	62.4	66	3.4	15	62.4	62.4	0.0	8	8	0.0	8	-8.0
Receiver7	7	1	59.0	64.1	66	5.1	15	64.1	64.1	0.0	8	8	0.0	8	-8.0
Receiver8	8	1	59.0	64.2	66	5.2	15	64.2	64.2	0.0	8	8	0.0	8	-8.0
Receiver9	9	1	59.0	64.8	66	5.8	15	64.8	64.8	0.0	8	8	0.0	8	-8.0
Receiver10	10	1	59.0	65.8	66	6.8	15	65.8	65.8	0.0	8	8	0.0	8	-8.0
Receiver11	11	1	59.0	61.7	66	2.7	15	61.7	61.7	0.0	8	8	0.0	8	-8.0
Receiver12	12	1	59.0	54.6	66	-4.4	15	54.6	54.6	0.0	8	8	0.0	8	-8.0
Receiver13	13	1	59.0	63.7	66	4.7	15	63.7	63.7	0.0	8	8	0.0	8	-8.0
Receiver14	14	1	59.0	65.1	66	6.1	15	65.1	65.1	0.0	8	8	0.0	8	-8.0
Receiver15	15	1	59.0	63.4	66	4.4	15	63.4	63.4	0.0	8	8	0.0	8	-8.0
Receiver16	16	1	59.0	65.8	66	6.8	15	65.8	65.8	0.0	8	8	0.0	8	-8.0
Receiver17	17	1	59.0	64.6	66	5.6	15	64.6	64.6	0.0	8	8	0.0	8	-8.0
Receiver18	18	1	59.0	65.5	66	6.5	15	65.5	65.5	0.0	8	8	0.0	8	-8.0
Receiver19	19	1	59.0	65.1	66	6.1	15	65.1	65.1	0.0	8	8	0.0	8	-8.0
Receiver20	20	1	59.0	65.5	66	6.5	15	65.5	65.5	0.0	8	8	0.0	8	-8.0
Receiver21	21	1	59.0	66.4	66	7.4	15	66.4	66.4	0.0	8	8	0.0	8	-8.0
Receiver22	22	1	59.0	64.3	66	5.3	15	64.3	64.3	0.0	8	8	0.0	8	-8.0

RESULTS: SOUND LEVELS

Bishopville Bypass

Receiver23	23	1	59.0	64.4	66	5.4	15	----	64.4	0.0	8	-8.0
Receiver24	24	1	59.0	65.7	66	6.7	15	----	65.7	0.0	8	-8.0
Receiver25	25	1	59.0	65.6	66	6.6	15	----	65.6	0.0	8	-8.0
Receiver26	26	1	59.0	67.1	66	8.1	15	Snd Lvl	67.1	0.0	8	-8.0
Receiver27	27	1	59.0	71.9	66	12.9	15	Snd Lvl	71.9	0.0	8	-8.0
Receiver28	28	1	59.0	58.0	66	-1.0	15	----	58.0	0.0	8	-8.0
Receiver29	29	1	59.0	70.4	66	11.4	15	Snd Lvl	70.4	0.0	8	-8.0
Receiver30	30	1	59.0	65.2	66	6.2	15	----	65.2	0.0	8	-8.0
Receiver31	31	1	59.0	70.1	66	11.1	15	Snd Lvl	70.1	0.0	8	-8.0
Receiver32	32	1	59.0	69.1	66	10.1	15	Snd Lvl	69.1	0.0	8	-8.0
Receiver33	33	1	59.0	69.9	66	10.9	15	Snd Lvl	69.9	0.0	8	-8.0
Receiver34	34	1	59.0	70.8	66	11.8	15	Snd Lvl	70.8	0.0	8	-8.0
Receiver35	35	1	59.0	72.1	66	13.1	15	Snd Lvl	72.1	0.0	8	-8.0
Receiver36	36	1	59.0	71.1	66	12.1	15	Snd Lvl	71.1	0.0	8	-8.0
Receiver37	37	1	59.0	69.6	66	10.6	15	Snd Lvl	69.6	0.0	8	-8.0
Receiver38	38	1	59.0	70.3	66	11.3	15	Snd Lvl	70.3	0.0	8	-8.0
Receiver39	39	1	59.0	66.5	66	7.5	15	Snd Lvl	66.5	0.0	8	-8.0
Receiver40	40	1	59.0	65.8	66	6.8	15	----	65.8	0.0	8	-8.0
Receiver41	41	1	59.0	59.3	66	0.3	15	----	59.3	0.0	8	-8.0
Receiver42	42	1	59.0	67.8	66	8.8	15	Snd Lvl	67.8	0.0	8	-8.0
Receiver43	43	1	59.0	64.6	66	5.6	15	----	64.6	0.0	8	-8.0
Receiver44	44	1	59.0	64.9	66	5.9	15	----	64.9	0.0	8	-8.0
Receiver45	45	1	59.0	65.3	66	6.3	15	----	65.3	0.0	8	-8.0
Receiver46	46	1	59.0	65.6	66	6.6	15	----	65.6	0.0	8	-8.0
Receiver47	47	1	59.0	63.2	66	4.2	15	----	63.2	0.0	8	-8.0
Receiver48	48	1	59.0	67.4	66	8.4	15	Snd Lvl	67.4	0.0	8	-8.0
Receiver49	49	1	59.0	66.0	66	7.0	15	Snd Lvl	66.0	0.0	8	-8.0
Receiver50	50	1	59.0	64.8	66	5.8	15	----	64.8	0.0	8	-8.0
Receiver51	51	1	59.0	65.5	66	6.5	15	----	65.5	0.0	8	-8.0
Receiver52	52	1	59.0	68.0	66	9.0	15	Snd Lvl	68.0	0.0	8	-8.0
Receiver53	53	1	59.0	67.8	66	8.8	15	Snd Lvl	67.8	0.0	8	-8.0
Receiver54	54	1	59.0	65.1	66	6.1	15	----	65.1	0.0	8	-8.0
Receiver55	55	1	59.0	64.7	66	5.7	15	----	64.7	0.0	8	-8.0
Receiver56	56	1	59.0	66.9	66	7.9	15	Snd Lvl	66.9	0.0	8	-8.0
Receiver57	57	1	59.0	67.5	66	8.5	15	Snd Lvl	67.5	0.0	8	-8.0
Receiver58	58	1	59.0	67.4	66	8.4	15	Snd Lvl	67.4	0.0	8	-8.0
Receiver59	59	1	59.0	65.1	66	6.1	15	----	65.1	0.0	8	-8.0
Receiver60	60	1	59.0	66.2	66	7.2	15	Snd Lvl	66.2	0.0	8	-8.0
Receiver61	61	1	59.0	65.9	66	6.9	15	----	65.9	0.0	8	-8.0
Receiver62	62	1	59.0	66.0	66	7.0	15	Snd Lvl	66.0	0.0	8	-8.0

RESULTS: SOUND LEVELS

Bishopville Bypass

Receiver63	63	1	59.0	64.6	66	5.6	15	---	64.6	0.0	8	-8.0
Receiver64	64	1	59.0	64.3	66	5.3	15	---	64.3	0.0	8	-8.0
Receiver65	65	1	59.0	65.5	66	6.5	15	---	65.5	0.0	8	-8.0
Receiver66	66	1	59.0	66.3	66	7.3	15	Snd Lvl	66.3	0.0	8	-8.0
Receiver67	67	1	59.0	67.6	66	8.6	15	Snd Lvl	67.6	0.0	8	-8.0
Receiver68	68	1	59.0	66.7	66	7.7	15	Snd Lvl	66.7	0.0	8	-8.0
Receiver69	69	1	59.0	65.4	66	6.4	15	---	65.4	0.0	8	-8.0
Receiver70	70	1	59.0	65.1	66	6.1	15	---	65.1	0.0	8	-8.0
Receiver71	71	1	59.0	68.1	66	9.1	15	Snd Lvl	68.1	0.0	8	-8.0
Receiver72	72	1	59.0	65.9	66	6.9	15	---	65.9	0.0	8	-8.0
Receiver73	73	1	59.0	66.9	66	7.9	15	Snd Lvl	66.9	0.0	8	-8.0
Receiver74	74	1	59.0	64.0	66	5.0	15	---	64.0	0.0	8	-8.0
Receiver75	75	1	59.0	63.6	66	4.6	15	---	63.6	0.0	8	-8.0
Receiver76	76	1	59.0	63.3	66	4.3	15	---	63.3	0.0	8	-8.0
Receiver77	77	1	59.0	64.3	66	5.3	15	---	64.3	0.0	8	-8.0
Receiver78	78	1	59.0	63.7	66	4.7	15	---	63.7	0.0	8	-8.0
Receiver79	79	1	59.0	65.1	66	6.1	15	---	65.1	0.0	8	-8.0
Receiver80	80	1	59.0	58.2	66	-0.8	15	---	58.2	0.0	8	-8.0
Receiver81	81	1	59.0	57.9	66	-1.1	15	---	57.9	0.0	8	-8.0
Receiver82	82	1	59.0	59.3	66	0.3	15	---	59.3	0.0	8	-8.0
Receiver83	83	1	59.0	62.5	66	3.5	15	---	62.5	0.0	8	-8.0
Receiver84	84	1	59.0	61.9	66	2.9	15	---	61.9	0.0	8	-8.0
Receiver85	85	1	59.0	58.1	66	-0.9	15	---	58.1	0.0	8	-8.0
Receiver86	86	1	59.0	65.0	66	6.0	15	---	65.0	0.0	8	-8.0
Receiver87	87	1	59.0	62.6	66	3.6	15	---	62.6	0.0	8	-8.0
Receiver88	88	1	59.0	63.6	66	4.6	15	---	63.6	0.0	8	-8.0
Receiver89	89	1	59.0	64.7	66	5.7	15	---	64.7	0.0	8	-8.0
Receiver90	90	1	59.0	64.7	66	5.7	15	---	64.7	0.0	8	-8.0
Receiver91	91	1	59.0	64.1	66	5.1	15	---	64.1	0.0	8	-8.0
Receiver92	92	1	59.0	62.6	66	3.6	15	---	62.6	0.0	8	-8.0
Receiver93	93	1	59.0	59.5	66	0.5	15	---	59.5	0.0	8	-8.0
Receiver94	94	1	59.0	60.0	66	1.0	15	---	60.0	0.0	8	-8.0
Receiver95	95	1	59.0	57.7	66	-1.3	15	---	57.7	0.0	8	-8.0
Receiver96	96	1	59.0	55.1	66	-3.9	15	---	55.1	0.0	8	-8.0
Receiver97	97	1	59.0	54.7	66	-4.3	15	---	54.7	0.0	8	-8.0
Receiver98	98	1	59.0	61.9	66	2.9	15	---	61.9	0.0	8	-8.0
Receiver99	99	1	59.0	61.6	66	2.6	15	---	61.6	0.0	8	-8.0
Receiver100	100	1	59.0	58.7	66	-0.3	15	---	58.7	0.0	8	-8.0
Receiver101	101	1	59.0	56.2	66	-2.8	15	---	56.2	0.0	8	-8.0
Receiver102	102	1	59.0	65.0	66	6.0	15	---	65.0	0.0	8	-8.0

RESULTS: SOUND LEVELS

Bishopville Bypass

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	102	0.0	0.0	0.0
All Impacted	30	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Truck Route 1 Site 4
RUN: INPUT HEIGHTS
BARRIER DESIGN: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
				LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated			
Site 4 - St. Johns AME Church	1	1	68.0	69.3	66	1.3	15	Snd Lvl	69.3	0.0	8	-8.0	
Dwelling Units													
		# DUs	Noise Reduction										
			Min	Avg	Max								
All Selected		1	0.0	0.0	0.0								
All Impacted		1	0.0	0.0	0.0								
All that meet NR Goal		0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

Bishopville Bypass

RUN:

2035 Truck Route 1 Site 5

BARRIER DESIGN:

INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS:

68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
				LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Noise Reduction		
			dB	dB	dB	dB	dB		dB	dB		
Site 5 - Bishopville Presbyterian	9	1	68.0	66.2	66	-1.8	15	Snd Lvl	66.2	0.0	8	-8.0

Dwelling Units

	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Bishopville Bypass
2035 Truck Route 1 Site 6
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type Impact	With Barrier		Noise Reduction	Calculated minus Goal	Calculated Goal
				LAeq1h	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated			
			dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
Site 6 - Post Office	7	1	61.0	61.3	66	0.3	15	---	61.3	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction											
		Min	Avg	Max									
All Selected	1	0.0	0.0	0.0									
All Impacted	0	0.0	0.0	0.0									
All that meet NR Goal	0	0.0	0.0	0.0									

Truck Route 2

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
Bishopville Bypass
2035 Truck Route 2
BARRIER DESIGN:
INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h dBA	No Barrier		Increase over existing		Type Impact	With Barrier		Calculated minus Goal dB	
				LAeq1h dBA	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated LAeq1h dBA	Noise Reduction Calculated Goal dB		
												Calculated
Receiver1	1	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
Receiver2	2	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
Receiver3	3	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
Receiver4	4	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
Receiver5	5	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0
Receiver6	6	1	0.0	65.1	66	65.1	10	----	65.1	0.0	8	-8.0
Receiver7	7	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
Receiver9	9	1	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0
Receiver10	10	1	0.0	68.3	66	68.3	10	Snd Lvl	68.3	0.0	8	-8.0
Receiver11	11	1	0.0	57.5	66	57.5	10	----	57.5	0.0	8	-8.0
Receiver12	12	1	0.0	60.1	66	60.1	10	----	60.1	0.0	8	-8.0
Receiver13	13	1	0.0	61.0	66	61.0	10	----	61.0	0.0	8	-8.0
Receiver14	14	1	0.0	62.7	66	62.7	10	----	62.7	0.0	8	-8.0
Receiver15	15	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
Receiver16	16	1	0.0	64.4	66	64.4	10	----	64.4	0.0	8	-8.0
Receiver17	17	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0
Receiver18	18	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Receiver19	19	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
Receiver20	20	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
Receiver21	21	1	0.0	61.8	66	61.8	10	----	61.8	0.0	8	-8.0
Receiver22	22	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
Receiver23	23	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0

RESULTS: SOUND LEVELS

Bishopville Bypass

Receiver	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	86	87	88	89	65.1	66	65.1	10	65.1	65.1	0.0	0.0	8	-8.0	
																																			1
Receiver64	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	86	87	88	89	65.1	66	65.1	10	65.1	65.1	0.0	0.0	8	-8.0	
Receiver65																										69.5	66	69.5	10	69.5	69.5	0.0	0.0	8	-8.0
Receiver66																										61.2	66	61.2	10	61.2	61.2	0.0	0.0	8	-8.0
Receiver67																										62.0	66	62.0	10	62.0	62.0	0.0	0.0	8	-8.0
Receiver68																										60.0	66	60.0	10	60.0	60.0	0.0	0.0	8	-8.0
Receiver69																										58.5	66	58.5	10	58.5	58.5	0.0	0.0	8	-8.0
Receiver70																										66.4	66	66.4	10	66.4	66.4	0.0	0.0	8	-8.0
Receiver71																										61.8	66	61.8	10	61.8	61.8	0.0	0.0	8	-8.0
Receiver72																										67.1	66	67.1	10	67.1	67.1	0.0	0.0	8	-8.0
Receiver73																										69.2	66	69.2	10	69.2	69.2	0.0	0.0	8	-8.0
Receiver74																										68.8	66	68.8	10	68.8	68.8	0.0	0.0	8	-8.0
Receiver75																										67.9	66	67.9	10	67.9	67.9	0.0	0.0	8	-8.0
Receiver76																										68.4	66	68.4	10	68.4	68.4	0.0	0.0	8	-8.0
Receiver77																										63.7	66	63.7	10	63.7	63.7	0.0	0.0	8	-8.0
Receiver78																										65.4	66	65.4	10	65.4	65.4	0.0	0.0	8	-8.0
Receiver79																										66.3	66	66.3	10	66.3	66.3	0.0	0.0	8	-8.0
Receiver80																										65.1	66	65.1	10	65.1	65.1	0.0	0.0	8	-8.0
Receiver81																										65.5	66	65.5	10	65.5	65.5	0.0	0.0	8	-8.0
Receiver82																										62.7	66	62.7	10	62.7	62.7	0.0	0.0	8	-8.0
Receiver83																										64.2	66	64.2	10	64.2	64.2	0.0	0.0	8	-8.0
Receiver86																										68.5	66	68.5	10	68.5	68.5	0.0	0.0	8	-8.0
Receiver87																										68.1	66	68.1	10	68.1	68.1	0.0	0.0	8	-8.0
Receiver88																										65.4	66	65.4	10	65.4	65.4	0.0	0.0	8	-8.0
Receiver89																										54.5	66	54.5	10	54.5	54.5	0.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	86	0.0	0.0	0.0
All Impacted	33	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

27 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
Bishopville Bypass
2035 Truck Route 2 Site 4
BARRIER DESIGN:
INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier		Increase over existing		Type		With Barrier		Calculated minus Goal dB	Calculated Goal dB
				LAeq1h Calculated	Crit'n dBA	Calculated	Crit'n Sub'l Inc	Impact	Calculated LAeq1h	Calculated	Goal		
Site 4 - St. Johns AME Church	1	1	68.0	67.1	66	-0.9	15	Snd Lvl	67.1	0.0	8	-8.0	
Dwelling Units													
	# DUs	Noise Reduction			Max dB								
		Min dB	Avg dB										
All Selected	1	0.0	0.0	0.0	0.0								
All Impacted	1	0.0	0.0	0.0	0.0								
All that meet NR Goal	0	0.0	0.0	0.0	0.0								

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

28 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
Bishopville Bypass
2035 Truck Route 2 Site 5
BARRIER DESIGN:
INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver													
Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Crit'n	Increase over existing		Type Impact	With Barrier		Noise Reduction Calculated	Goal	Calculated minus Goal
						Calculated	Crit'n Sub'l Inc		Calculated LAeq1h	Calculated			
				dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
Site 5 - Bishopville Presbyterian	9	1	68.0	66.2	66	-1.8	15	Snd Lvl	66.2	0.0	8	-8.0	
Dwelling Units													
# DUs	Noise Reduction			Max dB									
	Min dB	Avg dB											
All Selected	1	0.0	0.0	0.0									
All Impacted	1	0.0	0.0	0.0									
All that meet NR Goal	0	0.0	0.0	0.0									

RESULTS: SOUND LEVELS

Bishopville Bypass

DRMP
JRS

28 June 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:
Bishopville Bypass
2035 Truck Route 2 Site 6
BARRIER DESIGN:
INPUT HEIGHTS

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

ATMOSPHERICS:
68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing		No Barrier		Increase over existing		Type Impact		With Barrier		Calculated minus Goal dB
			LAeq1h	dBA	LAeq1h	Calculated	Crit'n	Calculated	Crit'n	Sub'l Inc	Calculated	Goal	
Site 6 - Post Office	7	1	61.0	61.3	61.3	66	0.3	15	----	61.3	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction										
			Min	Avg	Max								
All Selected		1	0.0	0.0	0.0	0.0							
All Impacted		0	0.0	0.0	0.0	0.0							
All that meet NR Goal		0	0.0	0.0	0.0	0.0							

Barrier Summary

RESULTS: BARRIER DESIGN

Bishopville Bypass

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12 July 2011
TNM 2.5
Calculated with TNM 2.5

RESULTS: BARRIER DESIGN

PROJECT/CONTRACT: Bishopville Bypass
2035 Alternative 2
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Selected Receivers

Name	No.	Calc		Noise Reduction		Barrier Reviewed		Important Segments		Partial	
		L Aeq1h dBA	Calc dB	Goal dB	Calc-Goal dB	Name	No.	Height ft	L Aeq1h dBA		
Receiver1	1	71.3	0.0	8	-8.0						
Receiver2	2	64.1	0.0	8	-8.0						
Receiver3	3	61.6	-0.0	8	-8.0						
Receiver4	4	68.4	0.0	8	-8.0						
Receiver5	5	61.3	-0.0	8	-8.0						
Receiver6	6	56.8	0.0	8	-8.0	West Barrier 2	point22	22	12.0	19.8	
Receiver7	7	69.7	-0.0	8	-8.0	West Barrier 1	point16	16	12.0	18.2	
Receiver9	9	57.6	13.2	8	5.2	East Barrier 2	point24	24	12.0	57.5	
Receiver10	10	74.9	-0.0	8	-8.0	East Barrier 1	point12	12	12.0	41.0	
Receiver11	11	56.4	5.7	8	-2.3	East Barrier 2	point24	24	12.0	53.6	
Receiver12	12	54.5	4.2	8	-3.8	East Barrier 1	point12	12	12.0	46.7	
Receiver13	13	52.2	3.4	8	-4.6	East Barrier 2	point24	24	12.0	50.1	
Receiver14	14	50.3	2.9	8	-5.1	West Barrier 2	point12	12	12.0	45.9	
						East Barrier 1	point22	22	12.0	18.0	
						East Barrier 2	point24	24	12.0	47.1	
						West Barrier 1	point12	12	12.0	44.3	
						West Barrier 2	point22	22	12.0	24.4	
						East Barrier 2	point24	24	12.0	44.5	

RESULTS: BARRIER DESIGN

Bishopville Bypass

										East Barrier 1	point12	12	12.0	42.6
										West Barrier 2	point22	22	12.0	26.4
										West Barrier 1	point16	16	12.0	18.9
Receiver15	15	51.2	3.8	8	-4.2					East Barrier 1	point12	12	12.0	46.1
										East Barrier 2	point24	24	12.0	45.3
										West Barrier 2	point22	22	12.0	27.1
										West Barrier 1	point16	16	12.0	20.5
Receiver16	16	54.6	5.8	8	-2.2					East Barrier 1	point12	12	12.0	51.4
										East Barrier 2	point24	24	12.0	48.9
										West Barrier 2	point22	22	12.0	22.0
Receiver17	17	56.6	7.7	8	-0.3					East Barrier 1	point12	12	12.0	55.0
										East Barrier 2	point24	24	12.0	50.3
										West Barrier 2	point22	22	12.0	19.1
Receiver18	18	57.9	9.3	8	1.3					East Barrier 1	point12	12	12.0	57.3
										East Barrier 2	point24	24	12.0	44.7
										West Barrier 2	point22	22	12.0	22.7
Receiver19	19	58.5	10.6	8	2.6					East Barrier 1	point12	12	12.0	58.1
										East Barrier 2	point24	24	12.0	38.8
										West Barrier 2	point22	22	12.0	24.1
Receiver20	20	66.5	0.1	8	-7.9					West Barrier 2	point22	22	12.0	42.0
										West Barrier 1	point16	16	12.0	28.6
Receiver21	21	57.3	0.6	8	-7.4					West Barrier 2	point22	22	12.0	44.9
										West Barrier 1	point16	16	12.0	35.5
Receiver22	22	53.8	0.3	8	-7.7					West Barrier 2	point22	22	12.0	39.5
										West Barrier 1	point16	16	12.0	32.5
Receiver24	24	66.9	0.1	8	-7.9					West Barrier 2	point22	22	12.0	47.7
										West Barrier 1	point16	16	12.0	32.4
Receiver25	25	66.6	0.4	8	-7.6					West Barrier 2	point22	22	12.0	50.6
										West Barrier 1	point16	16	12.0	34.3
Receiver26	26	58.5	8.8	8	0.8					East Barrier 1	point12	12	12.0	57.3
										East Barrier 2	point24	24	12.0	38.1
										West Barrier 2	point22	22	12.0	24.3
Receiver27	27	60.8	6.8	8	-1.2					East Barrier 1	point12	12	12.0	56.9
										West Barrier 2	point22	22	12.0	27.8
Receiver31	31	57.2	14.8	8	6.8					West Barrier 2	point22	22	12.0	57.2

RESULTS: BARRIER-SEGMENT DESCRIPTIONS

Bishopville Bypass

DRMP
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12 July 2011
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RESULTS: BARRIER-SEGMENT DESCRIPTIONS

PROJECT/CONTRACT: Bishopville Bypass
2035 Alternative 2
BARRIER DESIGN: INPUT HEIGHTS

Barriers		Segments									
Name	Type	Name	No.	Heights First Point ft	Average ft	Second Point ft	Length ft	If Wall Area sq ft	On Struc? Reflections?	If Berm Volume cu yd	Cost
East Barrier 1	W	point12	12	12.00	12.00	12.00	567	6809			238326
West Barrier 1	W	point16	16	12.00	12.00	12.00	378	4542			158967
West Barrier 2	W	point22	22	12.00	12.00	12.00	624	7483			261911
East Barrier 2	W	point24	24	12.00	12.00	12.00	394	4723			165296