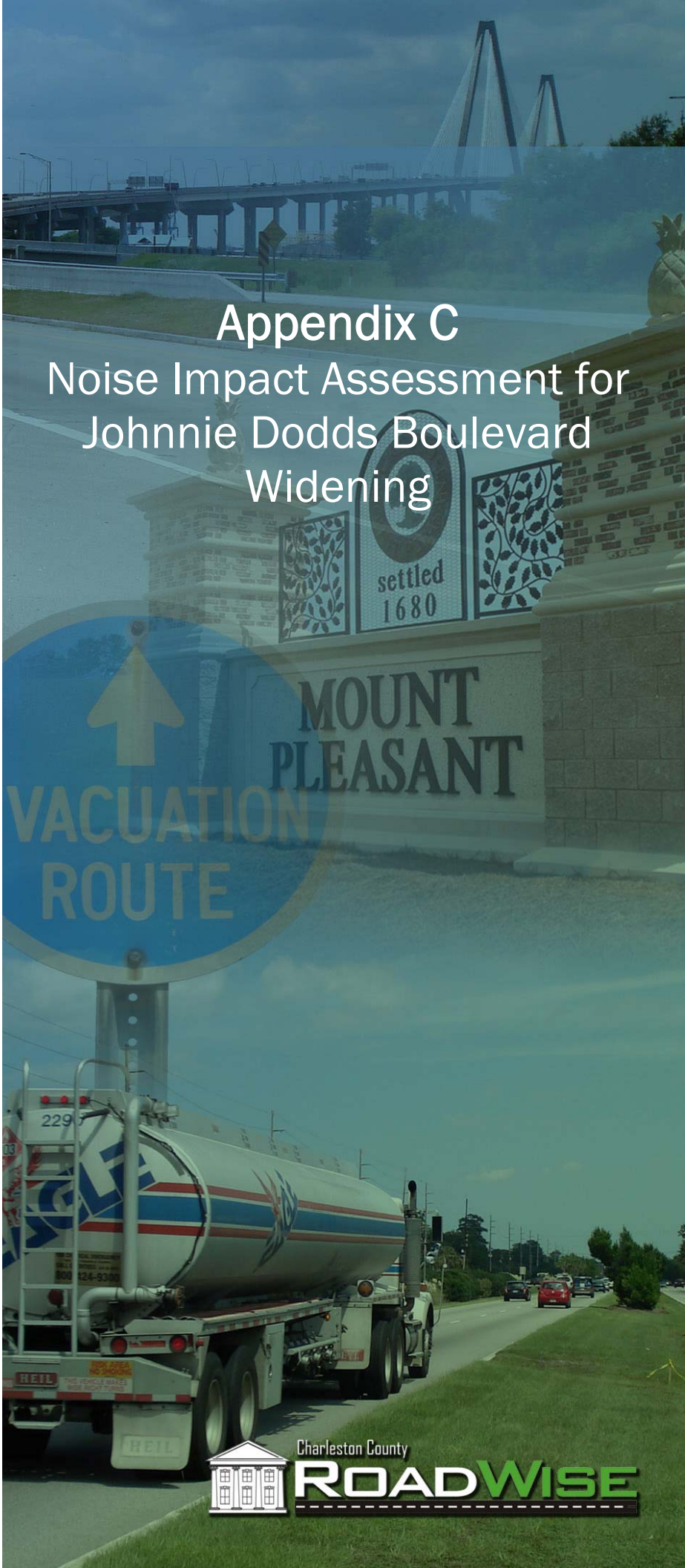

Appendix C

Noise Impact Assessment for Johnnie Dodds Boulevard Widening

NOISE IMPACT ASSESSMENT

NOISE IMPACT ASSESSMENT FOR JOHNNIE DODD BOULEVARD WIDENING MT. PLEASANT, SOUTH CAROLINA

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July 12, 2007

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Mt. Pleasant, South Carolina

NOISE IMPACT ASSESSMENT FOR
JOHNNIE DODD BOULEVARD WIDENING
MT. PLEASANT, SOUTH CAROLINA

Introduction

Charleston County is proposing to widen Johnnie Dodd Boulevard. Johnnie Dodds Boulevard (U.S. Route 17) is located within the Town of Mount Pleasant, Charleston County, South Carolina. Charleston County proposes to widen Johnnie Dodds Boulevard and improve several cross streets as part of the County's RoadWise Program, which is funded by a half-cent sales tax. The portion of Johnnie Dodds Boulevard included as part of this study begins at the north end of the Ravenel Bridge and continues to the interchange with I-526, a distance of approximately 2.8 miles. The existing roadway along this predominately commercial area is a 4-lane divided highway with a planted median. Frontage roads provide access to the large number of businesses that are present along most of the length of the project. It includes major intersections at Magrath Darby Boulevard, Houston Northcutt Boulevard, Shellmore Boulevard, Dragoon Drive, Anna Knapp Boulevard, and Bowman Road. The proposed improvements consist of widening the highway to 6 lanes, relocating/improving the frontage roads, and improving the major intersections with grade separated interchanges, continuous flow intersections and/or "super street" intersections that provide median crossovers to eliminate left turns. The study also includes improvements for bicycle and pedestrian facilities. A project location map is in Figure-1.

In compliance with *23 USC Section 109(h) and (I),* the *Federal Highway Administration* established guidelines for the assessment of highway traffic-generated noise. These guidelines, published as *Part 772 of Title 23* of the *Code of Federal Regulations*, provide procedures to be followed in conducting noise analyses that will protect the public health and welfare. In accordance with the Noise Control Act of 1972, coordination of this regulation with the *Environmental Protection Agency* has been completed. The following assessment has been prepared in accordance with *23 CFR Part 772*.

Land Uses

Existing activities or land uses along the project's corridor are identified as a mixture of hotel, office, retail, and service type businesses with some sparse residential dwellings along the south side of the project.

Noise Abatement Criteria

To determine whether highway noise levels are compatible with various land uses, the Federal Highway Administration (FHWA) has developed noise abatement criteria and procedures to be used in planning and design of highways. These criteria and procedures are set forth in Title 23 on the Code of Federal Regulations, Part 772 (23 CFR 772), US Department of Transportation, FHWA, *and Procedures for Abatement of Highway Traffic Noise and Construction Noise*. A summary of the FHWA noise abatement criteria for various land uses is presented in Table 1.

Title 23 CFR Section 772.11(a) states "In determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement usually will be necessary only where frequent human use occurs and lowered noise levels would be of benefit."

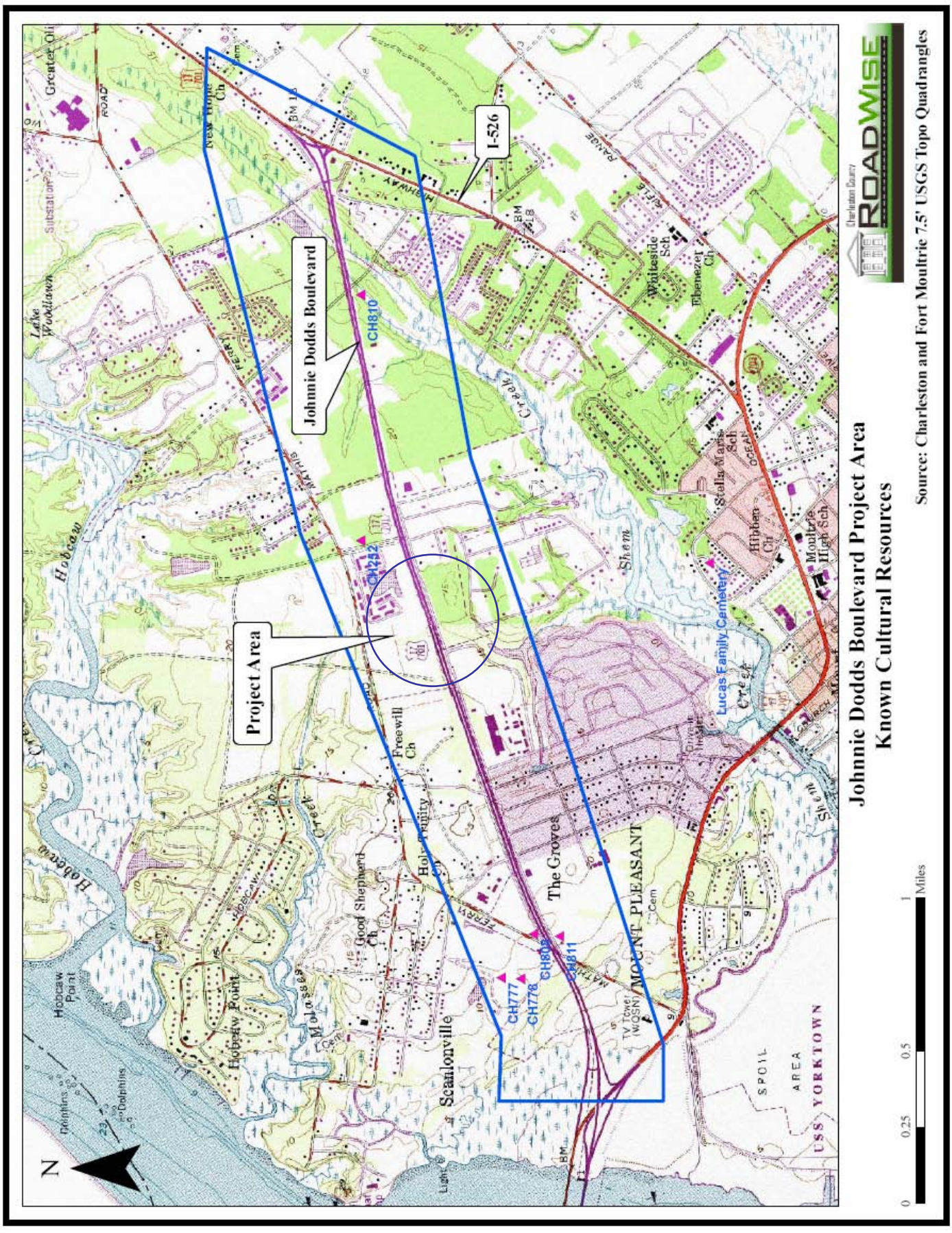


FIGURE 1 – PROJECT LOCATION MAP

Traffic noise impacts occur when either; a) the predicted traffic noise levels approach or exceed the FHWA Noise Abatement Criterion (NAC) for the applicable Activity Category, or b) when the predicted traffic noise levels substantially exceed the existing noise levels (23 CFR 772). Noise abatement measures must be considered for receptors impacted under either case. The South Carolina Department of Transportation (SCDOT) considers noise levels within 1 dBA of the FHWA Noise Abatement Criteria as "approaching" the criterion. Noise impacts will also occur if the difference between the existing noise level and the predicted noise level is 15 dBA or greater. A 15 dBA increase is deemed to be a "substantial increase".

TABLE 1
FHWA NOISE ABATEMENT CRITERIA

Activity Category	L_{10} (hour)*	Leq (hour)*	Description of Activity Category
A	60	57	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 purpose.
B	70	67	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	75	72	Developed lands, properties, or activities not included in Categories A or B above.
D	- -	- -	Undeveloped lands.
E	55 (interior)	52	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

*L_{10} = A-weighted noise level exceeded 10 percent of the time. L_{10} = Hourly A-weighted Average Noise Level Source: Title 23 of the Code of Federal Regulations (CFR) Part 772.

Analysis Methodology

Any traffic noise prediction method is approved for use in any noise analysis required by the Federal regulations if it generally meets the following conditions: 1) The methodology is consistent with the methodology in the FHWA highway noise prediction model; and 2) The prediction method uses noise emission levels obtained from the National Reference Energy Mean Emission Levels as a function of speed or by determining the reference energy mean emission levels for measuring highway noise. In predicting noise levels and assessing noise impacts, traffic characteristics that will yield the worst hourly traffic noise impact on a regular basis for the design year shall be used**.** Peak hour truck factors ranging from 11% to 16% for the Johnnie Dodd Boulevard corridor along with the design hourly volume traffic were used as input for the model.

Traffic volumes for *2005* were used to determine modeled existing noise levels at all modeled receptor locations in the project's vicinity and, future noise levels were determined based on projected traffic volumes for the *2030* to determine the build and no-build levels. The traffic data for this project is in Tables 2.

TABLE 2
Existing/Design Peak Hour Volumes and Speeds

Roadway	Existing Year (2005)				Design Year (2030)			
Johnnie Dodd Boulevard Widening	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Speed**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Speed**
JDB – Magrath Darby Blvd to Mathis Ferry Rd	2975	339	227	45 mph	6568	631	420	45 mph
JDB – Mathis Ferry Rd to Shellmore Blvd	2386	268	182	45 mph	4918	561	375	45 mph
JDB – Shellmore Blvd to Anna Knapp Blvd	2635	279	186	45 mph	4593	486	324	45 mph
JDB – Anna Knapp Blvd to Bowman Rd	2664	260	173	45 mph	4699	459	306	45 mph
JDB – Bowan Rd to I-526	2844	211	140	45 mph	5510	408	272	45 mph
N Magrath Darby Blvd	323	37	24	35 mph	48	5	4	35 mph
S Magrath Darby Blvd	173	20	13	35 mph	66	7	5	35 mph
Mathis Ferry Rd	811	92	62	35 mph	1580	181	120	35 mph
Houston Northcutt Blvd	496	56	38	35 mph	1023	117	78	35 mph
N Shellmore Blvd	383	41	27	35 mph	598	63	42	35 mph
S Shellmore Blvd	362	38	26	25 mph	534	56	38	25 mph
Dragoon Drive	206	20	14	30 mph	262	26	17	30 mph
N Anna Knapp Blvd	352	34	23	35 mph	512	50	33	35 mph
S Anna Knapp Blvd	289	28	19	35 mph	354	35	23	35 mph
N Bowman Rd	551	41	27	35 mph	805	60	40	35 mph
S Bowman Rd	617	46	30	35 mph	652	49	32	35 mph
Old Georgetown Rd	20	0	0	30 mph	30	0	1	30 mph
EB US 17 to SB I-526 Ramp	27	2	1	45 mph	71	5	4	45 mph
I-526 SB	654	64	43	55 mph	897	88	58	55 mph
I-526 NB	206	20	13	55 mph	320	31	21	55 mph
S Frontage Rd – Magrath Darby to Mathis Ferry	225	7	5	35 mph	588	19	12	35 mph
S Frontage Rd – Mathis Ferry to Shellmore	498	16	10	35 mph	880	28	18	35 mph
S Frontage Rd – Shellmore to Anna Knapp	352	11	8	35 mph	498	16	10	35 mph
S Frontage Rd – Anna Knapp Blvd to Bowman Rd	321	10	7	35 mph	428	14	9	35 mph
S Frontage Rd – Bowan Rd to Old Georgetown Rd	207	7	4	35 mph	178	5	4	35 mph
N Frontage Rd – I-526 to Bowman Rd	321	10	7	35 mph	428	14	9	35 mph
N Frontage Rd – Bowman Rd to Anna Knapp	352	11	8	35 mph	498	16	10	35 mph
N Frontage Rd – Anna Knapp to Shellmore Blvd	498	16	10	35 mph	880	28	18	35 mph
N Frontage Rd –Shellmore Blvd to Mathis Ferry	225	7	5	35 mph	588	19	12	35 mph

Build = No-Build Traffic

Determination of Ambient Noise Levels for Existing Activities

In this noise analysis, noise measurements were taken to help determine existing ambient noise levels. Field measurements were taken at three representative sites along and near the proposed project corridor. The field measurements ranged from ***56.7 L_{eq}*** **to** ***66.6 L_{eq}***.

TABLE 3
Field Measurements

Field Readings	Site Location	Existing dBA
Reading #1	Along S Frontage Road near Houston Northcutt Blvd	66.6 Leq
Reading #2	Along Old Georgetown Road near I-526 SB On Ramp	56.7 Leq
Reading #3	Hotel at the corner of Johnnie Dodd Blvd and Magrath Darby Blvd	60.2 Leq

Noise levels along the proposed project were also calculated using the *FHWA Highway Traffic Noise Prediction Model (TNM 2.5)*. Input to the model included existing roadway alignments, existing traffic volumes, vehicle speeds and truck percentages. One hundred and eighteen (118) sites were modeled along the proposed project. The modeled measurements ranged from ***59.9 L_{eq}*** **to** ***72.2 L_{eq}***.

Calibrating the Prediction Model

FHWA has no specific guidance on how to perform model validation and calibration. Validation is recommended to reinforce the prediction of future noise levels in the model and as long as the existing measurements and predicted measurements (for that existing situation) are within +/-3dBA then the model validates can be used to predict future levels.

Calibration involves the situations were the model is consistently over-predicting or under-predicting by an amount greater than 3 dBA. It is then reasonable to adjust the model by the difference between the measured and predicted values as long as it is documented. FHWA Technical Assistance (Washington, DC) has recommended referring to the Caltrans and Florida DOT state policies.

Model calibration is defined as the process of adjusting calculated noise levels by algebraically adding a calibration constant derived from the difference between measured and calculated noise levels at representative sites. The purpose of model calibration is to "fine-tune" the prediction model to actual site conditions, which are not adequately accounted for by the model. In general, model calibrations are recommended if site conditions, highway alignment, and profile are not expected to change significantly before and after construction of a project, and until its design year.

Prediction of Future Traffic Noise Levels

The Leq future noise levels were predicted at existing and planned noise sensitive land uses for the proposed project under detailed consideration, including the "2030 no build" scenario. For the build condition, future roadway alignments, future traffic volumes, vehicle speed and truck percentages were added to the model. The predictions were made using methods approved by the FHWA as outlined in the Analysis Methodology section. Predictions were made for the traffic characteristics that yielded the worst hourly traffic noise impact. The predictions were compared with the Noise Abatement Criteria of 23 CFR 772 and with the existing noise levels. Actual highway traffic noise levels could be somewhat lower. An actual situation generally includes many types of vehicles driving at different speeds through continually changing highway configurations and surrounding terrain. Due to the large number of variables present in a complex situation such as this, certain assumptions and simplifications were made in order to be able to model and predict the highway traffic noise. It was assumed that traffic will operate at posted speeds for the modeled roadways and all surrounding terrain features are level. The predicted noise levels for the build and no-build conditions for the proposed project are included in Table 4 and 5.

TABLE 4
MODELED NOISE SITES

Receivers	Existing Noise Level		Build Noise Level	No-Build Noise Level	Existing/Build Difference	Existing/No-Build Difference	Impact?	
	Field	Modeled					Yes	No
R1 - Hotel (Pool)		66.3	70.2	67.5	3.9	1.2	X	
R2 - Commercial"		68.1	72.1	69.6	4.0	1.5	X	
R3 - Commercial"		71.5	74.9	73.3	3.4	1.8	X	
R4 - Commercial"		68.3	72.4	70.1	4.1	1.8	X	
R5 - Commercial"		66.6	70.8	68.8	4.2	2.2		X
R6 - Commercial"		67.1	71.4	69.3	4.3	2.2	X	
R7 - Commercial"	66.6	68.2	72.4	70.3	4.2	2.1	X	
R8 - Commercial"		70.2	73.6	72.2	3.4	2.0	X	
R9 - Commercial"		68.4	72.5	70.4	4.1	2.0	X	
R10 - Commercial"		69.3	73.0	71.3	3.7	2.0	X	
R11 - Residential"		68.5	72.5	70.5	4.0	2.0	X	
R12 - Residential"		68.5	72.5	70.5	4.0	2.0	X	
R13 - Residential"		68.4	72.4	70.4	4.0	2.0	X	
R14 - Residential"		69.2	72.9	71.2	3.7	2.0	X	
R15 - Commercial"		66.2	70.3	68.2	4.1	2.0		X
R16 - Commercial"		62.1	66.1	64.1	4.0	2.0		X
R17 - Commercial"		70.8	74.1	72.8	3.3	2.0	X	
R18 - Commercial"		66.4	70.8	68.5	4.4	2.1		X
R19 - Commercial"		68.3	72.3	70.3	4.0	2.0	X	
R20 - Commercial"		65.2	68.4	68.0	3.2	2.8		X
R21 - Commercial"		68.1	71.8	69.7	3.7	1.6	X	
R22 - Commercial"		63.9	67.8	66.2	3.9	2.3		X
R23 - Commercial"		64.9	69.4	67.1	4.5	2.2		X
R24 - Commercial"		64.9	69.3	67.0	4.4	2.1		X
R25 - Commercial"		68.5	72.3	70.3	3.8	1.8	X	
R26 - Commercial"		68.5	72.1	70.1	3.6	1.6	X	
R27 - Commercial"		69.3	72.7	70.9	3.4	1.6	X	
R28 - Commercial"		61.4	64.7	62.6	3.3	1.2		X
R29 - Commercial"		62.7	66.1	64.0	3.4	1.3		X
R30 - Commercial"		60.4	63.6	61.5	3.2	1.1		X
R31 - Commercial"		62.8	66.2	64.1	3.4	1.3		X
R32 - Commercial"		68.2	71.9	69.8	3.7	1.6	X	
R33 - Commercial"		66.7	70.7	68.2	4.0	1.5		X
R34 - Commercial"		66.7	70.7	68.3	4.0	1.6		X
R35 - Commercial"		62.2	65.5	64.2	3.3	2.0		X
R36 - Commercial"		61.4	64.2	63.1	2.8	1.7		X
R37 - Commercial"		65.1	68.7	67.0	3.6	1.9		X
R38 - Commercial"		67.4	71.2	68.8	3.8	1.4	X	
R39 - Commercial"		63.5	66.0	65.0	2.5	1.5		X
R40 - Commercial"		63.2	66.6	64.6	3.4	1.4		X
R41 - Commercial"		66.2	70.3	67.7	4.1	1.5		X
R42 - Commercial"		62.8	66.1	64.1	3.3	1.3		X
R43 - Commercial"		66.1	69.9	67.5	3.8	1.4		X
R44 - Commercial"		63.8	67.9	65.3	4.1	1.5		X
R45 - Commercial"		60.2	62.6	61.6	2.4	1.4		X
R46 - Commercial"		61.9	64.0	63.3	2.1	1.4		X
R47 - Commercial"		63.1	65.0	64.4	1.9	1.3		X
R48 - Commercial"		65.1	69.4	66.7	4.3	1.6		X
R49 - Commercial"		65.8	70.2	67.6	4.4	1.8		X
R50 - Commercial"		67.4	71.5	69.4	4.1	2.0	X	
R51 - Residential"		61.5	63.5	62.7	2.0	1.2		X
R52 - Residential"		59.9	62.4	61.3	2.5	1.4		X
R53 - Residential"		60.2	62.9	61.6	2.7	1.4		X
R54 - Commercial"		67.0	71.2	69.0	4.2	2.0	X	
R55 - Commercial"		67.3	71.5	69.3	4.2	2.0	X	
R56 - Commercial"		66.6	71.0	68.7	4.4	2.1	X	
R57 - Commercial"		66.6	71.0	68.6	4.4	2.0	X	
R58 - Commercial"		66.8	70.6	68.2	3.8	1.4		X
R59 - Commercial"		66.8	70.9	68.5	4.1	1.7		X
R60 - Commercial"		65.0	69.5	66.7	4.5	1.7		X
R61 - Commercial"		65.9	70.1	67.6	4.2	1.7		X
R62 - Commercial"	56.7	60.9	63.2	62.6	2.3	1.7		X

TABLE 5
MODELED NOISE SITES

Receivers	Existing Noise Level		Build Noise Level	No-Build Noise Level	Existing/Build Difference	Existing/No-Build Difference	Impact?	
	Field	Modeled					Yes	No
R63 - Commercial		65.7	69.3	66.6	3.6	0.9		X
R64 - Commercial"		63.6	66.4	64.3	2.8	0.7		X
R65 - Commercial"		68.9	72.0	70.3	3.1	1.4	X	
R66 - Commercial"		65.3	69.7	68.0	4.4	2.7		X
R67 - Commercial"		68.5	72.2	70.4	3.7	1.9	X	
R68 - Commercial"		67.9	71.8	69.8	3.9	1.9	X	
R69 - Commercial"		71.2	74.3	72.9	3.1	1.7	X	
R70 - Commercial"		66.3	70.8	68.2	4.5	1.9		X
R71 - Commercial"		70.2	73.4	72.0	3.2	1.8	X	
R72 - Commercial"		60.4	63.8	62.4	3.4	2.0		X
R73 - Commercial"		61.6	64.4	63.5	2.8	1.9		X
R74 - Commercial"		69.5	72.6	70.9	3.1	1.4	X	
R75 - Commercial"		69.1	72.0	70.1	2.9	1.0	X	
R76 - Commercial"		63.5	64.7	63.8	1.2	0.3		X
R77 - Commercial"		60.6	62.7	61.1	2.1	0.5		X
R78 - Commercial"		66.7	69.4	67.0	2.7	0.3		X
R79 - Commercial"		65.6	68.5	66.1	2.9	0.5		X
R80 - Commercial"		65.8	68.7	66.3	2.9	0.5		X
R81 - Commercial"		69.8	71.9	70.0	2.1	0.2	X	
R82 - Commercial"		67.0	69.7	67.3	2.7	0.3		X
R83 - Commercial"		69.2	71.5	69.4	2.3	0.2	X	
R84 - Commercial"		70.7	72.5	70.8	1.8	0.1	X	
R85 - Commercial"		68.0	70.6	68.2	2.6	0.2		X
R86 - Commercial"		68.6	71.2	68.8	2.6	0.2	X	
R87 - Commercial"		67.1	70.0	67.5	2.9	0.4		X
R88 - Commercial"		72.2	73.9	72.4	1.7	0.2	X	
R89 - Commercial"		71.8	73.6	72.1	1.8	0.3	X	
R90 - Commercial"		70.1	71.5	69.5	1.4	-0.6	X	
R91 - Commercial"		65.5	65.3	64.3	-0.2	-1.2		X
R92 - Commercial"		67.4	70.8	68.2	3.4	0.8		X
R93 - Commercial"		71.4	74.9	73.3	3.5	1.9	X	
R94 - Commercial"		61.8	64.0	62.8	2.2	1.0		X
R95 - Commercial"		63.2	66.2	64.5	3.0	1.3		X
R96 - Commercial"		64.6	68.3	66.1	3.7	1.5		X
R97 - Commercial"		70.2	73.2	71.6	3.0	1.4	X	
R98 - Commercial"		72.3	75.0	73.5	2.7	1.2	X	
R99 - Commercial"		70.6	73.6	72.1	3.0	1.5	X	
R100 - Commercial"		66.6	70.6	68.2	4.0	1.6		X
R101 - Commercial"		70.7	73.7	72.2	3.0	1.5	X	
R102 - Commercial"		70.4	73.5	72.0	3.1	1.6	X	
R103 - Commercial"		71.5	74.6	73.0	3.1	1.5	X	
R104 - Commercial"		67.5	71.4	69.0	3.9	1.5	X	
R105 - Commercial"		67.0	71.1	68.6	4.1	1.6	X	
R106 - Commercial"		67.8	71.6	69.4	3.8	1.6	X	
R107 - Commercial"		69.5	72.7	71.0	3.2	1.5	X	
R108 - Commercial"		71.7	74.5	73.0	2.8	1.3	X	
R109 - Commercial"		66.5	70.5	68.0	4.0	1.5		X
R110 - Commercial"		67.0	70.6	68.4	3.6	1.4		X
R111 - Commercial"		70.4	73.8	72.3	3.4	1.9	X	
R112 - Commercial"		67.0	70.2	68.9	3.2	1.9		X
R113 - Commercial"		67.2	69.4	68.7	2.2	1.5		X
R114 - Commercial"		66.5	68.8	68.4	2.3	1.9		X
R115 - Commercial"		64.3	67.7	66.8	3.4	2.5		X
R116 - Commercial"		67.7	71.9	69.8	4.2	2.1	X	
R117 - Commercial"		65.6	69.8	67.6	4.2	2.0		X
R118 - Hotel "	60.2	65.4	69.6	66.8	4.2	1.4	X	

Comparison of Predicted Traffic Noise Levels to Existing Noise Levels

Two methods are used for predicting a noise impact. The first is a comparison of predicted noise levels to the noise abatement criteria established by *23 CFR Part 772*. A 67 dBA Leq criterion has been established for schools, libraries, residences, churches, playgrounds and recreational areas and a 72 dBA Leq criterion has been established for

commercial activities. Any predicted noise level that approaches or exceeds the applicable noise abatement criterion is considered an impact. For the purpose of this study, approach means within 1 dBA of the noise abatement criterion. Fifty Five (55) sites along Johnnie Dodd Boulevard will be impacted with four (4) of those sites being single family residential dwellings. Seventeen (17) of the total the modeled sites are impacted under existing conditions.

The second method of determining noise impacts involves the amount of increases from the existing noise levels to the predicted future noise levels. An impact occurs when there is a substantial increase from existing levels. Noise increases of 15 dBA or more are considered a substantial increase. According to SCDOT Noise Policy, a "substantial increase" occurs when the future predicted noise levels exceed 57 dBA and there is an increase of at least 15 dBA or more over existing levels. No sites will experience noise increases in excess of 15 dBA. The modeled receiver locations are in Figures 2-7.

Evaluation of Noise Abatement Measures

In accordance with *23 CFR Part 772*, alternative noise abatement measures for reducing or eliminating noise impacts along the proposed corridors were evaluated for the noise sensitive sites that exceeded the noise abatement criteria. Among the types of abatement considered were the following:

a. Abatement Barriers - Among the most common are earth berms and freestanding walls. The optimum situation for the use of free-standing noise barriers results when a dense concentration of impacted sites lies directly adjacent to and parallel with the highway right-of-way. In these instances, one barrier can protect many people at a relatively low cost per impacted site. Guidelines adopted by SCDOT to ensure that the maximum number of people benefit from each dollar spent on noise abatement limit the cost of barriers to $25,000 per impacted residence based on a $18 per square foot construction cost. Where cost per unit for an effective noise barrier, one that would reduce noise levels by at least five decibels, would exceed this amount, the wall is not considered a reasonable use of public funds and no abatement is proposed. The evaluations are based on a $18 per square foot cost.

A preliminary evaluation was done to determine the feasibility of constructing a noise barrier along the south side of Johnnie Dodd Boulevard to mitigate noise impacts for residential dwellings at the corners of Cliffwood Drive and Lakeview Drive. The following table contains the preliminary evaluations for the proposed noise barriers.

TABLE 6
PRELIMINARY NOISE WALL EVALUATIONS

JOHNNIE DODD BOULEVARD NOISE BARRIER EVALUATION					
	Location	Barrier Dimensions	Barrier Cost	# of Impacted Sites	Feasibility
Wall 1	Southside of JDB along Cliffford Dr & Lakview Dr	1000''L x 10'H	$180,000- $45,000/impact	4	No

No abatement was considered for the commercial developments along the corridor since there no noise sensitive exterior uses associated with them and no abatement was considered for the two impacted hotels since both are at corners of an intersection. To provide effective abatement, a wall will need to be approximately 4 times as long to either side of the impacted receiver as it is from the noise source.

b.) Acquisition of Rights-of-Way - There acquisition of rights-of-way to mitigate the noise levels at the affected site would result in a disruptive relocation.

c.) Traffic Management – Measures such as exclusive lane designations, signing for prohibition of certain vehicle types, and modified speed limits would prevent the project from serving its intended purpose.

d.) Alteration of Horizontal and Vertical Alignments - Alignment modifications as a means of noise abatement would result in disruptive relocations for this project and would not be cost effective.

e.) Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development – Adequate property is not available to create an effective buffer zone between the proposed roadway and the impacted receivers.

f.) Noise insulation of public use or nonprofit institutional structures – The impacted structures are identified as a private residences and do not comply with the definition of public use or nonprofit institutional structure.

Construction Noise

Although temporary in nature, construction noise can, at times, interfere with day-to-day activities. Construction noise generated by project activities will cause a temporary impact on the adjoining communities. Areas adjacent to the highway construction will temporarily experience increased noise. The types and uses of equipment, traffic relocation (detour routes), material movement (haul routes), and various construction techniques, would all contribute to this additional noise.

A variety of equipment and operational modes and the unpredictable location of on-site activities combine to make an estimate of composite noise level impractical, especially for specific receiver locations. Therefore, the discussion of construction noise is limited to equipment emission levels and feasible mitigation. The most prevalent construction noise source is equipment powered by internal combustion engines (usually diesel).

Construction equipment would be required to have factory-installed mufflers or their equivalents in good working order during the life of the construction contracts, and construction, where feasible, would take place primarily during the less noise sensitive daylight hours to avoid impacts during the hours associated with sleep.

FIGURE 2 - Magrath Darby Boulevard to Mathis Ferry Road

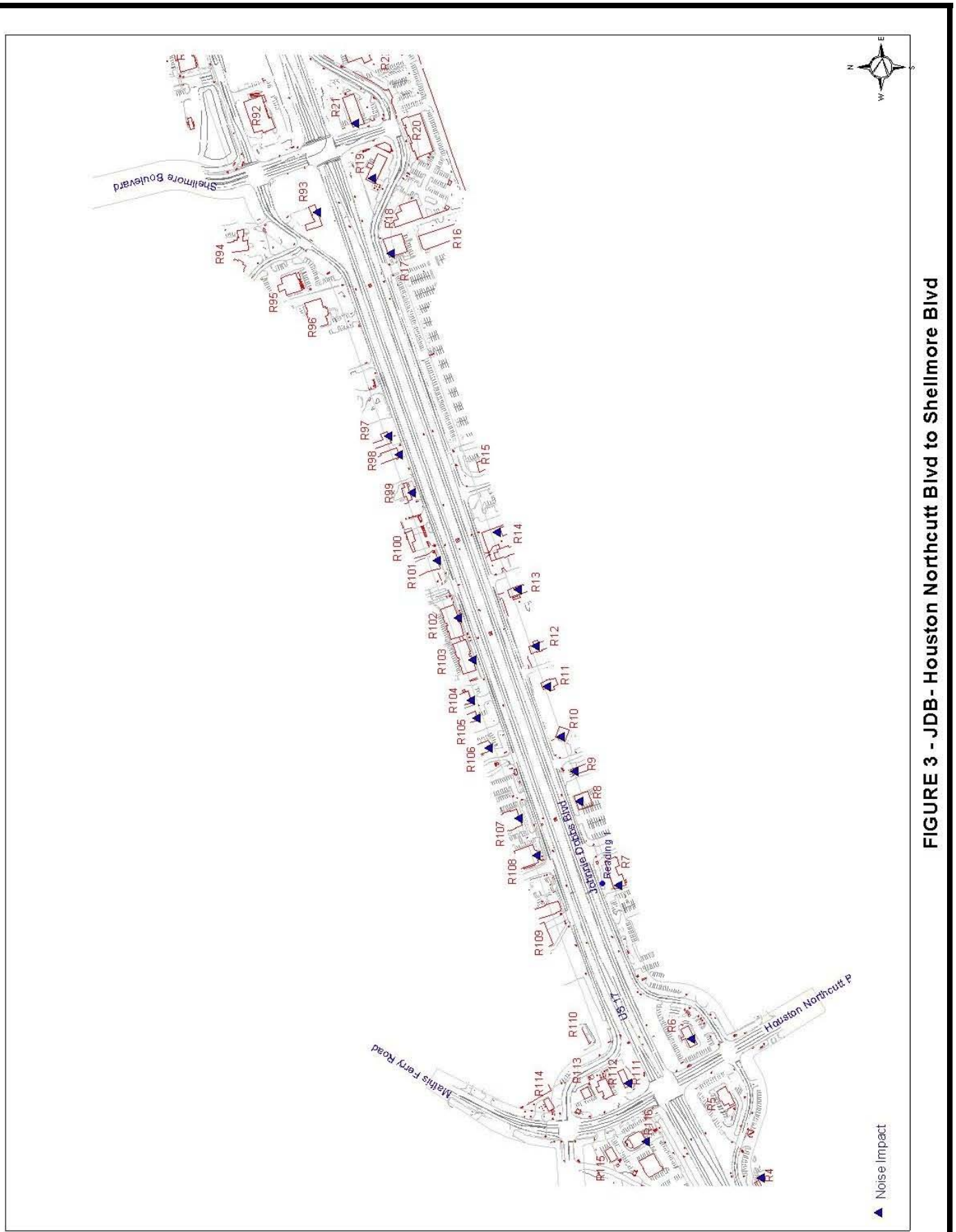


FIGURE 3 - JDB- Houston Northcutt Blvd to Shellmore Blvd

FIGURE 4 - JDB- Shellmore Blvd to Dragoon Drive

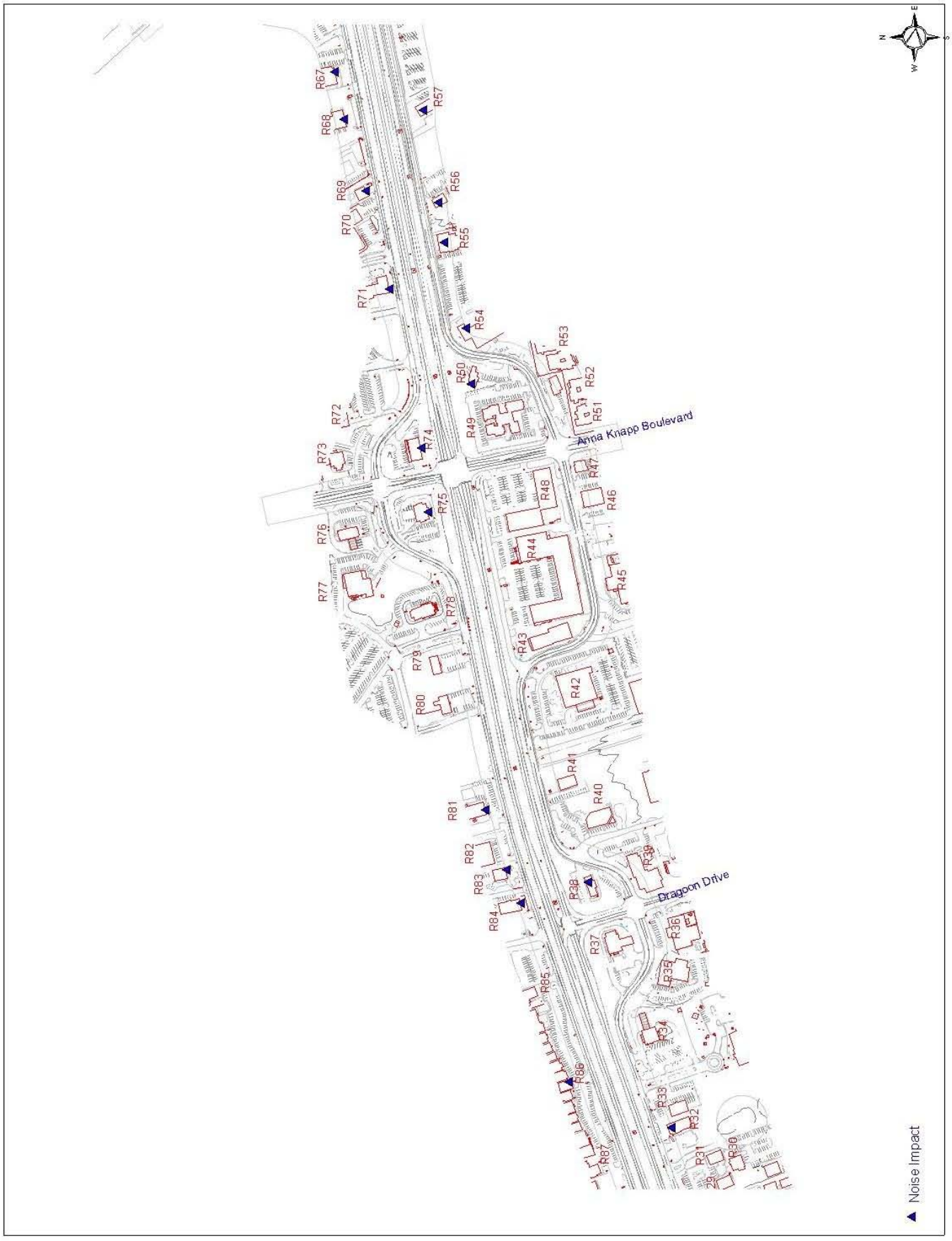


FIGURE 5 - JDB- Dragoon Drive to Anna Knapp Boulevard

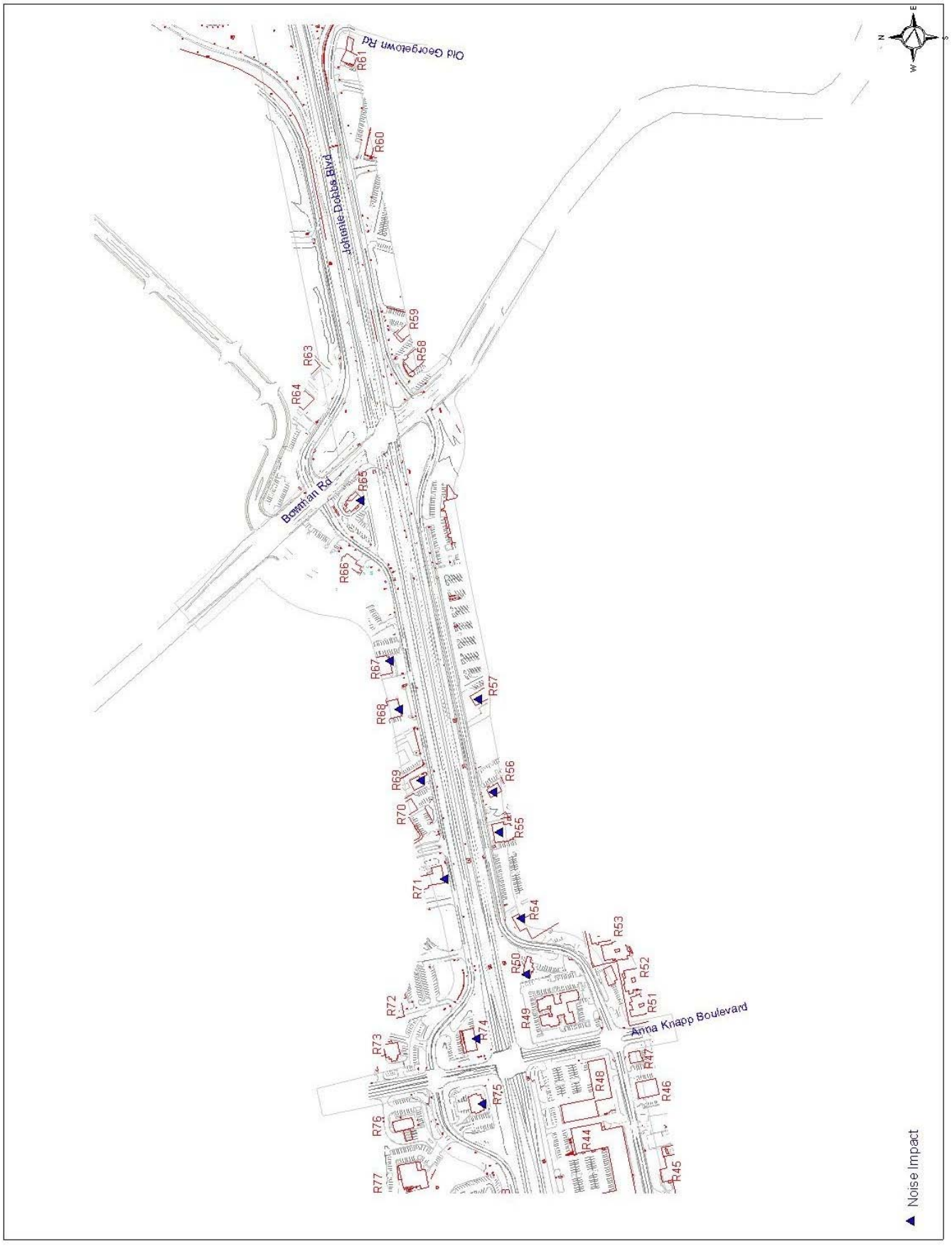


FIGURE 6 - JDB- Anna Knapp Boulevard to Bowman Road

FIGURE 7 - Bowman Road to I-526

Conclusion

The proposed widening of Johnnie Dodd Boulevard would result in approximately fifty five (55) sites experiencing noise levels in excess of the noise abatement criterion. A preliminary evaluation was done for one (1) noise wall to provide abatement for four (4) residential sites along the corridor. Based on the preliminary cost analysis, it was determined that it would not be reasonable to construct the proposed barrier.

The Department has informed local planning officials of future, generalized noise levels expected to occur in the project vicinity by the year 2030.

APPENDIX A
TNM OUTPUT FILES

APPENDIX B
TRAFFIC DATA WORK SHEETS

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	Johnnie Dodds EB1	Johnnie Dodds WB1	Johnnie Dodds EB2	Johnnie Dodds WB2	Johnnie Dodds EB3
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	1828	1713	1637	1203	1525
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	1536	1439	1375	1011	1296
	MEDIUM TRUCKS	175	164	157	115	137
	HEAVY TRUCKS	117	110	105	77	92
	SPEED	45	45	45	45	45
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	3361	3207	3340	2514	2682
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	2823	2694	2806	2112	2280
	MEDIUM TRUCKS	323	308	320	241	241
	HEAVY TRUCKS	215	205	214	161	161
	SPEED	45	45	45	45	45
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	3361	3207	3340	2514	2682
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	2823	2694	2806	2112	2280
	MEDIUM TRUCKS	323	308	320	241	241
	HEAVY TRUCKS	215	205	214	161	161
	SPEED	40	40	40	40	40
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	Johnnie Dodds WB3	Johnnie Dodds EB4	Johnnie Dodds WB4	Johnnie Dodds EB5	Johnnie Dodds WB5
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	1575	1380	1717	1182	2013
	T (PEAK HOUR)	0.15	0.14	0.14	0.11	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	1339	1187	1477	1052	1792
	MEDIUM TRUCKS	142	116	144	78	133
	HEAVY TRUCKS	94	77	96	52	88
	SPEED	45	45	45	45	45
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	2721	2464	3000	2622	3568
	T (PEAK HOUR)	0.15	0.14	0.14	0.11	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	2313	2119	2580	2334	3176
	MEDIUM TRUCKS	245	207	252	173	235
	HEAVY TRUCKS	163	138	168	115	157
	SPEED	45	45	45	45	45
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	2721	2464	3000	2622	3568
	T (PEAK HOUR)	0.15	0.14	0.14	0.11	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	2313	2119	2580	2334	3176
	MEDIUM TRUCKS	245	207	252	173	235
	HEAVY TRUCKS	163	138	168	115	157
	SPEED	40	40	40	40	40
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	McGrath-Darby (N)	McGrath-Darby (S)	Mathis Ferry Rd	Houston Northcutt	Shellmore Blvd (N)
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	384	206	965	590	450
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	323	173	811	496	383
	MEDIUM TRUCKS	37	20	92	56	41
	HEAVY TRUCKS	24	13	62	38	27
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	57	78	1881	1218	703
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	48	66	1580	1023	598
	MEDIUM TRUCKS	5	7	181	117	63
	HEAVY TRUCKS	4	5	120	78	42
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	57	78	1881	1218	703
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	0.15
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	48	66	1580	1023	598
	MEDIUM TRUCKS	5	7	181	117	63
	HEAVY TRUCKS	4	5	120	78	42
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	Shellmore Blvd (S)	Dragoon Dr	Anna Knapp (N)	Anna Knapp (S)	Bowman (N)
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	426	240	409	336	619
	T (PEAK HOUR)	0.15	0.14	0.14	0.14	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	362	206	352	289	551
	MEDIUM TRUCKS	38	20	34	28	41
	HEAVY TRUCKS	26	14	23	19	27
	SPEED	25	30	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	628	305	595	412	905
	T (PEAK HOUR)	0.15	0.14	0.14	0.14	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	534	262	512	354	805
	MEDIUM TRUCKS	56	26	50	35	60
	HEAVY TRUCKS	38	17	33	23	40
	SPEED	25	30	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	628	305	595	412	905
	T (PEAK HOUR)	0.15	0.14	0.14	0.14	0.11
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	534	262	512	354	805
	MEDIUM TRUCKS	56	26	50	35	60
	HEAVY TRUCKS	38	17	33	23	40
	SPEED	25	30	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	Bowman (S)	Old Georgetown Rd	US-17 to I-526 ramp	I-526 SB	I-526 NB
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	693	20	30	761	239
	T (PEAK HOUR)	0.11		0.11	0.14	0.14
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	617	20	27	654	206
	MEDIUM TRUCKS	46		2	64	20
	HEAVY TRUCKS	30		1	43	13
	SPEED	35	30	45	55	55
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	733	30	80	1043	372
	T (PEAK HOUR)	0.11	0.05	0.11	0.14	0.14
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	652	29	71	897	320
	MEDIUM TRUCKS	49	1	5	88	31
	HEAVY TRUCKS	32	1	4	58	21
	SPEED	35	30	45	55	55
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	733	30	80	1043	372
	T (PEAK HOUR)	0.11	0.05	0.11	0.14	0.14
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	652	29	71	897	320
	MEDIUM TRUCKS	49	1	5	88	31
	HEAVY TRUCKS	32	1	4	58	21
	SPEED	35	30	45	55	55
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	S Frontage Rd 1	S Frontage Rd 2	S Frontage Rd 3	S Frontage Rd 4	S Frontage Rd 5
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	237	524	371	338	218
	T (PEAK HOUR)	0.05	0.05	0.05	0.05	0.05
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	225	498	352	321	207
	MEDIUM TRUCKS	7	16	11	10	7
	HEAVY TRUCKS	5	10	8	7	4
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	619	926	524	451	187
	T (PEAK HOUR)	0.05	0.05	0.05	0.05	0.05
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	588	880	498	428	178
	MEDIUM TRUCKS	19	28	16	14	5
	HEAVY TRUCKS	12	18	10	9	4
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	0.1
	DHV	619	926	524	451	187
	T (PEAK HOUR)	0.05	0.05	0.05	0.05	0.05
	S.U. %	0.6	0.6	0.6	0.6	0.6
	COMB. %	0.4	0.4	0.4	0.4	0.4
	AUTOS	588	880	498	428	178
	MEDIUM TRUCKS	19	28	16	14	5
	HEAVY TRUCKS	12	18	10	9	4
	SPEED	35	35	35	35	35
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

PROJECT NUMBER:
DESCRIPTION:
SPECIALIST:
DATE:

	SEGMENT	N Frontage Rd 1	N Frontage Rd 2	N Frontage Rd 3	N Frontage Rd 4	
EXISTING (2005)	AADT					
	K	0.1	0.1	0.1	0.1	
	DHV	384	206	965	590	
	T (PEAK HOUR)	0.16	0.16	0.16	0.16	
	S.U. %	0.6	0.6	0.6	0.6	
	COMB. %	0.4	0.4	0.4	0.4	
	AUTOS	323	173	811	496	
	MEDIUM TRUCKS	37	20	92	56	
	HEAVY TRUCKS	24	13	62	38	
	SPEED	35	35	35	35	
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	
	DHV	424	1091	956	951	
	T (PEAK HOUR)	0.05	0.05	0.05	0.05	
	S.U. %	0.6	0.6	0.6	0.6	
	COMB. %	0.4	0.4	0.4	0.4	
	AUTOS	403	1036	908	903	
	MEDIUM TRUCKS	13	33	29	29	
	HEAVY TRUCKS	8	22	19	19	
	SPEED	35	35	35	35	
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					
NO BUILD (2030)	AADT					
	K	0.1	0.1	0.1	0.1	
	DHV	424	1091	956	951	
	T (PEAK HOUR)	0.05	0.05	0.05	0.05	
	S.U. %	0.6	0.6	0.6	0.6	
	COMB. %	0.4	0.4	0.4	0.4	
	AUTOS	403	1036	908	903	
	MEDIUM TRUCKS	13	33	29	29	
	HEAVY TRUCKS	8	22	19	19	
	SPEED	35	35	35	35	
	dBAL10 @ 100'					
	dBAL10 @ 200'					
	dBAL LEQ @ 100'					
	dBAL LEQ @ 200'					

APPENDIX C
FIELD DATA

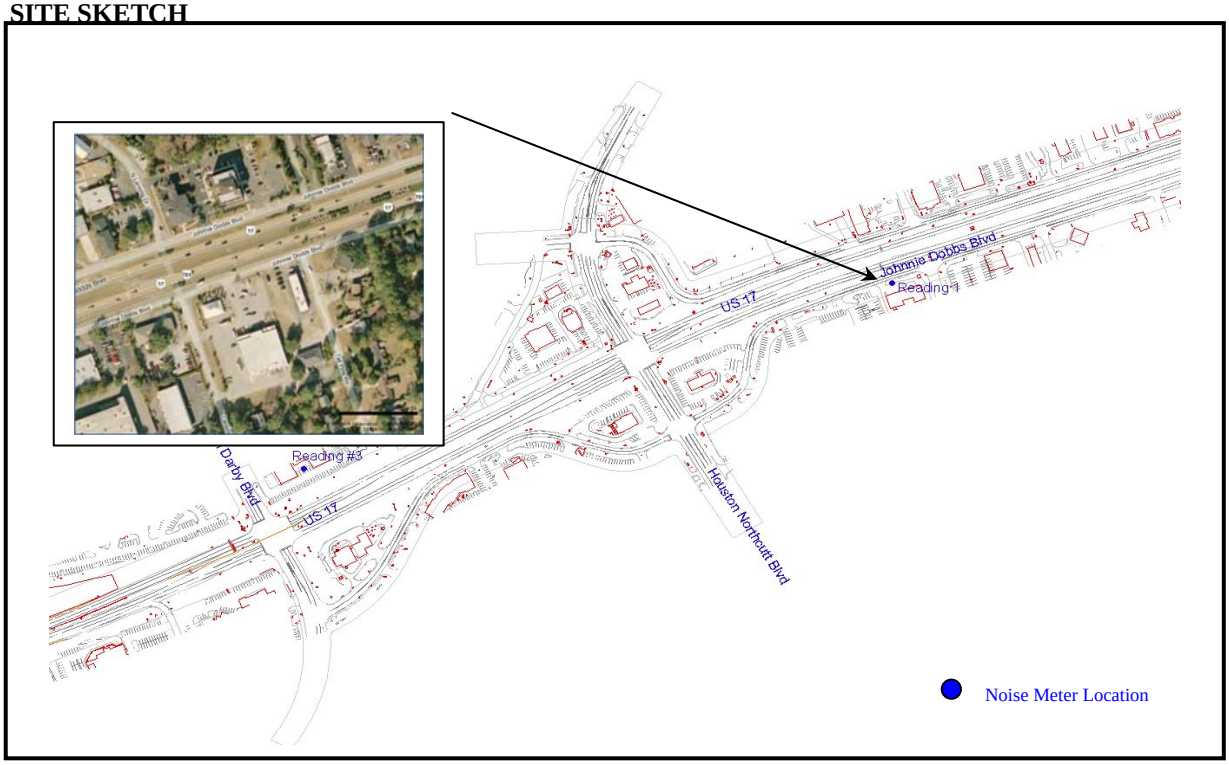
NOISE MEASUREMENT DATA SHEET FOR JOHNNIE DODDS BOULEVARD WIDENING MT. PLEASANT, SOUTH CAROLINA

ANALYST(S): Tim McKay & Mario Evans **DATE: 6/15/07**

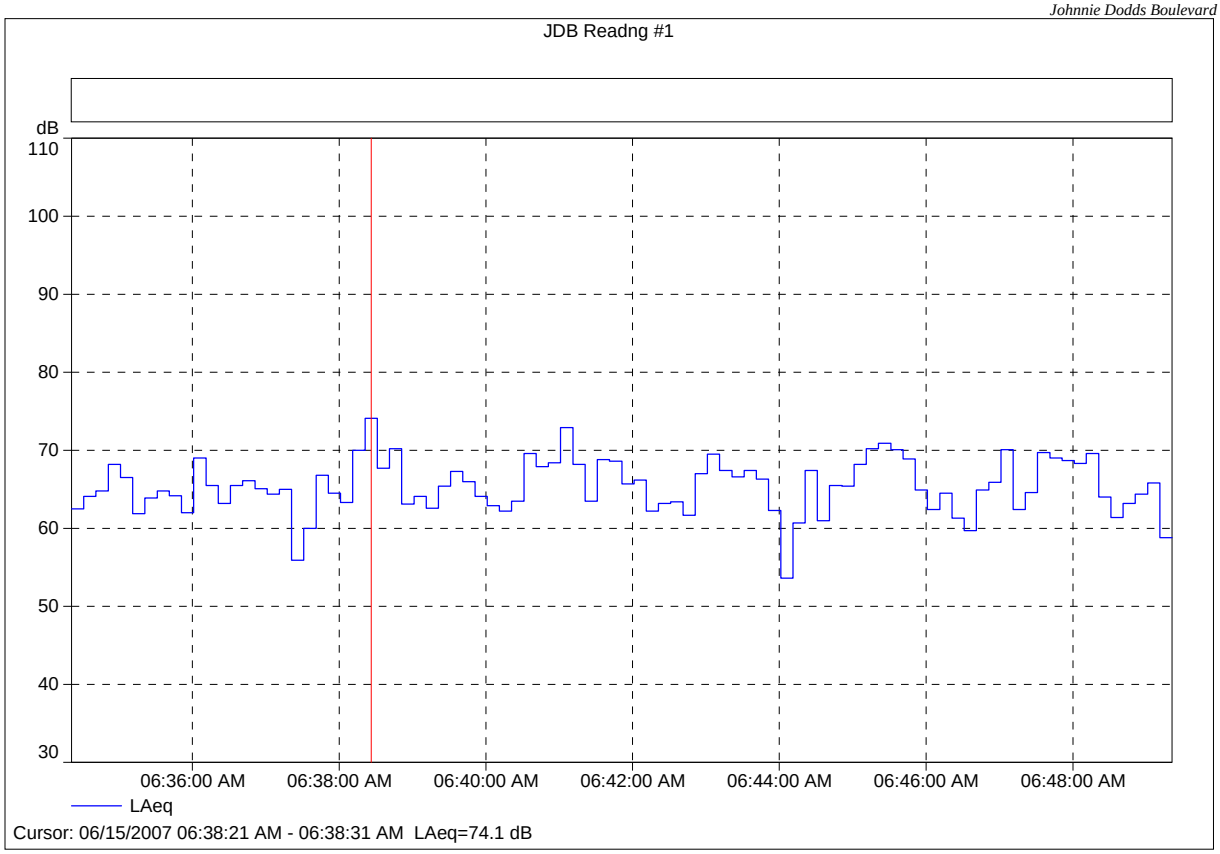
Instrument:		2238
Application:		BZ7124 version 1.2
Start Time:		06/15/2007 06:34:21 AM
End Time:		06/15/2007 06:49:21 AM
Elapsed Time:		0:15:00
Bandwidth:		Broad band
Detector 1/2	RMS	Peak
Range:		30.0-110.0 dB
	Time	Frequency
Detector 1:	S F I	A
Detector 2:	Peak	C
Statistic	F	A
Criterion Level:		100.0 dB
Threshold:		0.0 dB
Exchange Rate		3 and 4
Exposure Time:		7:30:00
Peaks Over:		140.0 dB
Instrument Serial Number:		2124741
Microphone Serial Number:		2120928
Input:		Microphone
Windscreen Correction:		Off
S. I. Correction:		Frontal
Calibration Time:		
Calibration Level:		94.0 dB
Sensitivity:		-30.0 dB
Microphone:		2120928

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAIMax [dB]	LAIMin [dB]
Value	06:34:21 AM	06:49:21 AM	0:15:00	0.00	**66.6**	79.4	48.6
Date	06/15/2007	06/15/2007					

SITE SKETCH



FIELD MEASUREMENT Leq: 66.6 dBA
WEATHER CONDITIONS: Dry, Partly Cloudy
BACKGROUND NOISE SOURCES : Johnnie Dodd Blvd and S Frontage Road



Start date	Start time	LAeq
06/15/2007	06:34:21 AM	62.5
06/15/2007	06:34:31 AM	64.1
06/15/2007	06:34:41 AM	64.8
06/15/2007	06:34:51 AM	68.2
06/15/2007	06:35:01 AM	66.5
06/15/2007	06:35:11 AM	61.9
06/15/2007	06:35:21 AM	63.9
06/15/2007	06:35:31 AM	64.8
06/15/2007	06:35:41 AM	64.2
06/15/2007	06:35:51 AM	62
06/15/2007	06:36:01 AM	69
06/15/2007	06:36:11 AM	65.5
06/15/2007	06:36:21 AM	63.2
06/15/2007	06:36:31 AM	65.5
06/15/2007	06:36:41 AM	66.1
06/15/2007	06:36:51 AM	65.1
06/15/2007	06:37:01 AM	64.4
06/15/2007	06:37:11 AM	65
06/15/2007	06:37:21 AM	55.9
06/15/2007	06:37:31 AM	60
06/15/2007	06:37:41 AM	66.8
06/15/2007	06:37:51 AM	64.5
06/15/2007	06:38:01 AM	63.3
06/15/2007	06:38:11 AM	70
06/15/2007	06:38:31 AM	67.7
06/15/2007	06:38:41 AM	70.2
06/15/2007	06:38:51 AM	63.1
06/15/2007	06:39:01 AM	64.1
06/15/2007	06:39:11 AM	62.6
06/15/2007	06:39:21 AM	65.4
06/15/2007	06:39:31 AM	67.3
06/15/2007	06:39:41 AM	66
06/15/2007	06:39:51 AM	64.1
06/15/2007	06:40:01 AM	62.9
06/15/2007	06:40:11 AM	62.2
06/15/2007	06:40:21 AM	63.5

06/15/2007	06:40:31 AM	69.6
06/15/2007	06:40:41 AM	67.9
06/15/2007	06:40:51 AM	68.4
06/15/2007	06:41:01 AM	72.9
06/15/2007	06:41:11 AM	68.2
06/15/2007	06:41:21 AM	63.5
06/15/2007	06:41:31 AM	68.8
06/15/2007	06:41:41 AM	68.6
06/15/2007	06:41:51 AM	65.7
06/15/2007	06:42:01 AM	66.2
06/15/2007	06:42:11 AM	62.2
06/15/2007	06:42:21 AM	63.2
06/15/2007	06:42:31 AM	63.4
06/15/2007	06:42:41 AM	61.7
06/15/2007	06:42:51 AM	67
06/15/2007	06:43:01 AM	69.5
06/15/2007	06:43:11 AM	67.4
06/15/2007	06:43:21 AM	66.6
06/15/2007	06:43:31 AM	67.4
06/15/2007	06:43:41 AM	66.3
06/15/2007	06:43:51 AM	62.3
06/15/2007	06:44:01 AM	53.6
06/15/2007	06:44:11 AM	60.7
06/15/2007	06:44:21 AM	67.4
06/15/2007	06:44:31 AM	61
06/15/2007	06:44:41 AM	65.5
06/15/2007	06:44:51 AM	65.4
06/15/2007	06:45:01 AM	68.2
06/15/2007	06:45:11 AM	70.2
06/15/2007	06:45:21 AM	70.9
06/15/2007	06:45:31 AM	70.1
06/15/2007	06:45:41 AM	68.9
06/15/2007	06:45:51 AM	64.9
06/15/2007	06:46:01 AM	62.4
06/15/2007	06:46:11 AM	64.5
06/15/2007	06:46:21 AM	61.3
06/15/2007	06:46:31 AM	59.7
06/15/2007	06:46:41 AM	64.9
06/15/2007	06:46:51 AM	65.9
06/15/2007	06:47:01 AM	70.1
06/15/2007	06:47:11 AM	62.4
06/15/2007	06:47:21 AM	64.6
06/15/2007	06:47:31 AM	69.7
06/15/2007	06:47:41 AM	69
06/15/2007	06:47:51 AM	68.7
06/15/2007	06:48:01 AM	68.3
06/15/2007	06:48:11 AM	69.6
06/15/2007	06:48:21 AM	64
06/15/2007	06:48:31 AM	61.4
06/15/2007	06:48:41 AM	63.2
06/15/2007	06:48:51 AM	64.4
06/15/2007	06:49:01 AM	65.8
06/15/2007	06:49:11 AM	58.8

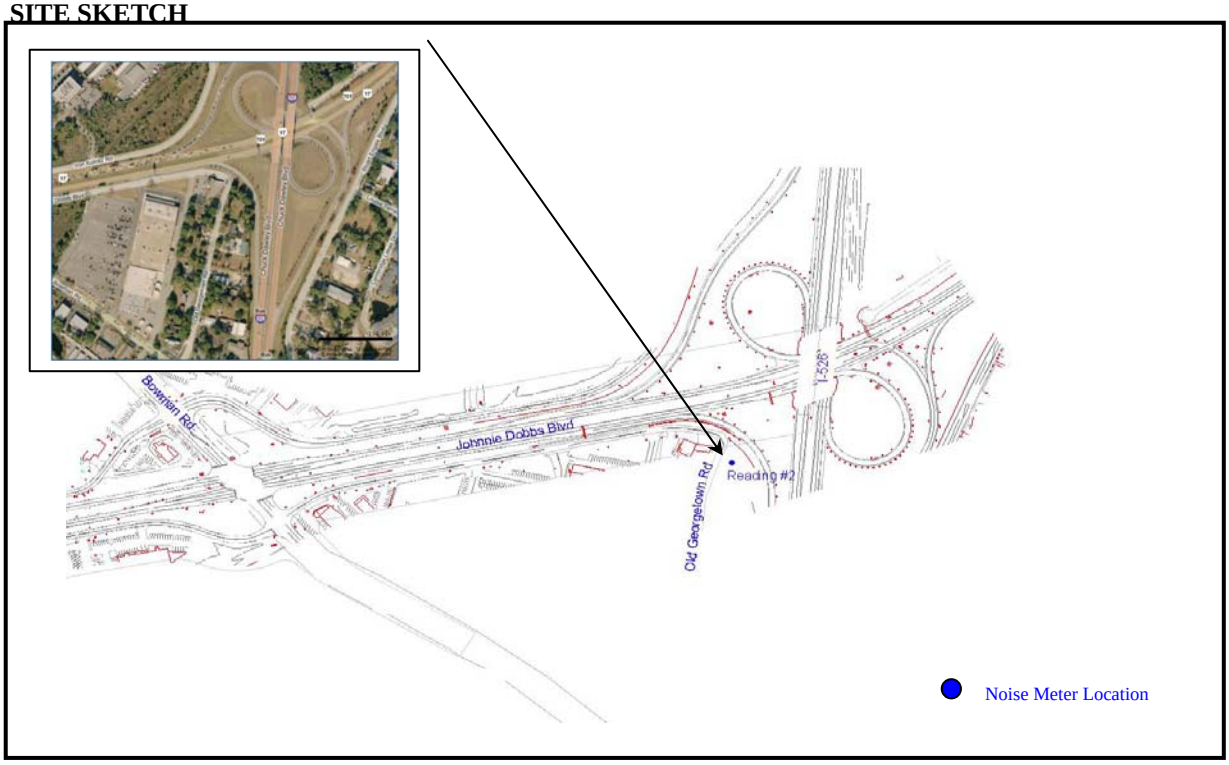
NOISE MEASUREMENT DATA SHEET FOR JOHNNIE DODDS BOULEVARD WIDENING MT. PLEASANT, SOUTH CAROLINA

ANALYST(S): Tim McKay & Mario Evans **DATE: 6/15/07**

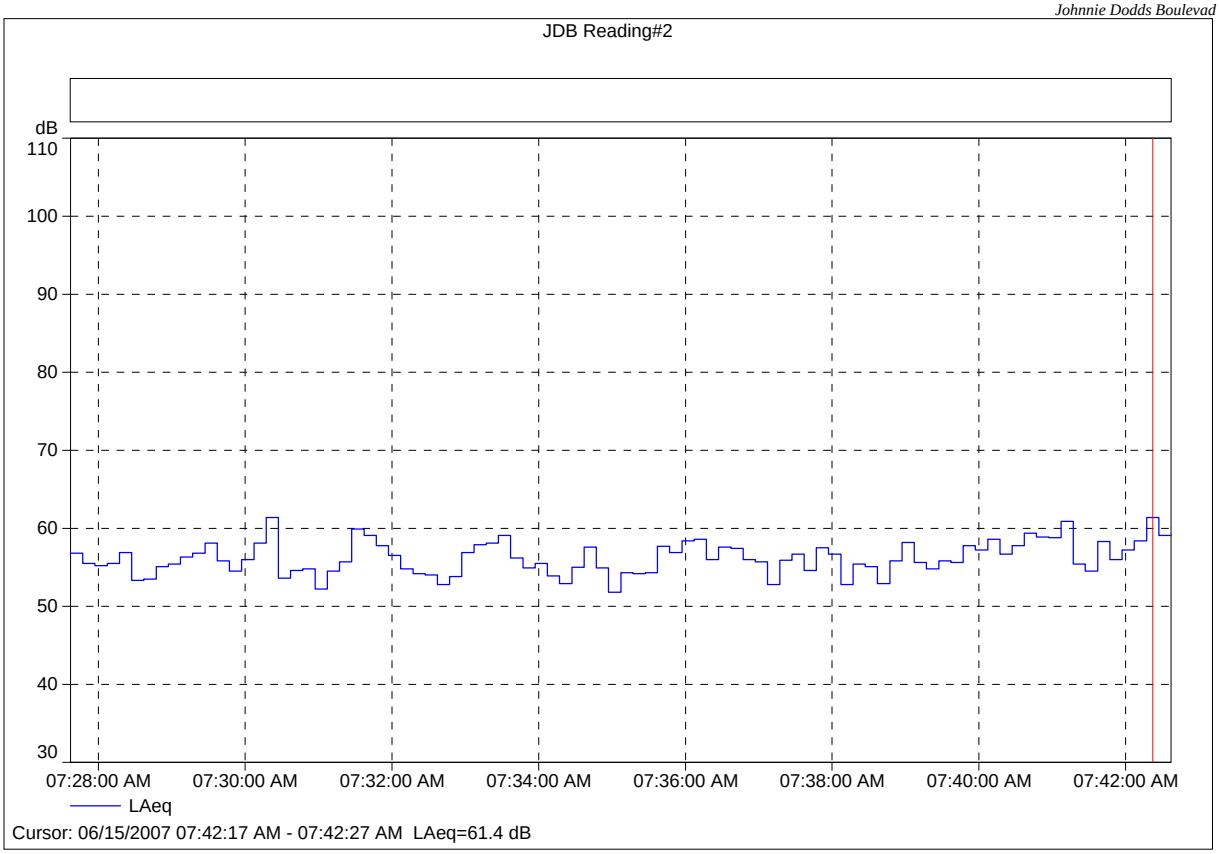
Instrument:		2238
Application:		BZ7124 version 1.2
Start Time:		06/15/2007 07:27:37 AM
End Time:		06/15/2007 07:42:37 AM
Elapsed Time:		0:15:00
Bandwidth:		Broad band
Detector 1/2	RMS	Peak
Range:		30.0-110.0 dB
	Time	Frequency
Detector 1:	S F I	A
Detector 2:	Peak	C
Statistic	F	A
Criterion Level:		100.0 dB
Threshold:		0.0 dB
Exchange Rate		3 and 4
Exposure Time:		7:30:00
Peaks Over:		140.0 dB
Instrument Serial Number:		2124741
Microphone Serial Number:		2120928
Input:		Microphone
Windscreen Correction:		Off
S. I. Correction:		Frontal
Calibration Time:		
Calibration Level:		94.0 dB
Sensitivity:		-30.0 dB
Microphone:		2120928

	Start time	End time	Elapsed time	Overload [%]	Laeq [dB]	LAIMax [dB]	LAIMin [dB]
Value				0.00	**56.7**	70.3	50.3
Time	07:27:37 AM	07:42:37 AM	0:15:00				
Date	06/15/2007	06/15/2007					

SITE SKETCH



FIELD MEASUREMENT Leq: 56.7 dBA
WEATHER CONDITIONS: Dry, Partly Cloudy
BACKGROUND NOISE SOURCES : Johnnie Dodd Blvd and I-526



Start date	Start time	LAeq
06/15/2007	07:27:37 AM	56.8
06/15/2007	07:27:47 AM	55.5
06/15/2007	07:27:57 AM	55.2
06/15/2007	07:28:07 AM	55.5
06/15/2007	07:28:17 AM	56.9
06/15/2007	07:28:27 AM	53.3
06/15/2007	07:28:37 AM	53.5
06/15/2007	07:28:47 AM	55.1
06/15/2007	07:28:57 AM	55.4
06/15/2007	07:29:07 AM	56.3
06/15/2007	07:29:17 AM	56.8
06/15/2007	07:29:27 AM	58.1
06/15/2007	07:29:37 AM	55.8
06/15/2007	07:29:47 AM	54.5
06/15/2007	07:29:57 AM	56
06/15/2007	07:30:07 AM	58.1
06/15/2007	07:30:27 AM	53.6
06/15/2007	07:30:37 AM	54.6
06/15/2007	07:30:47 AM	54.8
06/15/2007	07:30:57 AM	52.2
06/15/2007	07:31:07 AM	54.5
06/15/2007	07:31:17 AM	55.7
06/15/2007	07:31:27 AM	59.9
06/15/2007	07:31:37 AM	59.1
06/15/2007	07:31:47 AM	57.8
06/15/2007	07:31:57 AM	56.5
06/15/2007	07:32:07 AM	54.8
06/15/2007	07:32:17 AM	54.2
06/15/2007	07:32:27 AM	54
06/15/2007	07:32:37 AM	52.8
06/15/2007	07:32:47 AM	53.8
06/15/2007	07:32:57 AM	56.9
06/15/2007	07:33:07 AM	57.9
06/15/2007	07:33:17 AM	58.1
06/15/2007	07:33:27 AM	59.1
06/15/2007	07:33:37 AM	56.2
06/15/2007	07:33:47 AM	54.9
06/15/2007	07:33:57 AM	55.5

06/15/2007	07:34:07 AM	53.9
06/15/2007	07:34:17 AM	52.9
06/15/2007	07:34:27 AM	55
06/15/2007	07:34:37 AM	57.6
06/15/2007	07:34:47 AM	54.9
06/15/2007	07:34:57 AM	51.8
06/15/2007	07:35:07 AM	54.3
06/15/2007	07:35:17 AM	54.2
06/15/2007	07:35:27 AM	54.3
06/15/2007	07:35:37 AM	57.7
06/15/2007	07:35:47 AM	56.9
06/15/2007	07:35:57 AM	58.4
06/15/2007	07:36:07 AM	58.6
06/15/2007	07:36:17 AM	56
06/15/2007	07:36:27 AM	57.6
06/15/2007	07:36:37 AM	57.4
06/15/2007	07:36:47 AM	56
06/15/2007	07:36:57 AM	55.7
06/15/2007	07:37:07 AM	52.8
06/15/2007	07:37:17 AM	55.9
06/15/2007	07:37:27 AM	56.7
06/15/2007	07:37:37 AM	54.6
06/15/2007	07:37:47 AM	57.5
06/15/2007	07:37:57 AM	56.7
06/15/2007	07:38:07 AM	52.8
06/15/2007	07:38:17 AM	55.4
06/15/2007	07:38:27 AM	55.1
06/15/2007	07:38:37 AM	52.9
06/15/2007	07:38:47 AM	55.8
06/15/2007	07:38:57 AM	58.2
06/15/2007	07:39:07 AM	55.6
06/15/2007	07:39:17 AM	54.8
06/15/2007	07:39:27 AM	55.8
06/15/2007	07:39:37 AM	55.6
06/15/2007	07:39:47 AM	57.8
06/15/2007	07:39:57 AM	57.2
06/15/2007	07:40:07 AM	58.6
06/15/2007	07:40:17 AM	56.7
06/15/2007	07:40:27 AM	57.8
06/15/2007	07:40:37 AM	59.4
06/15/2007	07:40:47 AM	58.9
06/15/2007	07:40:57 AM	58.8
06/15/2007	07:41:07 AM	60.9
06/15/2007	07:41:17 AM	55.4
06/15/2007	07:41:27 AM	54.5
06/15/2007	07:41:37 AM	58.3
06/15/2007	07:41:47 AM	56
06/15/2007	07:41:57 AM	57.2
06/15/2007	07:42:07 AM	58.4
06/15/2007	07:42:27 AM	59.1

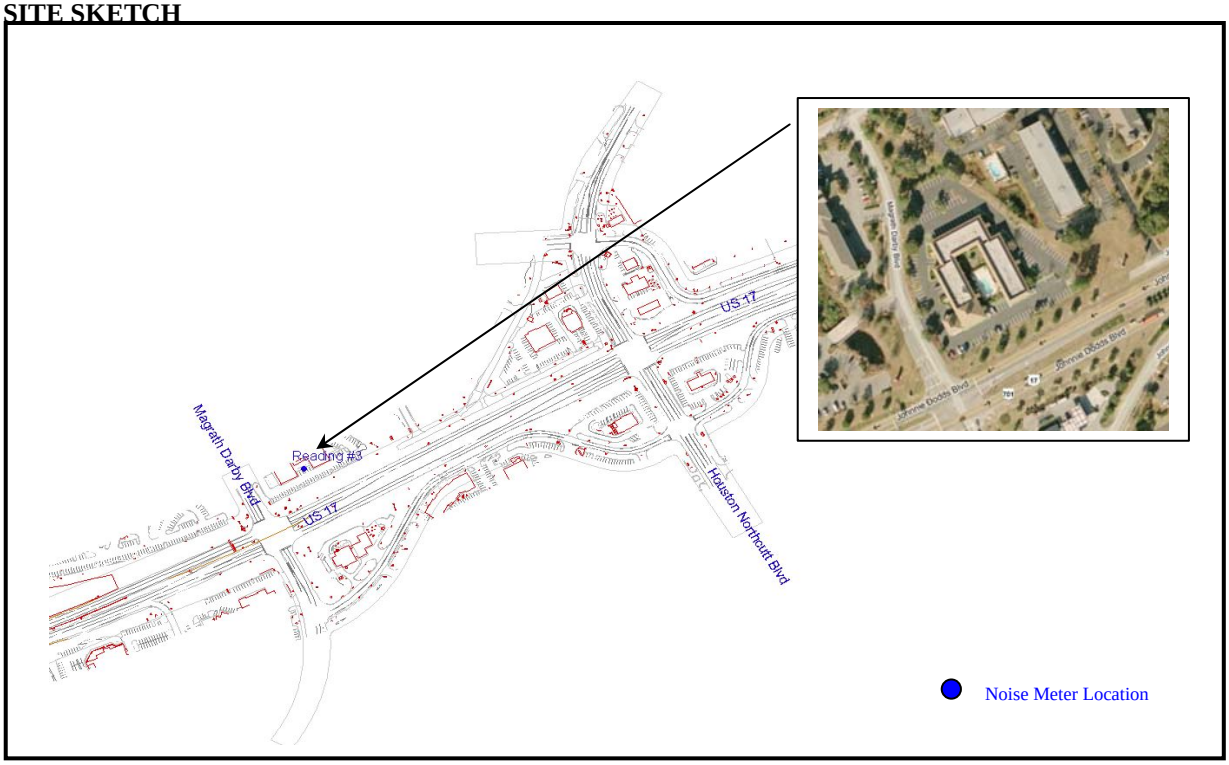
NOISE MEASUREMENT DATA SHEET FOR JOHNNIE DODDS BOULEVARD WIDENING MT. PLEASANT, SOUTH CAROLINA

ANALYST(S): Tim McKay & Mario Evans **DATE: 6/15/07**

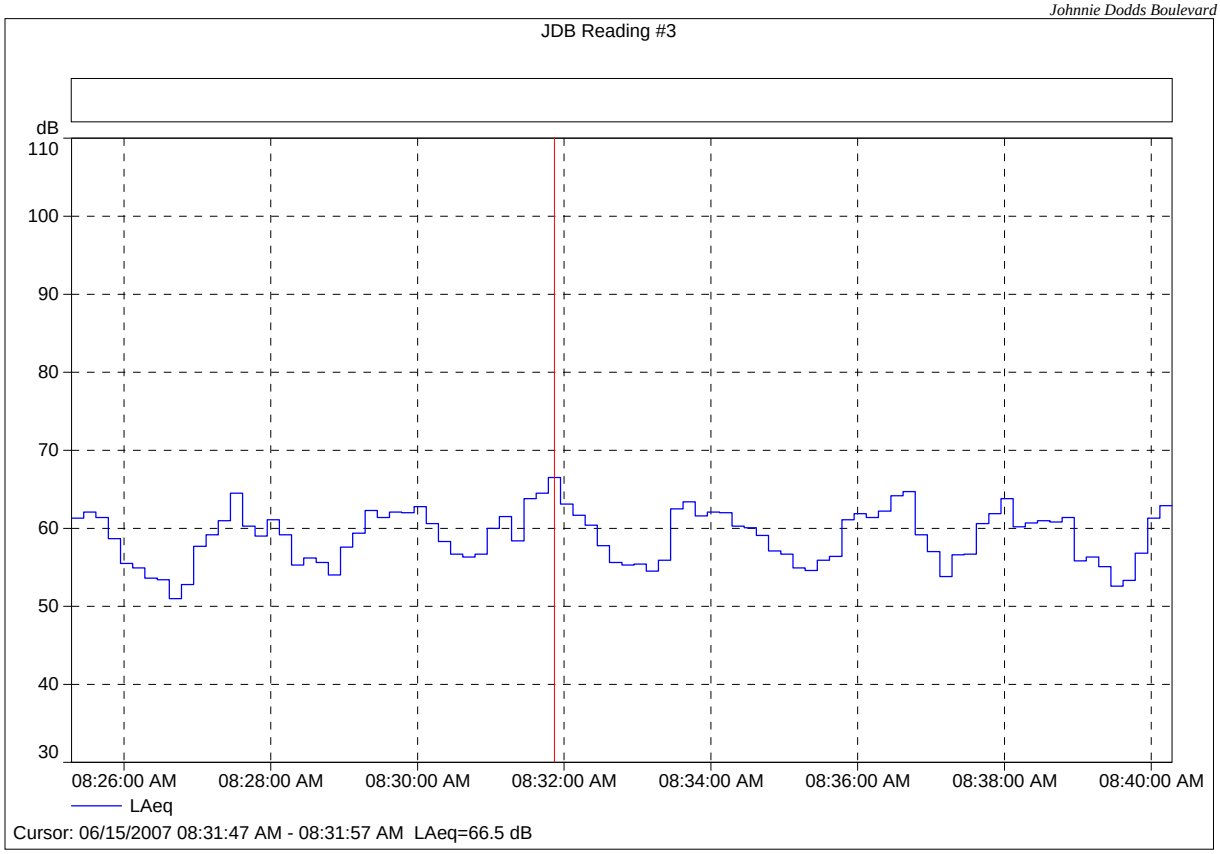
Instrument:		2238
Application:		BZ7124 version 1.2
Start Time:		06/15/2007 08:25:17 AM
End Time:		06/15/2007 08:40:17 AM
Elapsed Time:		0:15:00
Bandwidth:		Broad band
Detector 1/2	RMS	Peak
Range:		30.0-110.0 dB
	Time	Frequency
Detector 1:	S F I	A
Detector 2:	Peak	C
Statistic	F	A
Criterion Level:		100.0 dB
Threshold:		0.0 dB
Exchange Rate		3 and 4
Exposure Time:		7:30:00
Peaks Over:		140.0 dB
Instrument Serial Number:		2124741
Microphone Serial Number:		2120928
Input:		Microphone
Windscreen Correction:		Off
S. I. Correction:		Frontal
Calibration Time:		
Calibration Level:		94.0 dB
Sensitivity:		-30.0 dB
Microphone:		2120928

	Start time	End time	Elapsed time	Overload [%]	LAeq [dB]	LAIMax [dB]	LAIMin [dB]
Value	08:25:17 AM	08:40:17 AM	0:15:00	0.00	**60.2**	73.3	50.4
Date	06/15/2007	06/15/2007					

SITE SKETCH



FIELD MEASUREMENT Leq: 60.2 dBA
WEATHER CONDITIONS: Dry, Partly Cloudy
BACKGROUND NOISE SOURCES : Johnnie Dodd Blvd and Magrath Darby Blvd



Start date	Start time	LAeq
06/15/2007	08:25:17 AM	61.3
06/15/2007	08:25:27 AM	62.1
06/15/2007	08:25:37 AM	61.4
06/15/2007	08:25:47 AM	58.7
06/15/2007	08:25:57 AM	55.5
06/15/2007	08:26:07 AM	54.9
06/15/2007	08:26:17 AM	53.6
06/15/2007	08:26:27 AM	53.4
06/15/2007	08:26:37 AM	51
06/15/2007	08:26:47 AM	52.8
06/15/2007	08:26:57 AM	57.7
06/15/2007	08:27:07 AM	59.2
06/15/2007	08:27:17 AM	61
06/15/2007	08:27:27 AM	64.5
06/15/2007	08:27:37 AM	60.3
06/15/2007	08:27:47 AM	59
06/15/2007	08:27:57 AM	61.1
06/15/2007	08:28:07 AM	59.2
06/15/2007	08:28:17 AM	55.3
06/15/2007	08:28:27 AM	56.2
06/15/2007	08:28:37 AM	55.6
06/15/2007	08:28:47 AM	54
06/15/2007	08:28:57 AM	57.6
06/15/2007	08:29:07 AM	59.4
06/15/2007	08:29:17 AM	62.3
06/15/2007	08:29:27 AM	61.4
06/15/2007	08:29:37 AM	62.1
06/15/2007	08:29:47 AM	62
06/15/2007	08:29:57 AM	62.8
06/15/2007	08:30:07 AM	60.6
06/15/2007	08:30:17 AM	58.3
06/15/2007	08:30:27 AM	56.7
06/15/2007	08:30:37 AM	56.3
06/15/2007	08:30:47 AM	56.7
06/15/2007	08:30:57 AM	60
06/15/2007	08:31:07 AM	61.5
06/15/2007	08:31:17 AM	58.4

06/15/2007	08:31:27 AM	63.8
06/15/2007	08:31:37 AM	64.5
06/15/2007	08:31:47 AM	66.5
06/15/2007	08:31:57 AM	63.1
06/15/2007	08:32:07 AM	61.7
06/15/2007	08:32:17 AM	60.4
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06/15/2007	08:32:47 AM	55.3
06/15/2007	08:32:57 AM	55.4
06/15/2007	08:33:07 AM	54.5
06/15/2007	08:33:17 AM	55.9
06/15/2007	08:33:27 AM	62.5
06/15/2007	08:33:37 AM	63.4
06/15/2007	08:33:47 AM	61.6
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06/15/2007	08:34:07 AM	62
06/15/2007	08:34:17 AM	60.3
06/15/2007	08:34:27 AM	60.1
06/15/2007	08:34:37 AM	59.1
06/15/2007	08:34:47 AM	57.1
06/15/2007	08:34:57 AM	56.7
06/15/2007	08:35:07 AM	54.9
06/15/2007	08:35:17 AM	54.6
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06/15/2007	08:36:27 AM	64.2
06/15/2007	08:36:37 AM	64.7
06/15/2007	08:36:47 AM	59.2
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06/15/2007	08:39:37 AM	53.3
06/15/2007	08:39:47 AM	56.8
06/15/2007	08:39:57 AM	61.3
06/15/2007	08:40:07 AM	62.9