

# **NOISE STUDY REPORT DESIGN ADDENDUM**

for

**Wekiva Parkway  
Segment 8 - Ballantrae Apartments  
Seminole County, Florida**

**Financial Project ID: 240200-4-32-01**

**Prepared for:**



**Florida Department of Transportation  
District V  
Deland, Florida**

**November 2017**

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**Prepared by:  
Inwood Consulting Engineers, Inc.**

**November 2017**

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## **1.0 INTRODUCTION**

The Florida Department of Transportation (FDOT) evaluated potential noise impacts for the proposed construction of the Wekiva Parkway as part of a Project Development and Environment (PD&E) study completed in 2010 (CH2MHILL). The improvements involve the construction of a new expressway facility in Orange, Lake and Seminole Counties including interchanges at International Parkway and Interstate 4 (I-4) in Seminole County.

A subsequent design project is proposed for Segment 8 of the Wekiva Parkway from Lake County to Interstate 4 (I-4). The limits of the design project include the Ballantrae Apartments, which are located in the southwest quadrant of the Wekiva Parkway interchange with International Parkway. The Noise Study Report completed as part of the PD&E study determined that a 16-foot high noise barrier, constructed adjacent to the right-of-way (ROW) was a potentially feasible and reasonable method of abating roadway related noise impacts for these residences.

A modification to the design of the Wekiva Parkway interchanges with International Parkway and I-4 is proposed subsequent to the original PD&E Noise Study Report which modifies horizontal and vertical roadway geometries of the mainline and ramp configurations. This redesign of the roadway geometry will modify the predicted noise environment and requires additional noise analysis at the Ballantrae Apartments. The goal of this noise evaluation is to evaluate the revisions to the project noise environmental and determine the if modifications to the limits of proposed noise barriers are necessary.

## **2.0 METHODOLOGY**

The traffic noise study was performed in accordance with Code of Federal Regulations, Title 23, Part 772 (23 CFR 772) *Procedures for Abatement of Highway Traffic Noise and Construction Noise*<sup>1</sup> using methodology established by FDOT in the *Project Development and Environment Manual*<sup>2</sup>, Part 2, Chapter 18 (FDOT, June 14, 2017). Predicted noise levels were produced using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM), version 2.5.

### **2.1 Noise Metrics**

The reanalysis used the same metrics as the original analysis. Noise levels developed for this analysis are expressed in decibels (dB) using an “A”-scale (dB(A)) weighting. This scale most closely approximates the response characteristics of the human ear. All noise levels are reported as hourly equivalent noise levels (LAeq1h). The LAeq1h is defined as the equivalent steady-state sound level that, in a given hourly period, contains the same acoustic energy as the time-varying sound level for the same hourly period. Use of the dB(A) and LAeq1h metrics to evaluate traffic noise is consistent with 23 CFR 772.

## **2.2 Traffic Data**

Traffic noise is heavily dependent on both traffic speed and traffic volume with the amount of noise generated by traffic increasing as the vehicle speed and number of vehicles increases. The traffic conditions that result in the highest noise levels for roadways are the hourly traffic volumes that represent Level of Service (LOS) C traffic conditions because they represent maximized traffic volumes that continue to travel at free flow speed.

Traffic volumes and vehicle mix (e.g. cars, medium trucks, heavy trucks, motorcycles and buses) were predicted for the design year (2040) under the Build condition. For roadway segments Level of Service (LOS) C, hourly traffic was utilized. For ramp volumes, hourly traffic demand volumes were utilized. Traffic volumes and speeds used in the analysis are provided in Appendix A.

## **2.3 Noise Abatement Criteria and Considerations**

Noise sensitive sites are any property where frequent exterior and/or interior human use occurs and where a lowered noise level would provide a benefit. FHWA has established noise levels at which noise abatement must be considered for various types of noise sensitive sites. These levels, which are used by the Florida Department of Transportation for the purpose of evaluating traffic noise, are referred to as the Noise Abatement Criteria (NAC). As shown in Table 2-1, the NAC vary by activity category. Noise abatement measures are considered when predicted traffic noise levels approach or exceed the NAC. FDOT defines “approach” as within one dB(A) of the applicable FHWA criterion. For comparison purposes, typical noise levels for common indoor and outdoor activities are provided in Figure 2-1.

Noise abatement measures must also be considered when a substantial increase in traffic noise will occur as a direct result of the transportation project. FDOT defines a substantial increase as 15 or more dB(A) above existing conditions. A substantial increase typically occurs in areas where traffic noise is a minor component of the existing noise environment but would become a major component after the project is constructed (e.g., new alignment project). The proposed design for this project is a new roadway and substantial noise increases were evaluated.

**Table 2-1 – FHWA Noise Abatement Criteria**

Activity Category	Description	Leq(h) (dB(A))
A	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	57 (Exterior)
B	Residential	67 (Exterior)
C	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings	67 (Exterior)
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools, and television studios	52 (Interior)
E	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F	72 (Exterior)
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	N/A
G	Undeveloped lands that are not permitted	N/A
Source: 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise; FHWA, 2010		

**Figure 2-1 – Typical Noise Levels**

Common Outdoor Activities	Noise Level dB(A)	Common Indoor Activities
	---110---	Rock Band
Jet Fly-Over 1000 ft.	---100---	
Gas Lawn Mower at 3 ft.	---90---	
Diesel Truck at 50 ft., at 50 mph	---80---	Food Blender at 3 ft. Garbage Disposal at 3 ft.
Noise Urban Area (Daytime)	---70---	Vacuum Cleaner at 10 ft. Normal Speech at 3 ft.
Gas Lawn Mower at 100 ft. Commercial Area Heavy Traffic at 300 ft.	---60---	
Quiet Urban Daytime	---50---	Large Business Office Dishwasher Next Room
Quiet Urban Nighttime Quiet Suburban Nighttime	---40---	Theater, Large Conference Room (Background)
Quiet Rural Nighttime	---30---	Library Bedroom at Night, Concert Hall (Background)
	---20---	
	---10---	
Lowest Threshold of Human Hearing	---0---	Lowest Threshold of Human Hearing

Source: California Dept. of Transportation; Technical Noise Supplement; Oct 1998; Page 18.

### 3.0 TRAFFIC NOISE ANALYSIS AND ABATEMENT ASSESSMENT

#### 3.1 Noise Sensitive Sites and Abatement Analysis

Within the project limits residential land-uses were evaluated. Receptor points representing the noise sensitive sites are located in accordance with the FDOT PD&E Manual, Part 2, Chapter 18 as follows:

- Residential receptor points are located at the edge of the residential building closest to the major traffic noise source for evaluation of impacts.
- When evaluating the effectiveness of noise barriers, residential receptor points are located in representative areas of the property where a reduction in traffic related noise would provide a benefit.

- Where residences are clustered together, single receptor points are analyzed as representative of a group of sites with similar characteristics.
- Ground floor receptor points are assumed to be 5 feet above the ground elevation. Receptor points are elevated an additional 10 feet for each story above the ground floor (up to two floors within the project limits).
- The locations of the receptor points are depicted on the project aerials found in Appendix C.
- Where noise sensitive sites occur on multiple floors, a suffix is added to the receptor identification to indicate the receptor location includes an additional receptor on the second floor. This additional suffix is “/B” added to receptor label shown on the project aerials. The predicted noise level for the first and second floor receptors are shown separately within Appendix B.

Noise barriers reduce traffic noise by blocking the sound path between a highway and noise sensitive site. To effectively reduce traffic noise, a noise barrier must be relatively long, continuous (with no intermittent openings), and of sufficient height. For a noise barrier to be considered feasible and cost reasonable, the following three conditions must be met:

- A noise barrier must demonstrate that it will benefit at least two impacted receptors by providing a reduction in traffic-related noise of at least 5 dB(A).
- The FDOT has established a Noise Reduction Design Goal of 7 dB(A). Therefore, a noise barrier must provide a noise reduction of at least 7 dB(A) for at least one benefited receptor.
- The cost of the noise barrier must not exceed \$42,000 per benefited receptor. This is the upper cost limit established by FDOT. A benefited receptor is defined as a site that would experience at least a 5 dB(A) reduction in noise levels as a result of providing a noise barrier. The current unit cost used to evaluate cost reasonableness is \$30 per square foot for non-shoulder barriers. This cost covers barrier materials and labor.

Within the project limits, noise barrier locations were evaluated for the project as follows:

- Non-shoulder noise barriers located outside the clear recovery zone but within the right-of-way (ROW) are considered at heights ranging from 8 feet to 22 feet in 2-foot increments. According to the FDOT *Plans Preparation Manual*, Volume 2, Chapter 32<sup>3</sup>, noise barriers outside the clear zone shall not exceed a maximum height of 22 feet.

At some locations, noise barriers will benefit receptors with a predicted noise level that does not approach the NAC. Since abatement consideration at these receptors is not required, noise barrier lengths or heights are not increased to benefit these sites. However, if benefited because of the



proximity to an impacted receptor, these sites are included when determining the cost reasonableness of the barrier based on cost per benefited receptor. This methodology is consistent with FHWA policy and guidance.

### **3.2 Ballantrae Apartments**

The proposed design modifications at the interchange of the Wekiva Parkway and International Parkway changed the predicted noise environment for the residences within the Ballantrae Apartments and the barrier system proposed for the original PD&E study was re-evaluated.

The proposed Wekiva Parkway is a new alignment connecting several existing roadways. Except in close proximity to existing roadways as they intersect with or run parallel with the proposed Wekiva Parkway, traffic-related noise is not the predominate source of existing noise. The existing conditions within the Ballantrae Apartments neighborhood is influenced by traffic-related noise from International Parkway. Close to International Parkway, the traffic-related noise is the predominant source of existing noise and was modelled by TNM for the existing conditions. Further away from International Parkway where the traffic-related noise is not the predominant noise source noise, 45 dB(A) was utilized for the ambient condition based on the analysis completed for the PD&E Study Noise Study Report.

For the proposed design, 51 receptor points were utilized to represent 108 residences and one open area that is signed as a “dog-walk” area. The “dog-walk” area represents a common area for residences with frequent outdoor human use. For the year 2040 Build condition, a noise impact is predicted to occur at 30 residences and the “dog-walk” area. Of these 30 noise sensitive sites, noise levels are predicted to approach or exceed the NAC [66 dB(A)] at 8 residences and to increase 15.0 dB(A) or more at 22 residences and the “dog-walk” area, when compared to the existing conditions.

The following configurations of noise barriers placed 10-feet inside the Wekiva Parkway ROW were evaluated for the Ballantrae Apartments:

- A 22-foot tall, 1,140-foot long noise barrier that includes an 880-foot long segment running east-west and a 260-foot long segment running north-south can provide a minimum of 5 dB(A) reduction for 17 of the 30 impacted residences and over 7 dB(A) reduction for 5 of the 30 impacted residences. In addition to the 17 impacted residences that are benefited, 24 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.
- A 22-foot tall, 1,100-foot long noise barrier that includes an 840-foot long segment running east-west and a 260-foot long segment running north-south can provide a minimum of 5 dB(A) reduction for 11 of the 30 impacted residences and over 7 dB(A) reduction for 2 of the 30 impacted residences. In addition to the 11 impacted residences that are benefited, 16 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.
- A 22-foot tall, 880-foot long noise barrier running east-west can provide a minimum of 5 dB(A) reduction for 15 of the 30 impacted residences and over 7 dB(A) reduction for 5 of the 30

impacted residences. In addition to the 15 impacted residences that are benefited, 16 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.

- A 22-foot tall, 700-foot long noise barrier that includes a 540-foot long segment running east-west and a 140-foot long segment running north-south can provide a minimum of 5 dB(A) reduction for 10 of the 30 impacted residences and over 7 dB(A) reduction for 4 of the 30 impacted residences. In addition to the 10 impacted residences that are benefited, 12 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.

All noise barrier configurations evaluated are feasible and have a cost per benefited receptor of less than \$42,000 per benefited receptor and therefore meet the FDOT criteria for cost reasonableness. A summary of the barrier analysis conducted for the Ballantrae Apartments is shown in Table 3-1.

Based on the analysis, the noise barrier system that provides a benefit to the greatest number of impacted residences for the Ballantrae Apartments includes the following:

- A 22-foot tall, 1,140-foot long noise barrier that includes an 880-foot long segment running east-west and a 260-foot long segment running north-south. In addition to the 17 impacted residences that are benefited, 24 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.

Noise barrier configurations were presented to the property owner of the Ballantrae Apartments by the FDOT. Based on feedback from the property owner, construction of the 22-foot tall, 1,140-foot long noise barrier includes a 260-foot long section of noise barrier that runs north-south along the east property line of the Ballantrae Apartments reduces visibility of the property from International Parkway and is not desired. A copy of the property owner survey is included in Appendix D – Public Involvement. The noise barrier configuration preferred by the property owner was the following:

- A 22-foot tall, 700-foot long noise barrier that includes a 540-foot long segment running east-west and a 140-foot long segment running north-south. This noise barrier configuration can provide a minimum of 5 dB(A) reduction for 10 of the 30 impacted residences and over 7 dB(A) reduction for 4 of the 30 impacted residences. In addition to the 10 impacted residences that are benefited, 12 additional residences may receive at least a 5 dB(A) reduction in roadway related noise.

This final proposed noise barrier system together with the impacted and benefited receptors is shown on the project aerials located in Appendix C.

**Table 3-1 – Ballantrae Apartments Noise Barrier Analysis Summary**

Barrier Height (feet)	Barrier Length (feet)	Number of Impacted Noise Sensitive Sites	Noise Reduction at Impacted Residences			Number of Benefited Residences				Impacted Residences Not Benefited <sup>3</sup>	Total Estimated Cost <sup>4</sup>	Cost per Benefited Residence
			5-5.9 dB(A)	6.0-6.9 dB(A)	≥ 7 dB(A)	Impacted <sup>1</sup>	Not Impacted <sup>2</sup>	Total	Average Reduction dB(A)			
22	1,140	31	6	6	5	17	24	41	6.5	14	\$752,400	\$18,351
22	880	31	4	6	5	15	16	31	6.5	14	\$528,000	\$17,032
22	700	31	2	4	4	10	12	22	6.5	21	\$462,000	\$21,000
20	1,140	31	6	6	4	16	16	32	6.4	15	\$684,000	\$21,375

<sup>1</sup> Benefited residences with predicted noise levels that approach or exceed the NAC.

<sup>2</sup> Benefited residences with predicted noise levels that do not approach the NAC.

<sup>3</sup> Impacted residences that do not received a minimum 5 dB(A) reduction from proposed noise barrier.

<sup>4</sup> Unit cost of \$30/ft<sup>2</sup>

#### **4.0 PUBLIC INVOLVEMENT**

The Department utilized public surveys to solicit the viewpoints of the owner of the property and the benefited residences within the Ballantrae Apartments regarding their desire for the construction of a noise barrier. Included in the public survey were questions regarding aesthetic preferences of the noise barrier. A copy of the public survey sent to the owner and residences is included in Appendix D. A completed survey was received from the owner of the Ballantrae Apartments, but only one of the 22 residential units that are potentially benefited within the Ballantrae Apartments. Both survey respondents indicated they were in favor of constructing the noise barrier.

#### **5.0 CONSTRUCTION NOISE AND VIBRATION**

During the construction phase of the proposed project, short-term noise may be generated by stationary and mobile construction equipment. The construction noise will be temporary at any location and will be controlled by adherence to the most recent edition of FDOT's *Standard Specifications for Road and Bridge Construction*<sup>4</sup>.

Using the listing of sensitive sites found in FDOT's *Project Development and Environment Manual*, residents were identified as the only land use potentially sensitive to vibration that could occur during construction. If during final design it is determined that measures to control vibration are necessary, the project's construction provisions can be modified as needed.

#### **6.0 REFERENCES**

1. 23 CFR Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*; Federal Highway Administration; Tallahassee, Florida; July 2010.
2. *Project Development and Environment Manual*; Florida Department of Transportation; Tallahassee, Florida; June 2017.
3. *Plans Preparation Manual*; Florida Department of Transportation; Tallahassee, Florida; 2016.
4. *Standard Specifications for Road and Bridge Construction*; Florida Department of Transportation; Tallahassee, Florida; July 2016.

# **Appendix A**

## **Traffic Data**

Wevika Section 8 (MAINLINE) Traffic Distribution Calculations

		Opening Year (2020)		Future Year (2040)	
		Year	2020	Year	2040
		Posted Speed	65	Posted Speed	65
		Number of travel lanes	3	Number of travel lanes	3
		Number of Vehicles	43,000	Number of Vehicles	82,500
Mainline Demand Peak Hour	Peak Direction	Autos	2008	3853	
		Med Trucks	87	168	
		Heavy Trucks	76	147	
		Buses	5	9	
		Motorcycles	7	13	
	Total	2183	4189		
	Off- Peak Direction	Autos	1551	2976	
		Med Trucks	67	129	
		Heavy Trucks	59	113	
		Buses	4	7	
Motorcycles		5	10		
Total	1687	3236			
LOS C	Either Direction	Autos	4213	4213	
		Med Trucks	183	183	
		Heavy Trucks	160	160	
		Buses	10	10	
		Motorcycles	14	14	
		Total	4580	4580	

Source Data %s

Values from Plans: Typical Section Pages	AADT	43,000	82,500
	K	9.00%	9.00%
	D	56.42%	56.42%
	T	7.72%	7.72%
	Design Speed	70	70
Assumed Breakdown based on general distributions	Med Trucks	4.00%	4.00%
	Heavy Trucks	3.50%	3.50%
	Buses	0.22%	0.22%
	Motorcycles	0.30%	0.30%

TYPICAL SECTION (Sent by Jamison using Skype 9-29-16)

TRAFFIC DATA
ESTIMATED OPENING YEAR = 2020 AADT = 43,000
ESTIMATED DESIGN YEAR = 2040 AADT = 82,500
K = 9.00% D = 56.42% T = 10.52% (24 HOUR)
DESIGN HOUR T = 7.72%
DESIGN SPEED = 70 MPH

# **Appendix B**

## **Predicted Noise Levels**

### Predicted Noise Levels

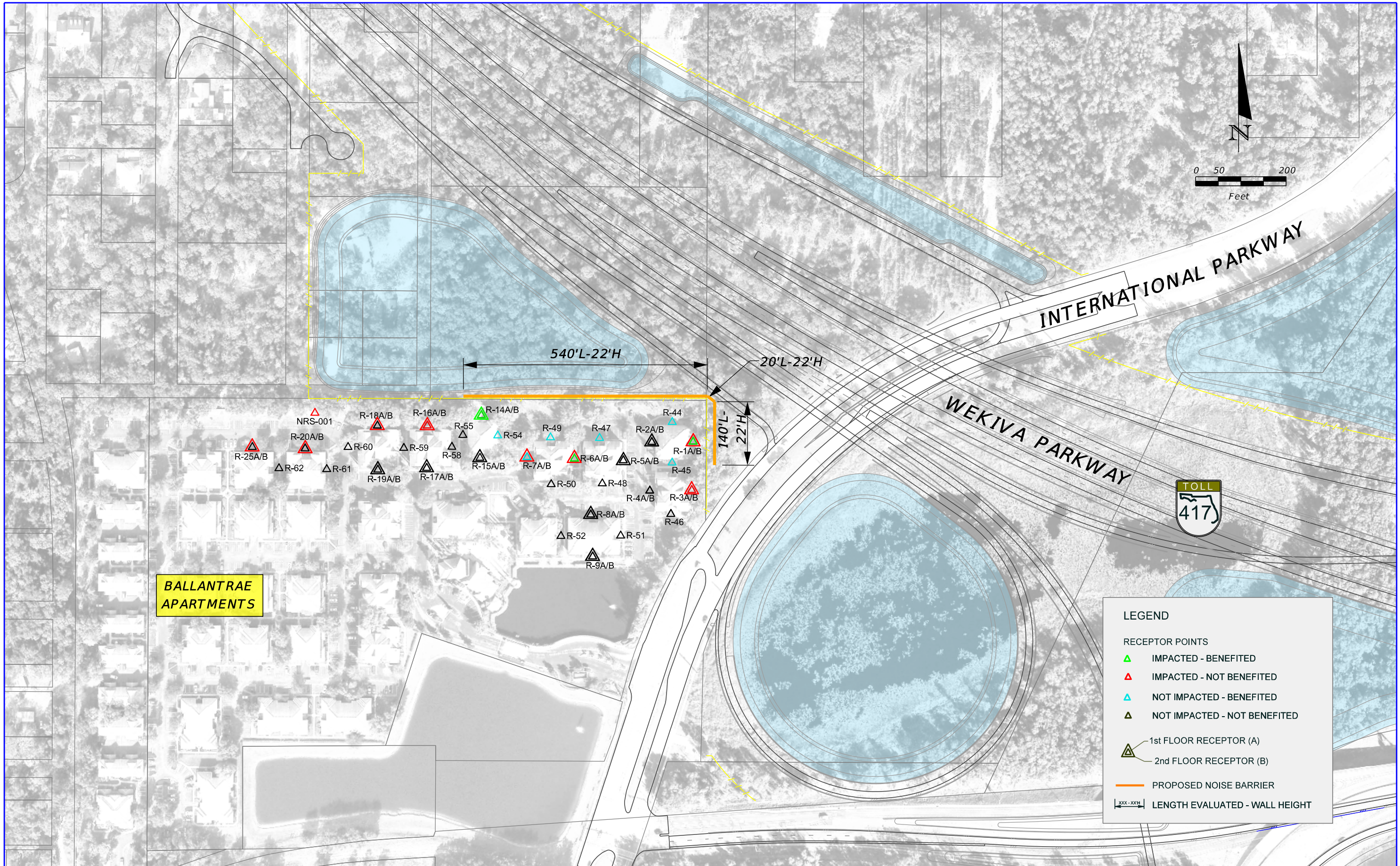
Rec. Point	No. of Units	NAC	NAC Criteria (dBA)	FDOT Criteria (dBA)	2016 Existing Geometry LAeq1h (dBA)	2040 Build Geometry LAeq1h (dBA)	Increase LAeq1h (dBA)	Receptor Impacted	NAC Approached or Exceeded	Substantial Increase (15 dBA or Greater)	Description
R-1A	2	B	67	66	60.7	65.6	4.9	No	No	No	
R-2A"	2	B	67	66	47.4	59.8	12.4	No	No	No	
R-3A"	2	B	67	66	64.0	66.5	2.5	Yes	Yes	No	
R-4A"	2	B	67	66	51.6	58.9	7.3	No	No	No	
R-5A"	2	B	67	66	52.2	60.9	8.7	No	No	No	
R-6A"	4	B	67	66	43.0	58.3	15.3	Yes	No	Yes	
R-7A"	2	B	67	66	43.0	57.9	14.9	No	No	No	
R-8A"	3	B	67	66	47.5	54.4	6.9	No	No	No	
R-9A"	3	B	67	66	56.3	58.1	1.8	No	No	No	
R-14A"	2	B	67	66	47.1	63.2	16.1	Yes	No	Yes	
R-15A"	2	B	67	66	47.3	52.1	4.8	No	No	No	
R-16A"	2	B	67	66	45.7	61.7	16.0	Yes	No	Yes	
R-17A"	2	B	67	66	49.3	52.5	3.2	No	No	No	
R-18A"	2	B	67	66	46.3	61.1	14.8	No	No	No	
R-19A"	2	B	67	66	48.9	52.3	3.4	No	No	No	
R-20A"	2	B	67	66	45.0	59.1	14.1	No	No	No	
R-25A"	2	B	67	66	45.0	58.3	13.3	No	No	No	
R-1B"	2	B	67	66	62.8	68.6	5.8	Yes	Yes	No	
R-2B"	2	B	67	66	49.7	63.2	13.5	No	No	No	
R-3B"	2	B	67	66	65.5	68.6	3.1	Yes	Yes	No	
R-4B"	2	B	67	66	54.0	61.5	7.5	No	No	No	
R-5B"	2	B	67	66	55.9	63.5	7.6	No	No	No	
R-6B"	2	B	67	66	45.0	60.4	15.4	Yes	No	Yes	
R-7B"	2	B	67	66	45.0	60.9	15.9	Yes	No	Yes	
R-8B"	2	B	67	66	51.0	55.6	4.6	No	No	No	
R-9B"	2	B	67	66	60.0	61.0	1.0	No	No	No	
R-14B"	2	B	67	66	49.2	65.5	16.3	Yes	No	Yes	
R-15B"	2	B	67	66	49.1	53.3	4.2	No	No	No	
R-16B"	2	B	67	66	46.4	64.1	17.7	Yes	No	Yes	
R-17B"	2	B	67	66	50.8	53.8	3.0	No	No	No	
R-18B"	2	B	67	66	47.9	63.6	15.7	Yes	No	Yes	
R-19B"	2	B	67	66	50.5	53.2	2.7	No	No	No	
R-20B"	2	B	67	66	45.0	61.6	16.6	Yes	No	Yes	
R-25B"	2	B	67	66	45.0	61.4	16.4	Yes	No	Yes	
R-44"	2	B	67	66	54.2	64.8	10.6	No	No	No	
R-45"	2	B	67	66	55.6	58.3	2.7	No	No	No	
R-46"	2	B	67	66	62.6	63.3	0.7	No	No	No	
R-47"	2	B	67	66	48.1	62.7	14.6	No	No	No	
R-48"	2	B	67	66	52.0	56.2	4.2	No	No	No	
R-49"	2	B	67	66	48.8	63.2	14.4	No	No	No	
R-50"	2	B	67	66	47.3	52.5	5.2	No	No	No	
R-51"	2	B	67	66	58.5	61.5	3.0	No	No	No	
R-52"	4	B	67	66	45.3	52.5	7.2	No	No	No	
R-54"	2	B	67	66	49.3	62.5	13.2	No	No	No	
R-55"	2	B	67	66	45.0	57.0	12.0	No	No	No	
R-58"	2	B	67	66	47.4	57.8	10.4	No	No	No	
R-59"	4	B	67	66	45.0	55.1	10.1	No	No	No	
R-60"	2	B	67	66	45.0	55.0	10.0	No	No	No	
R-61"	2	B	67	66	48.6	56.5	7.9	No	No	No	
R-62"	2	B	67	66	47.3	53.7	6.4	No	No	No	
NRS 01	1	C	67	66	45.0	60.4	15.4	Yes	No	Yes	Dog-Walk Area



# **Appendix C**

## **Project Aerials**





**BALLANTRAE APARTMENTS**

**LEGEND**

RECEPTOR POINTS

- ▲ IMPACTED - BENEFITED
- ▲ IMPACTED - NOT BENEFITED
- ▲ NOT IMPACTED - BENEFITED
- ▲ NOT IMPACTED - NOT BENEFITED

▲ 1st FLOOR RECEPTOR (A)  
 ▲ 2nd FLOOR RECEPTOR (B)

— PROPOSED NOISE BARRIER

||| LENGTH EVALUATED - WALL HEIGHT

REVISIONS				NOISE SPECIALIST	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			NOISE STUDY DESIGN ADDENDUM PROJECT AERIAL	SHEET NO.  1
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				David A. Graeber, PE Inwood Consulting Engineers, Inc. Certificate of Authorization No. 7074 3000 Dovera Drive, Suite 200, Oviedo, Florida 32765 P 407.971.8850		SEMINOLE	240200-4-32-01		



**Appendix D**  
**Public Involvement**



Ballantrae Apartments  
Tenants / Occupants  
1950 Pebble Ridge Ln.  
Sanford, FL 32771

**Design Noise Barrier Survey**  
**Wekiva Parkway 8 (SR 429)**  
**From Orange Boulevard (CR 431) to east of Rinehart Road**  
**FPID: 240200-4**  
**Seminole County**

Wekiva Parkway Section 8 is a design-build project involving design and preparation of final construction plans and permits for 2.63 miles of limited access toll road from Orange Boulevard (County Road 431) to east of Rinehart Road in Seminole County. The project will include the new Wekiva Parkway interchange at I-4 that will connect with State Road 417, completing the beltway around Central Florida. Work will include building and installing bridges, drainage, lighting, utilities, signage and other roadway features.

As part of the proposed improvements, the Florida Department of Transportation (FDOT) is considering construction of a concrete post and panel noise barrier within the roadway right-of-way adjacent to the Ballantrae Apartments. As an owner/renter of property near the proposed noise barrier location, **FDOT is seeking your position regarding support for or opposition to the noise barrier.**

A noise barrier impact design assessment including a barrier re-analysis adjacent to the Ballantrae Apartments was conducted to determine if the noise barrier studied during the PD&E Study was feasible and reasonable.

The results of the re-analysis and coordination with the property owner has indicated that a 22-foot tall barrier along the north property line (47 feet from the nearest building) and east property line (60 feet from the nearest building, as shown in the attached exhibit), is cost reasonable. Enclosed is an exhibit illustrating the proposed location of said barrier adjacent to the Ballantrae Apartments.

A noise barrier is a permanent structure primarily designed to reduce traffic noise from a roadway. However, there are other advantages and disadvantages to having a noise barrier adjacent to your property. One of those disadvantages is that a noise barrier can create a shadow that can adversely impact nearby vegetation. Noise barriers can also reduce breezes.

If you are in support of the noise barrier, FDOT requires that you also agree to the following conditions. If you or any other affected property owner/renter do not agree to the conditions, then the noise barrier length may be decreased or the barrier may not be constructed.

1. If required, the property owner/renter will honor an access permit for the purpose of temporary access for constructing the noise barrier.
2. The property owner/renter will relinquish to FDOT any light, air or view rights between their property and the roadway that are affected by the noise barrier.

**Wekiva Parkway Section 8 (SR 429)  
Noise Barrier Survey Package  
Page 2 of 2**

3. The property owner/renter will not pursue compensation for damages of any kind or inverse condemnation as a result of the placement and construction of the noise barrier within the FDOT right-of-way.

4. In accordance with the Wekiva Parkway Aesthetics Interim Master Guideline, the noise wall aesthetics will be:

- A. Color: **Light Brown**
- B. Texture: **Ashlar Stone**

Before giving further consideration to a noise barrier at the designated location, the FDOT requires documented support in favor of the barrier from affected property owners. If the majority of property owner/renter respondents do not indicate support, a barrier will not be constructed. If a majority of benefitted property owner/renter respondents indicate support, then the FDOT is committed to constructing the barrier within a timeframe consistent with the scheduled roadway construction period and FDOT Noise Abatement Policy. The final decision regarding any aspect of the noise barrier will rest solely with the FDOT.

This questionnaire has been distributed to you as an affected property owner/renter to document your support for or opposition to the proposed noise barrier.

**We ask that you complete, sign and return the entire survey form to the FDOT by July 17, 2017.** Your expeditious reply would be greatly appreciated.

**1. Are you in favor of constructing a noise barrier between the proposed improvements to SR 429 and your property to reduce traffic noise levels (check one)?**

Yes \_\_\_\_\_ No \_\_\_\_\_

Additional Comments: \_\_\_\_\_

Name of person completing this Survey: \_\_\_\_\_

Status of person completing this Survey (check one):

Property Owner \_\_\_\_\_ Legal Representative \_\_\_\_\_ Property Renter \_\_\_\_\_

Address: \_\_\_\_\_

Phone number: \_\_\_\_\_ Signature: \_\_\_\_\_

**Return this survey electronically to:**

Mary Brooks, Public Information Officer  
2431 Aloma Avenue, Ste. 231, Winter Park, FL 32792  
[info@wekivaparkway.com](mailto:info@wekivaparkway.com), 407-694-5505

3. The property owner/renter will not pursue compensation for damages of any kind or inverse condemnation as a result of the placement and construction of the noise barrier within the FDOT right-of-way.

4. In accordance with the Wekiva Parkway Aesthetics Interim Master Guideline, the noise wall aesthetics will be:

- A. Color: **Light Brown**
- B. Texture: **Ashlar Stone**

Before giving further consideration to a noise barrier at the designated location, the FDOT requires documented support in favor of the barrier from affected property owners. If the majority of property owner/renter respondents do not indicate support, a barrier will not be constructed. If a majority of benefitted property owner/renter respondents indicate support, then the FDOT is committed to constructing the barrier within a timeframe consistent with the scheduled roadway construction period and FDOT Noise Abatement Policy. The final decision regarding any aspect of the noise barrier will rest solely with the FDOT.

This questionnaire has been distributed to you as an affected property owner/renter to document your support for or opposition to the proposed noise barrier.

**We ask that you complete, sign and return the entire survey form to the FDOT by May 22.** Your expeditious reply would be greatly appreciated.

**1. Are you in favor of constructing a noise barrier between the proposed improvements to SR 429 and your property to reduce traffic noise levels (check one)?**

Yes X                      No     

Additional Comments: \_\_\_\_\_

Name of person completing this Survey: Michelle Hanson

Status of person completing this Survey (check one):

Property Owner X                      Legal Representative \_\_\_\_\_                      Property Renter \_\_\_\_\_

Address: 1950 Pebble Ridge Ln Sanford, FL 32771

Phone number: 4073028101                      Signature: M. Hanson

**Return this survey electronically to:**  
Mary Brooks, Public Information Officer  
2431 Aloma Avenue, Ste. 231, Winter Park, FL 32792  
[info@wekivaparkway.com](mailto:info@wekivaparkway.com), 407-694-5505



3. The property renter will not pursue compensation for damages of any kind or inverse condemnation as a result of the placement and construction of the noise barrier within the FDOT right-of-way.

4. In accordance with the Wekiva Parkway Aesthetics Interim Master Guideline, the noise wall aesthetics will be:

- A. Color: **Light Brown**
- B. Texture: **Ashlar Stone**

Before giving further consideration to a noise barrier at the designated location, the FDOT requires documented support in favor of the barrier from affected property owners and renters. If the majority of property owner and renter respondents do not indicate support, a barrier may not be constructed. If a majority of benefitted property owner/renter respondents indicate support, then the FDOT is committed to constructing the barrier within a timeframe consistent with the scheduled roadway construction period and FDOT Noise Abatement Policy. The final decision regarding any aspect of the noise barrier will rest solely with the FDOT.

This questionnaire has been distributed to you as an affected property renter to document your support for or opposition to the proposed noise barrier.

**We ask that you complete, sign and return the entire survey form to the FDOT by Aug. 31, 2017.** Your expeditious reply would be greatly appreciated.

**1. Are you in favor of constructing a noise barrier between the proposed improvements to SR 429 and your property to reduce traffic noise levels (check one)?**

Yes  No

Additional Comments: \_\_\_\_\_

Name of person completing this Survey: JEAN M. MORGAN

Status of person completing this Survey (check one):

Property Owner  Legal Representative  Property Renter

Address: 5000 STRAWBRIDGE TER. APT 102, SANFORD FL 32771

Phone number: 407-732-4296 Signature: Jean M. Morgan

Email: JMORGAN228@CFL.RR.COM

**Return this survey electronically to:**

Mary Brooks, Public Information Officer  
2431 Aloma Avenue, Ste. 231, Winter Park, FL 32792  
[info@wekivaparkway.com](mailto:info@wekivaparkway.com), 407-694-5505