EXHIBIT A

The following technical report examines the nature of sound transmission and attenuation at certain distances in relation to a proposed dragstrip conditional use application.

Staff's research and analysis is based on the cited material and should not be construed to imply an expertise in the field of acoustic or sound engineering. This data may be rebutted by an expert in the field.

Noise Production

Staff references a study by Birgitta Berglund & Thomas Lindvall of the Institute of Environmental Medicine, Karolinska Institute of Stockholm, Sweden, 1995, and published by the World Health Organization (WHO) titled *Community Noise.* This study is the collaboration of more than two (2) dozen individual contributors deemed experts in the field and assigned as part of the WHO Task Force for the project. Berblund & Lindvall address the compound effect of noise pollution on daily life.

"Community reaction to noise may involve considerably more than just annoyance. People may feel a variety of negative emotions when exposed to community noise, and may report anger, disappointment, dissatisfaction, withdrawal, helplessness, depression, anxiety, distraction, agitation or exhaustion (Job, 1993). Although annoyance may arbitrarily be defined as a "feeling of displeasure associated with any agent or condition known or believed by an individual or a group to be adversely affecting them" (Lindvall & Radford, 1973), more recent data indicate that the term annoyance does not cover all the negative reactions (Job, 1993)."

Berglund and Lindvall conclude,

"In residential areas during the daytime, the sound pressure level from steady-state, continuous noise on balconies, terraces, and in outdoor living areas should not exceed 55 dB LAeq, and preferably not exceed 50 dB LAeq."

For terminology purposes, "When dealing with a new or proposed noise **LAeq** is often used [also written dBA Leq]; this term is the **Equivalent Continuous Level**. The formal definition is "*when a noise varies over time, the Leq is the equivalent continuous sound which would contain the same sound energy as the time varying sound*". However, you can think of it as a type of average, where noisy events have a significant influence." (http://www.noisenet.org/Noise_Terms_Leq.htm)

Provided below is a chart compiled by Staff from various sources providing average noise levels of common activities and items utilized, or experienced by, most individuals. The decibel is a logarithmic measure, similar to the Richter Scale used for earthquakes. A rule of thumb is that a 10 db increase causes a person to hear double the volume. The purpose of the table is to provide a reference point to base the impacts of the proposed use.

Noise level of	Bathroom Exhaust Fan	55db
Noise level of	Clothes dryer	57db
Noise level of	Conversation Speech	55 - 60db
Noise level of	Alarm Clock	70db
Noise level of	Hair Dryer	80-95db
Noise level of	Lawn Mower	90-100db

Noise level of	Outboard motor	100db
Noise level of	Open Header Muscle Car (assumed non-top fuel Dragcar)	115db -120db
Noise level of	Ambulance Siren	120db
Noise level of	Stock Car Race	130db
Noise level of	Jet Take off @ 330'	130db
Noise level of	Dragcar Racing (assumed top fuel)	140db
Noise level of	Shotgun (avg.)	140-165db
Noise level of	Jet Take Off @ 82.5'	150db
Noise level of	Rifle (avg.)	159db
Noise level of	Centerfire Pistol (avg.)	157db
Noise level of	.44 Mag	164db
Noise level of	.338 Rifle with Muzzle Brake	170db

Sources include, Temple University Department of Civil/Environmental Engineering; *Federal Agency Review of Selected Airport Noise Analysis Issues*, Federal Interagency Committee on Noise (August 1992). Route 66 Rendezvous 21st Annual Open Header Contest; Dangerous Decibels Teacher Resource Guide Oregon Museum of Science and Industry, 2005; Netwell Noise Control (*www.esoundproof.com*);

Sound Attenuation

Diminution of the intensity of sound energy propagating in a medium; caused by absorption, spreading, and scattering. (http://www.answers.com/topic/sound-attenuation)

There exist many variables that effect the attenuation of sound including temperature, sound frequency, wind, natural and man-made buffers or obstructions, etc. According to the US Department of Transportation Federal Highway Administration's June 1995 *Highway Traffic Noise and Abatement Policy and Guidance*.

"…sound intensity decreases in proportion with the square of the distance from the source. Generally, sound levels for a point source will decrease by 6 dBA for each doubling of distance."

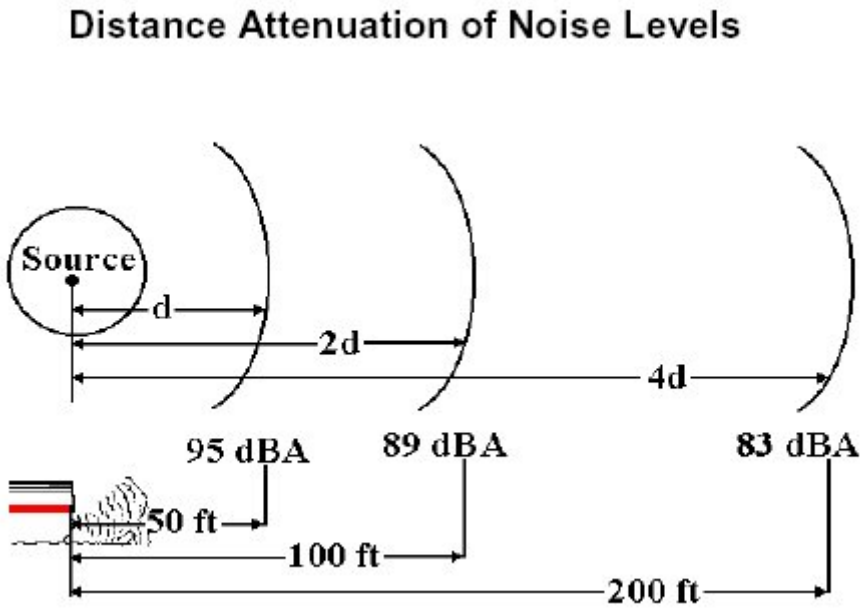

Diagram Source; The Minnesota Pollution Control Agency's, *A Guide to Noise Control in Minnesota*

Utilizing the point source method described above which accounts for a 6db reduction for each doubling of distance from the source Staff has prepared the following table estimating the sound attenuation at varying noise levels for varying distances.

1m(3.3ft)	2m(6.6ft)	4m(13.2ft)	8m(26.4ft)	16m(52.8ft)	32m(105.6ft)	64m(211.2ft)	128m(422.4ft)	256m(844.8ft)	512m(1,689ft)
80db	74db	68db	62db	56db	50db	44db	38db	32db	26db
95db	89db	83db	77db	71db	65db	59db	53db	47db	41db
105db	99db	93db	87db	81db	75db	69db	63db	57db	51db
120db	114db	108db	102db	96db	90db	84db	78db	72db	66db

The above chart shows how sound attenuation should affect any of the surrounding homes with noise decibel ratings ranging from 80-120 db. This does not take into account any noise buffering which will reduce these ratings even lower.

The US Department of Transportation Federal Highway Administration goes on to state in the same study that,
"…it can be seen that the sound pressure level from two equal sources is 3 dB greater than the sound pressure level of just one source. Therefore, two trucks producing 90 dB each will combine to produce 93 dB, not 180 dB. In other words, a doubling of the noise source produces only a 3 dB increase in the sound pressure level."

Staff does not expect decibel ratings to approach or exceed 90+ db estimates based on rules governing vehicle noise on Florida Roads.

Per Florida Statues 316.293 – Motor Vehicle Noise

	Speed limit 35 mph or less	Speed limit over 35 mph
Before January 1, 1979	76 dB A	82 dB A
On or after January 1, 1979	72 dB A	79 dB A

The above table is for vehicles with a GCWR* or GVWR* of 9,999 pounds or less

*(b) "Gross combination weight rating" or "GCWR" means the value specified by the manufacturer as the loaded weight of a combination vehicle.
(c) "Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the loaded weight of a single vehicle.

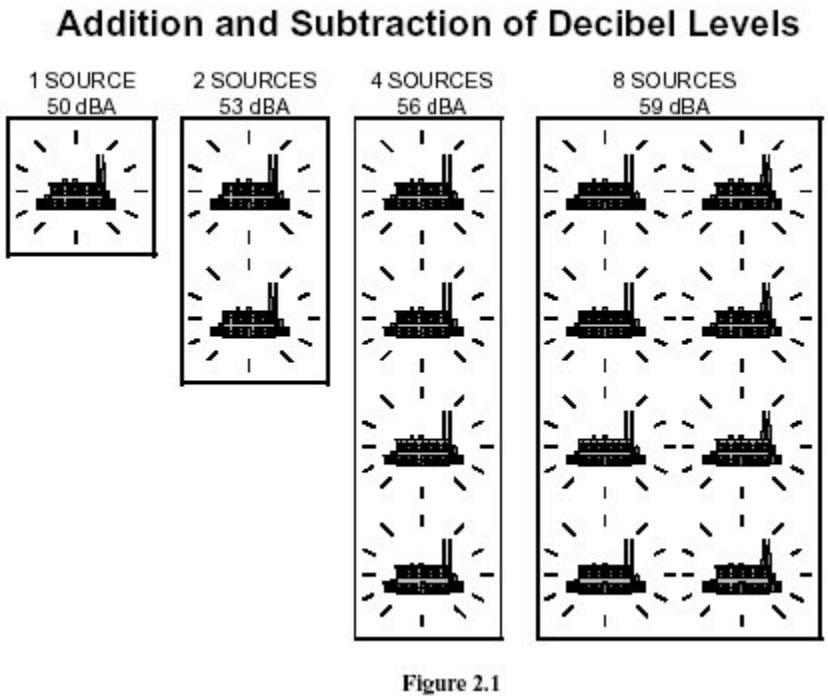

Figure 2.1

Diagram Source; The Minnesota Pollution Control Agency's, *A Guide to Noise Control in Minnesota*

Therefore, the cumulative effect of the operation will slightly exceed the noise level produced by an individual vehicle. This is vitally important to keep in mind when referencing the above table created by Staff that associates distance with noise level output measured in decibels.

- Estimating a single vehicle has a decibel output of 79db at 1m (3.3ft) 2 vehicles (the maximum that would be able to race at any given time) would rate at 82db at 1m (3.3ft).

Noise abatement and barrier effectiveness

According to the US Department of Transportation Federal Highway Administration's June 1995 *Highway Traffic Noise and Abatement Policy and Guidance*,

"Effective noise barriers can reduce noise levels by 10 to 15 decibels, cutting the loudness of traffic noise in half. Barriers can be formed from earth mounds… or from high, vertical walls."

Based on the referenced study, obtaining a 15db reduction is "very difficult" to obtain. *"Openings in noise walls for driveway connections or intersecting streets destroy the effectiveness of barriers… To avoid undesirable end effects, a good rule-of-thumb is that the barrier should extend 4 times as far in each direction as the distance from the receiver to the barrier."*

The report also addresses the height of the barrier citing that in order for the barrier to be effective it must be high enough to "break the line-of-site" from the source to the receiver.

In regards to the use of vegetation as a form of noise barrier the study cites;

"Vegetation, if it is high enough, wide enough, and dense enough that it cannot be seen through, can decrease highway traffic noise. A 61 meter (201.3') width of dense vegetation can reduce noise by 10 decibels… The planting of trees and shrubs provides only psychological benefits and may be provided for visual, privacy, or aesthetic treatment, not noise abatement."

To put this into perspective, the Staff created sound attenuation chart (shown below for conveyance), a noise source of 120db at 1m (3.3') resonates at 90db at 105.6' with no barrier. The utilization of one of the noise abatement techniques listed above could reduce the noise level to 80db at 105.6' or, in other words, it will reduce the perceived volume by 50% at the same distance.

1m(3.3ft)	2m(6.6ft)	4m(13.2ft)	8m(26.4ft)	16m(52.8ft)	32m(105.6ft)	64m(211.2ft)	128m(422.4ft)	256m(844.8ft)	512m(1,689ft)
80db	74db	68db	62db	56db	50db	44db	38db	32db	26db
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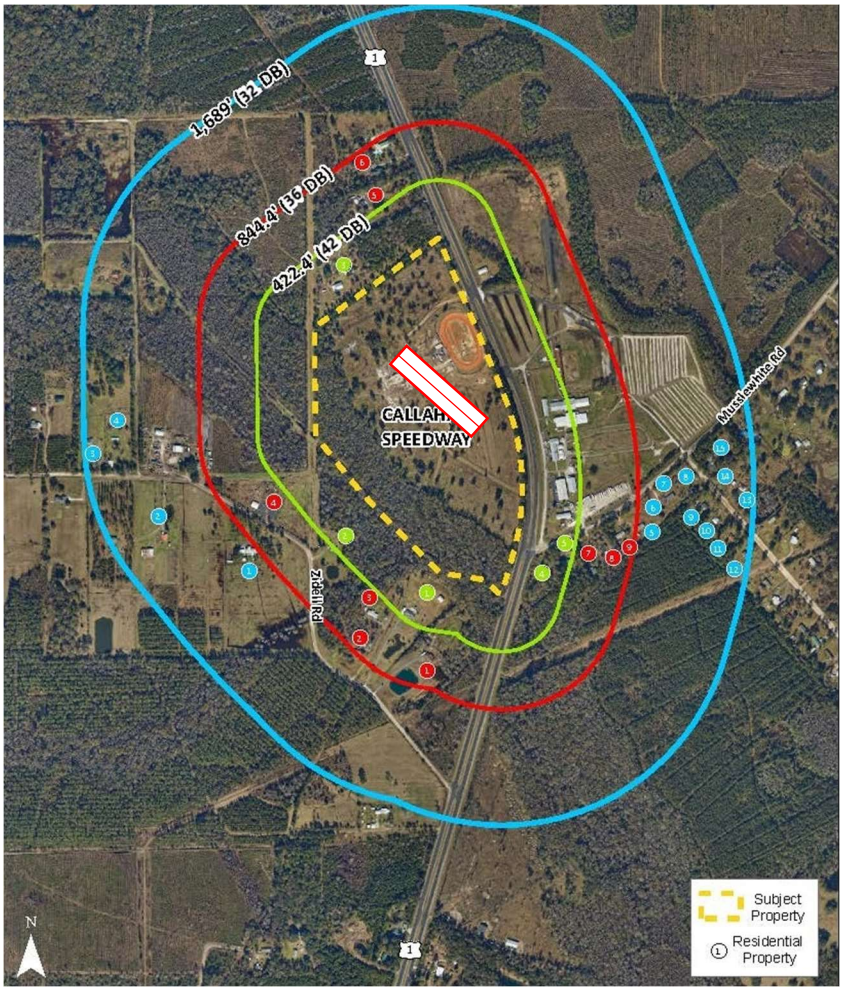
120db	114db	108db	102db	96db	90db	84db	78db	72db	66db

Based on the above research and utilizing ESRI ArcGIS software, Staff produced concentric rings of varying widths originating from the existing motocross tracks to simulate the sound attenuation associated with the above table. The buffer rings were then overlaid on the Property Appraiser's parcel data layer providing the following numbers.

Measured from the Existing Motocross Tracks (approx.)

Buffer Width	1,689 feet	844.8 feet	422.4 feet
Existing Dwelling Units	15	9	5



The above image shows the proposed 600' 1/8th of a mile strip and 500' of runoff and estimated sound attenuation

Dragstrip activity will be heard from properties in the immediate area surrounding the Dragstrip. However, based on the available data, the noise level produced on the track, the Applicant's commitment to utilize mufflers, and the addition of sound barriers against the rear of the proposed drag area and other areas on the property, should not create at a situation that is detrimental to adjacent properties or create an unreasonable "annoyance" as discussed in the World Health Organization's (WHO) publication, *Community Noise,* referenced above.