

SLN/CR

- WHERE SCIENCE MEETS SILENCE -

Sound Propagation Analysis

Prepared for: City of Marco Island Raquet Center

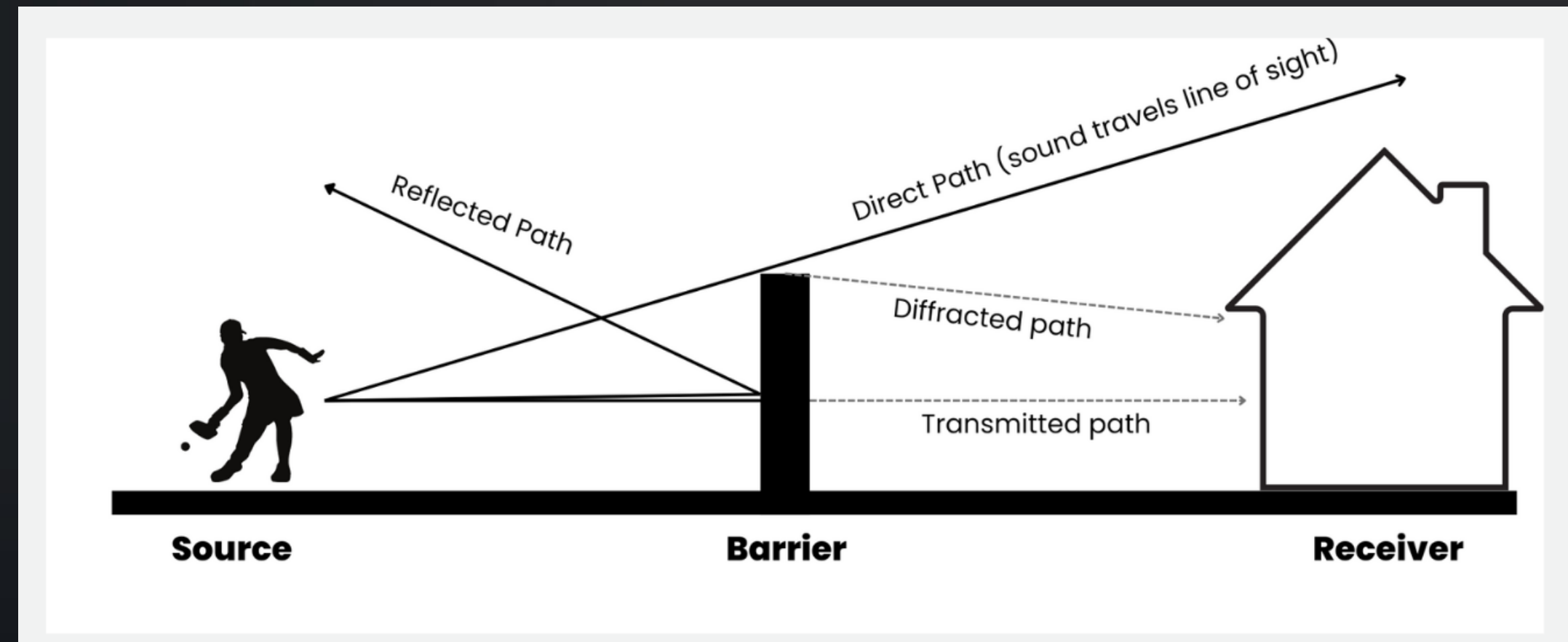
March 3, 2026

Summary

- Pickleball sound is characterized by:
 - Its distinct acoustic profile
 - Impact produces a sharp, "popping" noise at 85 dB
 - Noise peaks around 1200 Hz — a frequency range that corresponds to the sensitivity peak of human hearing.
- The impulsive nature of the sound is a factor emerging in litigation; separate from the pure sound pressure / intensity (as measured in dBs)
- Marco Island, FL sets the maximum allowable decibel limit in residential areas to 60 dB from 8pm to 7am and 66 dB from 7am to 8pm. These limits help protect the peace in neighborhoods, especially near recreational areas such as pickleball courts. Exceeding these limits can lead to disturbances for nearby residents, so implementing mitigation strategies like sound barriers or quieter equipment can help maintain compliance.

The Science of Sound

- 1250 Hz frequency is a nuisance tone
- 85 dB off paddle face
- Sound travels in a straight line
- Barriers are best option to control sound

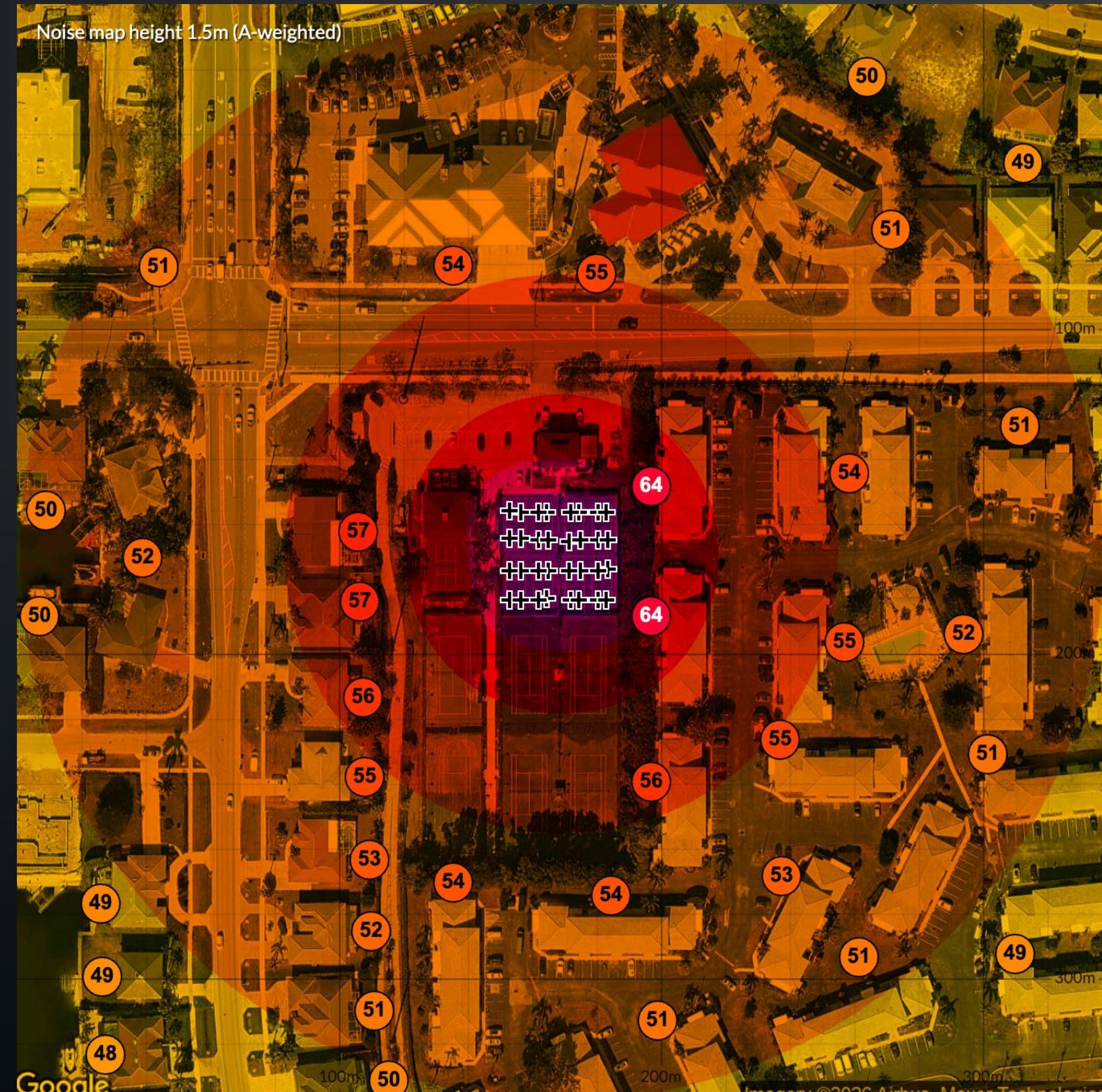


Current products are like hanging tires on court fences...

	<u>SLN/CR NanoBaffle Panels</u>	<u>Mass Loaded Vinyl (MLV)</u>
Weight	Lightweight - 0.55 lbs/square foot	Very Heavy - 1 to 1.5 lbs/square foot
Installation	Quick and easy, plastic zip ties, light panels easy to place, easy to roll up and bungee to fence in bad weather or for seasonal use	Heavy panels require more man power, sharp metal zip ties, difficult and time consuming to take down in severe weather or for seasonal use
NRC (absorption)	0.7	0.0
STC (reflection)	19	25
Sound Control	Absorbative material, sound waves converted to energy, quieter court for player enjoyment	100% reflective, sound bounced in opposite direction, echo chamber created for players
Fencing	Light panels easy on regular fencing	Heavy panels deteriorate fencing structure, fence bolsting may be required
Customization	Unlimited color options including screen printed graphics and logo capabilities.	Limited colors.

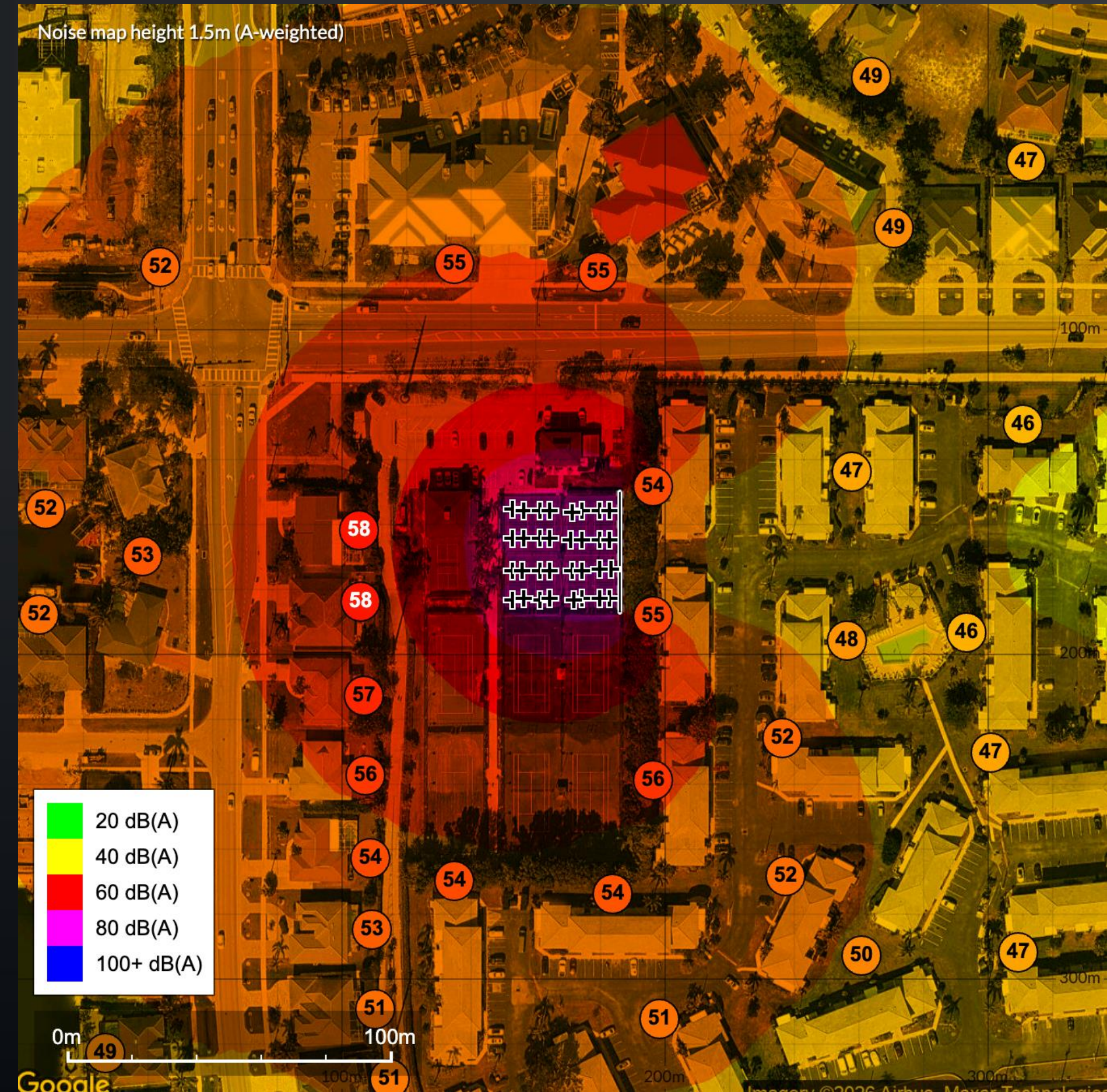
Without Barriers – Marco Island Racquet Center

- The apartments in close proximity to the courts directly east of the courts experience decibel levels upwards of 64.
- Homes to the southeast and directly west experience readings of 57 dB.
- Homes across the street to the west experience readings ranging from 48- 52 dB.
- Homes with further from the courts on the east experience readings from 49dB to 55 db.



MLV on East Fence

- With Mass Loaded Vinyl on the east fence, decibel levels fall 9–10 dBs for the apartments directly east of the courts.
- Homes to the west of the courts experience a 1–2 dB reading increase.
- Note: Without noise absorptive panels installed on the east fence, pickleball noise propagates to the east without effective reduction.

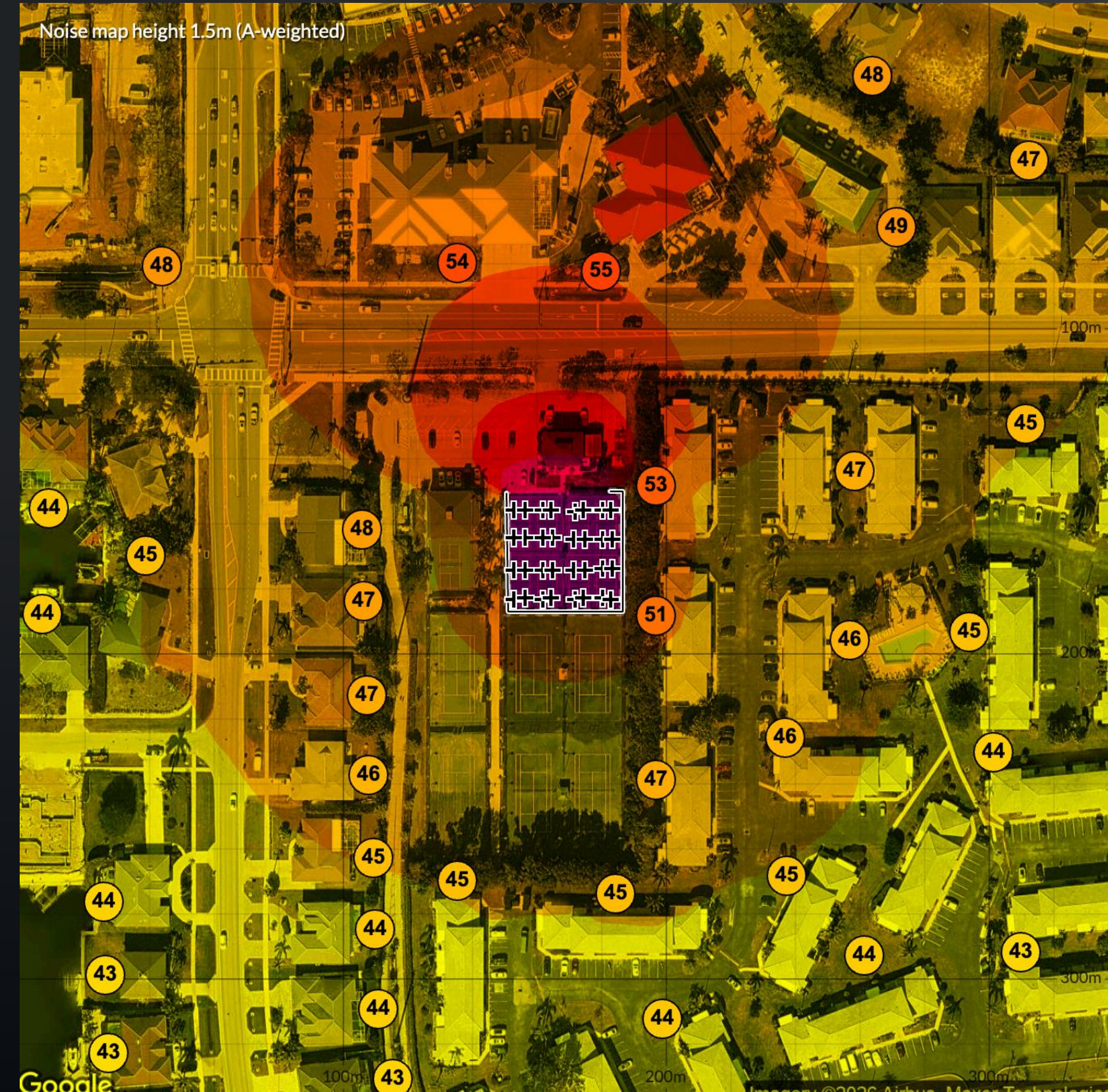


SLN/CR Barriers – 10' High Fences

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- With 10-foot high SLN/CR Nanobaffle barriers installed on the east, south and west fences, with 10' of coverage on the north fence, decibel levels fall by 9-11 points. This drop represents a greater than 50% reduction in perceived noise.
- Note: Barriers are not sound proof, rather they reduce and minimize sound. The game will still be audible but the power of each pop will be mitigated and it will sound muffled and softer.

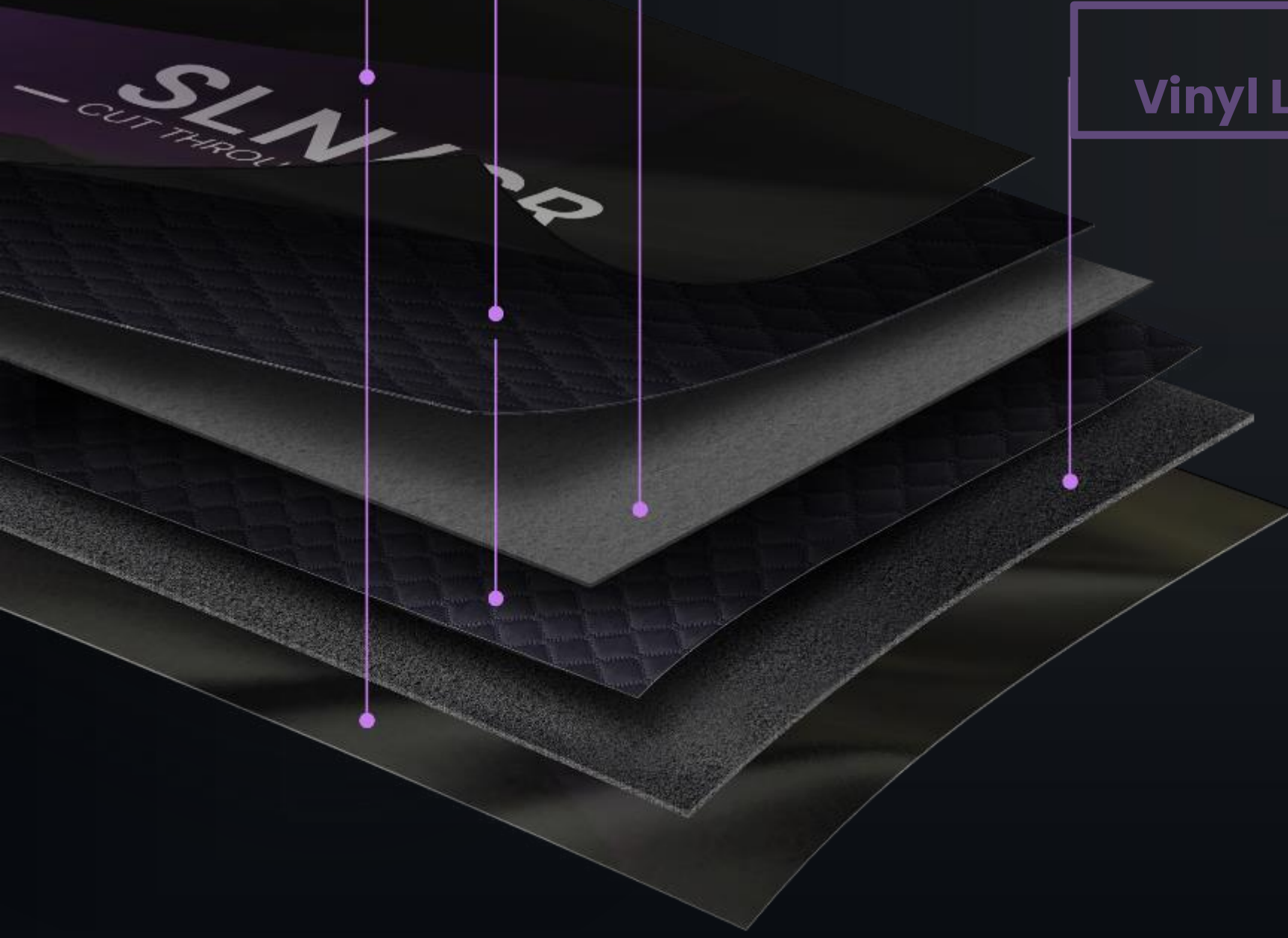


Weather Resistant Polyester
Durable and Lightweight

Nano-Fiber Sound Attenuation Fabric (SAF) Core
Absorbs Noise by Converting to Heat

Polymeric Filaments
Dense Cavity Fabric Traps Noise

Sonic Flex Polymer
Vinyl Layer Reflects Sound Back Through System



The Technology

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Happy
Customers



HERITAGE PARK
HOME OWNERS ASSOCIATION



MILLBRAE



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Hit us up!

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