

# ***OBSI: The Florida Experience***

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# Introduction

- FDOT Funded Project Being Performed By The UCF Community Noise Lab
- Project Update
  - Overview of Project
  - Description of System
  - Presentation of Preliminary Data
  - Future Work

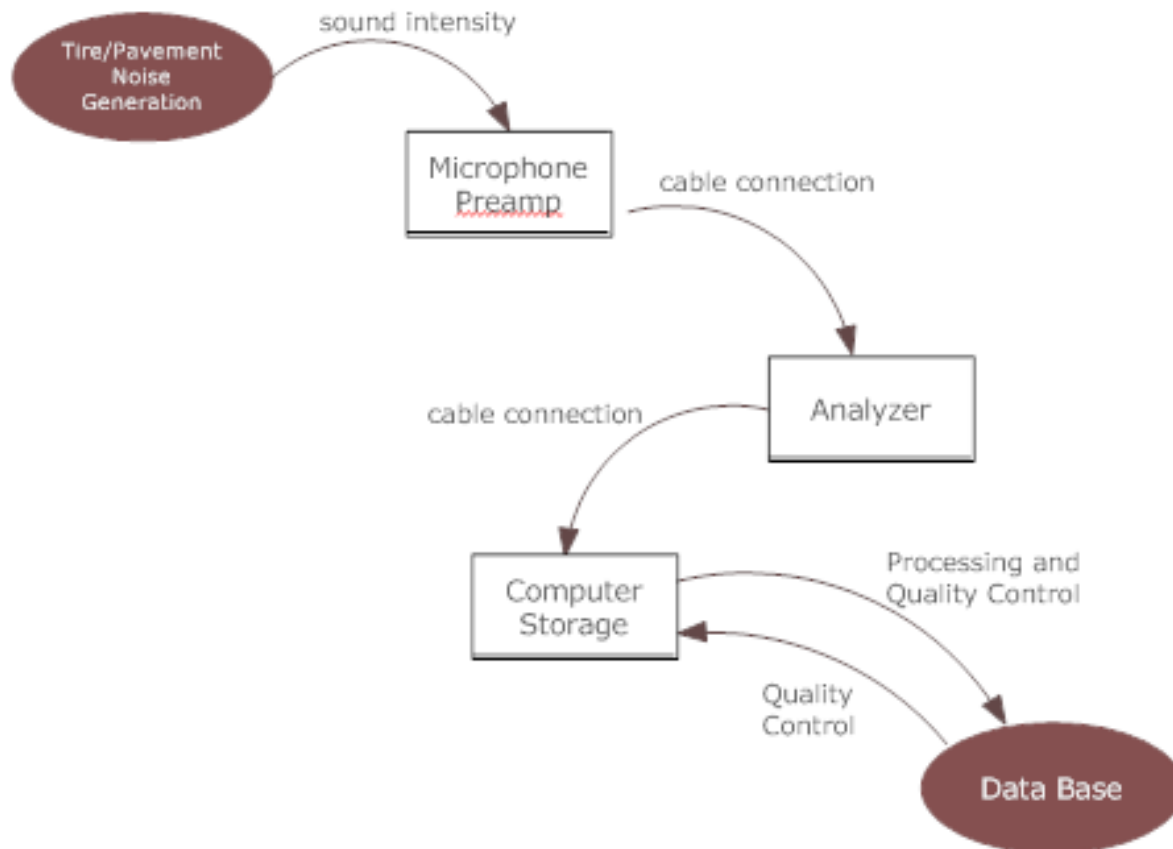
# Overview of Project

- FDOT and the FHWA Quiet Pavement Pilot Program (QPPP)
- Desire to Determine How Standard FDOT Pavements Rank Relative to Each Other
- Desire to Determine How FDOT Standard Pavements Compare to TNM REMELs
- This Led to Research Combining OBSI and Passby Measurements to Meet Goals

# Description of System

- Trailer Chosen Over Wheel Mounted
  - Consistency
  - Greater Flexibility
- Using a Modified Skid Trailer
- Wheel Loading of Typical Passenger Car
- Standard Reference Test Tire (16 inch)
- Leading and Trailing Edge Measurements Concurrently

# General Overview of OBSI System



# Trailer



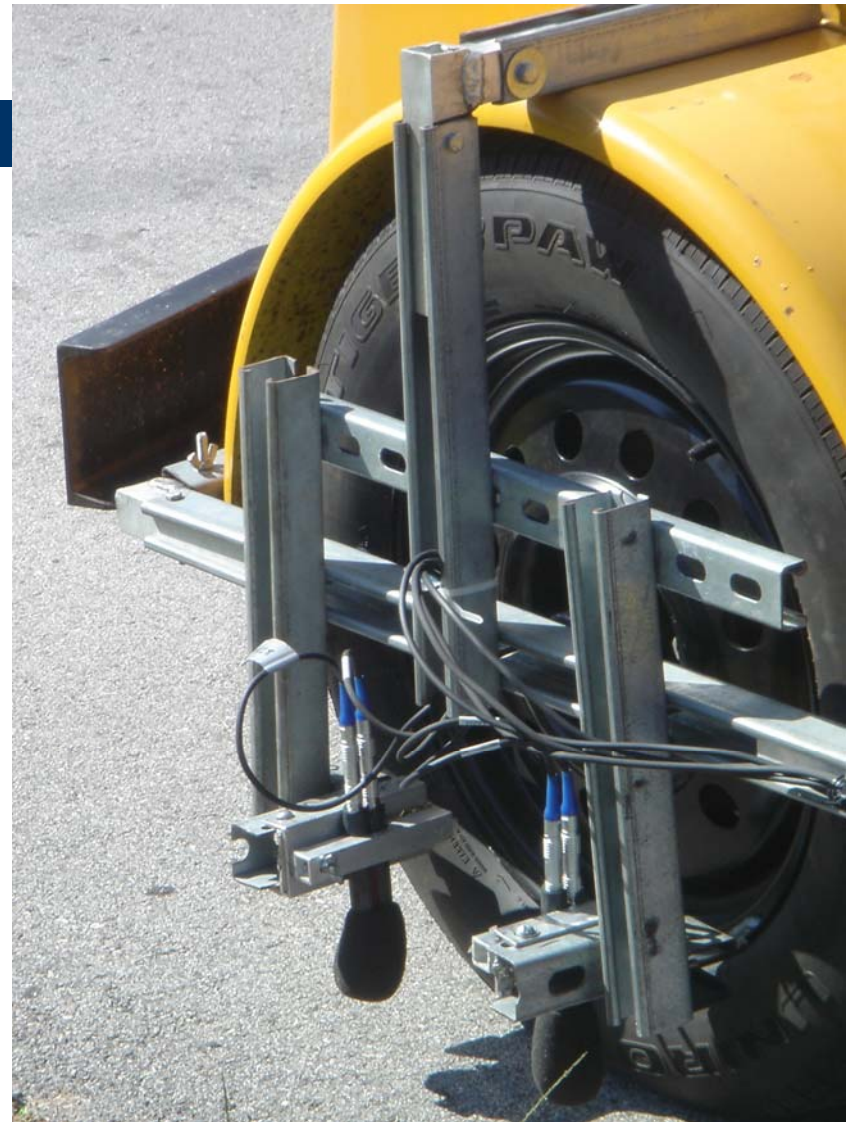
# Test Rig



# Microphones

Rig allows flexibility to change microphone placement

Leading and trailing edge at the same time increases agreement







# Analyzer and Software



**Standard packages with Visual Basic Programs written by UCF included for software collection and analysis**

Picture as supplied by Manufacturer

# Data Collection



# Passby

Passby at multiple distances and heights as well as weather parameters also measured



# Other Data

- Pavement Details from FDOT
  - No Lane Closures
  - Not on Same Day
- Speeds (Passby and Trailer) with Radar Gun
- Vehicle Classification During Statistical Passby
  - Manual
  - Most Interested in Automobiles (TNM Auto)
- Location Characteristics

# Preliminary Data

- Still Being Quality Controlled and Processed
- “Heart Breaks” Have Occurred
- Weather in Florida

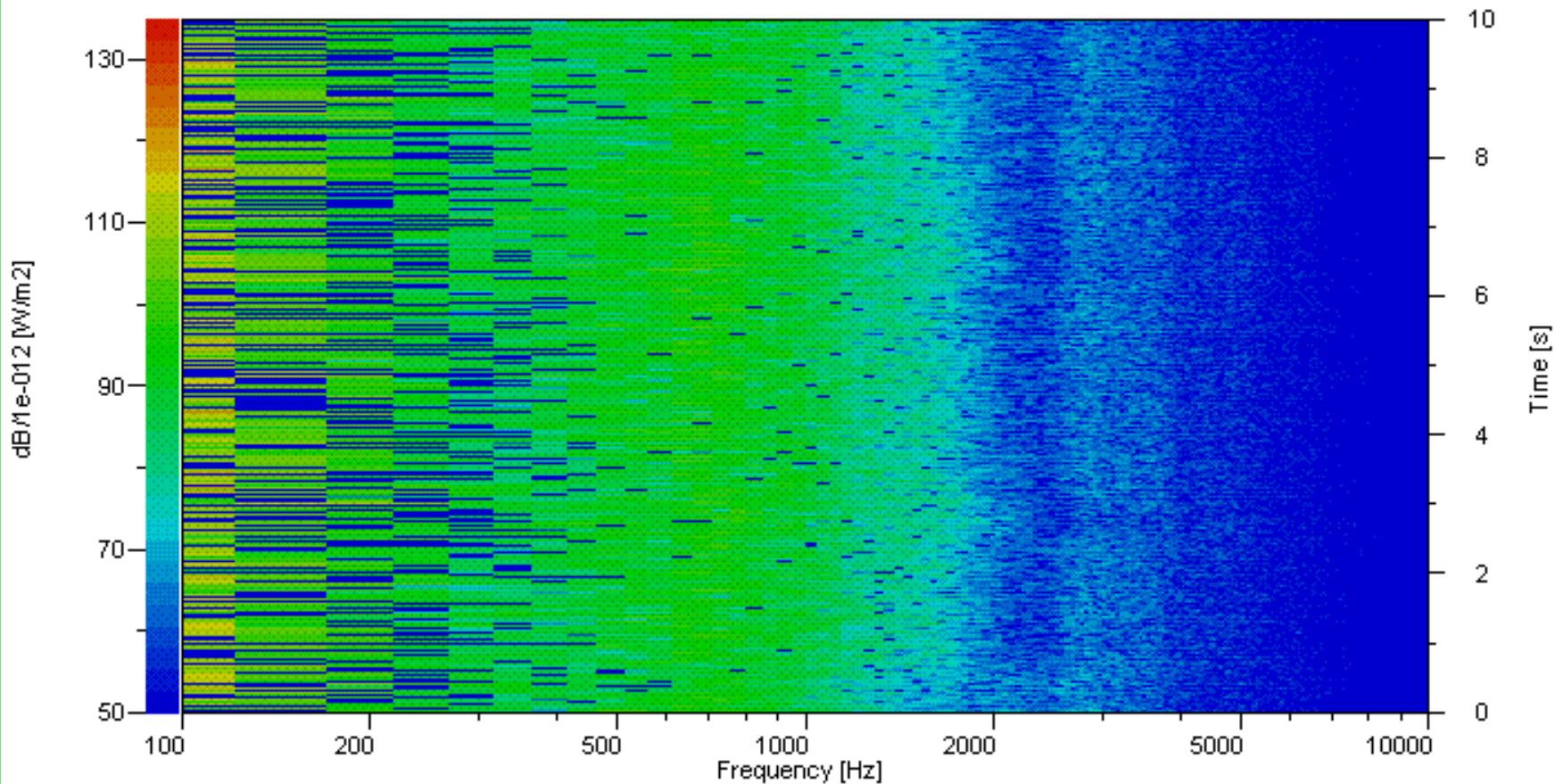
# Florida Porous Friction Course



**FC-5**

# “Raw” OBSI Data

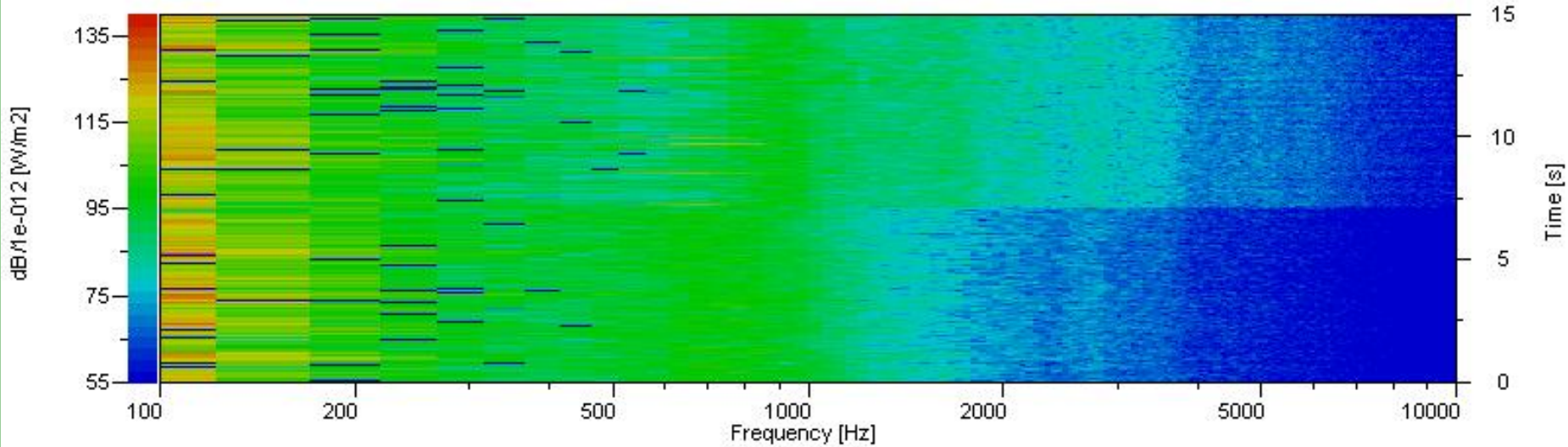
C10 (M) Run3 54 sr417 front by tire [W/m<sup>2</sup>] INTNS(C3,C4,1.2,0.015)



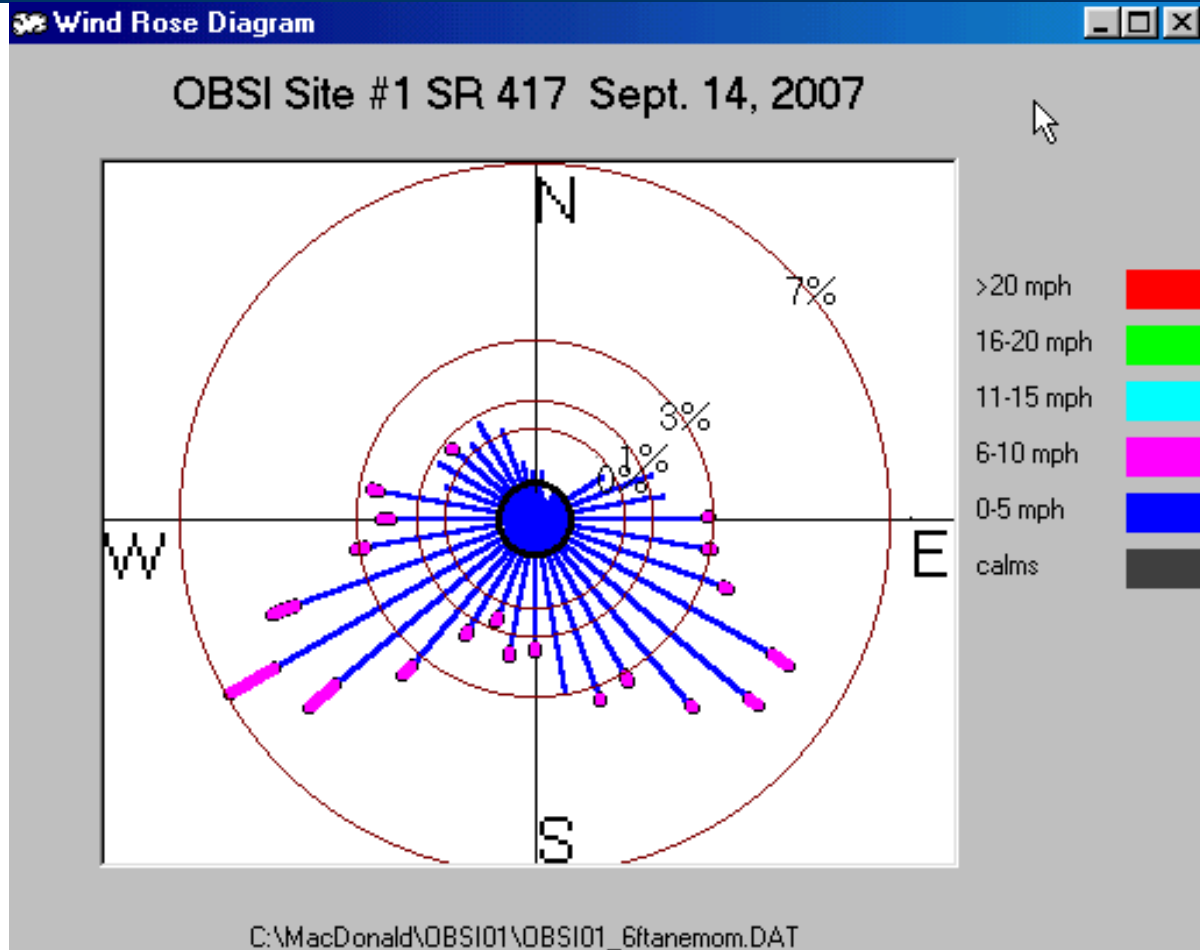


# Sample of Transition FC to PCC

C9 (M) Run24 rear by tire [W/m<sup>2</sup>] INTNS(C1,C2,1.2,0.015)

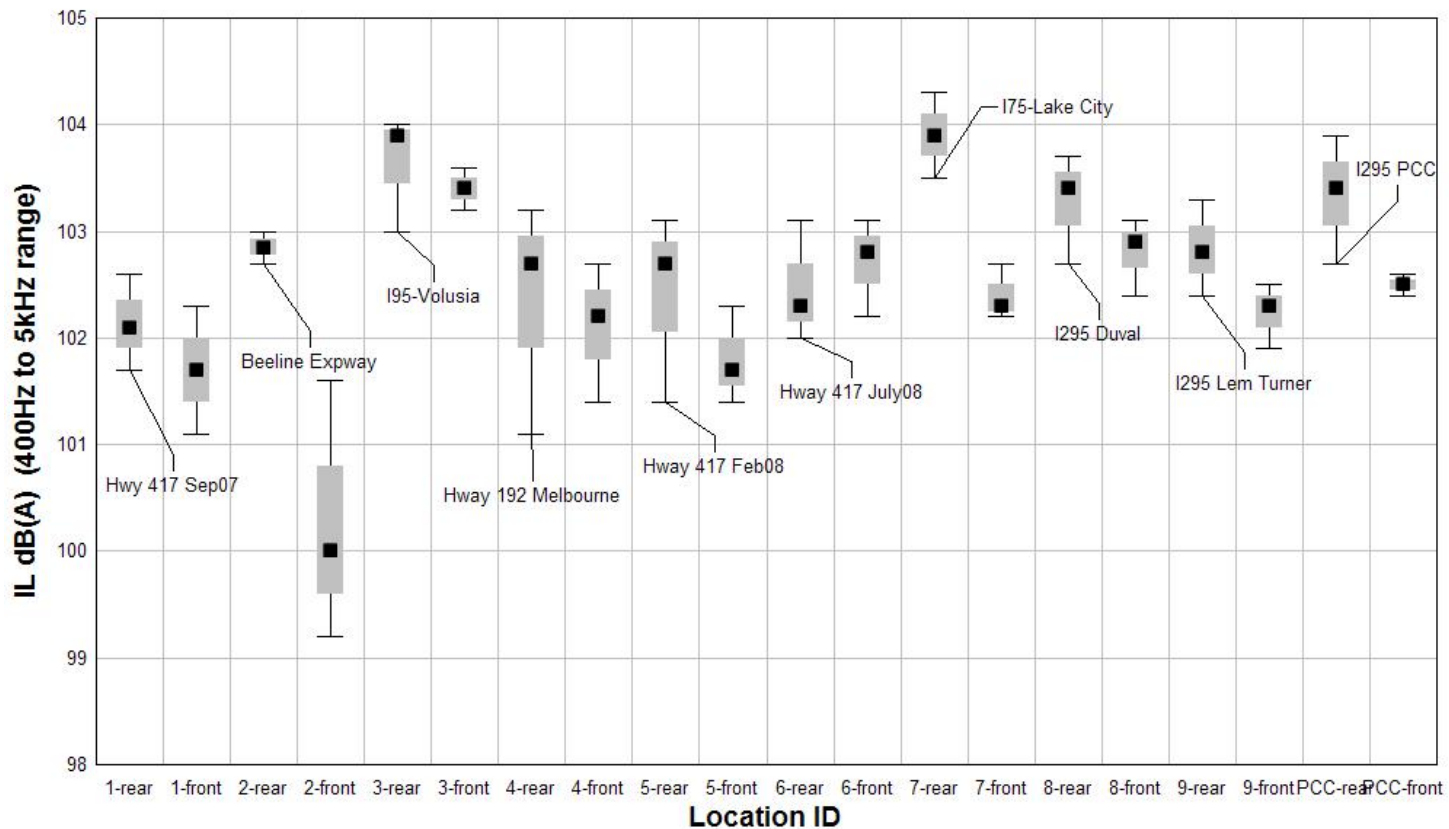


# Weather Data (One Example)



# Preliminary Findings (QA Incomplete)

Univ. Central Florida/FDOT OBSI Summary  
Sites #1-#9



# Future Work

- Frequent Calibration at Certified Lab
- Repeat of Suspect Locations
- Repeat of Certain Locations for Environmental Analysis
- Continued Tweaking of System
- Detailed Specs for Test Rig
- More Locations To Be Measured
- Continued Quality Control Measures
- Passby Measurements Continued
- Explore Passby vs. OBSI
- Coordination with FDOT and FHWA

# QUESTIONS?

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- Notes
  - All results presented are preliminary
  - Grateful acknowledgement of FDOT participation