PAVEWISE

Alaska Asphalt Pavement Summit 2023

Continuous Density Measurement with DPS

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ESSENTIAL UNDERGROUND INFORMATION

GSSI

TRANSPORTATION & PUBLIC FACILITIES

STATE OF ALASKA

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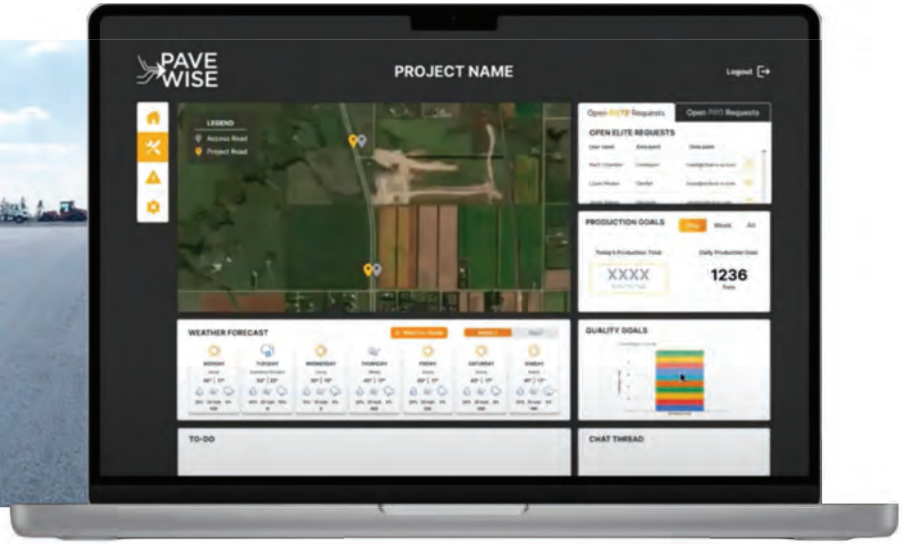
Integrating technology for quality.



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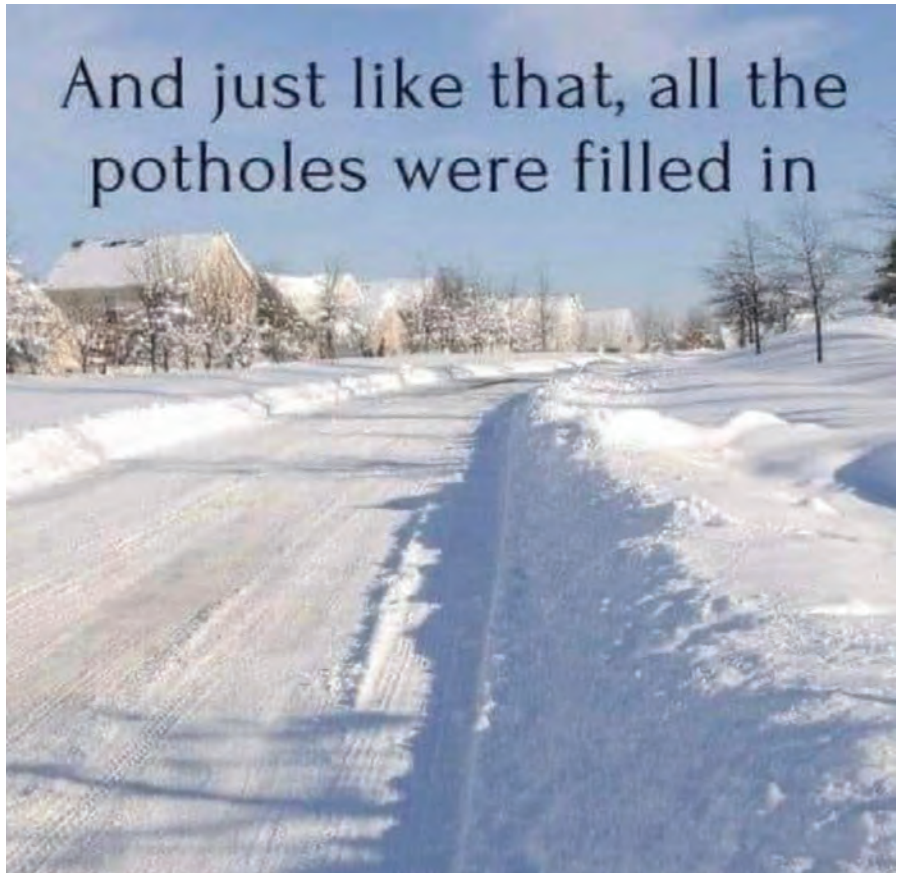
Bryce Wuori CEO, Pavewise

Presentation Topics

- DPS Technology Overview
- DPS QC/Contractor Questions
- DPS QA/Engineer Questions
- DPS Advantages/Perks
- DPS Disadvantages/Struggles
- DPS High Speed Data Collection
- DPS Future Applications and Tech



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Technology Overview

How it Works

A Quick Lesson on Dielectric

Material	Dielectric Value
Air	1
Water	81
Asphalt	4-7 (give or take)

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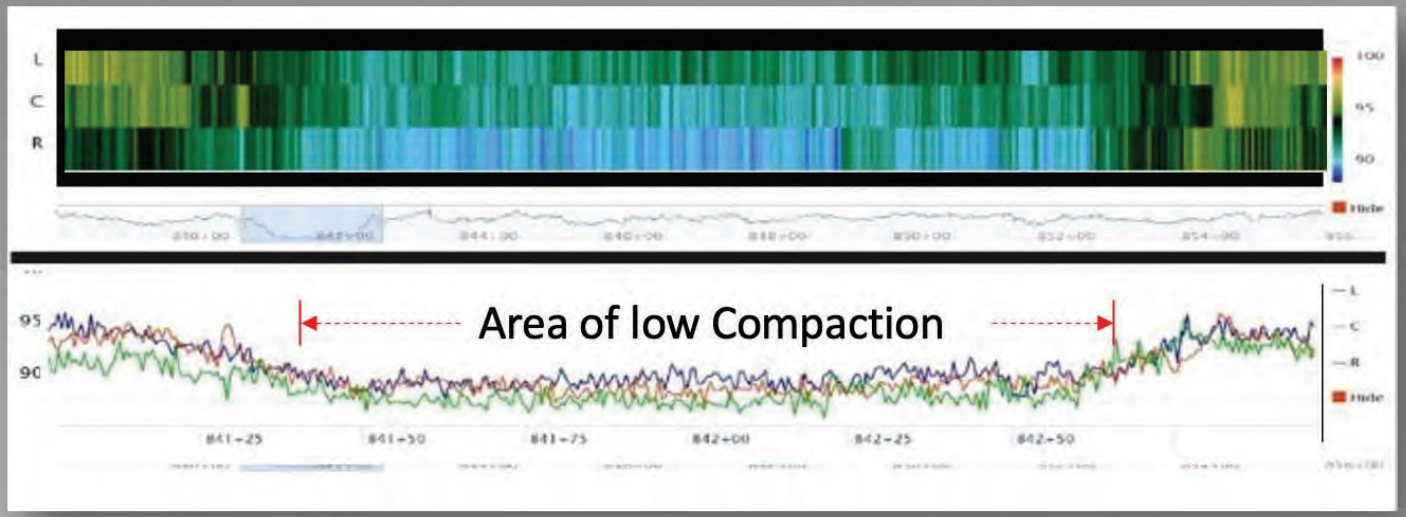


PaveScan RDM

Technology Overview

DPS Data Collected in the Field

- 2,100 Miles Data Collected
- 1,500 Core Locations Verified
- 43 Projects in 11 States
- 257 Gyratory samples Calibrated

DPS QC/Contractor Advantages

- Collect data that reduces risk
- Realtime data collection
- Proactive in field adjustments
- Verifies other technologies
- Joint data collection accuracy
- Core verification process

DPS QA/Engineer Advantages

- More realistic results of asphalt section
- Calibration to lab or production samples
- Non-Destructive
- Identify potential issues for improvements
- 50-100% coverage of product

DPS QC/Contractor Questions

- Cost
- Training
- Champion
- Certifications
- ROI
- Safety

DPS QA/Engineer Questions

- Accuracy
- Logistics
- Density Specifications
- How to adopt technology

DPS Common Contractor Struggles

- Cost to implement
- Training or proper use
- Champion development
- Change is hard
- Change is scary
- Trusting technology

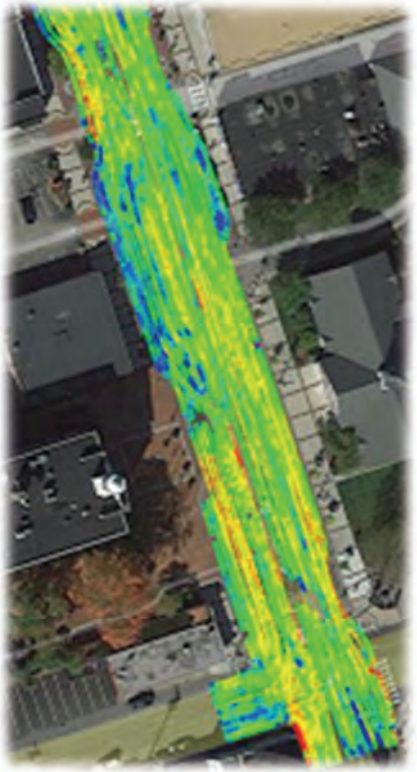
DPS Common Engineer Struggles

- Accuracy
- Logistics
- Safety
- Weather
- Champion

DPS High Speed Data Collection

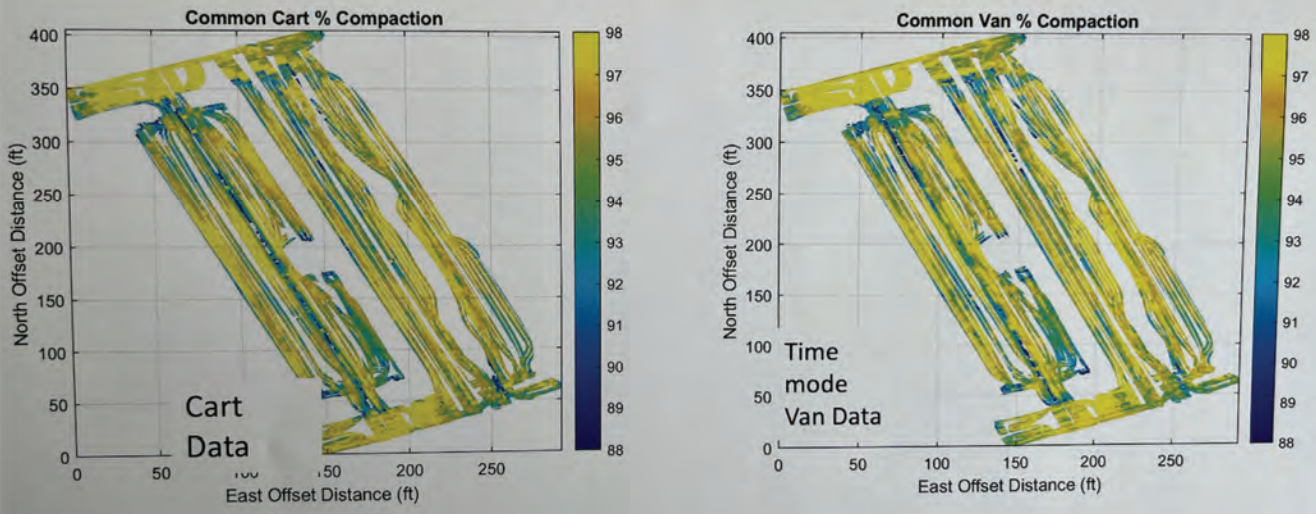
DPS High Speed Data

88
89
90
91
93
94
95
96



Common Cart and Van % Compaction Maps

Newly Paved Parking Lot



Close agreement between the two datasets.

High Speed Data vs. Cart Data

Other Methods for Collecting DPS Data

Mix Design Modules

Unique DPS Projects in 2023

Bus Tour Test and Results

All Test Location
RDM Lot Average-97.13%
RDM Core Average-96.87%
Nuclear Guage-95.91%
Core Results-97.57%

Core vs. RDM Cores-0.70%

Core vs. RDM Lot-0.44%

Wyoming Red Butte Project

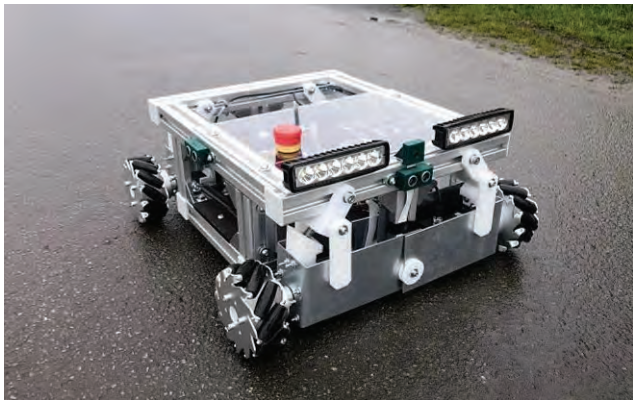
- IC/DPS Full Implantation
- 31,340 Tons SS-Type 2
- 38 Cores/15 Lots
- Average Density 95.88%
- Standard Deviation .61%

Future of DPS

Single Point Measurement

Behind the paver

Future of DPS



Earth Science Systems

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Questions?

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