



**Alaska DOT&PF**



## **RMWPPP 2016 NPPC, Nashville, TN**

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10/11/16





**~4500 Centerline Miles**





In Cooperation With  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

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# Alaska Road System

Region	System Class	Centerline Miles
Central	NHS	706
Central	Non NHS	1,672
Northern	NHS	1,511
Northern	Non NHS	2,487
Southcoast	NHS	130
Southcoast	Non NHS	1,124
Total	NHS	2,347
Total	Non NHS	5,283
Grand Total		7,630



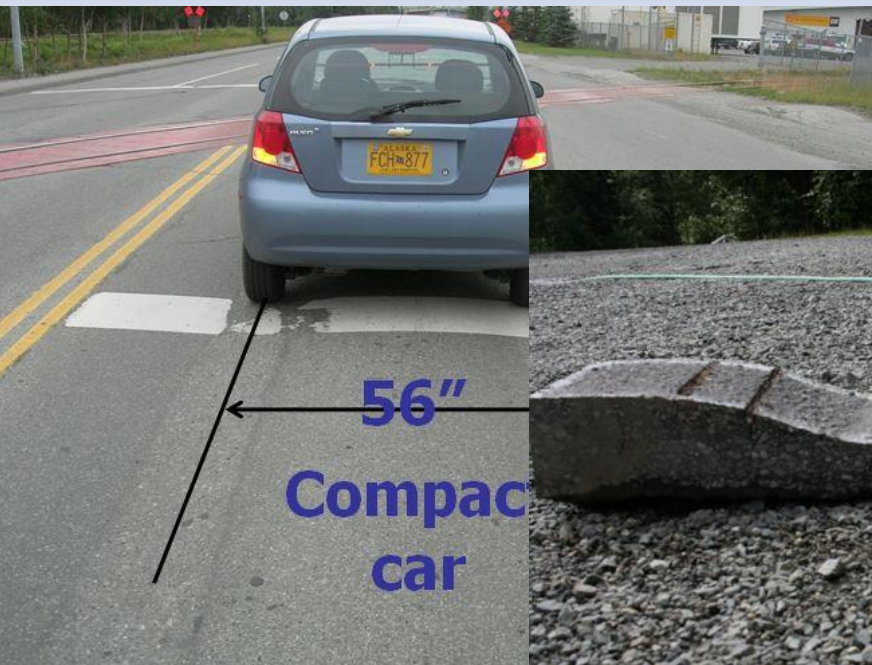
# Road Condition

- **Rutting**
  - Studded-tire wear
- **Roughness**
  - Permafrost Issues
- **Cracking**
  - Transverse, longitudinal, block
- **Friction**
  - High Friction Surface Treatments





# Rutting





# Treatments

- **Rutting: Mill-and-Fill**
- **Hard Aggregate:**
  - Policy: 5,000 AADT/Lane
  - Nordic Abrasion Value: Max. 8.0
- **Microsurfacing: Better Treatment?**





# Treatments

- **Durability:** Nordic Abrasion, LA Abrasion, Sulfate Soundness
- **Prall Test:** 15 minute test

Prall-Loss, cm <sup>3</sup>	Wear Resistance
< 20	Very Good
20 - 29	Good
30 -39	Satisfactory
> 40	Poor



# Treatments







# Cracking & Roughness







# Treatments

- **Reclaim** existing asphalt layer (HMA) and aggregate base course (ABC) layer
- **Reclaim** HMA + ABC & **Stabilize** with:
  - Portland Cement
  - Foamed-Asphalt
  - Emulsified-Asphalt







## Develop Guidelines for Pavement Preservation Treatments and for Building a Pavement Preservation Program Platform for Alaska

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# Pavement Preservation Guidelines + Treatments Tool Box

[http://www.dot.state.ak.us/stwddes/research/assets/pdf/fhwa\\_ak\\_rd\\_12\\_14.pdf](http://www.dot.state.ak.us/stwddes/research/assets/pdf/fhwa_ak_rd_12_14.pdf)





# Pavement Management

- Yearly Automated Collection of Pavement Condition
- Mandli Communications, Inc.:
  - Road Surface Profiling (RSP) equipment
  - Laser Crack Measurement System (LCMS)
  - High definition 3D profiles and 2D images of road surface





# Pavement Management

- Web-based PMS (+MMS+EMS) systems of AgileAssets Inc.
- Pavement Deterioration Modelling, Pavement Condition Index & Treatment Trigger Values with APTech

# Thank You!

