

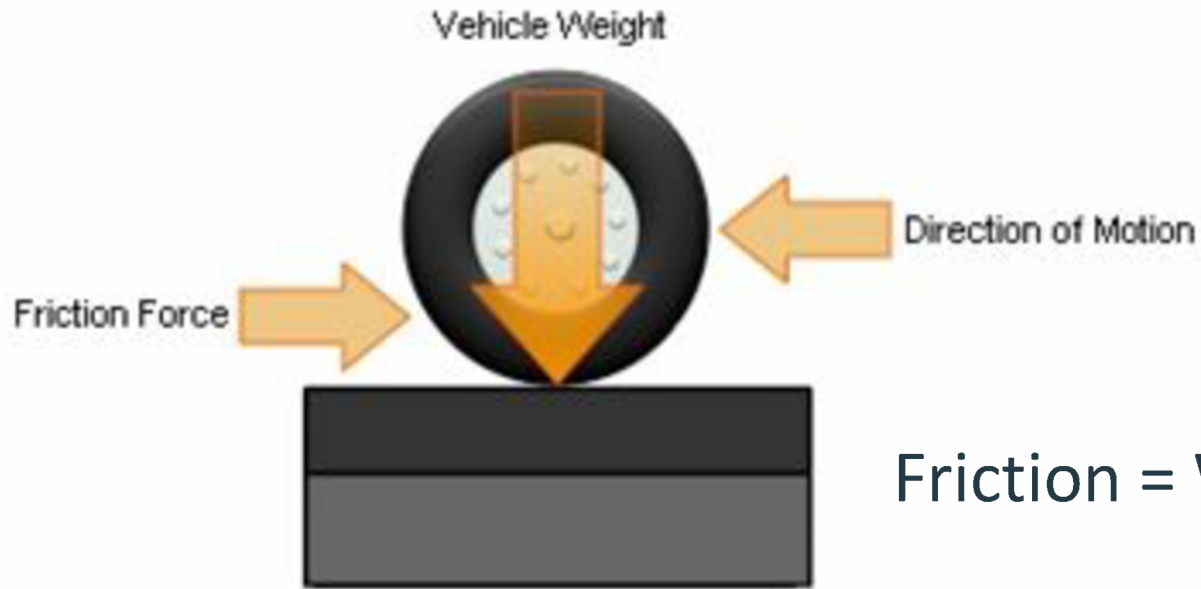
Friction (Skid) Testing and Requests

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Overview

- What is Friction?
- Friction vs Texture
- Types of Friction Testing
- Test Results and Analysis
- When and How to Request Testing

What is Friction?



$$\text{Friction} = \text{Weight} / \text{Force}$$



What is Friction Testing?

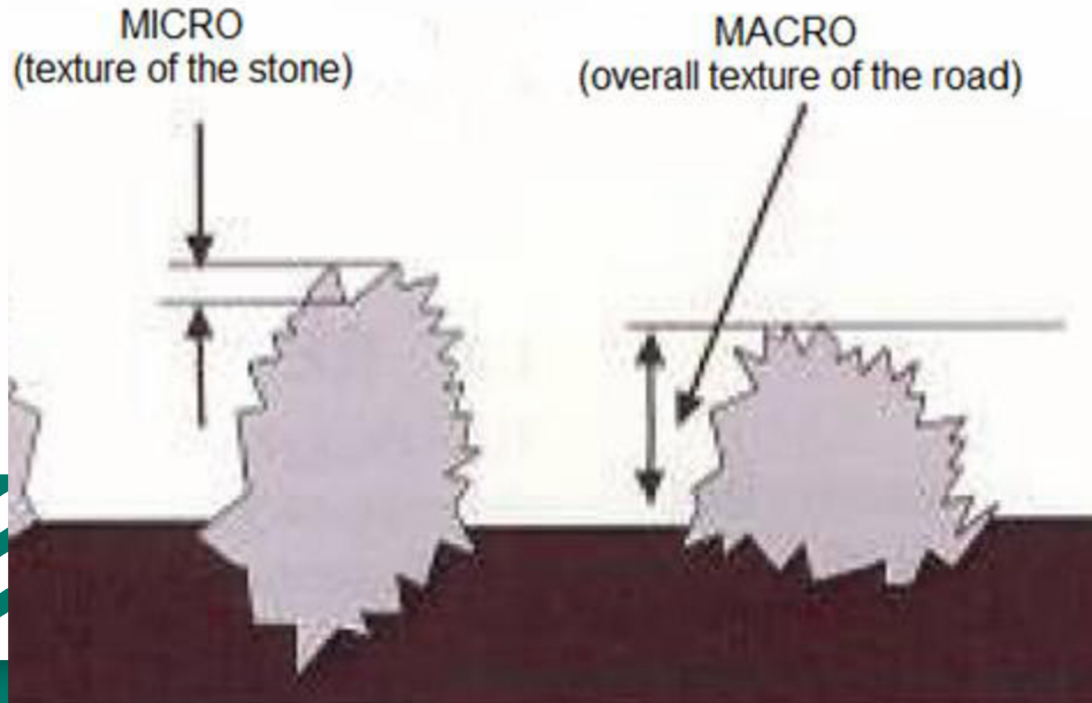


Doug McGee
Public Affairs
WYDOT - Cheyenne

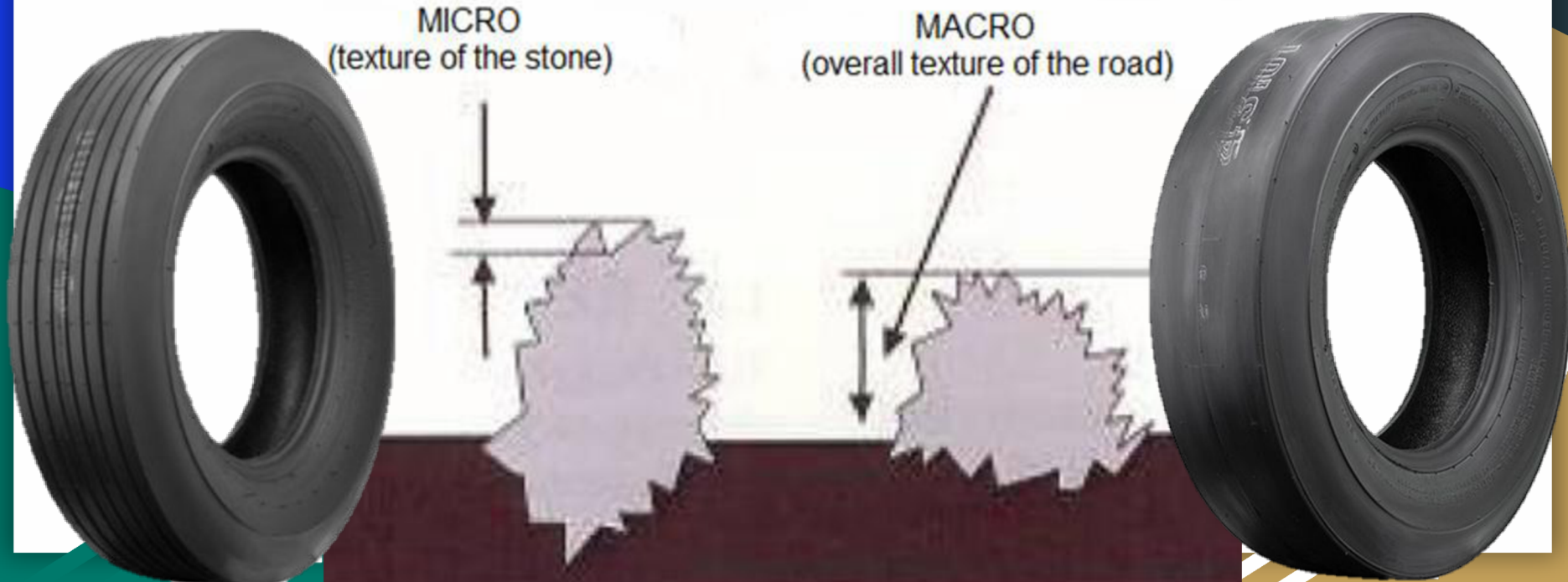
Friction vs Texture

- **Friction depends on speed**
 - more speed demands more friction
- **Texture is constant**
 - Microtexture - felt but not seen
 - Macrotexture - seen but not felt

Friction vs Texture



Friction vs Texture



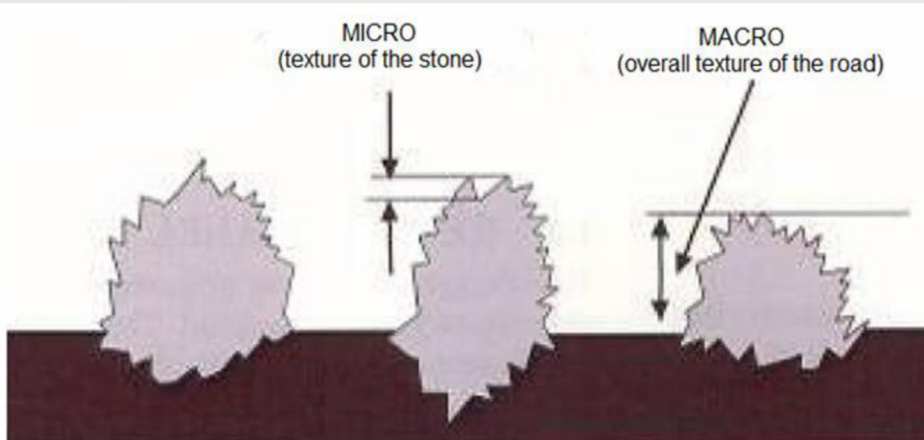
The image shows two black tires standing vertically against a light blue background with horizontal lines. The tire on the left has a ribbed tread pattern, while the tire on the right has a smooth tread. A black banner with cyan text is positioned at the bottom of the image.

**Ribbed (ASTM E 501) and Smooth (ASTM E 524)
Tires.**

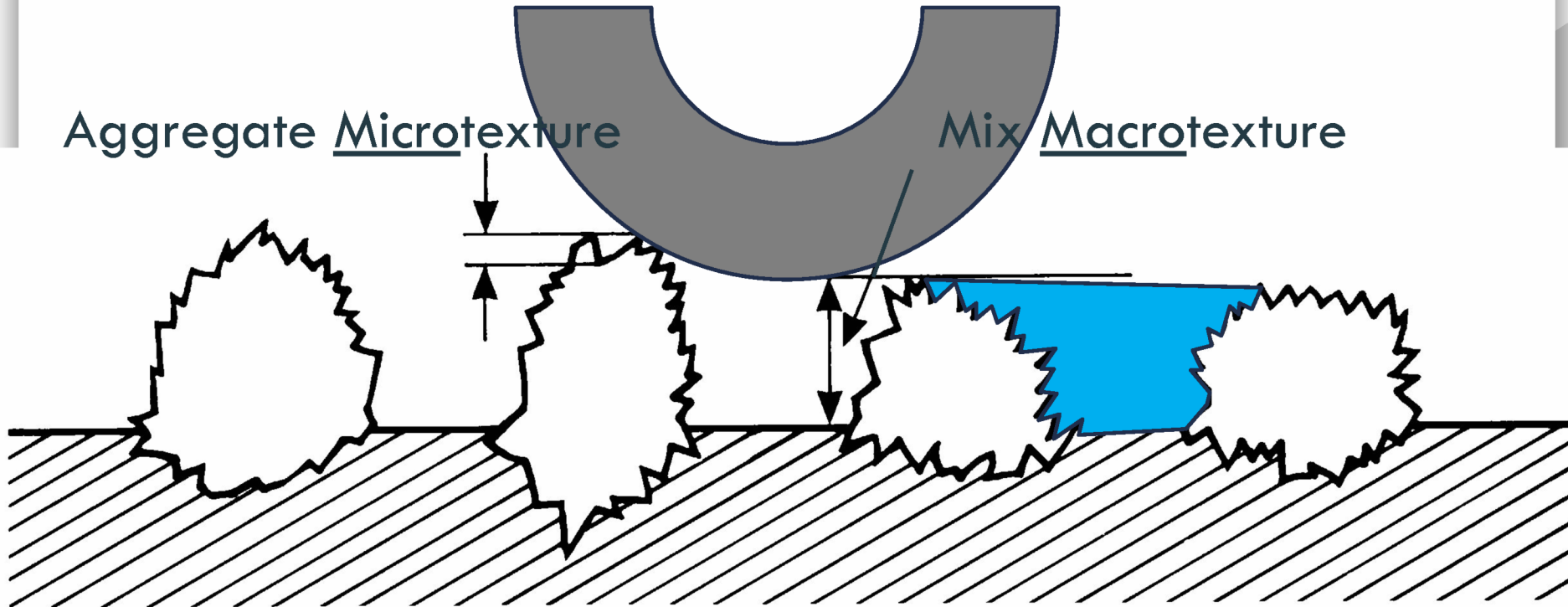
Friction and Texture



- Friction is speed dependent, texture is not.
- Types of Texture:
 - **Microtexture:** Not visible to naked eye, Ribbed tire more sensitive to micro.
 - **Macrotexture:** Visible to naked eye, Smooth tire more sensitive to macro



Pavement Texture







Friction

Vehicle Speed

Wheel Speed

Traction

Load

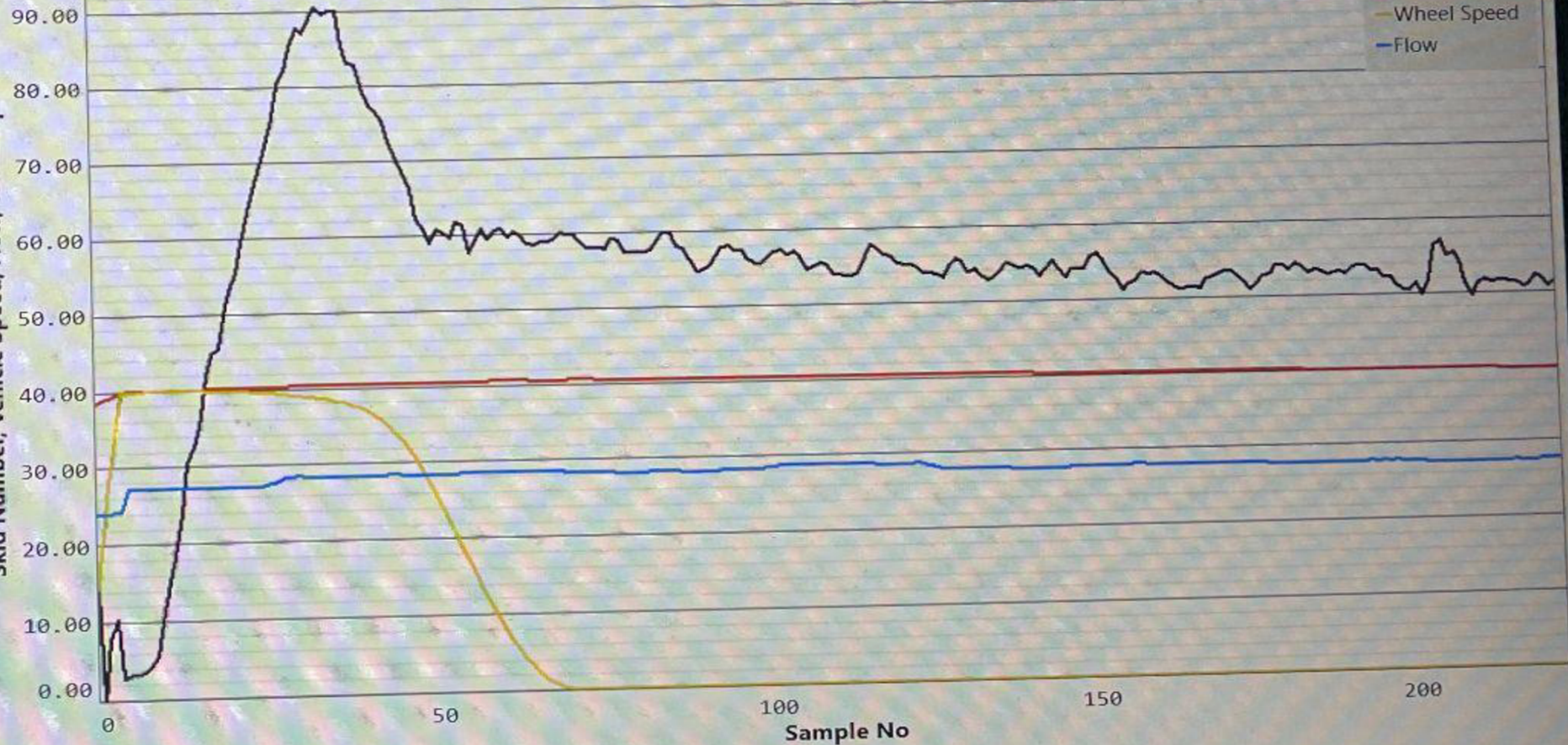
Flow

% Slip

Legend

- Skid Number
- Vehicle Speed
- Wheel Speed
- Flow

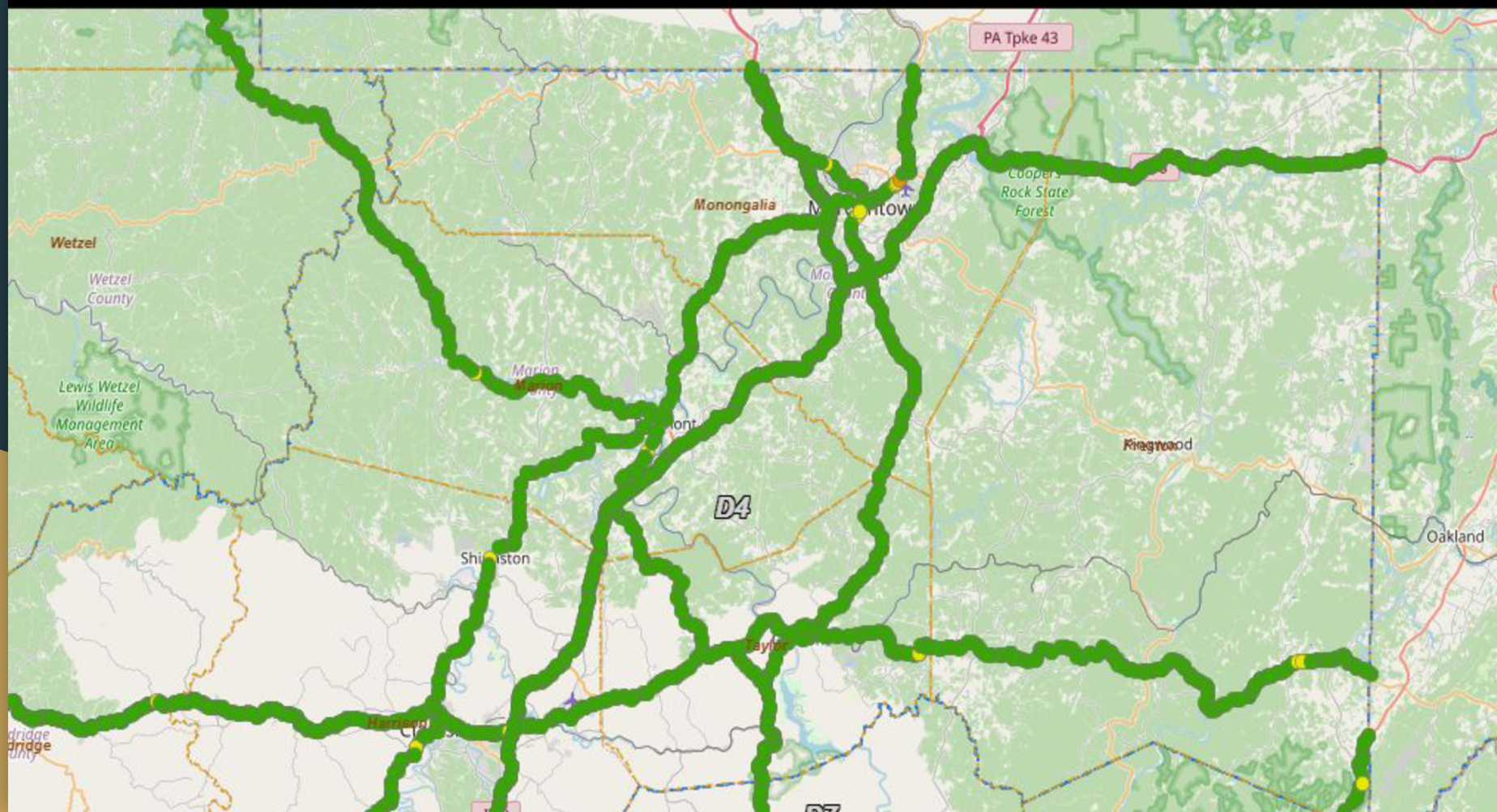
Skid Number, Vehicle Speed, Flow, Wheel Speed

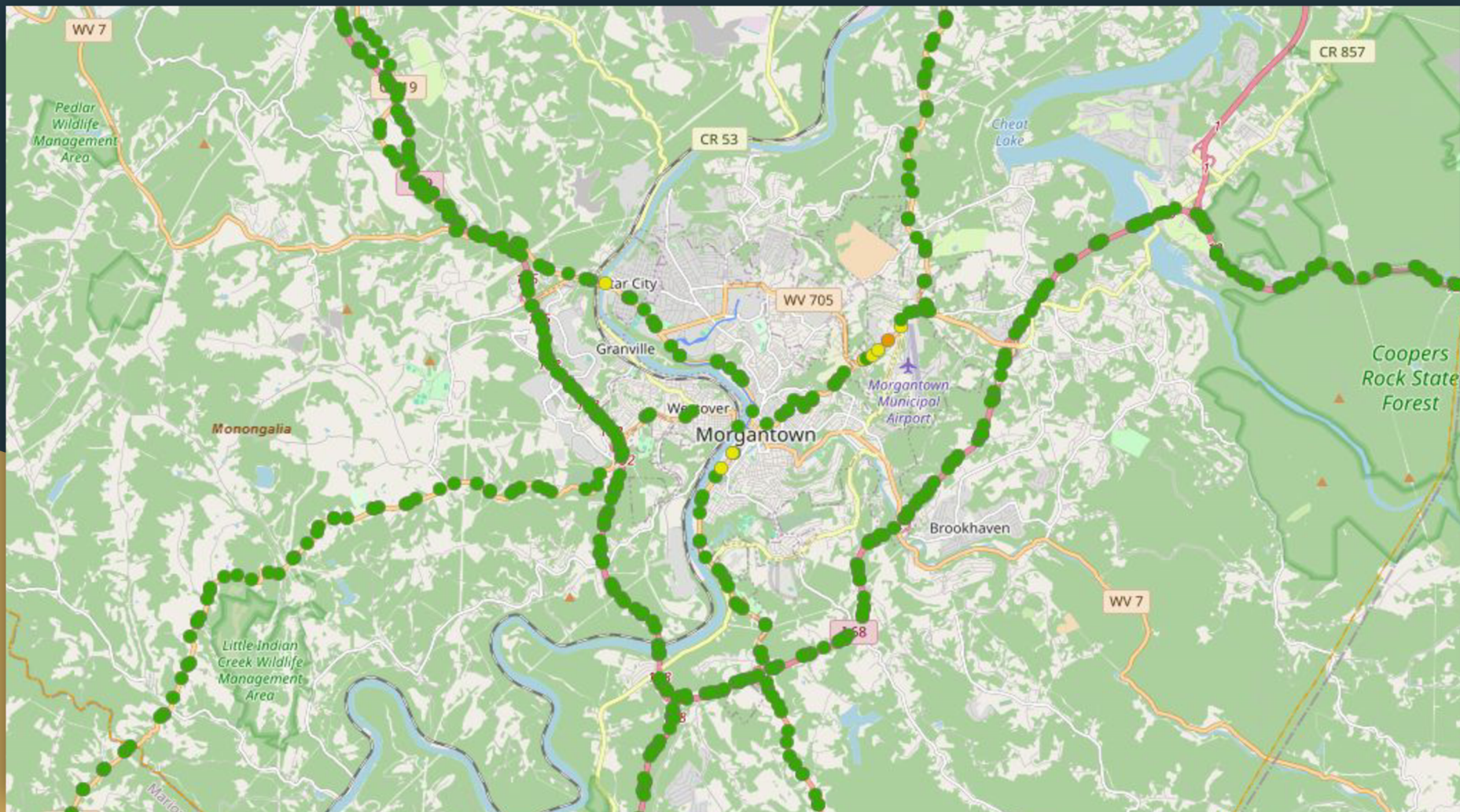


Types of Friction Testing:

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- **Network Testing**
 - Interstates and US Routes Annually





Types of Friction Testing:

- **Network Testing**
 - Interstates and US Routes Annually
- **Accident Investigation**
 - Upon Request

Types of Friction Testing:

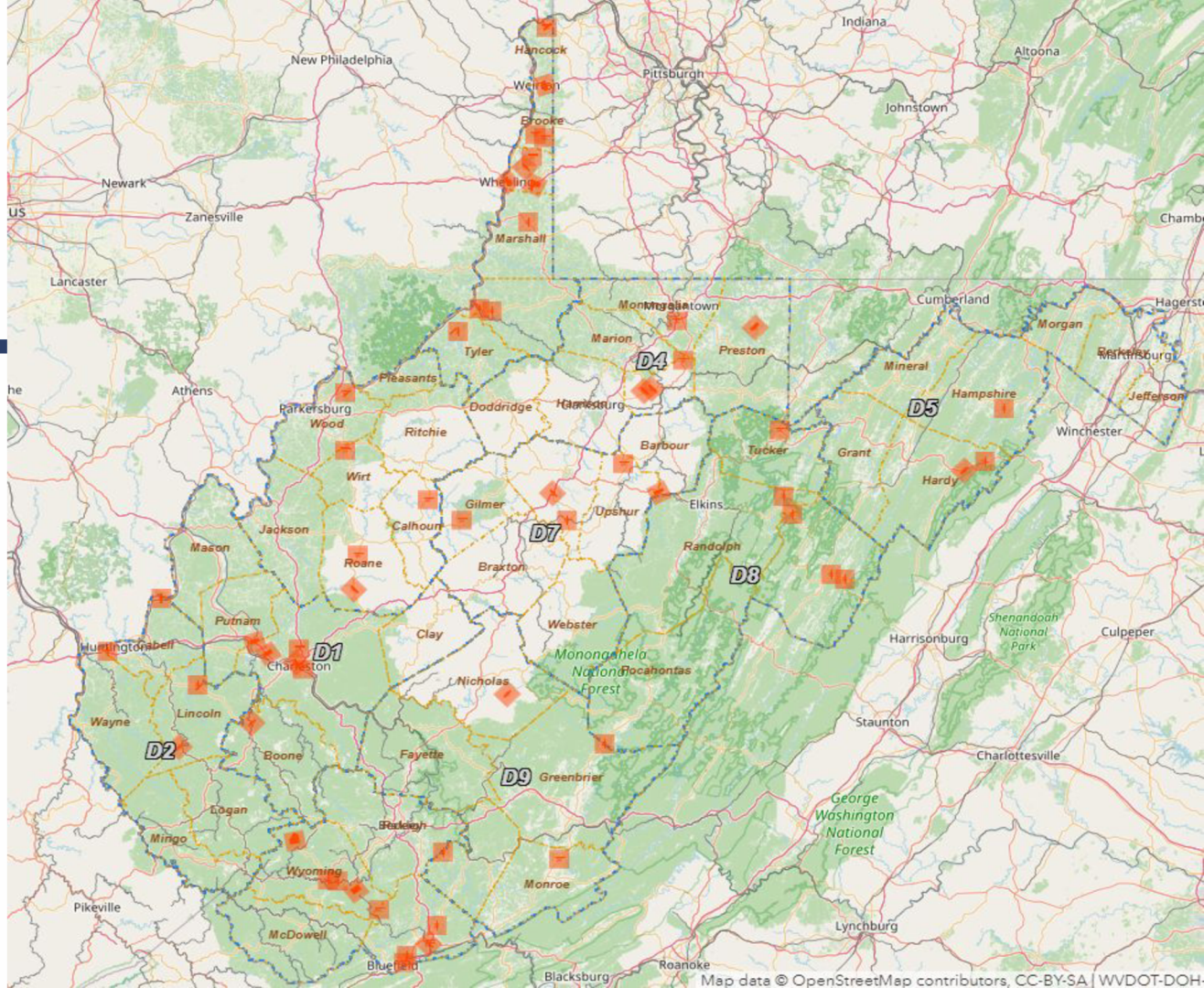
- **Network Testing**
 - Interstates and US Routes Annually
- **Accident Investigation**
 - Upon Request
- **406 - High Friction Surface Treatment**
 - < 90 days after Completion

Calcined Bauxite, used in HFST



HFST in West Virginia

100+
sites



Types of Friction Testing:

- **Network Testing**
 - Interstates and US Routes Annually
- **Accident Investigation**
 - Upon Request
- **406 - High Friction Surface Treatment**
 - Tested < 90 days after Completion??
- **402 - Skid Resistant Aggregate**
 - Tested > 30 days after Completion

How to Request Testing:

MCST Used Only:
Rec.: Tested:
Report: MIR:

Pavement Testing Request

Type of Testing:	Smoothness	Substantial Complete Date:	
Project Name:		Contract ID:	
Authorization:	Federal Project #:	State Project #:	
District Requesting:	County:	Beginning GPS Coordinates:	
District 1	Barbour		
Surface Type:	Mix Design (JMF):	Thickness:	Length:
Microsurface			
Paving Contractor:	Aggregate Source:		
Project Manager:	Phone Number:	Email:	

Please Attach all Location Maps and other information to this email.



Generate Email:

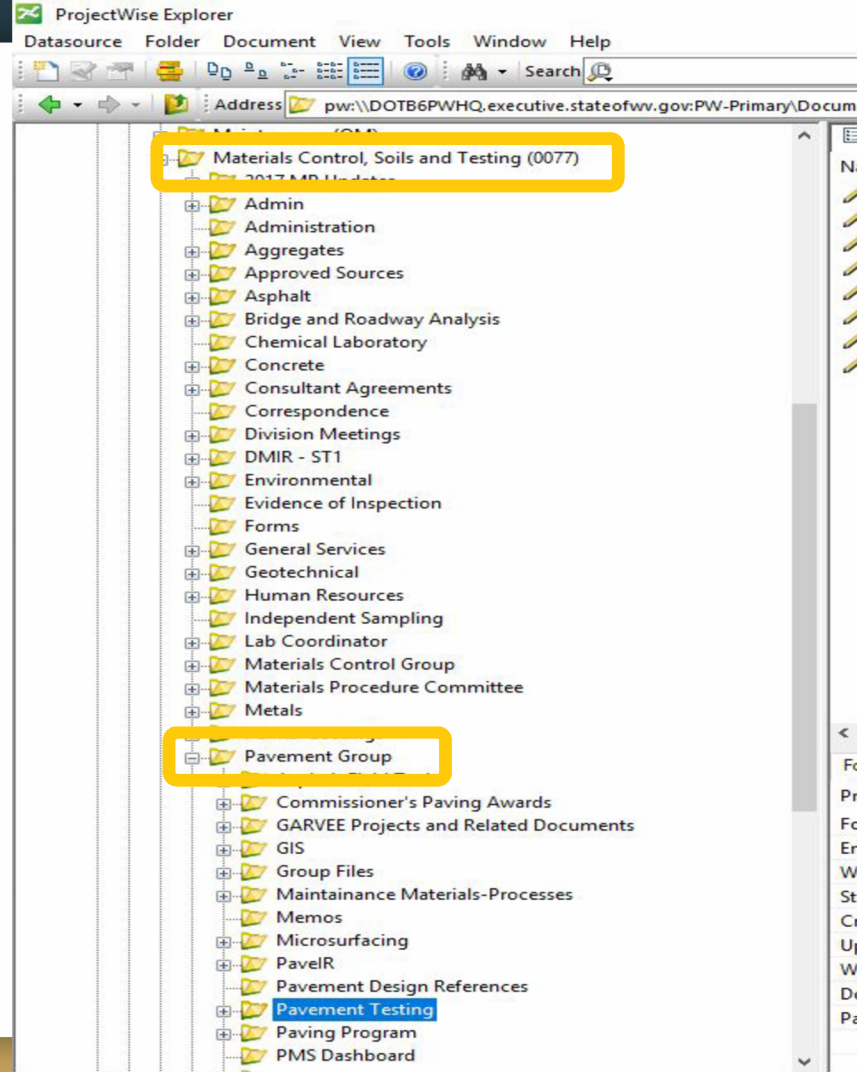
Submit



* Any form Received with missing information will be considered as incomplete.

* If you have any questions call the Pavement Group at (304)558-9884

How to Request Testing:



How to Request Testing:

File Message Insert Options Format Text Review Help ProjectWise Tell me what you want to do

Paste Cut Copy Format Painter Clipboard

Basic Text

Names

Include

Tags

Follow Up

High Importance

Low Importance

From: E029462@wv.gov

To: DOH MCSnT Roadway <dohmcsntroadway@wv.gov>

Cc: Caudill, Joseph D <joseph.d.caudill@wv.gov>

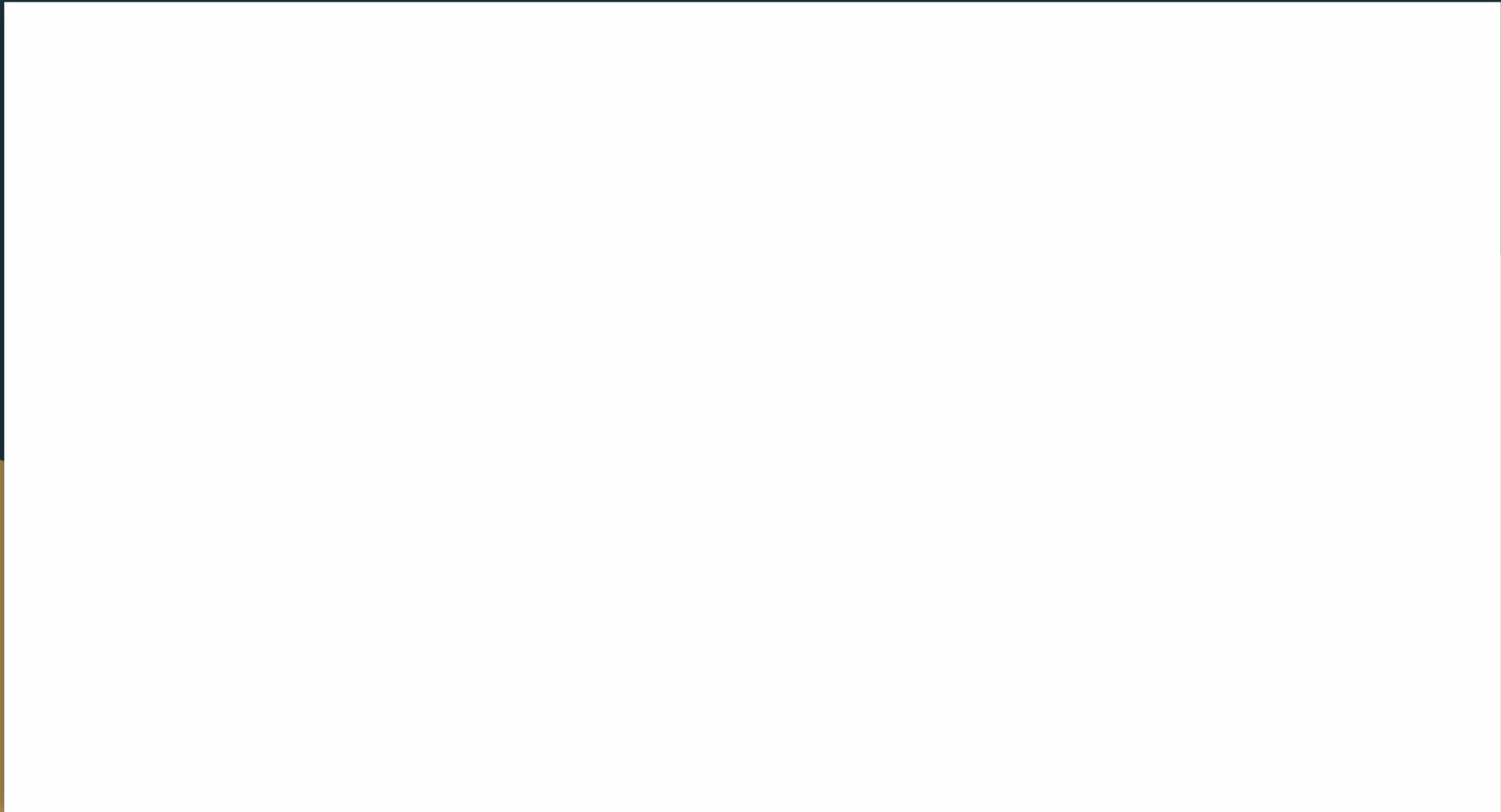
Subject: 1234567 Smoothness Request Barbour County

Attached: Pavement Testing Request form V1.1[2].pdf 2 MB

Location maps for 5th st.- 2nd Ave.pdf 104 KB

Surface Testing Request

Don't forget to attach map



Questions?

