



# Hardee County Pavement Management Plan

*Strategic Planning for the Future – June 2024*

Kimley»Horn



# Introductions



**Christopher Simpron, FCCM**  
Assistant County Manager /  
Public Works Director



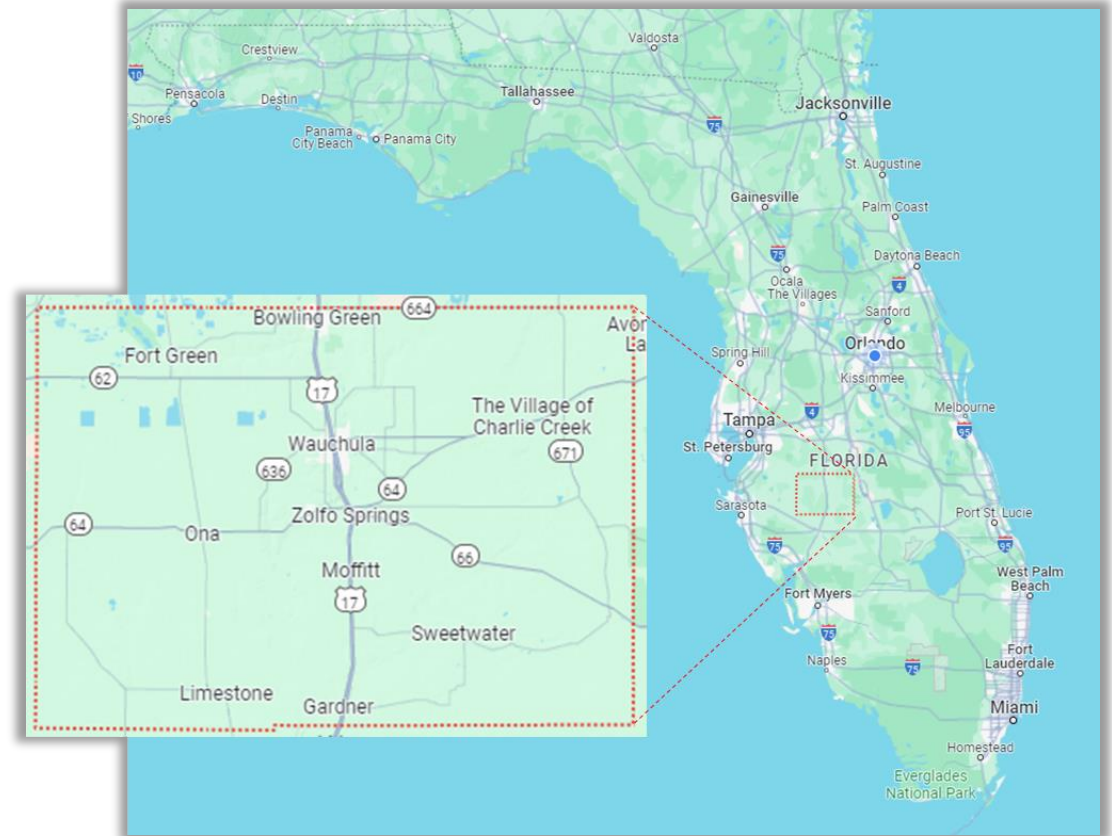
**Paul Reit, P.E.**  
Project Manager



**Kevin Stone, P.E.**  
Project Manager

# Hardee County

- Population – 25,327 (2020)
- Cities – Wauchula (Seat), Bowling Green, Zolfo Springs
- Industry(s) – Agricultural with predominantly phosphate mining (Mosaic)
- Other unique features – Mostly agricultural, fiscally constrained with disadvantaged communities
- Network
  - 478 Centerline Miles County Roads
    - Paved Roads – 381 miles
    - Unpaved Roads – 97 miles



# History - What Lead to a PMP?



## Past

Political pressures  
Reactive approach



## Present

County Strategic Plan  
New Culture



## Future

Implementing Vision – Measure  
so we can Plan!  
Support Strategic Plan  
Support Future Growth  
Community Engagement



HARDEE COUNTY  
**STRATEGIC PLAN**  
 Fiscal Year 2023-2024

Adopted: December 7, 2023

# Building a Vibrant, Resilient Hardee County



## Our Vision for the Future

A strong community of integrity  
 where people want to be.



## Our Mission

Building a vibrant and resilient environment  
 focusing on the health, safety and  
 welfare of the community.

## Our Guiding Principles

- Promote Economic Development
- Protect Property Rights
- Enhance the Quality of Life for Residents and Visitors
- Protect the Natural Environment
- Provide Housing Opportunities and Choices



# Land Use, Transportation and Infrastructure



**Improve coordination of economic development, land use, infrastructure, transportation, and natural resource planning.**

## Strategies:

- Provide **well-designed, functional, cost-effective** transportation, utility and public services to workplaces, neighborhoods, communities, and centers of economic activity.
- Create a **balance between natural resources and new development**.
- Balance **existing and future mining efforts** with reclamation land plans allowing for adaptive reuse of post mining lands for agriculture, parks, recreation and industrial development.
- Improve **gateways to communities to draw visitors and commerce**.
- Coordinate, identify** appropriate **utility service areas** for efficient provision of utilities including Broadband.
- Improve infrastructure** – sidewalks, street lighting, stormwater drainage, roadways within population centers.
- Integrate connected transportation system** with multiple modes of transportation – highways, rail, air
- Build infrastructure capacity** through the County and its municipalities. Support opportunities for new manufacturing.
- Establish balance** of available lands and efficient use of facilities.



Map of the Heartland including Hardee County



# Resiliency Florida

- May 12, 2021 – Governor Ron DeSantis signed Senate Bill 1954 into law
  - Ensures a coordinated approach to Florida’s coastal and inland resilience
  - Enhances our efforts to protect our inland waterways, coastlines and shores, which serve as invaluable natural defenses against sea level rise
  - Will yield the largest investment in Florida’s history to prepare communities for the impacts of sea level rise, intensified storms and flooding



# Resilience Is...

- ...the ability to
  - anticipate,
  - prepare for,
  - adapt to
  - withstand,
  - respond to, and
  - recover rapidly from disruptions
- ...making infrastructure more climate-resilient can have a benefit-cost ratio of about 6 to 1.
- **FOR EVERY DOLLAR INVESTED, SIX DOLLARS CAN BE SAVED.**



# Resilient Florida: Hardee County

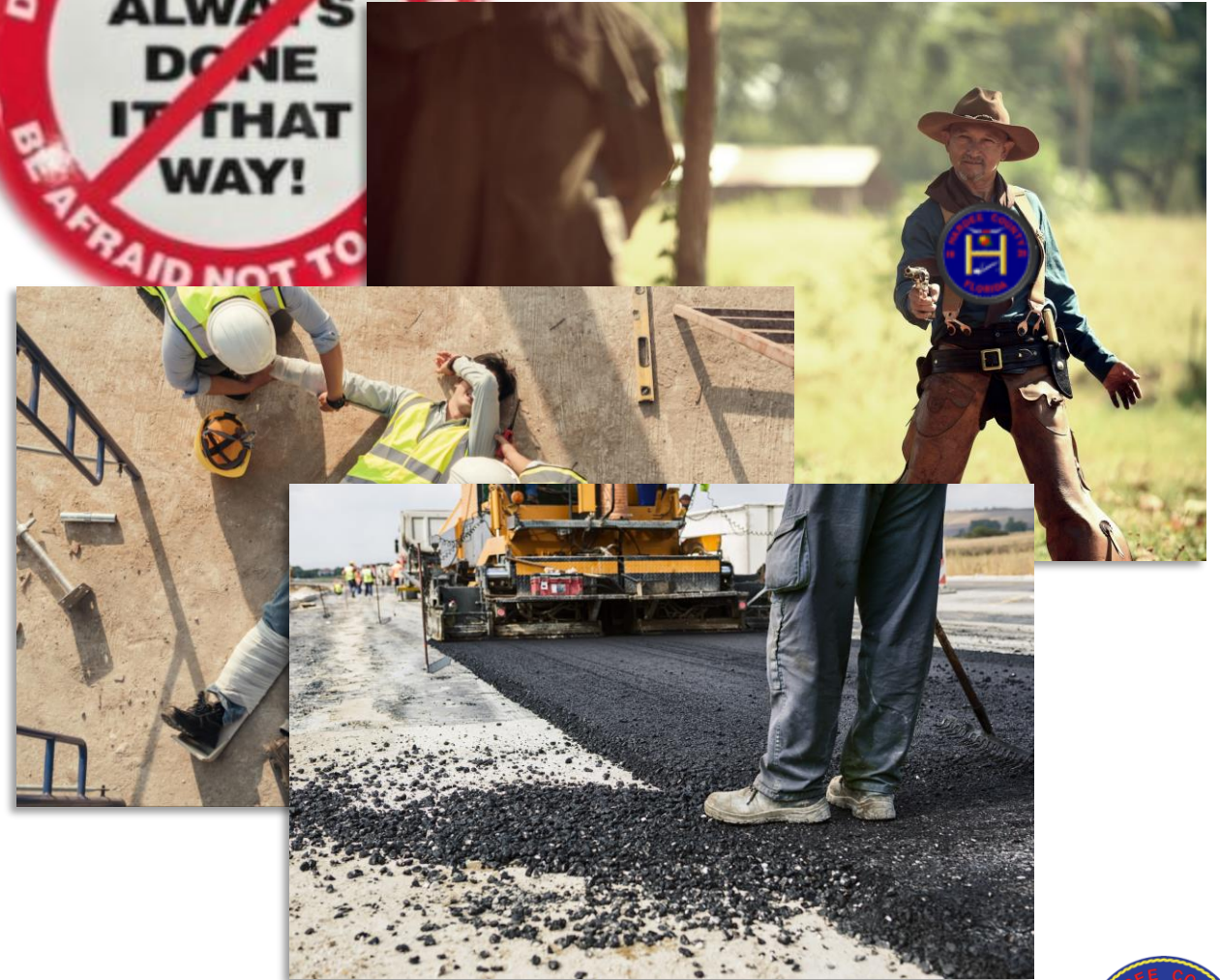
- Total Resilience Investment
  - **\$342,280**
- 2 Planning Grant Awards: **\$342,280**
  - FY22-23 RF - City of Wauchula
    - **\$152,280**
  - FY22-23 RF - Hardee County
    - **\$190,000**



# Lessons Learned

## Before

- Limited resources
- Reactive
- “Shoot from the hip”
- Unsafe Practices
- No Accountability/Care
- Quantity – “How many miles can we pave?”



# Lessons Learned

## After

- More self-sufficient
- Strategic
- Emphasis on Planning
- Improve Safety
- QA/QC – Treat it as your own
- Quality – Less quantity, higher quality



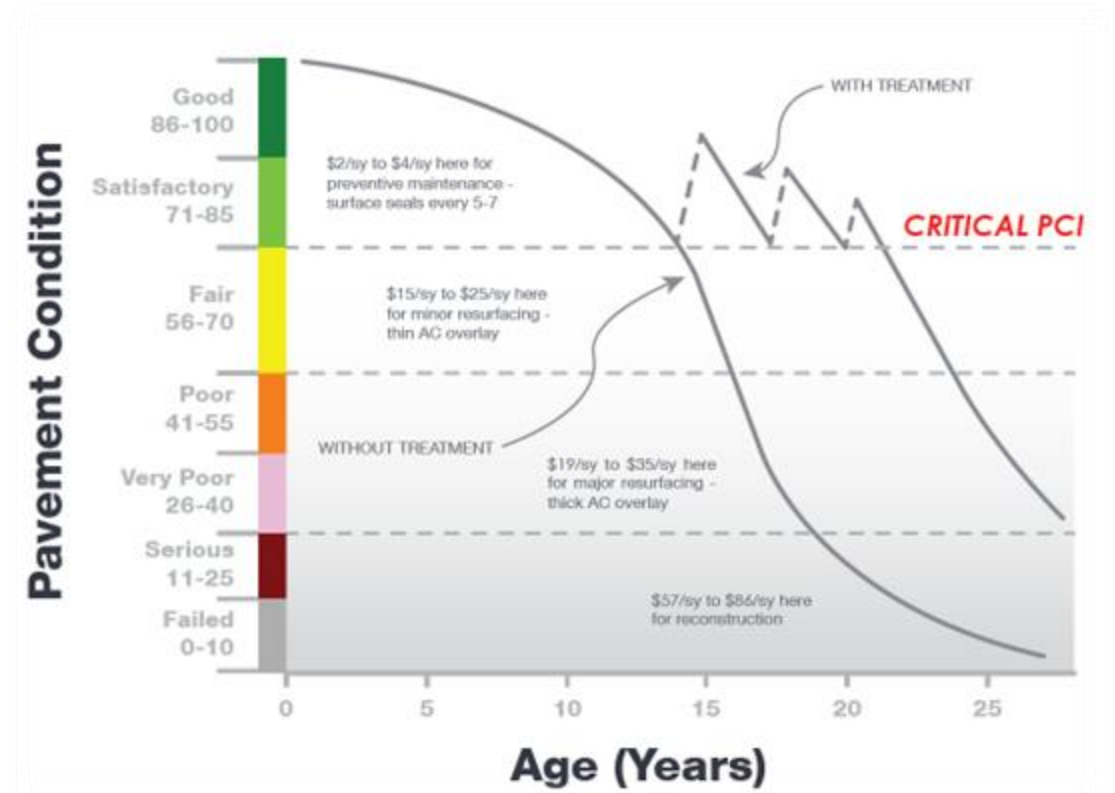
# Pavement Management Program Goals

Prioritized plan with justification

Development of a CIP

Justify and establish a budget

Leverage for Funding opportunities



# Unique Program Challenges

- Unpaved Roads
  - Desire to pave all unpaved roads over time
  - How do we prioritize? What metrics do we consider?
- Traffic
  - Prioritization
  - Looking beyond counts
    - Route maps, trucking, mining
- First Time Implementation
  - Starting New
  - Historical Records / Ownership



HISTORY  
OF  
HARDEE COUNTY

Copyright, 1929  
By  
JEAN FLOWDEN

# Paved Roads - By the Numbers

## County Roads

- Total Centerline - 478 Miles
- Paved Roads – 381 miles
- Unpaved Roads – 97 miles

## Road Types

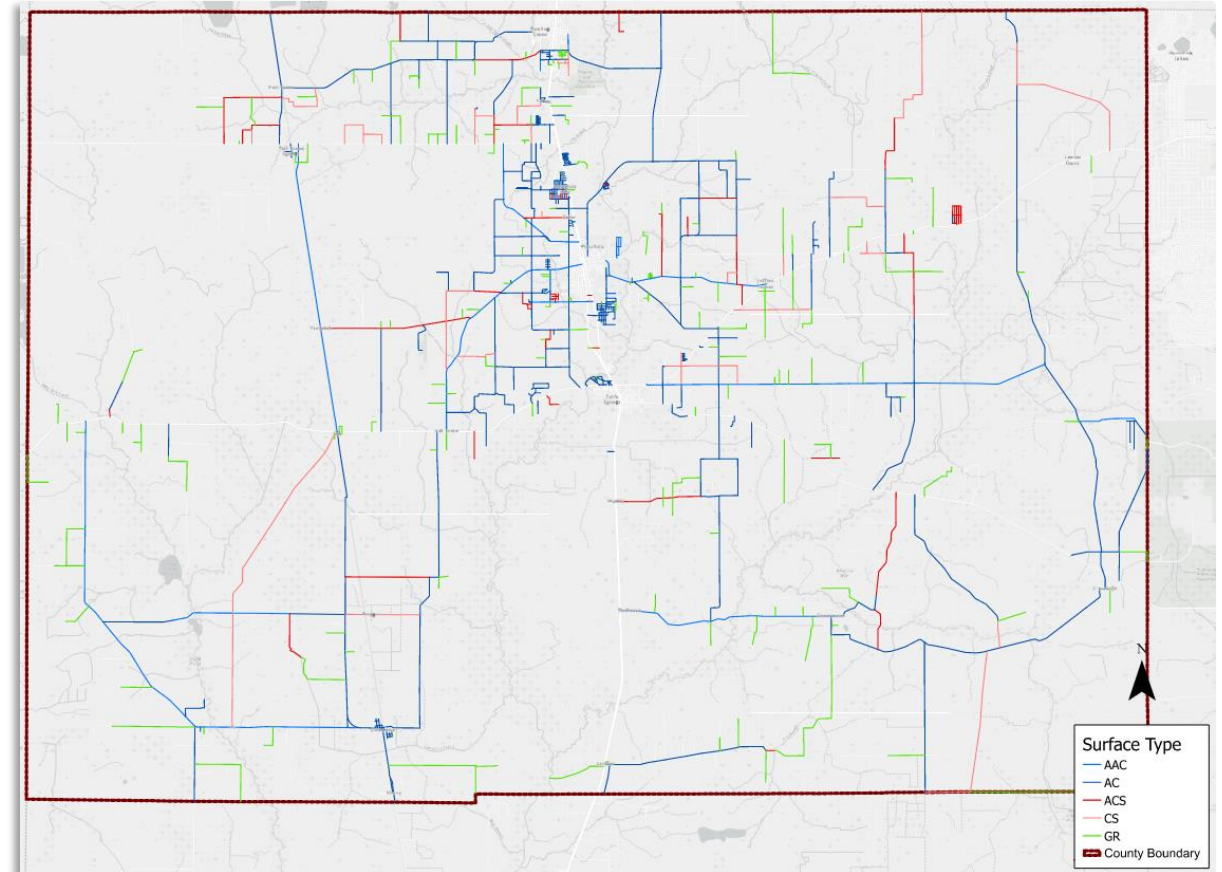
- Local – 317 miles
- Minor Collectors – 71 miles
- Major Collectors – 89 miles

## Surface Types

- AC (Asphalt) – 226 miles
- AAC (Asphalt overlaid with Asphalt) – 65 miles
- ACS (Asphalt overlaid with Chip seal) – 44 miles
- CS (Chip Seal/Millings surface on Grade) – 47 miles
- GR (Gravel / Unpaved) – 97 miles

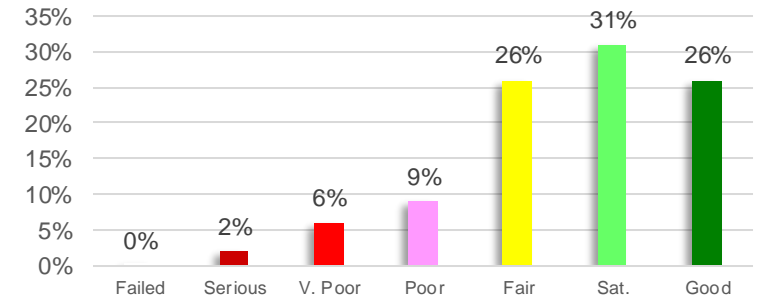
## Inspection

- Automated – 4 Days
- Unpaved – 6 Days
- QC Visit – 2 Days



# Paved Roads - Condition Assessment

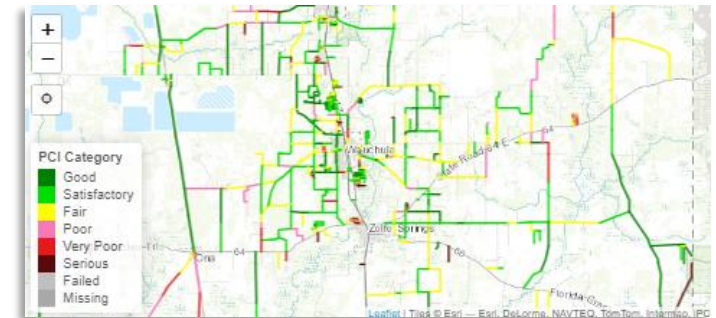
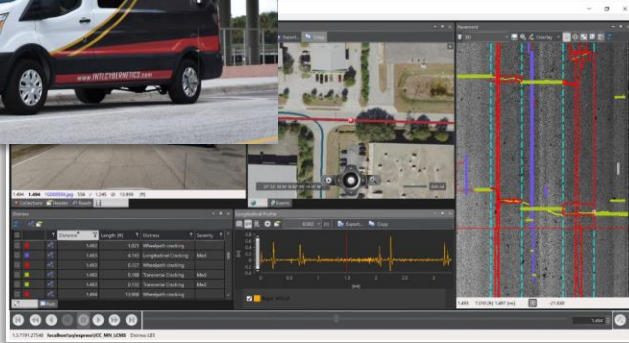
Automated Collection



Condition Results

Visual Calibration (QC)

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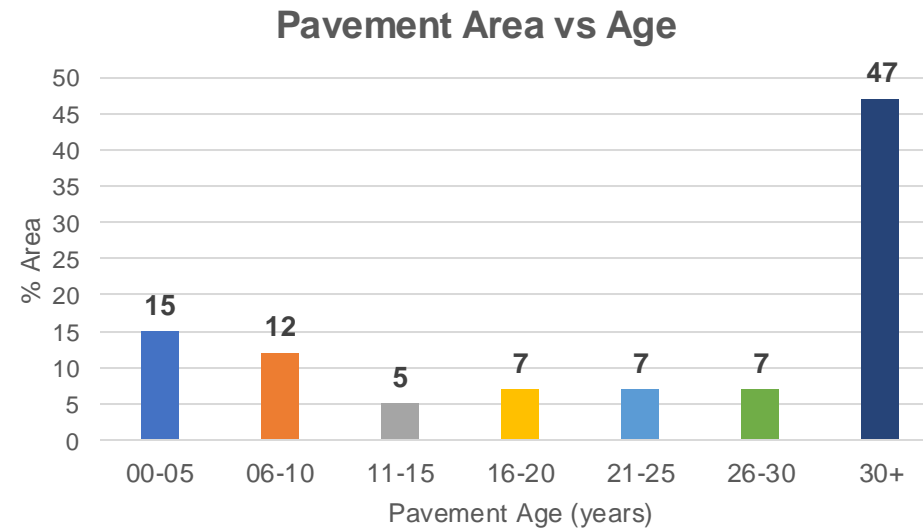


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# Paved Roads - Inventory

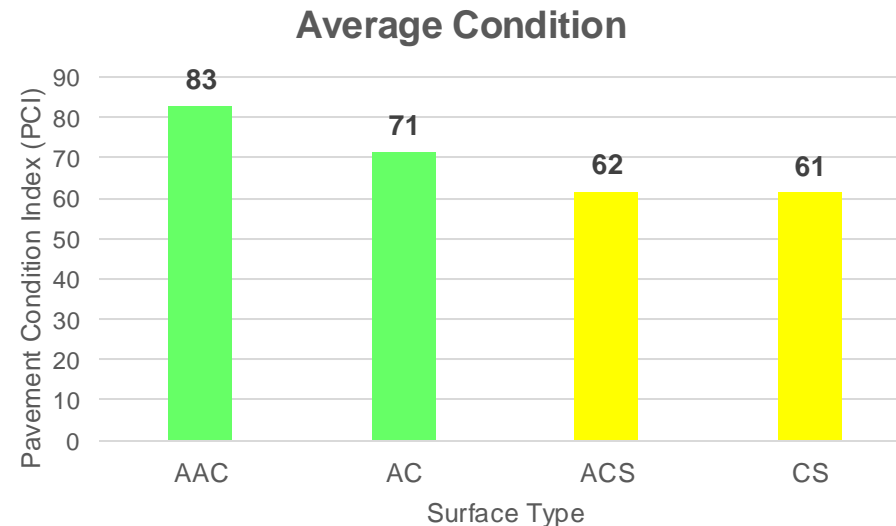
- Validation of historical records
  - Pavement ages
    - Known vs Unknown





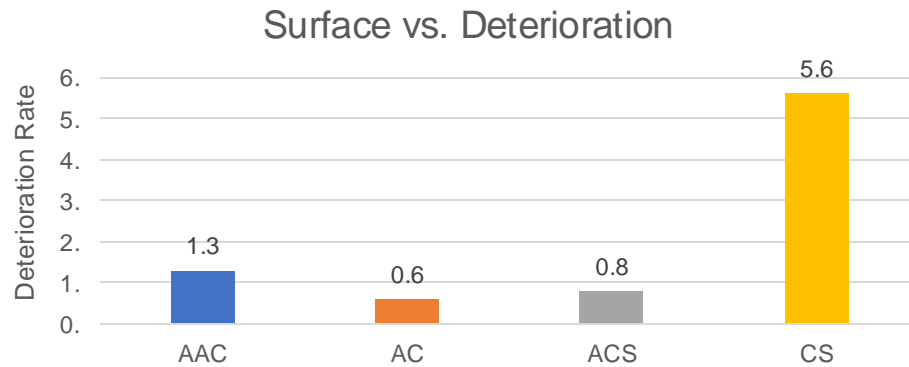
# Paved Roads - Conditions

- Surface Types
  - AAC – Asphalt Overlay
  - AC – Asphalt
  - ACS – Asphalt w Chip Seal
  - CS – Chip Seal & Road Millings

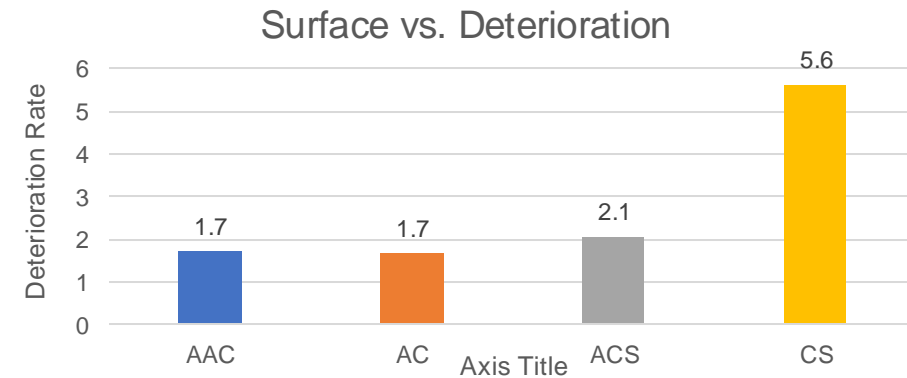


# Paved Roads - Deterioration Rates

All Segments (All Ages)



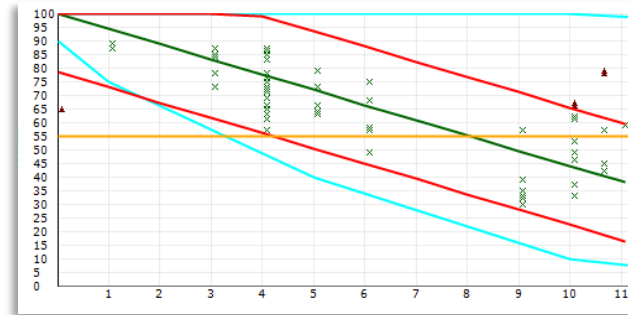
Segments <25 years old (Filtered)



# Paved Roads - Maintenance and Rehab Policies

- Custom Deterioration Models

- Chip Seals – 5.6 pts/yr
- Asphalts – 1.7 to 2 pts/yr



Chip Seal Performance Model



Chip Seal Surfaced Street

- Suite of Treatments

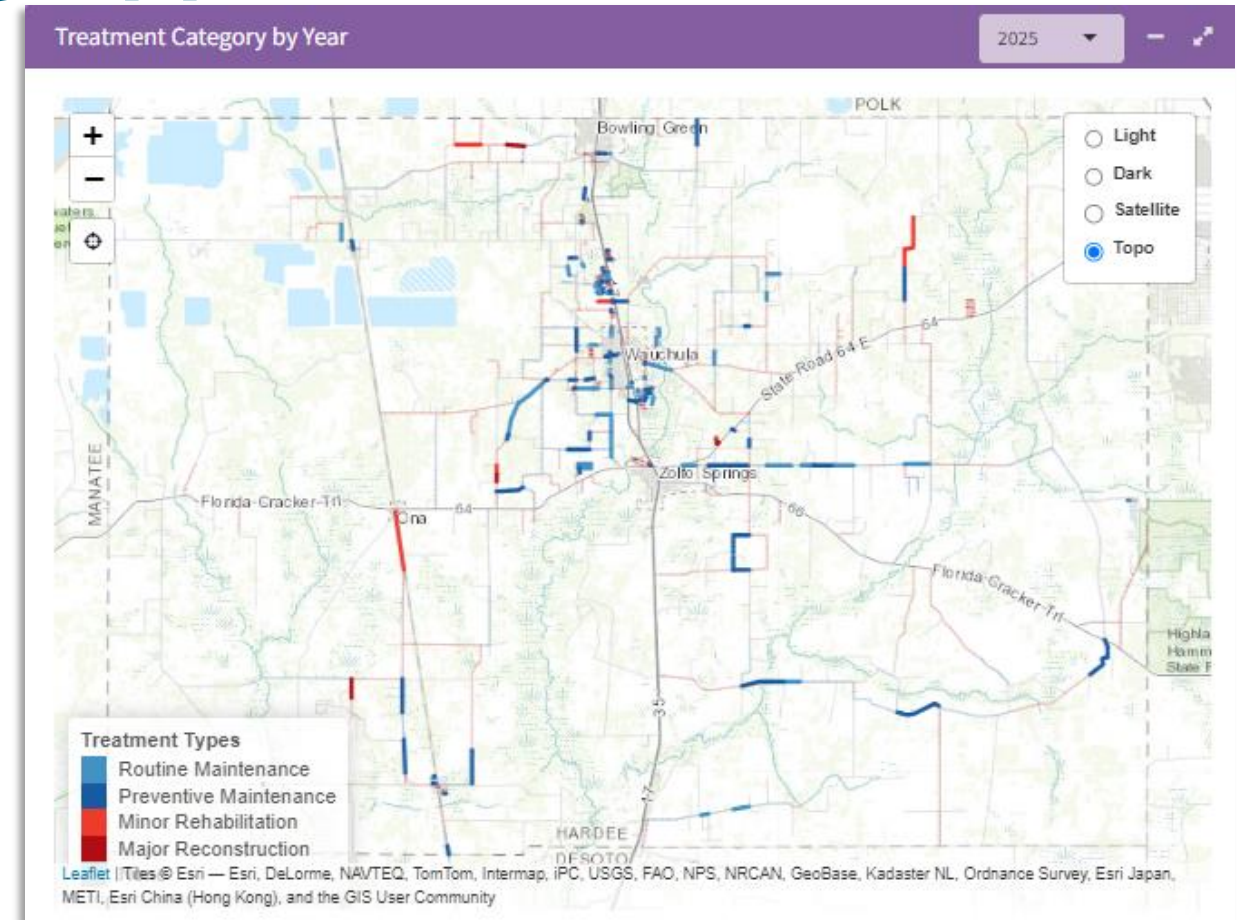
- Balance
- Introduction of new
- Leveraging existing practices
  - Analyze Performance
  - Lessons Learned



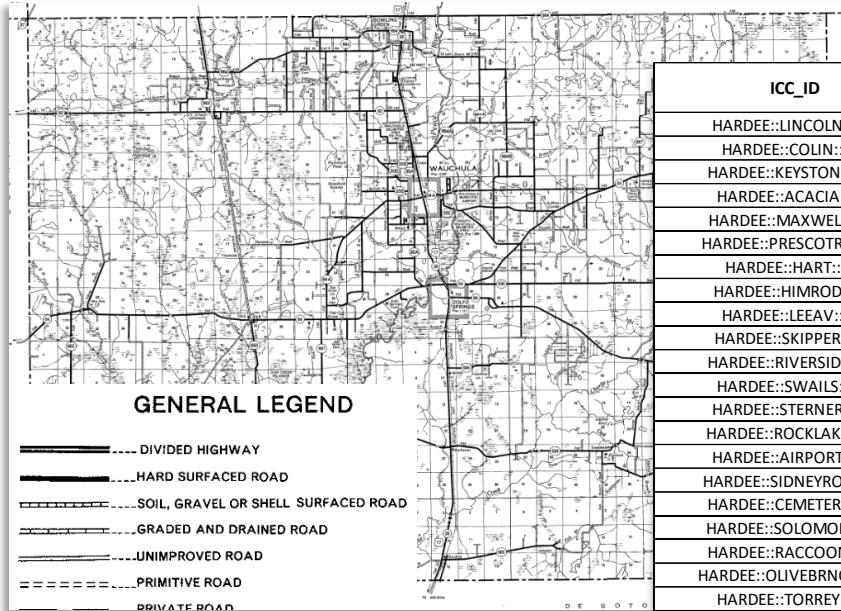
Microsurface Application

# Paved Roads - Planning Approach

- Budget Analysis
  - How much do we need to budget?
  - Break even vs improve
  - Realistic costs – not just material costs
- Prioritization/Project Planning
  - Cost of Deferral
  - Cost Benefit Value
    - Condition
    - Street Type
    - AADT
    - Custom Fields
  - 5-Year Pavement CIP



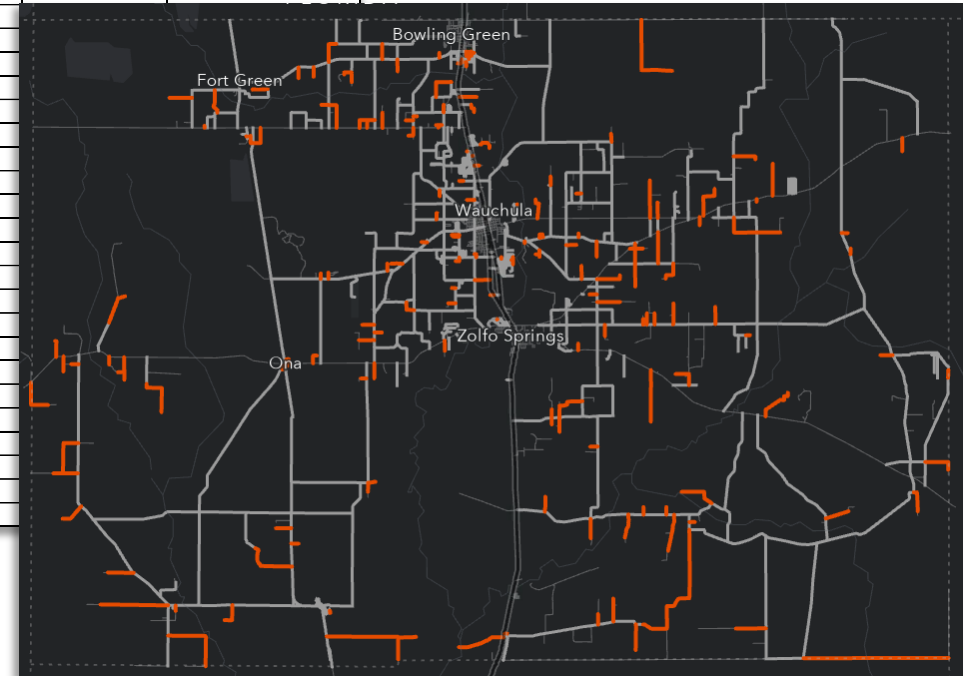
# Unpaved Roads - Developing Your Network



Historical Documents

ICC_ID	Road Name	Length	Removed From Network	Exception Reason
HARDEE::LINCOLN::010	LINCOLN ST	0.057	Yes	Dirt Road
HARDEE::COLIN::010	COLIN RD	0.752	Yes	Dirt Road
HARDEE::KEYSTONE::010	KEYSTONE AVE	0.031	Yes	Dirt Road
HARDEE::ACACIA::010	ACACIA DR	0.063		
HARDEE::MAXWELL::030	MAXWELL DR	0.182		
HARDEE::PRESCOTRD::010	PRESCOTT RD	0.272		
HARDEE::HART::010	HART RD	0.342		
HARDEE::HIMROD::010	HIMROD RD	0.999		
HARDEE::LEEAV::010	LEE AVE	0.03		
HARDEE::SKIPPER::025	SKIPPER RD	1.02		
HARDEE::RIVERSIDE::040	RIVERSIDE DR	0.028		
HARDEE::SWAILS::010	SWAILS RD	0.017		
HARDEE::STERNER::010	STERNER RD	0.125		
HARDEE::ROCKLAKE::010	ROCK LAKE TRL	0.063		
HARDEE::AIRPORT::010	AIRPORT RD	0.289		
HARDEE::SIDNEYROB::020	SIDNEY ROBERTS RD	0.708		
HARDEE::CEMETERY::010	CEMETERY RD	0.006		
HARDEE::SOLOMON::010	SOLOMON RD	0.194		
HARDEE::RACCOON::010	RACCOON RD	0.003		
HARDEE::OLIVEBRNCH::015	OLIVE BRANCH RD	0.248		
HARDEE::TORREY::010	TORREY RD	0.109		
HARDEE::MAXWELL::020	MAXWELL DR	0.079		
HARDEE::KENMCLEOD::010	KEN MCLEOD RD	0.31		
HARDEE::EDWARDSPEA::010	EDWARDS PEACE DR	0.005		
HARDEE::OAKGRVCEM::010	OAK GROVE CEMETERY RD	0.013		

Automated Collection Feedback



Establish Network

# Unpaved Roads - Visual Assessment

- PASER Conditions
  - 1-4 Rating
  - Grading, Profile and Ride, Drainage, Access, etc.

Pavement Surface Evaluation and Rating

## PASER Unimproved Road Manual

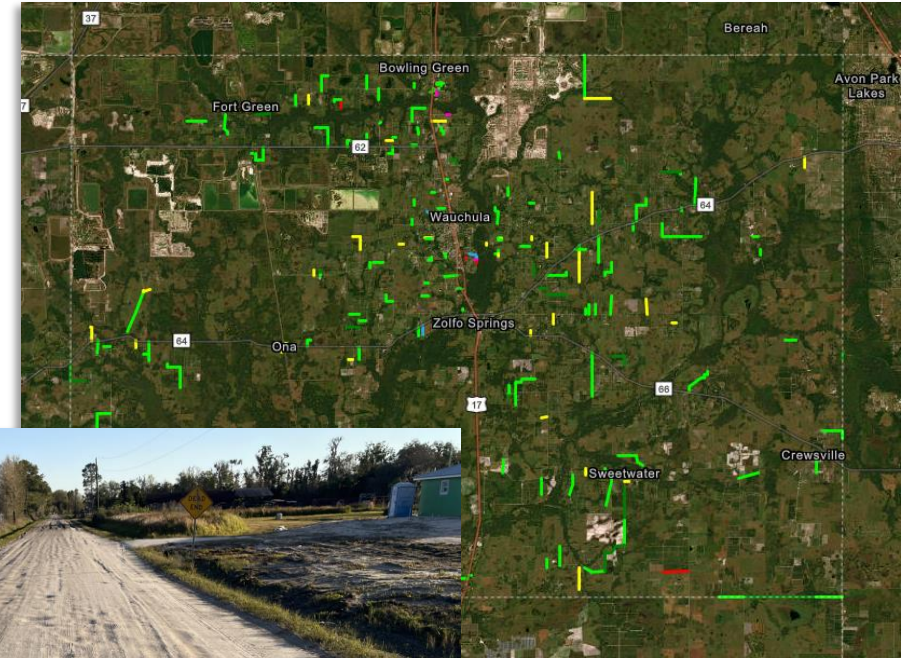
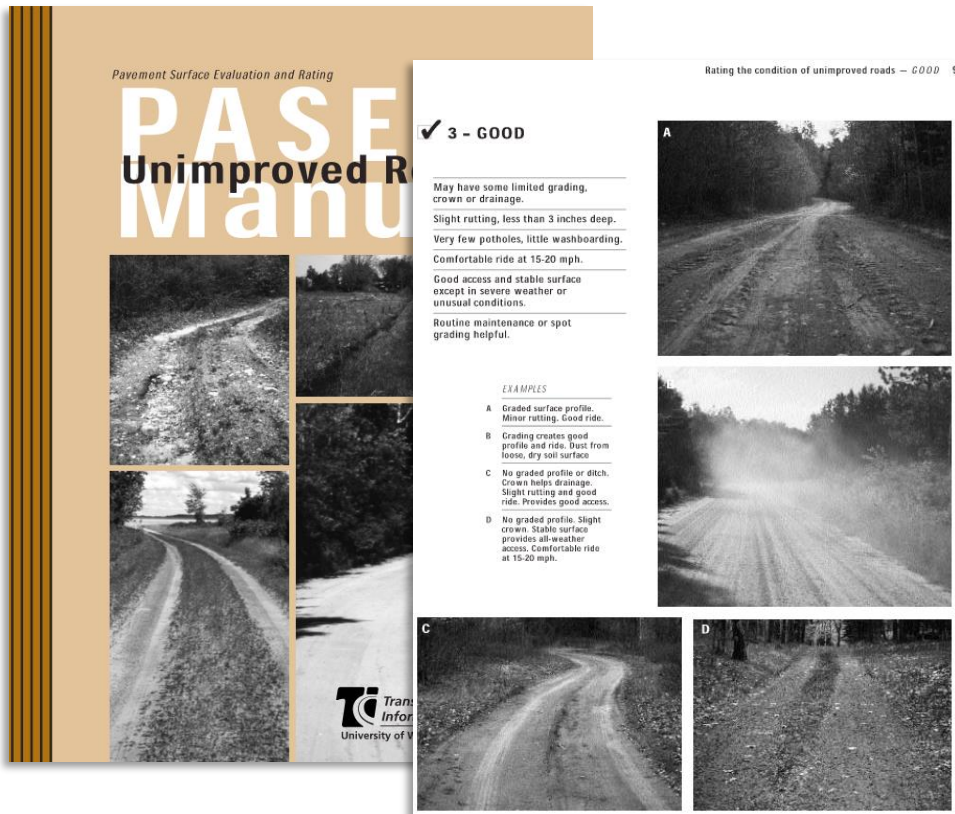
Rating the condition of unimproved roads — GOOD 9

✓ 3 - GOOD

May have some limited grading, crown or drainage.  
Slight rutting, less than 3 inches deep.  
Very few potholes, little washboarding.  
Comfortable ride at 15-20 mph.  
Good access and stable surface except in severe weather or unusual conditions.  
Routine maintenance or spot grading helpful.

**EXAMPLES**

- A Graded surface profile. Minor rutting. Good ride.
- B Grading creates good profile and ride. Dust from loose, dry soil surface.
- C No graded profile or ditch. Crown helps drainage. Slight rutting and good ride. Provides good access.
- D No graded profile. Slight crown. Stable surface provides all-weather access. Comfortable ride at 15-20 mph.



# Unpaved Roads - Additional Data

Surface Type



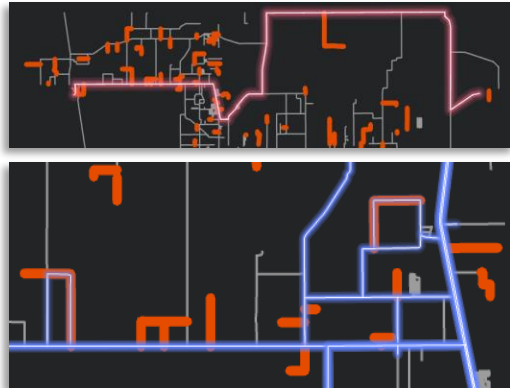
Road Width



Network Limits



# Unpaved Roads - When to Pave?



Truck/Bus Routes



Connectivity



AADT



Condition Rating



# Road to a Brighter Future

**The Road Doesn't End Here!**

Proactive Planning



Housing

Heartland 2050

Quality of Life

Resiliency

Master Plan Studies



Economic Development

Pavement Management Program



Improve Infrastructure

Hardee County Vision

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# Thank You! Questions?



**Christopher Simpron, FCCM**

Christopher.Simpron@HardeeCountyFL.gov  
863-773-3272



**Kevin Stone, P.E.**

Kevin.Stone@Kimley-Horn.com  
407-412-7809



**Paul Reit, P.E.**

Paul.Reit@Kimley-Horn.com  
407-427-1617



**Learn More!**