



Webinar Series – Building Value:
Strategies for Performance, Resilience, and ROI

Maximizing Pavement Performance: Strategic Management for Long-Term Savings

August 7, 2025

PRESENTER:



Bill Collester, CSI, CEI
Pavement Consulting

MODERATOR:



Greg Walterscheid, eMBA, FMP
Facilities Consulting

IIF™ Incident and Injury-Free™



- Safety is a culture for Terracon.
- Safe data collection.

About Terracon

ABOUT TERRACON

Our Services:

- Facilities
- Environmental
- Geotechnical
- Materials



7,000+
PROFESSIONALS



PROJECTS
IN ALL



50
STATES

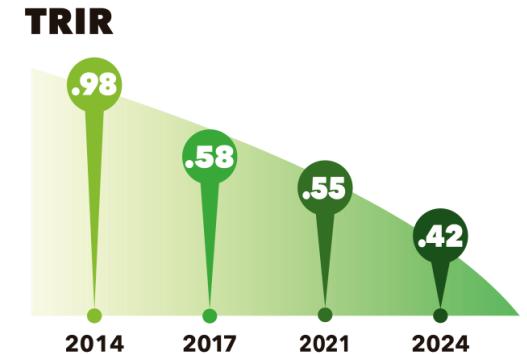
85,000+
PROJECTS COMPLETED
IN 2024
WITH OVER 23,000 CLIENTS



ENR RANKINGS 2025

#19
TOP 500
DESIGN FIRMS

100%
EMPLOYEE-OWNED

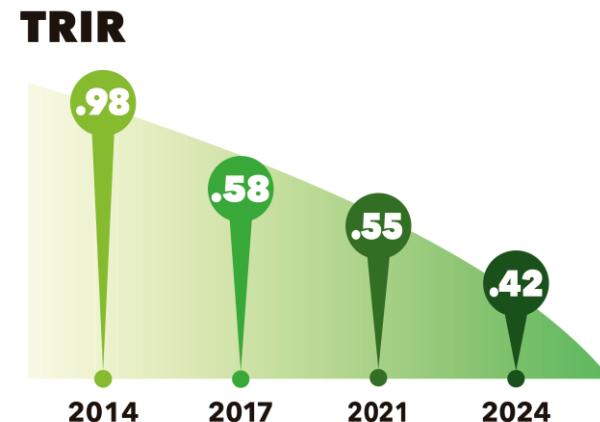




Delivering success safely

- Safety is one of Terracon's core values.
- Our commitment to being an *Incident and Injury-Free (IIF)* company is an operational priority.
- We strive to build safety and well-being into all aspects of our business.

Total Recordable Incident Rate (TRIR)



IIF®
Incident and Injury-Free®

Expertise for a Variety of Project Needs



Local Presence and Expertise

**Our knowledge of local of local
conditions is unmatched.**

Lean on our local lifecycle experts.



Maximizing Pavement Performance: Strategic Management for Long-Term Savings

PRESENTER:



Bill Collester, CSI, CEI
Pavement Consulting

Pavement Management Team



**Andrea Blanchette,
P.E.**
Pavement Group Mgr.
14 years of experience



Bill Collester
Client Development
Manager
20 years of experience



Tyler Means, P.E.
Sr. Geotechnical Project
Manager
10+ years of experience



Jennifer Tran
Sr. Geotechnical Project
Manager
17 years of experience

Streamlined Communication

A decorative background on the left side of the slide features a vertical gradient of blue shades, transitioning from a darker teal at the top to a lighter cyan at the bottom, with a subtle diagonal shadow effect.

- Strong, trusting partnership.
- Provides consistency.
- Single point of contact to manage our pavement and accessibility consulting services.

Client story: The value of a single point of contact

Having a single point of contact streamlines our communication and makes our work more productive and efficient. Reporting template consistency was key to building a trusting partnership with them. I collaborated with multiple contacts to create a report template customized to fit the needs of their national organization across 10 zones.

I held their hand through all of it – they didn't have to worry about the plan details. When there were any questions or concerns, the client knows who to call. Our client said that this process is working out for them.

~ Jennifer Tran, pavement project manager



Self-reflection

**What do your pavements look like?
What are your pain points?**

Pavement Management Programs

Consider Terracon YOUR Pavement Doctor

- Annual pavement evaluation/Pavement Condition Index (PCI) study.
- Diagnose problems and design plan for maintenance schedule.
- Provide data to make strategic budgeting decisions.
- Help administer contract work.
- Perform onsite pavement inspection.

Sustainability

LONGER LIFE PAVEMENTS

Lower costs, reduced environmental impacts, and positive social benefits



ENVIRONMENTAL

Reduced waste from fewer rehabilitations
Reduced impact to surrounding ecosystems
Reduced energy usage



SOCIAL

Improved safety and ride quality
Reduced disruptions to traveling public



ECONOMIC

Reduced pavement lifecycle costs

Value: Save Money



Impact

**How do your pavements impact
your revenue?**

How do your pavements impact user safety?

**Operations?
Risk?**

Do You Know?

- **General:** Do we have a strategic plan in place to management pavement assets?
- **Budgeting:** How are annual capital expenditures allocated?
- **Design:** Is there a professional engineering team currently responsible for managing our entire portfolio of facilities consistently, effectively, and efficiently.
- **Operations:** How often does your poor pavement conditions negatively affect productivity at your facilities?

How Pavement Management Can Save You Money

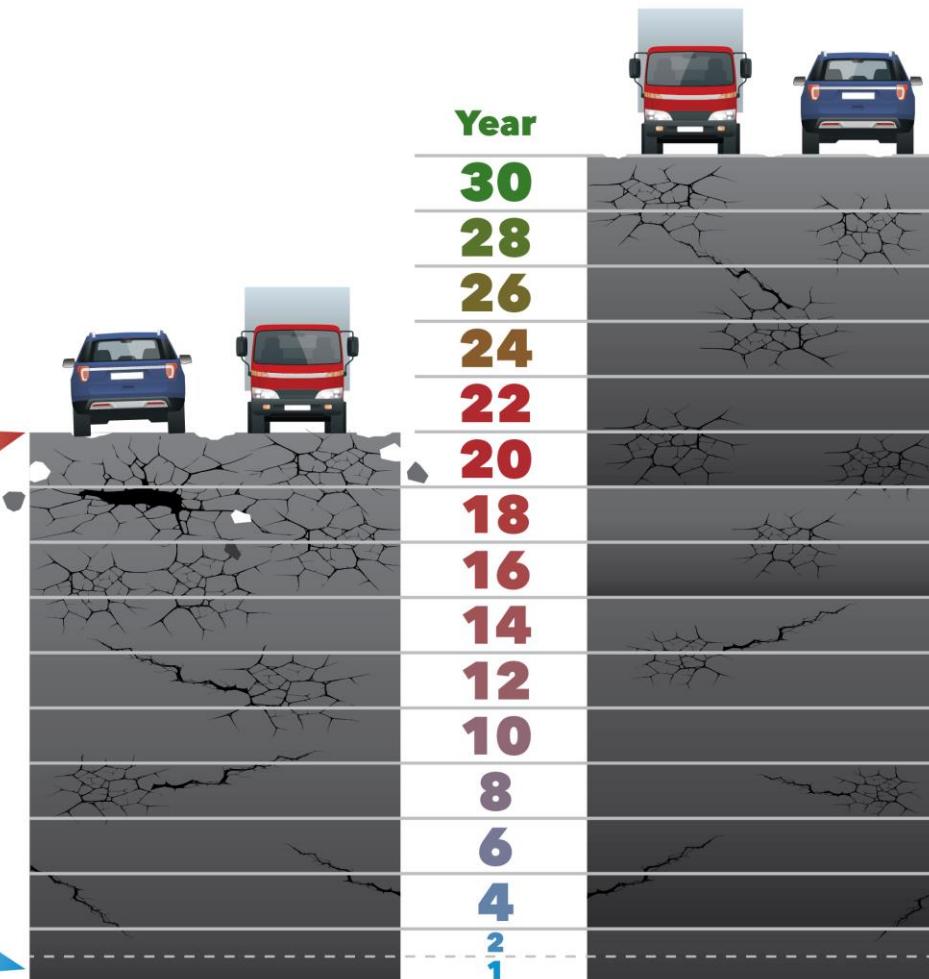
Client A

does nothing -
no pavement maintenance plan

Total cost over 20 years:
\$1.9 million

Year 20: New construction
@ \$11.15/sq. ft = \$1,114,460

Year 1: New construction
@ \$7.50/sq. ft = \$750,000



Client B

follows a pavement maintenance plan

Total cost over 20 years:

\$1.3 million

almost \$600K saved

PLUS, the pavement will likely last an additional 10-15 years and will not need a reconstruction until year 30 or beyond!

Year 18: Surface treatment
@ \$.31/sq. ft = \$71,412

Year 15: Mill and overlay
@ \$4.04/sq. ft = \$404,000

Year 3: Surface treatment
@ \$.53/sq. ft = \$53,000

Year 1: New construction
@ \$7.50/sq. ft = \$750,000

Client Story: Maricopa County Community College

- More than 25 years of pavement tradition tracking.
- Monitoring 15M square feet of pavement.
 - 32 campuses
 - 16 facility managers
- We determine critical junctures to perform maintenance:
 - crack sealing
 - surface treatment
 - milling overlay
- Maintenance delays a more fully, costly reconstruction.

Using Data to Help Budget and Plan

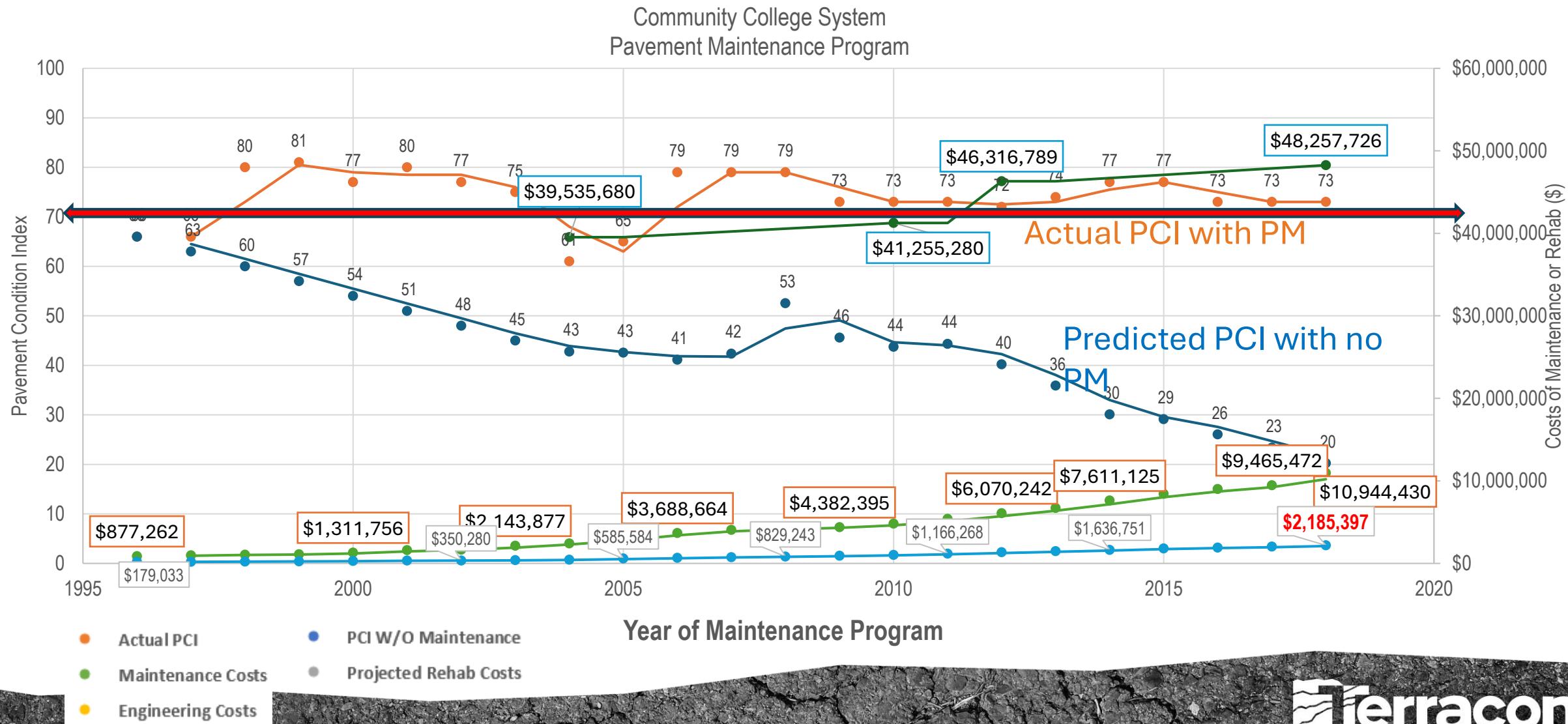


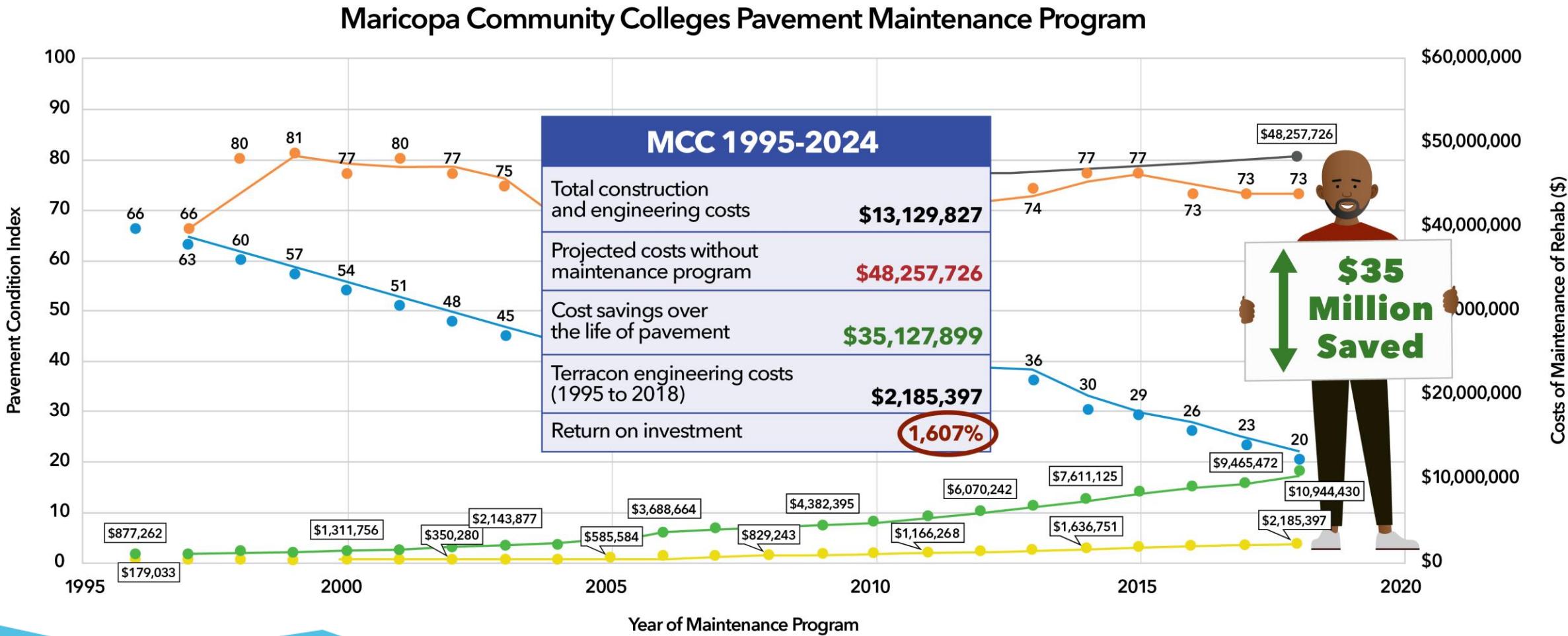
Table 1.

2023 Five-Year Pavement Condition Index Projections

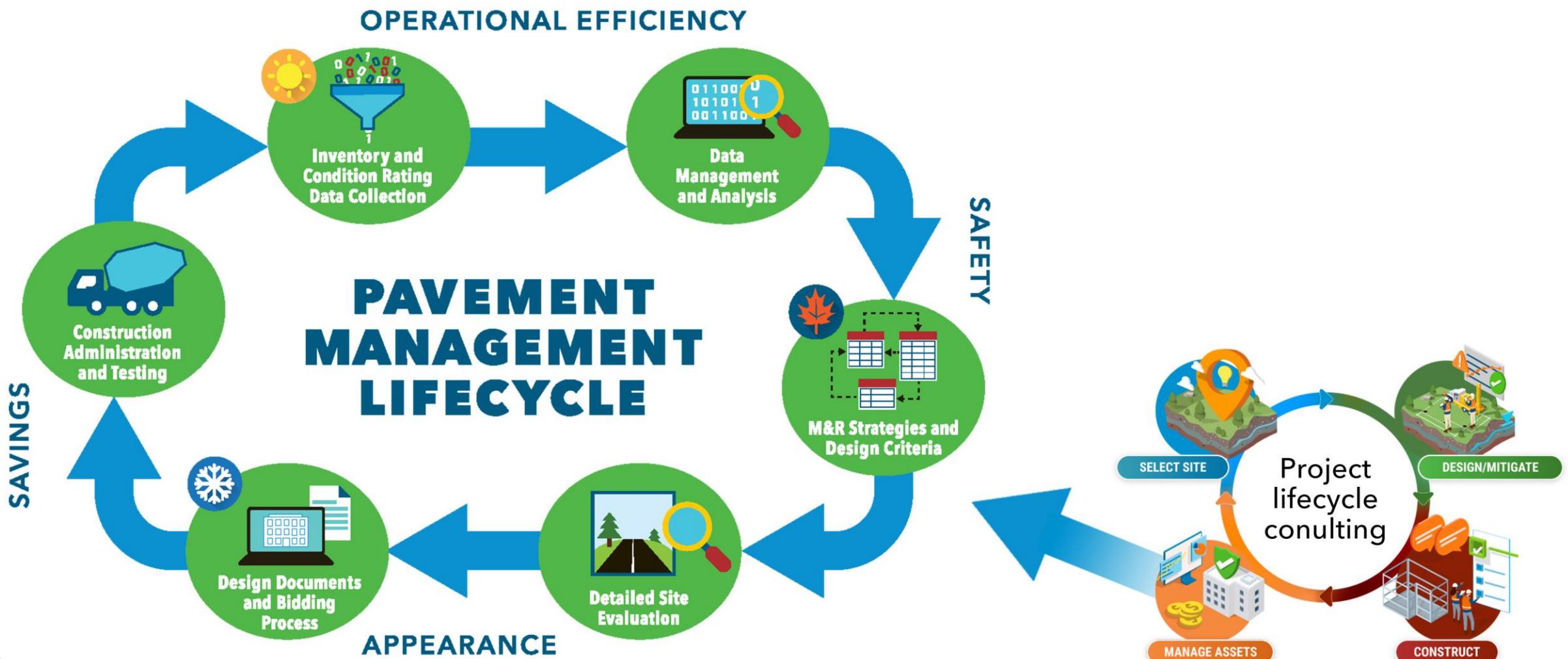
PROJECT DATA

		Network name	Maricopa County Community College District						Composite PCI by Campus for 2023
Campus	Section	Total Pavement Area (ft ²)	Last Surveyed	2023	2024	2025	2026	2027	
CGCC@W  514,939 sf	100	96,199	Aug-22	76	73	74	69	67	71
	110	33,048	Aug-22	65	62	59	56	53	
	16	21,304	Jan-21	90	89	88	87	85	
	89	7,934	Aug-22	72	71	70	69	67	
	90	14,380	Jan-21	75	74	73	72	71	
	91	11,554	Mar-22	80	79	79	78	78	
	92	51,300	Mar-22	67	63	60	57	54	
	94	77,800	Apr-20	81	79	77	74	72	
	BLUE FL	20,664	Mar-22	90	90	90	89	88	
	Facility	150,000	Mar-22	75	70	68	66	64	
	MSB	11,927	Mar-22	76	75	74	73	72	
	Tahoe	10,579	Mar-22	94	93	93	92	91	
	Texas	8,250	Jan-21	96	93	90	87	84	

Using Data To Help Budget A Plan

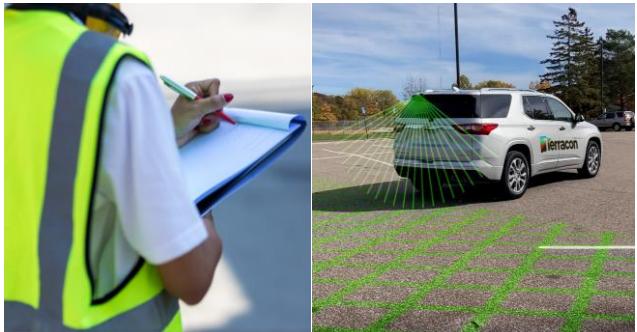


Lifecycle Management



Pavement Consulting Services

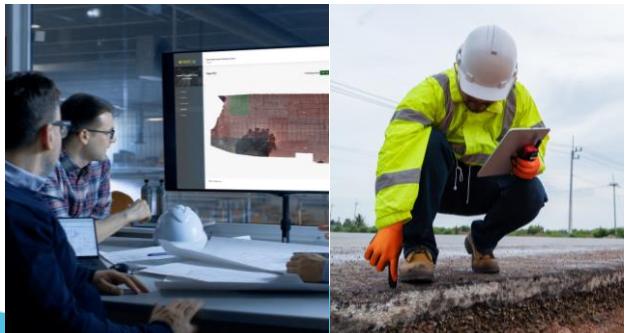
Pavement Assessment



Sub-surface evaluations



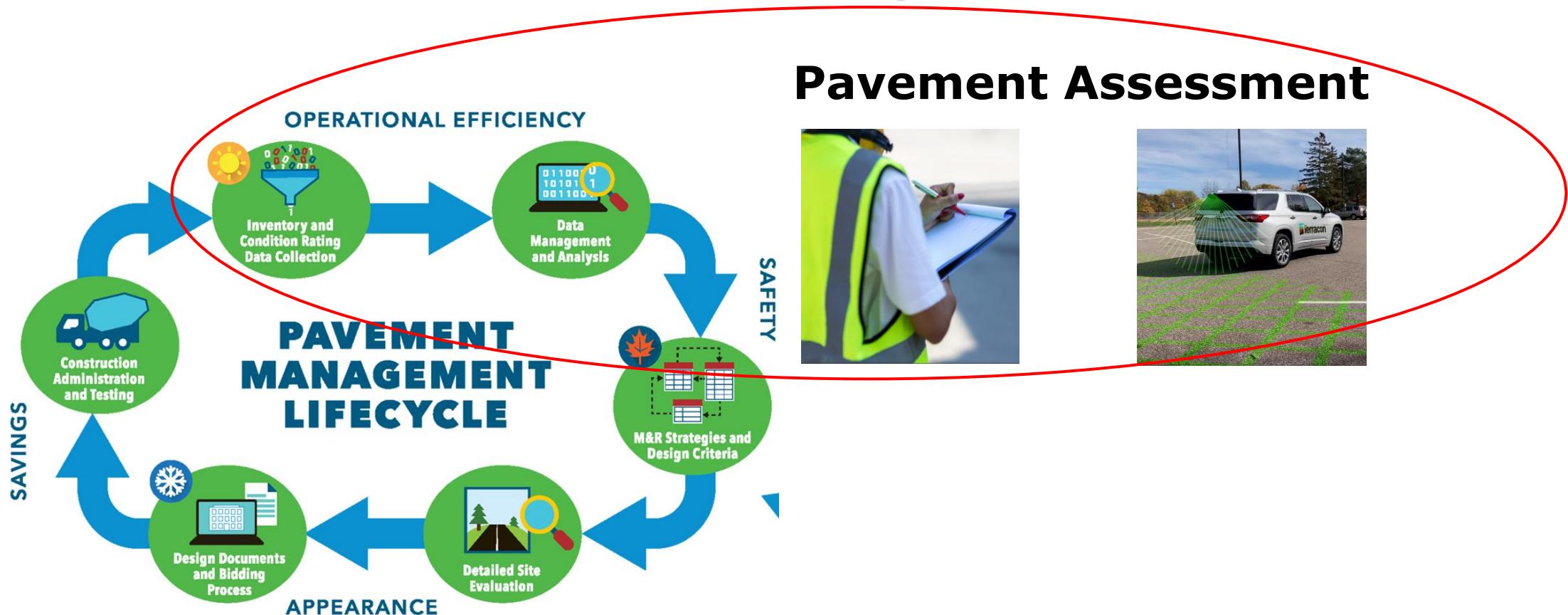
Design construction services



Pavement Management



Pavement Consulting Services



Pavement Consulting Services

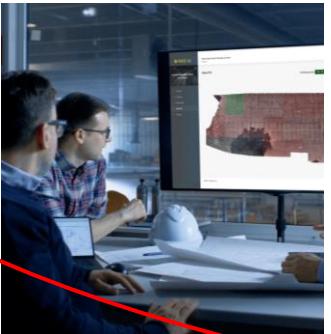


Sub-surface evaluations



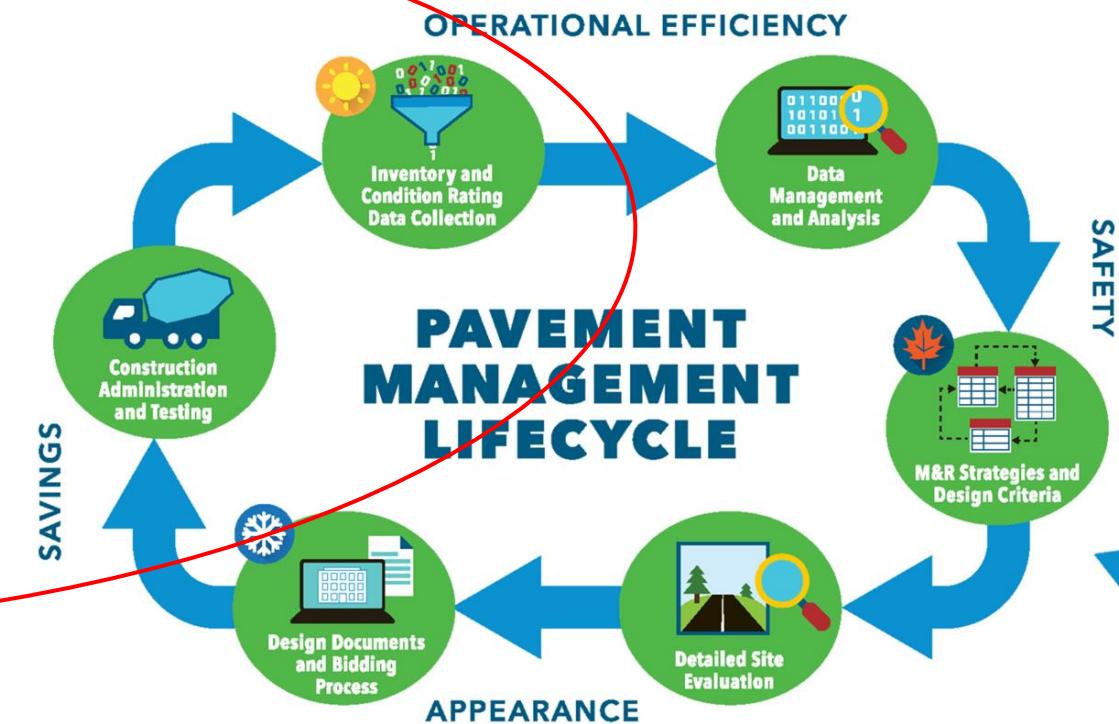
Pavement Consulting Services

Design construction services



Pavement Consulting Services

Pavement Management



Assessment Technology

Before scanning technology

- Potential for inconsistent data
- Significant time investment
- Underrepresented data/damage



Photo #1 Entrance to Section 4A in really poor condition.



Photo #2 Exposed subgrade in high severity pothole observed at loading area entrance.



Photo #3 High severity scaling with chunks of concrete being dislodged from the concrete apron at loading area entrance off of CSX Way.



Photo #4 Close-up to Photo #3.

The value of an expert consultant



That looks like low severity damage.

Based on the last PCI score of 56, this damage has worsened to a poor score of 42. The area needs reconstruction.



Advanced scanning technology



Objective / Repeatable advanced scanning technology

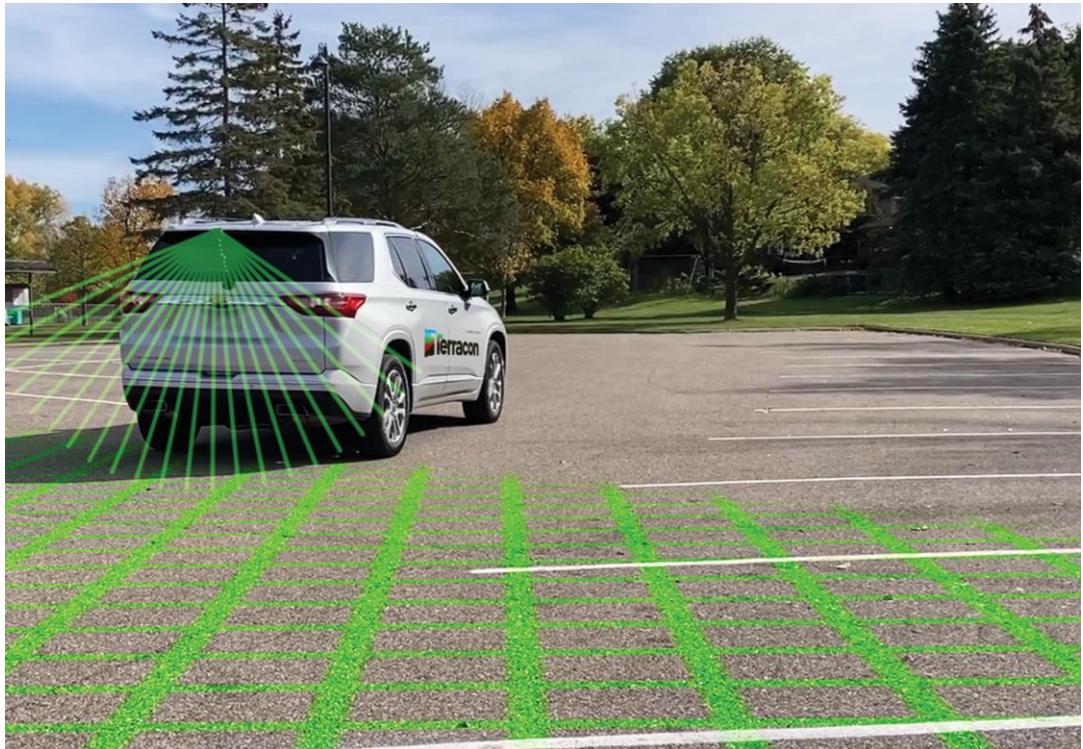


How we used to measure distresses



Today's methodology

Advanced scanning technology

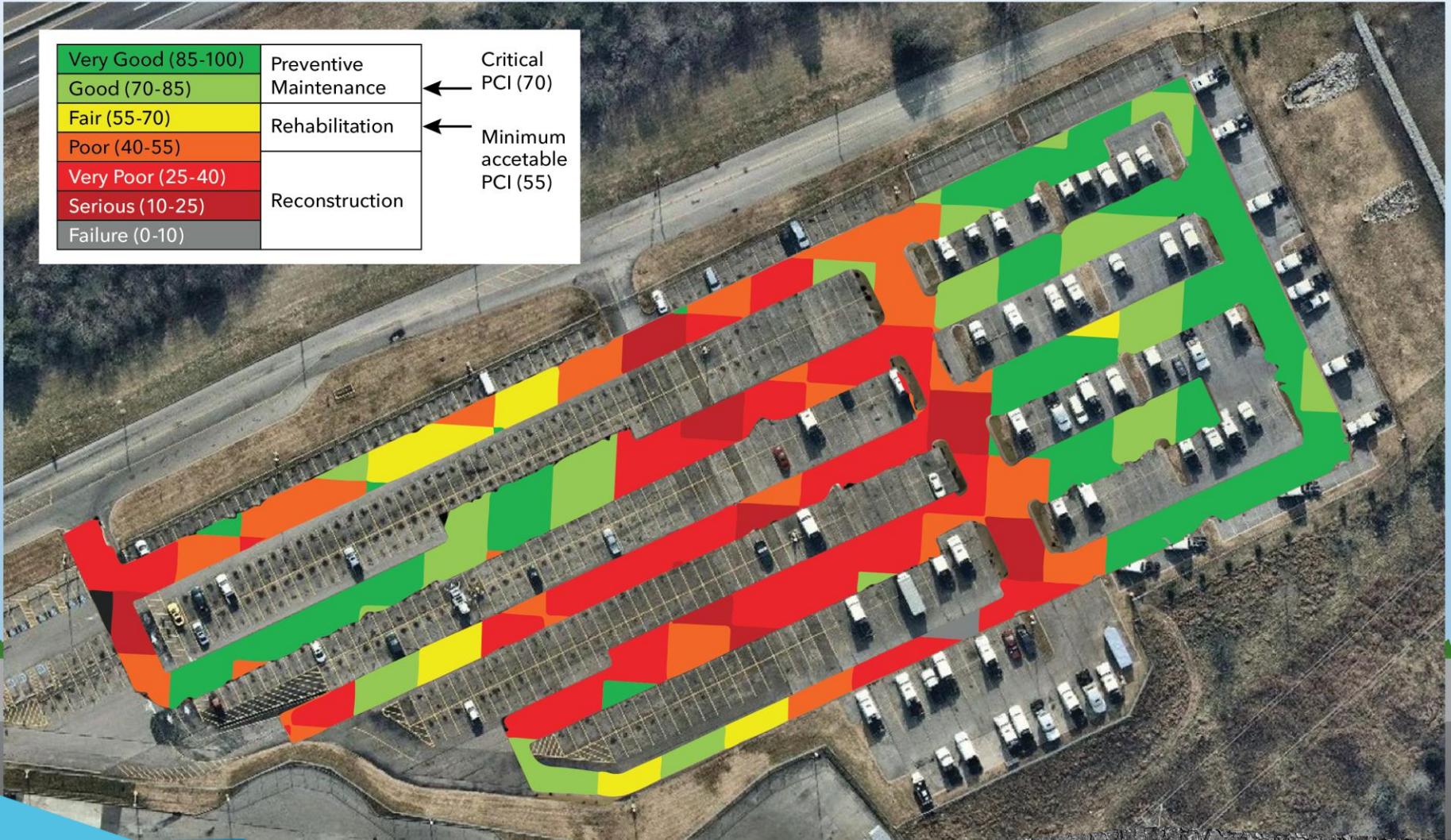


A car-mounted camera captures pavement condition data.



GPS- and time-stamped video footage of pavement condition

Heat map data reveals damage levels



Client Project Deliverable Platform



- Real-time/on-time project tracking and delivery tool.
- Enables clients to quickly find and view specific data.
- Make timely, informed decisions about their projects.

Compass



Terracon
Compass 

Pavement Evaluation Services

- Project Map
- View Map
- View Map in Tab
- Final Reports
- GP215005, Terracon Properties Pavement Management - signed
- Additional Files
- Corporate Parking Lot Plans

Documents marked with an * are preliminary.

Options

- Project borders
- Terracon Geotechnical Data
- PCI Index Overlay
- GRIT Overlay

Images

- Conductivity Map
- Overlay 2
- Overlay 1
- PCI Index Overlay
- GRIT Overlay

Pave AI Layers

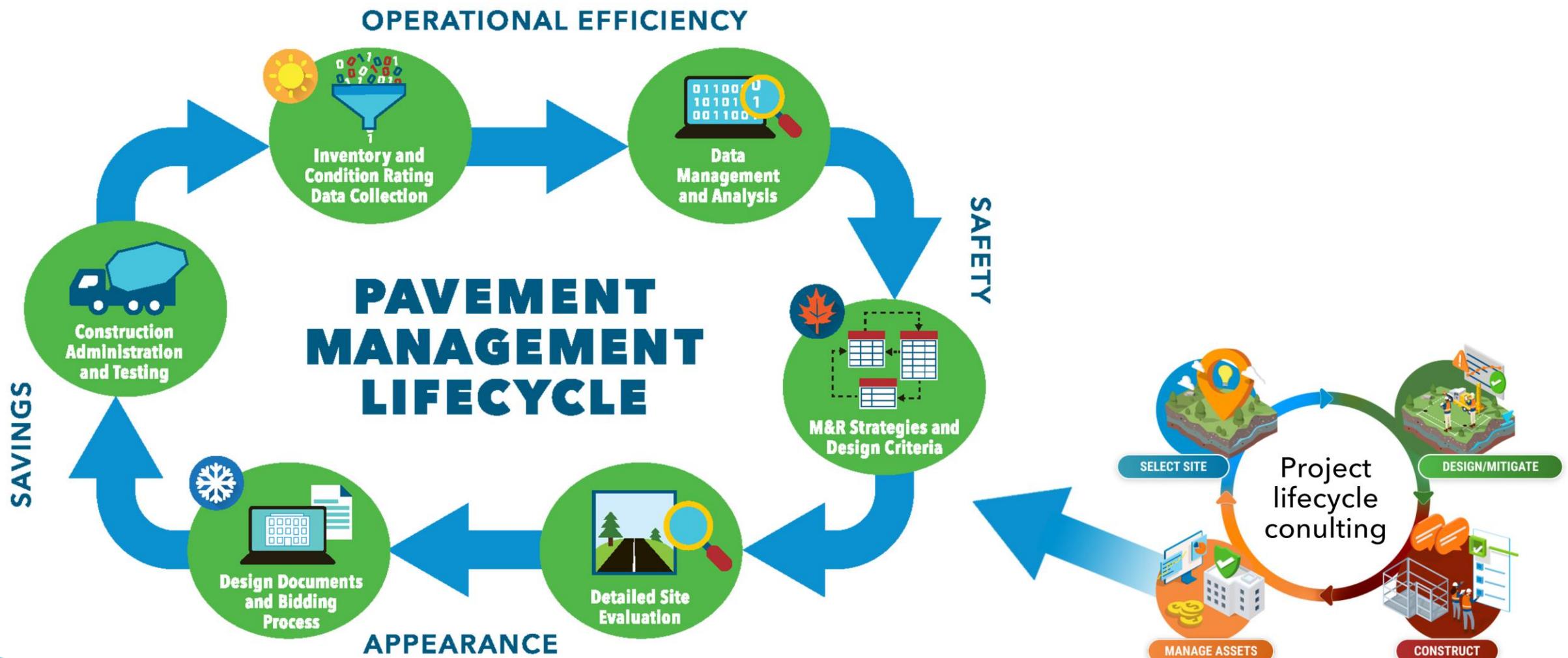
- Heatmap_Healthcare_Prudential_Campus
- Orthomosaic_Healthcare_Prudential_Campus
- Heatmap_Healthcare_Nassau_Campus
- Orthomosaic_Healthcare_Nassau_Campus
- Heatmap_Healthcare_St_Augustine_Campus
- Orthomosaic_Healthcare_St_Augustine_Campus
- Heatmap_Healthcare_Beaches_Campus
- Orthomosaic_Healthcare_Beaches_Campus
- Heatmap_Boundrock_TX
- Orthomosaic_Boundrock_TX
- Heatmap_Logistics_Atlanta
- Orthomosaic_Logistics_Atlanta
- Heatmap_Corporate_Site**
- Orthomosaic_Corporate_Site
- GRIT_Heatmap_Terracon_Milwaukee_WI
- GRIT_Orthomosaic_Terracon_Milwaukee_WI
- Heatmap_Lubbock_Texas_Schools
- Orthomosaic_Lubbock_Texas_Schools

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Collaborate  **Download Final Report**  **Email Team**  **Meeting Feedback** 

Aerial  **Contours of Landfill**  **Canvas Gray**  **Roads**  **Terracon Offices** 





QUESTIONS?

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