

Public Works Department



Pavement Condition Evaluation Survey



Council Presentation
July 23, 2024



Background

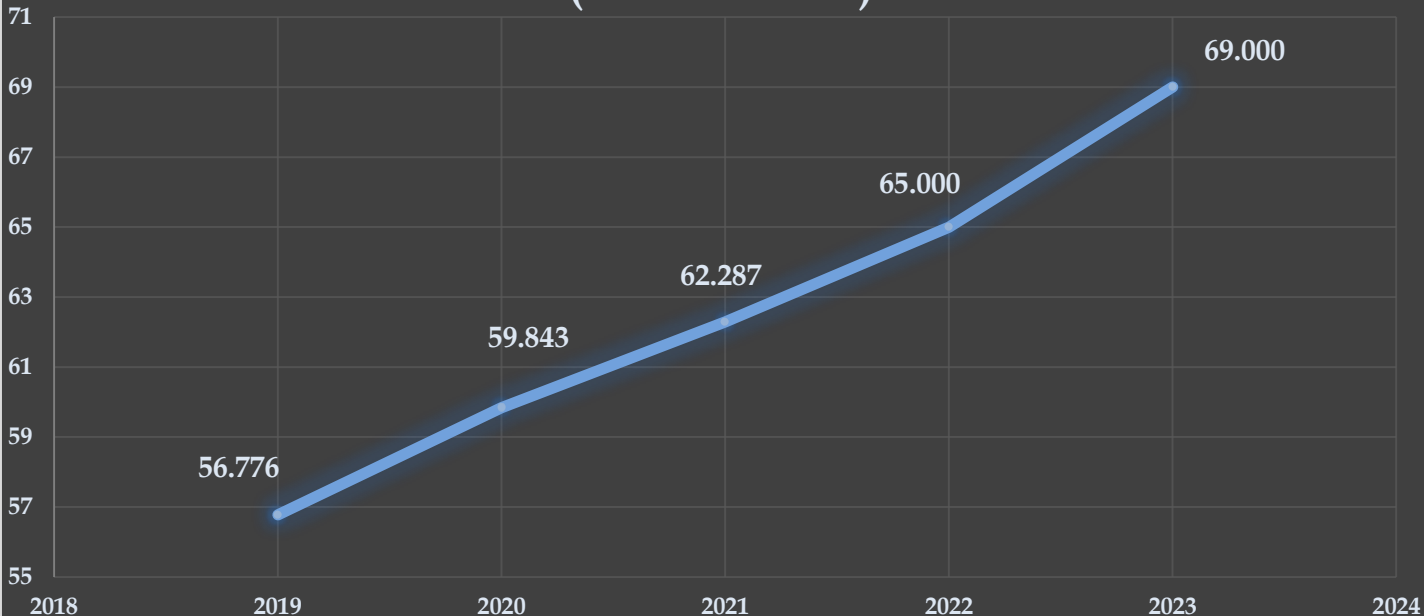


- 2019 data collected by Transmap at 20% sample
- 2019 data used to develop 2021-2025 IMP
- 2022 data collected by RAS at 100% sample
- 2022 data used to develop 2024-2028 IMP
- Proposed 2025 data collected by RAS at 100% sample to develop 2029-2031 RPP



Historical PCI Scores

City of Corpus Christi Average Annual
Network PCI Score by Year
(2019-Present)





Project Scope



- Survey and assess all streets and roadways in the Corpus Christi Street Network (est. 1,256 linear miles)
- Calculate a Pavement Condition Index (PCI) score for every street segment in the Corpus Christi Street Network
 - 1,256 linear miles = 13,043 street segments
- Inventory City transportation facilities located in the ROW:
 - * *Pavement Widths*
 - * *Improved Alleys*
 - * *Guardrail*
 - * *Driveways*
 - * *Curb & Gutter facilities*
 - * *Sidewalks*
 - * *Sidewalk Ramps*
 - * *Bike Lanes*
 - * *Pavement Markings*
 - * *Pavement Striping*
 - * *Street Signs*
 - * *Street Illumination*



Project Timeline

- Estimated 8-month project timeline (Oct. 2024 – May. 2025)
- PCI data will be collected and available for Staff's use for planning RPP FY 2029.
 - ✓ Phase 1 – Project Management & Coordination – Kick-Off
 - ✓ Phase 2 – Data Collection & QA/QC
 - ✓ Phase 3 – Project Reporting / RPP FY 2029 Planning



Public Works Department



Questions?



Roadway Asset Collection Van



Ladybug 360° Right-of-Way Camera

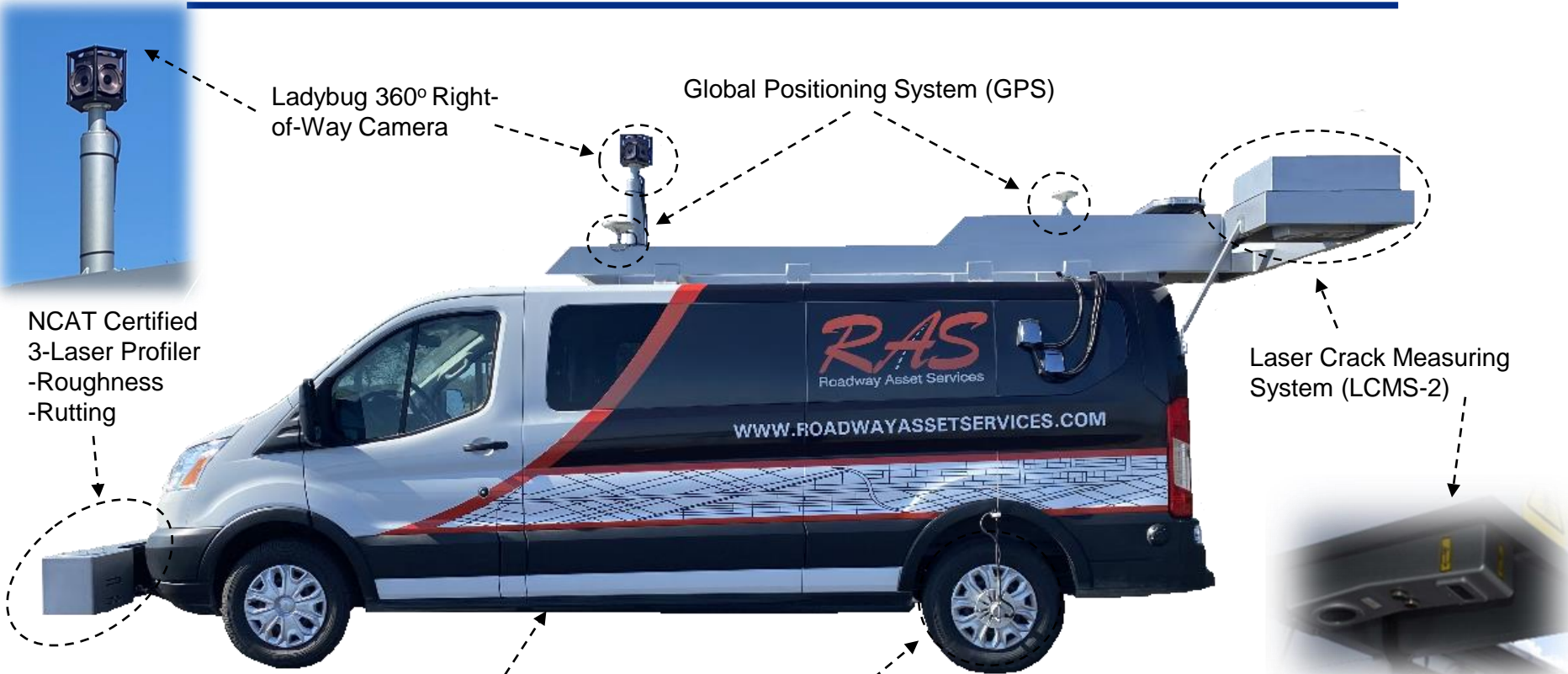
Global Positioning System (GPS)

NCAT Certified
3-Laser Profiler
-Roughness
-Rutting

Laser Crack Measuring
System (LCMS-2)

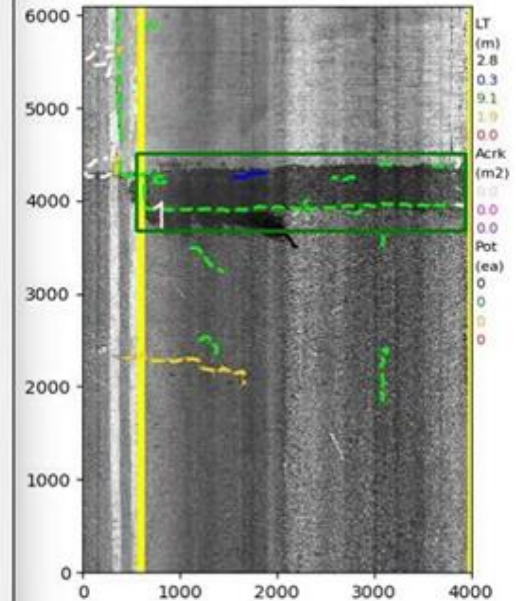
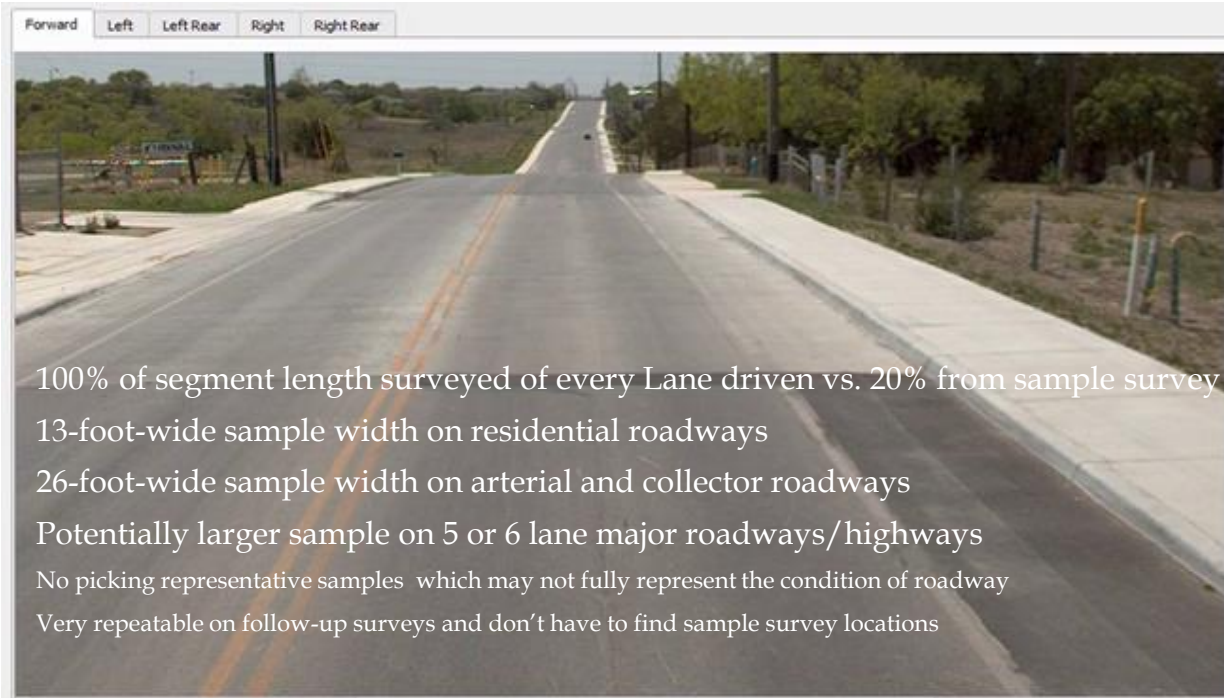
Internal Inertial Measuring Unit (IMU)

Distance Measuring Instrument (DMI)





Continuous Linear Survey vs. Traditional Sample Survey





Pilot Field Review



- Performed field visit with City staff to review pilot data (small sample set) and results
 - Performed QC on collected data in the field
- Discussed conditions and expectations with Staff
- Evaluate changes to historical data
- Evaluate changes due to survey areas versus 100%
- Made corrections to evaluation process to more accurately measure distresses





City Mileage



Item	Description	Centerline Miles	Percent of Centerline Miles
1	Asphalt Segments with PCI	1209.1	97.7%
2	Concrete Segments with PCI	17.4	1.4%
3	Not Collected – Barricaded	0.8	0.1%
4	Not Collected – Construction	8.1	0.7%
5	Not Collected – Gated	0.2	0.0%
6	Not Collected – Not Paved	1.0	0.1%
7	Not Rated - Pavers	0.2	0.0%
8	Not Rated – Other	0.5	0.0%
TOTAL WITH PCI		1226.5	99.1%
TOTAL WITHOUT PCI		10.8	0.9%
Total		1237.3	100.0%



Pavement Condition Results



Pavement Condition Index (PCI) Range	Condition Description	Total Distance (Miles)	Percent of Network
86-100	Good	249.8	20.4%
71-85	Satisfactory	358.5	29.2%
56-70	Fair	164.6	13.4%
41-55	Poor	176.4	14.4%
26-40	Very Poor	196.0	16.0%
11-25	Serious	70.6	5.7%
0-10	Failed	10.6	0.9%
Total of Rated Segments		1226.5	100.0%

} Preventive Maintenance

} Overlay

} Reconstruction



Pavement Condition Results



Corpus Christi Overall	2022	2019
Network PCI Weighted Average	65	54
*Reconstruction Percentage	37.0%	54.1%
*Reconstruction Miles	453.6	583.6

Corpus Christi Asphalt Roads	
Network PCI Weighted Average	64
*Reconstruction Percentage	36.9%
*Reconstruction Centerline Miles	452.8

Corpus Christi Concrete Roads	
Network PCI Weighted Average	89
*Reconstruction Percentage	0.1%
*Reconstruction Centerline Miles	0.8

* Streets in need of reconstruction are those with a PCI less than 55



Pavement Condition Results by District



Corpus Christi District 1

Network PCI Weighted Average	61
*Reconstruction Percentage	43.8%
*Reconstruction Centerline Miles	119.2

Corpus Christi District 4

Network PCI Weighted Average	66
*Reconstruction Percentage	30.1%
*Reconstruction Centerline Miles	82.2

Corpus Christi District 2

Network PCI Weighted Average	59
*Reconstruction Percentage	47.9%
*Reconstruction Centerline Miles	97.1

Corpus Christi District 5

Network PCI Weighted Average	71
*Reconstruction Percentage	25.9%
*Reconstruction Centerline Miles	60.0

Corpus Christi District 3

Network PCI Weighted Average	62
*Reconstruction Percentage	43.1%
*Reconstruction Centerline Miles	85.8

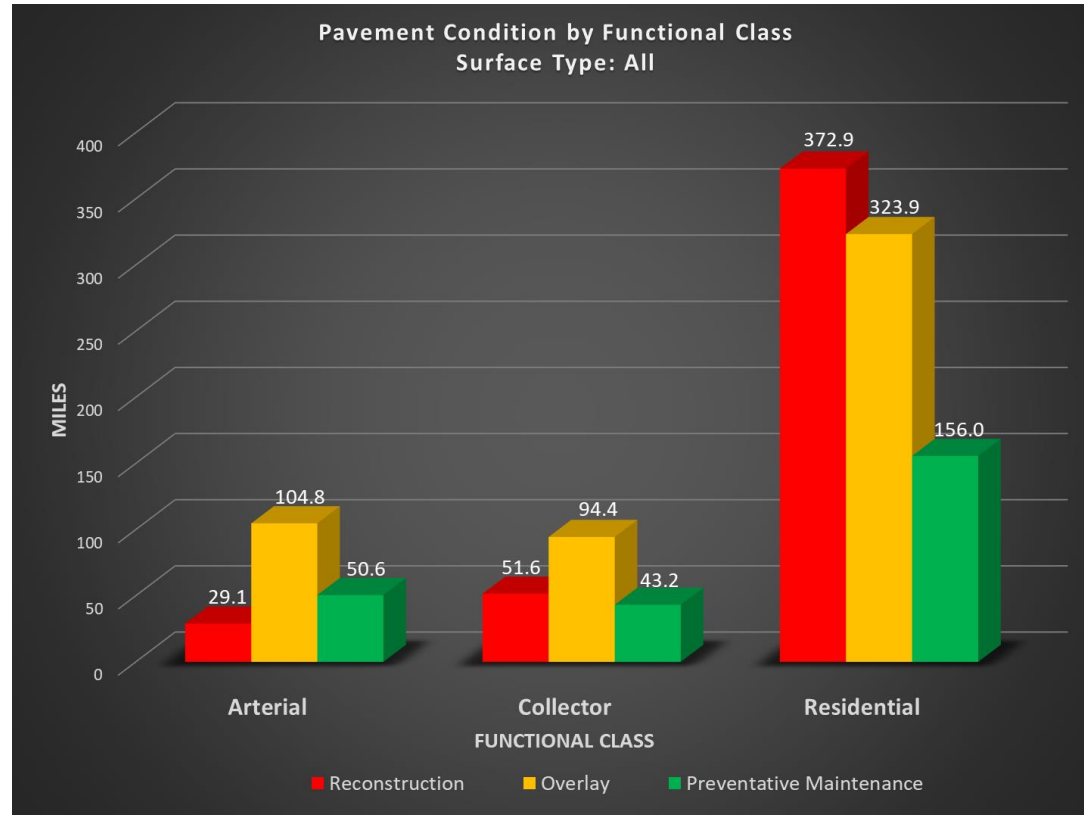
Corpus Christi Downtown (DT)

Network PCI Weighted Average	72
*Reconstruction Percentage	19.5%
*Reconstruction Centerline Miles	9.3

* Streets in need of reconstruction are those with a PCI less than 55

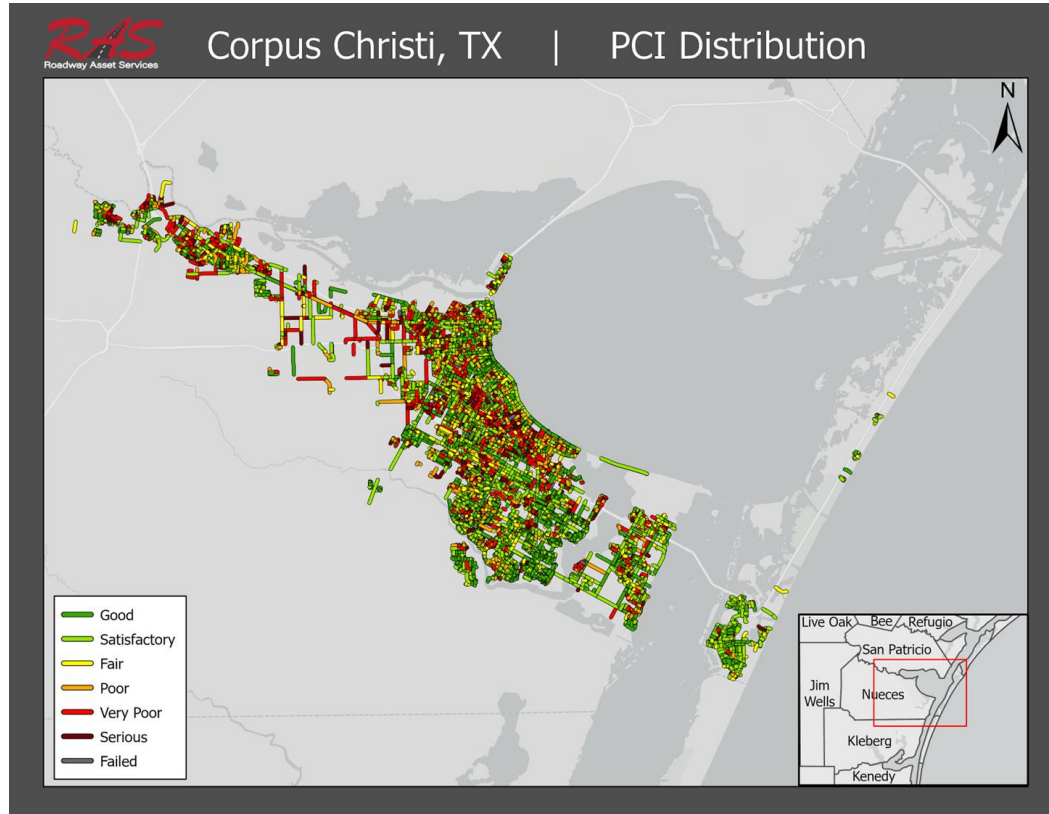


Pavement Maintenance





Pavement Condition Results





Impacts to the IMP



- Help drive the current IMP
- Move projects in the IMP
- Plan for future IMP



Take Aways



- Our overall score of 65 is not bad
 - On par with other Texas Cities
- Our Roads are in 2 Extremes
- Our reconstruction projects need to be focused on District 1, 2, and 3.