

2023

LEE COUNTY PAVEMENT CONDITION REPORT (PASER)



Brooklyn Road North of West Brooklyn

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Glossary (Definitions)

A1 & A2 – Illinois designation for a single (A1) or double (A2) layer sealcoat surface.

Alligator Cracking – A series of interconnected cracks forming small pieces (typically 1” to 6”) caused by the fatigue failure of the asphalt or sealcoat under repeated traffic loading and poor base or sub-base conditions. It is often a sign of poor drainage.

Asphalt – A hydrocarbon based oil that is used in many different types of road applications. In common usage it refers to a mixture of asphalt oil, sand, and stone that is used to make asphalt pavement.

Base – The layer(s) on which the HMA or sealcoat layer is built on. It is often known as the stone base as it is usually made of stone and aggregate.

Block Cracking – Interconnected cracks that divide the pavement up into large rectangular pieces. It is typically caused by the aging of the pavement.

Cape Seal – A two-step process to protect an asphalt road that uses a sealcoat followed by a micro-surface. The sealcoat seals the road while the micro-surface provides a smoother ride for vehicles. It is typically used on asphalt roads with higher traffic volumes.

Crack Filling – Process of filling cracks with a thick oil based material to seal cracks and prevent water intrusion into the pavement through the cracks.

Distortion – Where shoving or rippling of the surface is displaced perpendicular to the traffic flow. It is caused by a poorly mixed asphalt, settling, frost heave, poor base or sub-base conditions, or by heavy traffic accelerating or braking.

Distress and Deterioration – The result of a natural process that slowly degrades a pavement’s integrity over time. It is very often accelerated by heavy traffic loads, poor construction, and/or weather related actions. Normally seen as cracking, pavement wear, potholes, rutting, and etc.

Drainage – Water runoff and how it is conveyed away from an area. It involves the use of grading, ditches, curbs, culverts, sewers and etc.

Flushing – Where oil works its way up to and covering the surface. It is usually found with sealcoat surfaces. It is also sometimes called bleeding.

Fog Seal – A thin layer of asphalt oil sprayed on the top layer of sealcoat. It provides a stronger adhesion for the sealcoat aggregate and helps extend the service life of the sealcoat.

Grade – The slant or slope and relative smoothness of a road surface. The grade is important to ensure the proper drainage and smooth ride of the road.

Grading – Process of shaping and maintaining a pavement surface’s integrity.

Grinding – Process of pulverizing surface into very small pieces typically with a milling machine.

HMA – Acronym for Hot Mix Asphalt.

Longitudinal Crack – Cracks that run parallel to the pavement's centerline. Typically caused by cracks in the underlying pavement layer, poor asphalt bonding, poor base or sub-base conditions, or heavy traffic loads on the pavement.

Maintenance – Routine work done to maintain the road that typically does not require major road construction.

Micro-surface – A surface treatment for asphalt pavement that lays a thin mixture of asphalt oil, sand and cement over the surface. Used to help protect the asphalt surface from wear or to provide better traction on polished pavement surfaces.

Milling – Process of grinding a layer off to create a flat road surface with a milling machine.

Overlay – Term used for placing a layer of HMA over an existing surface.

Partial HMA Reconstruction – Involves reconstruction HMA surface with localized sections of base repairs and patching.

Patching – Replacing an area of pavement that has been damaged or has been removed due to material loss such as a pothole or excavation due to some maintenance or construction activity. It is typically done with HMA or cold patch (a softer asphalt pavement mix).

PASER – Acronym for PAvement Surface Evaluation and Rating. It is an engineering based rating system used for determining road pavement conditions. The word sounds similar to the word “laser”.

Pavement Preservation – Maintenance activities such as crack filling, spray patching, cape sealing and sealcoating when used to protect and preserve a pavement to extend its service life. Typically done on asphalt pavements with a PASER rating of 6 or higher.

Pothole – An area where pavement material has been lost leaving a depression in the pavement surface. It is caused by traffic loading, pavement fatigue, or inadequate strength. It is often a sign of poor drainage.

Raveling – The progressive disintegration of an HMA or sealcoat from the surface downward as a result of the dislodgement of aggregate particles. It is caused by the stripping of oil from the stone, hardening of oil due to age, poor compaction, or not enough oil in the pavement.

Rutting – The displacement of material in the wheel path of the pavement creating deformation in the surface. It is caused by poor base or sub-base conditions and heavy traffic loads.

Scarify – Process of breaking up a road’s surface. Sometimes done with a milling machine. The broken material is then either removed or mixed into the underlying stone base.

Sealcoat – A treatment to seal roads from water intrusion or to control dust on gravel roads. It consists of a layer of asphalt oil with covering of crushed stone (known as chips). Sometimes it is known as oil and chip or tar and chip. Typically found on low volume rural roads but it can also be used to seal and protect asphalt roads.

Spray Patching – Process similar to sealcoating but used for covering and sealing isolated areas of pavement.

Sub-Base – The underlying soils that the base and pavement are built on top of. Sometimes these soils are referred to as the sub-soils.

Total HMA Reconstruction – The complete reconstruction of the entire road section including both asphalt and stone base repair down to the subbase. Subbase work may also be done.

Transverse Crack – Cracks that run perpendicular to the pavement's centerline. It is typically caused by temperature changes and the aging of the pavement.

Project Overview

The purpose of this report is to rate and evaluate the road pavement conditions of the Lee County Highway System. Bridges were not considered in this study as they must be evaluated separately. Lee County, through its Highway Department, maintains approximately 220 miles of roadway within its jurisdiction. The road system includes both asphalt and sealcoat paved roads. This survey used the PASER System to rate and evaluate the pavement conditions. The findings of the report are intended to be used to:

1. Identify what issues are currently affecting various roads throughout the county highway system.
2. To help identify what maintenance and repairs are needed throughout the system.
3. To estimate what it will cost to maintain and repair the highway system based on the current pavement conditions.
4. To help create a future multi-year maintenance and construction plan.

The PASER system is designed to help the Highway Department staff assess the condition of the County's highway system and determine what county resources are needed for each roadway segment. With limited funds available to the department, the PASER ratings help staff determine how to use this funding to provide the maximum benefit to the county residents.

What is the PASER System?

The Pavement Surface Evaluation and Rating (PASER) system provides an engineering based system to rate and evaluate the condition of road pavements. It was developed by the University of Wisconsin – Madison's Transportation Information Center. This system is recognized by the Illinois Department of Transportation as an acceptable way to rate pavement conditions. It is listed in the Bureau of Local Roads Manual (BLM) in Chapter 45-4.02(a). A total of 6 PASER systems are available for different types of pavement. They are; asphalt, concrete, sealcoat, brick/block, gravel, and unimproved (dirt). Since Lee County roads only have asphalt and sealcoat pavements, only these PASER systems will be covered in this report. PASER provides numerical rating categories (10 for asphalt and 5 for sealcoat) that provides a recognized standard rating conditions of pavement deterioration. For each rating category, typical maintenance and repair options are suggested. When a road's condition has been rated, planners can then estimate what maintenance and repairs will be required. With this information they can create a future maintenance plan and cost estimate.

PASER Numerical Ratings

PASER utilizes a 10 point category rating system for asphalt roads and a 5 point rating system for sealcoat roads. Below is brief summary of each of the PASER ratings for the asphalt and sealcoat systems. For a more information of the PASER rating systems, please refer to the appropriate PASER manual. The PASER rating manuals are available online from the University of Wisconsin – Madison’s Transportation Information Center website or from Illinois Department of Transportation’s Technology Transfer Center website. (See ‘Related Website Links’ for website addresses)

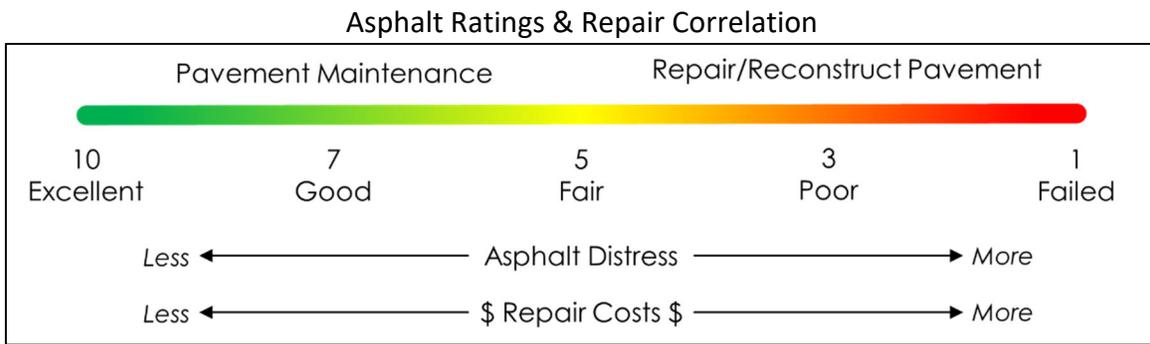
Asphalt PASER Ratings

- 10 – Excellent. New construction, pavement less than 1 year old. No deficiencies. No maintenance is required.
- 9 – Excellent. New construction over 1 year old or recent HMA overlay. No deficiencies. No maintenance is required.
- 8 – Very Good. Pavement may be a few years old. Very minor deficiencies such as only a few tightly sealed transverse or reflection cracks (<1/4” open). Only minor maintenance such as crack filling required.
- 7 – Good. Pavement is structurally sound. Pavement is showing the first signs of aging. Some longitudinal, transverse and reflection cracks which are tightly sealed (<1/4” open). Early signs of raveling may be present. Maintain roads with crack filling program. Some isolated areas may need to be spray patched. A sealcoat or cape seal may be considered to further protect pavement.
- 6 – Good. Pavement is structurally sound. Pavement is showing definite signs of aging. Surface may have some light raveling. Cracks are starting to open (1/4” to 1/2”). First signs of block cracking is observed. Crack filling, spray patching and a sealcoat or cape seal is needed.
- 5 – Fair. Pavement is generally structurally sound. Pavement is moderate to severely raveling with loss of aggregate. Any patches are in good condition. Cracks are open (>1/2”) and block cracking covers up to 50% of pavement surface. Crack filling required with either a sealcoat/cape seal or a thin HMA overlay. Expected life of sealcoat or thin overlay may be limited. A thicker HMA overlay may need to be considered.
- 4 – Fair. Pavement is showing first signs of needed strengthening. Surface is severely raveling with aggregate loss. Slight rutting (<1/2” deep) may be present. Open cracks are common and block cracking covers more than 50% of pavement. Some minor patching may be needed. Sealcoating the road will provide little to no benefit. A 2” HMA overlay is needed.
- 3 – Poor. Pavement is in need of structural improvement. Cracks are open and extensive. Raveling may be severe. Alligator cracking is present in less than 25% of the pavement. Moderate rutting (1” to 2” deep) or other distortions in the pavement are present. Patches are in fair to poor condition. Some potholes are present. Some spot

drainage and base improvements may be needed. Milling of surface likely required before overlay. A 2" or more HMA overlay required.

2 – Very Poor. Roads are severely deteriorated. Over 25% of surface is alligator cracked. Travel may be impaired in some places. There is severe rutting or distortion in the pavement. Patches are in poor condition. Potholes are common. The road needs reconstruction. Drainage and base improvements may be required. Surface pulverization and a thick HMA overlay may be an option.

1 – Failed. Road pavements have failed. Pavement is in severe distress. Surface integrity has been lost. Travel on road is likely impaired. Total road reconstruction is required. Base reconstruction and drainage improvements are also needed. Sub-base soils may need improvement as well.



Sealcoat PASER Ratings

5 – Excellent. Surface is up to 1 year old. The road has excellent drainage and no deficiencies. No maintenance is required.

4 – Good. Surface is 2 to 4 years old. The road has excellent to good drainage. Some slight surface wear and only very minor areas of flushing or aggregate loss are present. Little to no maintenance is required.

3 – Fair. Surface is 3 to 5 years old. The road has good to fair drainage. Some surface wear is evident or moderate flushing. Some spot drainage, spray patching and/or minor patching may be required. A preventive maintenance sealcoat recommended.

2 – Poor. Surface is over 5 years old. The road has fair to poor drainage. Surface wear is very evident throughout the surface. Severe flushing is evident. Patching, surface wedging, drainage or culvert improvements are likely needed. A new A1 surface is required.

1 – Failed. Surface is over 5 years old. The road has poor drainage and needs major improvements. Alligator cracking likely over large areas of the surface. Rutting and distortions are likely present throughout the surface showing the need for base improvements. The sealcoat has failed and the surface needs to be scarified, have new gravel added and be regraded. The road requires a reconstruction with a new A2 surface.

PASER Ratings Example Pictures

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Asphalt Rating 9 – Excellent, recently placed HMA overlay



Asphalt Rating 8 – Very good, no issues of concern

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Asphalt Rating 7 – Good, transverse cracks more than 10 feet apart with crack filler



Asphalt Rating 6 – Good, transverse cracks less than 10 feet apart

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Asphalt Rating 5 – Fair, block cracking up to 50% of area



Asphalt Rating 4 – Fair, irregular shaped block cracking over 50% of pavement

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Asphalt Rating 3 – Poor, alligator cracking and potholes beginning



Asphalt Rating 2 – Very Poor, potholes and patching in poor condition

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Asphalt Rating 1 – Failed, surface has lost its structural integrity

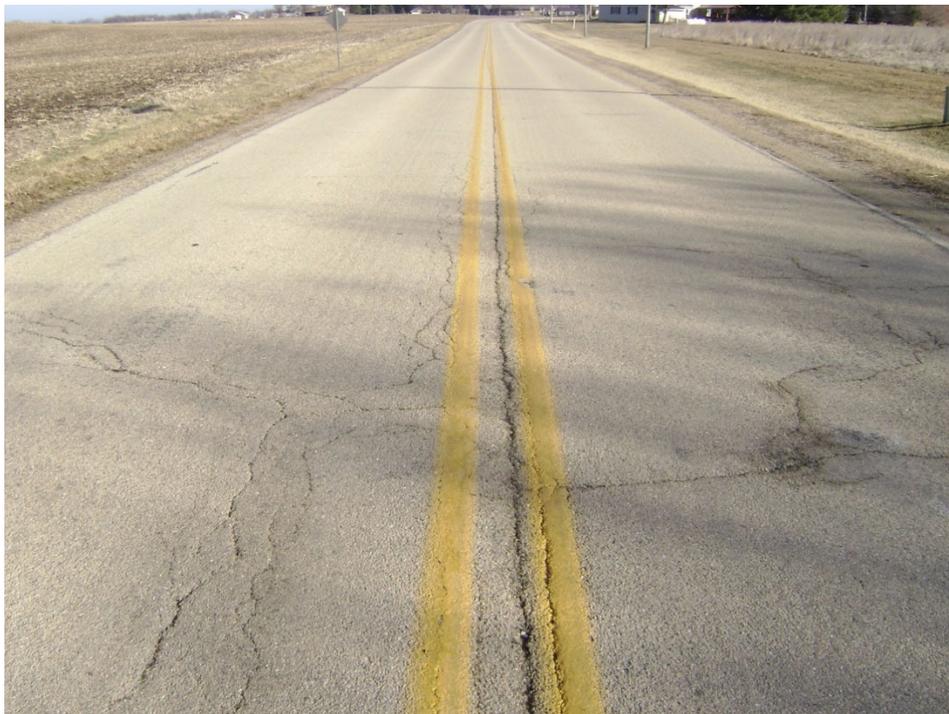


Sealcoat Rating 5 – Excellent – no issues/like new

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Sealcoat Rating 4 – Good – some aggregate loss



Sealcoat Rating 3 – Fair – cracking throughout sealcoat

(Note: The following examples are not intended to be used for determining PASER road ratings but to provide the reader with some visual basis for what type of pavement conditions the ratings represent.)



Sealcoat Rating 2 – Poor – Flushing, edge cracking and severe rutting



Sealcoat Rating 1 – Failed – loss of surface and mud is pumping into stone layer

PASER Ratings Determination and Methodology

The Highway Department engineering staff traveled to and rated each section of the County's road system in March of 2023. Each road was broken down into segments and inspected using the PASER rating system. The asphalt roads were broken down into 194 segments and the sealcoat roads into 34 for a total of 228 segments. Each segment's distance was measured to the nearest 1/10 of a mile. The PASER system uses a 10 point rating system for asphalt roads and a 5 point rating system for sealcoat roads. Every PASER rating has a defined type and quantity of different pavement distresses and deterioration. Each road segment was inspected to find the type and quantity of pavement distress and deterioration it had. Each segment's pavement distress and deterioration was then compared to the PASER standard criteria for each rating. With this comparison, a determination was made and a rating was assigned to each road segment. This data was then recorded into a spreadsheet which is available in the appendix of this report.

Lee County Highway System March 2023 PASER Ratings

The Highway Department's engineering staff conducted PASER inspections of all Lee County roads in March of 2023. As expected, the road conditions covered a multitude of PASER rating conditions. The highway system was found to have roads varying from very good to poor condition. Nearly 75% of the county's asphalt roads were rated 'Fair' (PASER 4/5) or less. For sealcoat roads, about 50% were rated 'Fair' (PASER 3) or less. Compared to the 2021 ratings, there was a slight rise in the average asphalt PASER rating and a significant rise in the average sealcoat rating. The main reason for the rise in the sealcoat was that a few poorly rated sealcoat roads were paved with asphalt and several roads were re-sealcoated. Several asphalt roads were overlaid since 2021 but the aging and deterioration of the other roads offset the gains from the HMA overlays. A complete list of each road section and its PASER rating can be found in the appendixes attached to this report. A summary of the road system's PASER ratings are shown below.

The tables below give a breakdown of the amount of roads in each PASER rating category.

Asphalt PASER Ratings

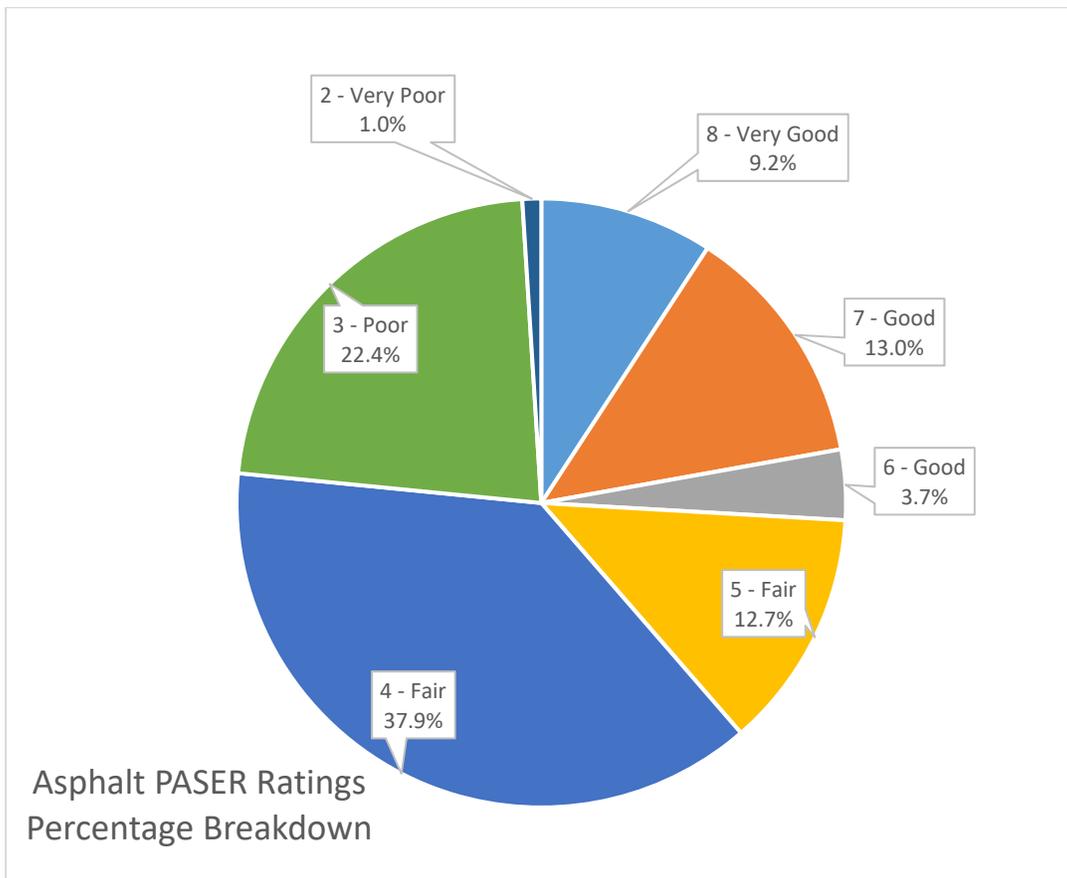
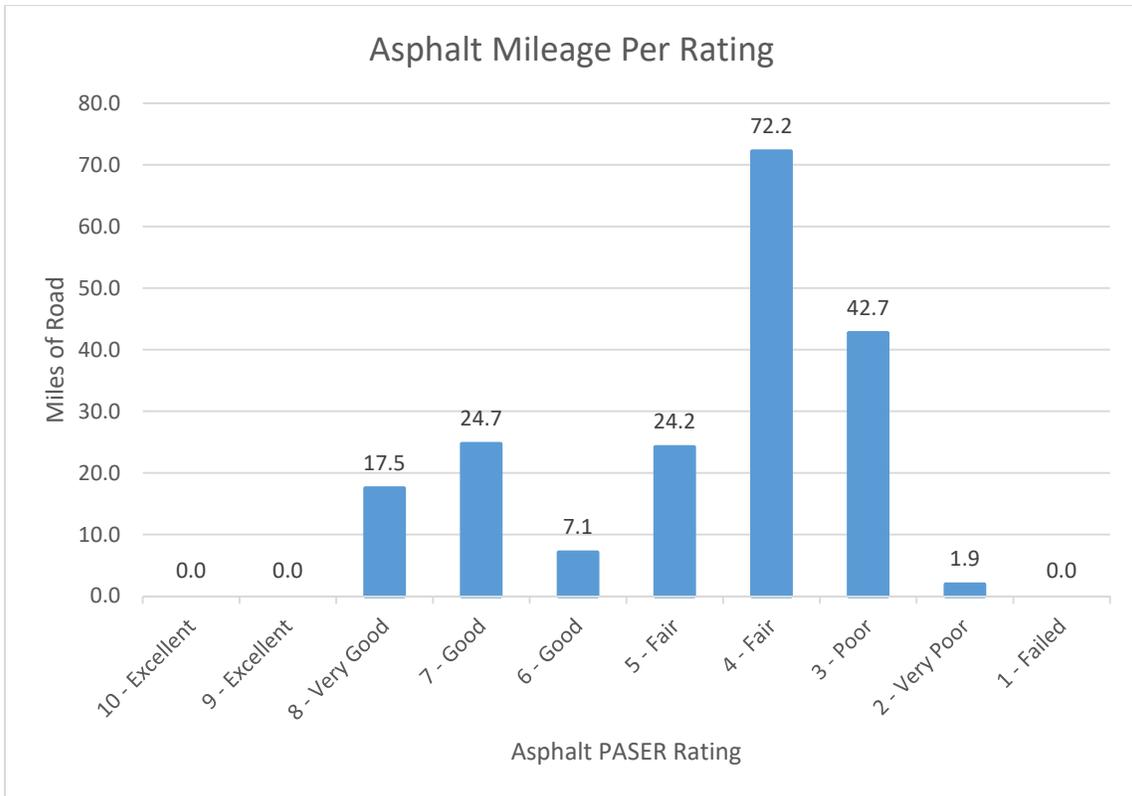
Rating	2023 Mileage	% of Total	2021 Mileage	% Change
10 - Excellent	0.0	0.0%	0.0	0.0%
9 - Excellent	0.0	0.0%	8.5	-100.0%
8 - Very Good	17.5	9.2%	6.7	161.2%
7 - Good	24.7	13.0%	17.3	42.8%
6 - Good	7.1	3.7%	10.9	-34.9%
5 - Fair	24.2	12.7%	18.3	32.2%
4 - Fair	72.2	37.9%	94.7	-23.8%
3 - Poor	42.7	22.4%	32.0	33.4%
2 - Very Poor	1.9	1.0%	0.5	280.0%
1 - Failed	0.0	0.0%	0.0	0.0%

Overall asphalt average PASER rating: 4.71

2021 asphalt average PASER rating: 4.69

Note: the total miles of asphalt increased by 1.3 miles from 2021 with a few sealcoat roads being paved with asphalt pavement.

See the asphalt miles and percentage per rating graphs on the next page.



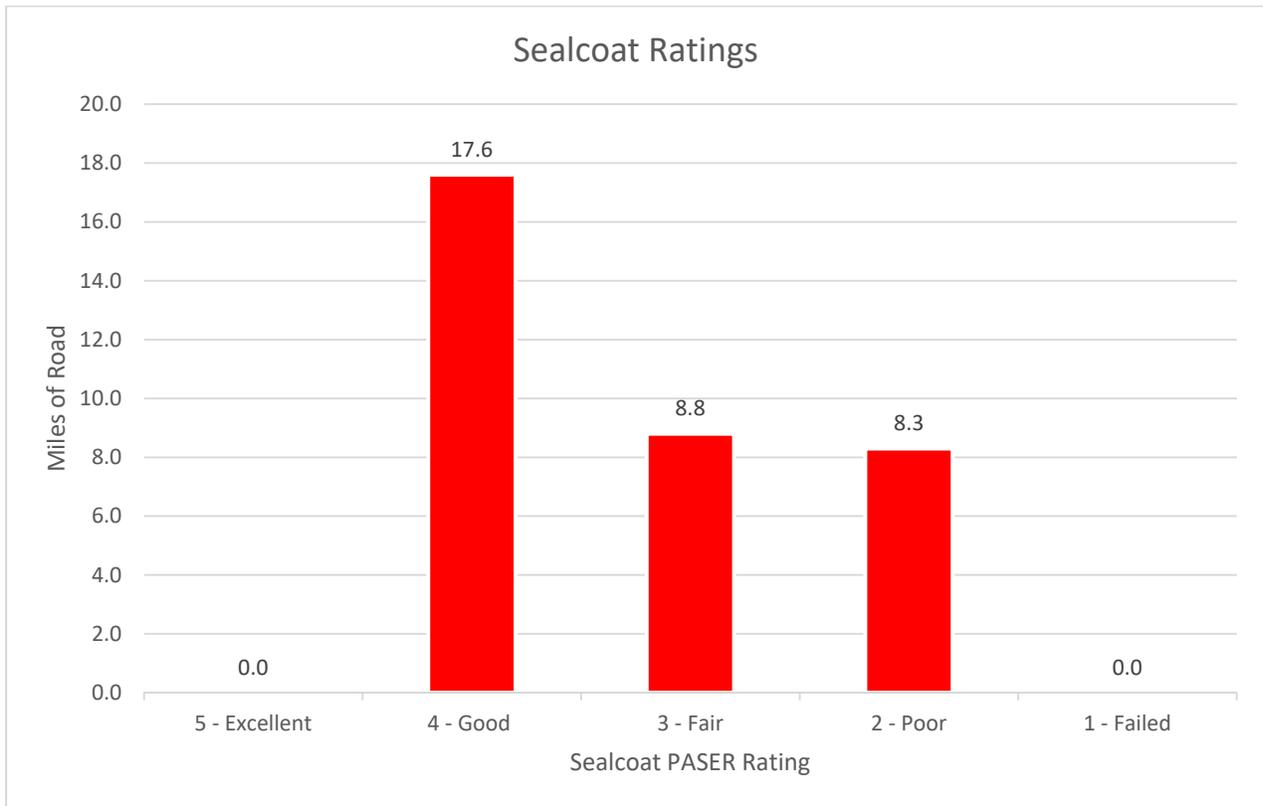
Sealcoat PASER Ratings

Rating	2023 Mileage	% of Total	2021 Mileage	% Change
5 - Excellent	0.0	0.0%	0.0	0.0%
4 - Good	17.6	50.7%	2.0	780.0%
3 - Fair	8.8	25.4%	29.0	-69.7%
2 - Poor	8.3	23.9%	5.2	59.6%
1 - Failed	0.0	0.0%	0.0	0.0%

Overall average sealcoat PASER rating: 3.27

2021 average sealcoat PASER rating: 2.91

Note: the total miles of sealcoat decreased 1.3 miles from 2021 with several roads being paved with asphalt pavement.



Recommended Pavement Maintenance Determination and Methodology

A good pavement maintenance program involves a combination of activities that work to maintain a good PASER rating. Typically, as a pavement's condition worsens, its deterioration accelerates. Ideally, a maintenance program is utilized to extend the life of the pavement and avoid costly repairs. Each recommended maintenance and repair action for each rating is based on the PASER system. Each action is meant to either maintain the pavement or repair the pavement as needed for its particular condition. Each repair is typical and actual repairs may differ as conditions of the pavement require. Each road must have an engineering assessment done to determine the correct maintenance or repair actions that are needed.

For asphalt roads, no maintenance is required for roads in excellent condition (PASER ratings 9 and 10). For roads in very good condition (PASER rating 8) crack sealing is all that is required. Roads in good condition (PASER rating 6 to 7) should be crack filled followed by a sealcoat with a fog seal, micro-surface, or cape seal treatment. Small areas of distress can be spray patched as needed. Crack filling, spray patching, sealcoating, micro-sealing, and cape sealing are all considered types of pavement maintenance activities. When these actions are used to preserve and protect a pavement, it is referred to as pavement preservation. Pavement maintenance is typically a low cost method to maintain the roads and avoid expensive construction costs.

Highways in fair condition (PASER Rating 5) are in the transition between just needing pavement maintenance and more intense construction activities. These roads will need to be crack filled and then covered by a thin HMA overlay. The expected life of a thin HMA layer may be limited, so a thicker HMA overlay may need to be considered instead.

Structural improvements are recommended for roads in fair condition (PASER Rating 4) or below. Roads with a 4 rating will need a minimum 2" HMA overlay. There may be a few spots where some patching is needed in the underlying asphalt. Roads in poor condition (PASER rating 3) will need to be milled and overlaid with at least a 2" of HMA. There may be areas that require a full depth patches prior to overlaying the road. Some areas may also require drainage improvements. A road in failed or very poor condition (PASER rating 1-2) typically require either a partial or full-depth pavement reconstruction including base, sub-base and drainage improvements. These actions can be very expensive and time consuming.

For sealcoat roads, only minor maintenance is needed for roads in good to excellent condition (PASER ratings 4-5). Roads in fair condition (PASER rating 3), a new A1 surface with a fog seal is recommended. For a roads in poor condition (PASER rating of 2), some base and drainage improvements are recommended as well as a new A1 surface with a fog seal. Additional patching or wedging may also be needed. Should a road reach the failed condition (PASER rating 1), the road will require a reconstruction. Major improvements to the base and drainage systems will be required. The old sealcoat will probably need to be scarified, have new stone added, and a new A2 sealcoat surface laid.

Cost Estimate Determination and Methodology

To determine estimated costs, the engineering staff used past bidding prices, typical material and labor quantities needed per mile and staff experience to determine what the per mile costs are for each type of repair. These estimated costs are shown in the table below:

Asphalt		Sealcoat	
Maintenance/ Repair	Cost per Mile	Maintenance/ Repair	Cost per Mile
Crack Filling	\$5,250 - \$14,000	Light Spray/Cold Patching	\$2,000
Cape Seal	\$75,000	A1 Surface	\$16,000
Thin HMA	\$75,000	Heavy Spray/Cold Patching	\$15,000
2" HMA	\$130,000	Sealcoat Base Repair	\$12,000
Mill and 2" HMA	\$180,000	Scarify, Add 2" CA-6, & A2 Surface	\$80,000
Partial HMA Reconstruction	\$410,000	Fog Seal	\$6,000
Total HMA Reconstruction	\$1,100,000		

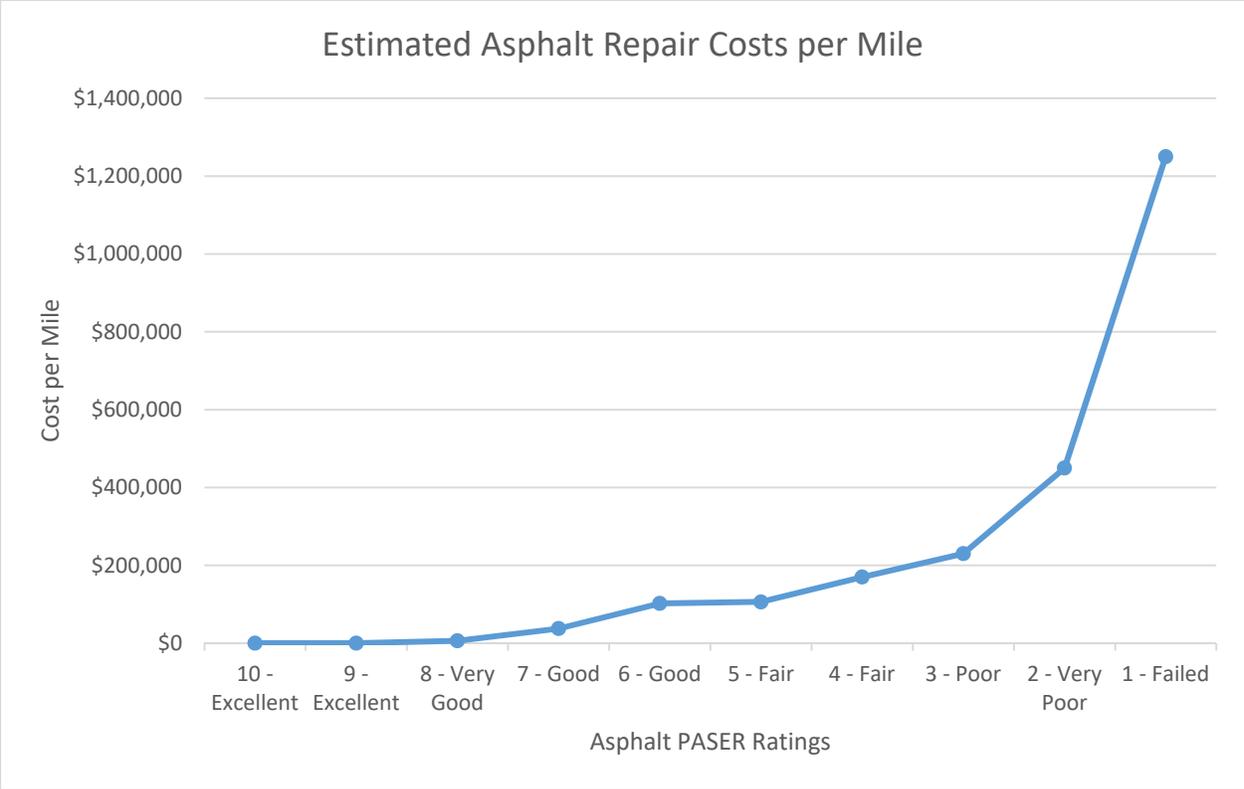
Asphalt		Sealcoat	
Maintenance/ Repair	Cost per Mile	Maintenance/ Repair	Cost per Mile
Crack Filling	\$6,000 - \$16,000	Light Spray/Cold Patching	\$3,000
Cape Seal	\$90,000	A1 Surface	\$22,000
Thin HMA	\$90,000	Heavy Spray/Cold Patching	\$20,000
2" HMA	\$170,000	Sealcoat Base Repair	\$18,000
Mill and 2" HMA	\$230,000	Scarify, Add 2" CA-6, & A2 Surface	\$100,000
Partial HMA Reconstruction	\$450,000	Fog Seal	\$7,500
Total HMA Reconstruction	\$1,250,000		

With the estimated per mile cost for each type of repair, determining the cost per mile of repairs for each rating type can be found using the typical repairs suggested for each rating.

Estimated Asphalt Repair Costs per Mile

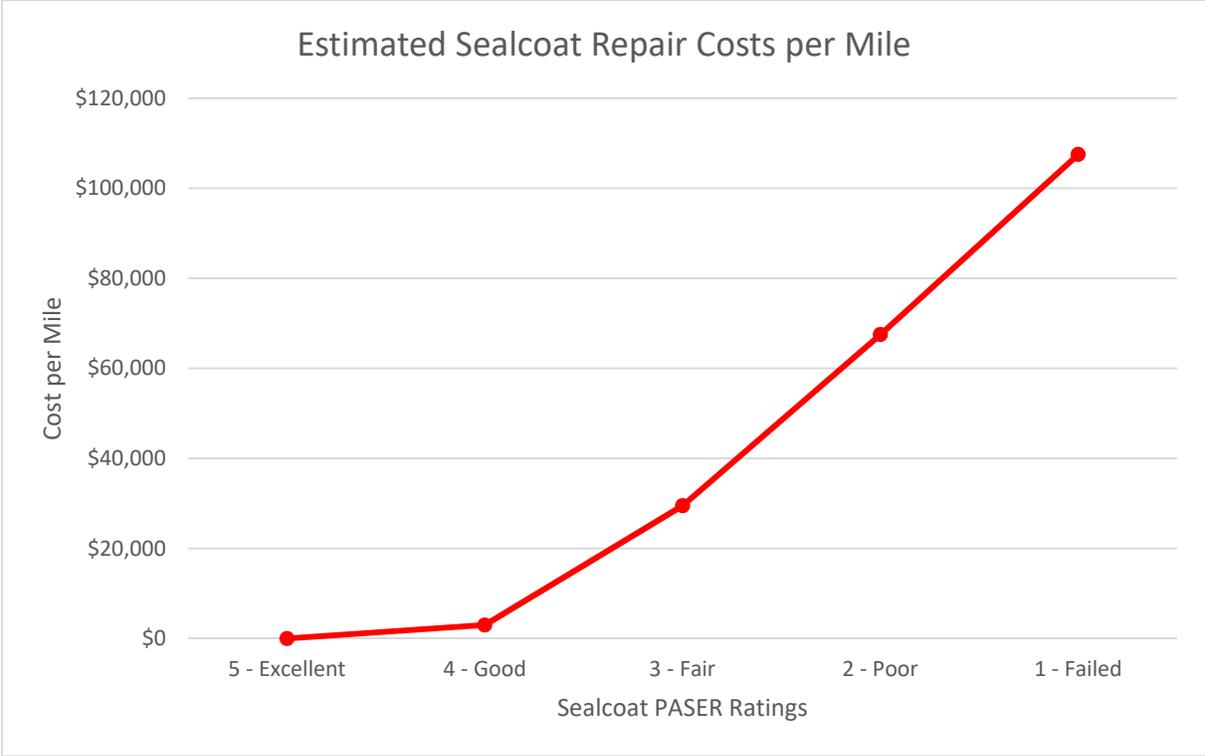
Estimated Asphalt Repair Costs per Mile		
Rating	Maintenance/Repairs	Cost per Mile
10 - Excellent	None	\$0
9 - Excellent	None	\$0
8 - Very Good	Crack Fill	\$5,250
7 - Good	Crack Fill/Sealcoat/Fog	\$29,000
6 - Good	Crack Fill/Cape Seal	\$85,500
5 - Fair	Crack Fill/Thin HMA	\$89,000
4 - Fair	2" HMA Overlay	\$130,000
3 - Poor	Mill and 2" HMA	\$180,000
2 - Very Poor	Partial Reconstruction	\$410,000
1 - Failed	Total Reconstruction	\$1,100,000

Estimated Asphalt Repair Costs per Mile		
Rating	Maintenance/Repairs	Cost per Mile
10 - Excellent	None	\$0
9 - Excellent	None	\$0
8 - Very Good	Crack Fill	\$6,000
7 - Good	Crack Fill/Sealcoat/Fog	\$37,500
6 - Good	Crack Fill/Cape Seal	\$102,000
5 - Fair	Crack Fill/Thin HMA	\$106,000
4 - Fair	2" HMA Overlay	\$170,000
3 - Poor	Mill and 2" HMA	\$230,000
2 - Very Poor	Partial Reconstruction	\$450,000
1 - Failed	Total Reconstruction	\$1,250,000



Estimated Sealcoat Repair Costs per Mile

Estimated Sealcoat Repair Costs per Mile		
Rating	Maintenance/Repairs	Cost per Mile
5 - Excellent	None	\$0
4 - Good	Spray /Cold Patching	\$3,000
3 - Fair	A1 Surface & Fog Seal	\$29,500
2 - Poor	Base Repair, Spray/Cold Patching, A1 Surface & Fog Seal	\$67,500
1 - Failed	Scarify, Add 2" CA-6, A2 Surface & Fog Seal	\$107,500



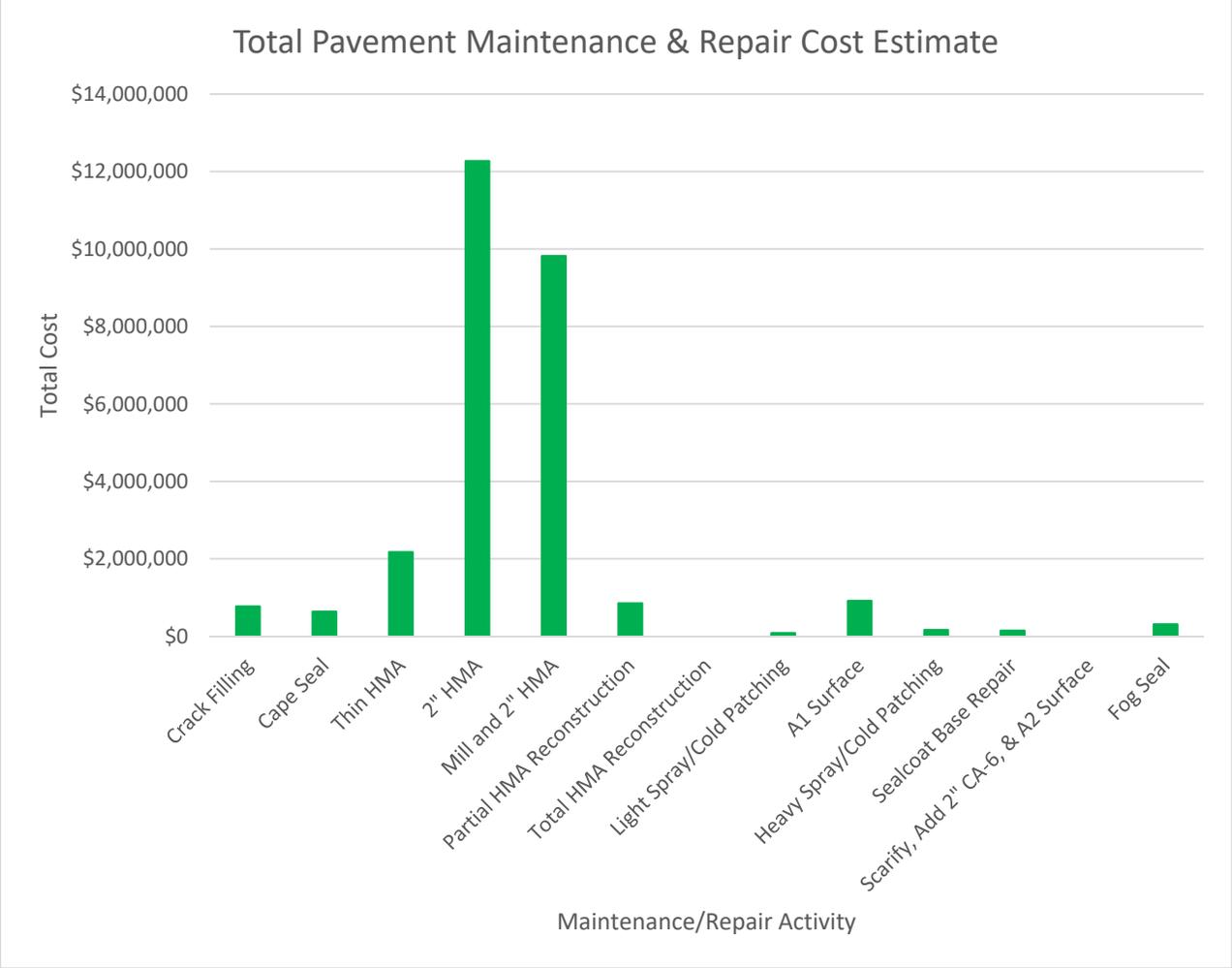
Lee County Pavement Maintenance and Repair Cost Estimates

With the cost per mile estimated and the PASER ratings for each road segment known, the total cost of repairs for each type of maintenance and repair activities can now be estimated. It should be noted that these are estimates and each road will vary with its particular needs and costs. Thus each road must be reviewed and have an engineering assessment made to determine what maintenance or repair actions are required. With this information the estimated total maintenance/repair costs for each rating can be determined.

Cost Estimate by Pavement Maintenance and Repair Activity

Below is the total 2023 pavement maintenance and repair cost estimate for the Lee County road system broken down by each pavement maintenance and repair activity.

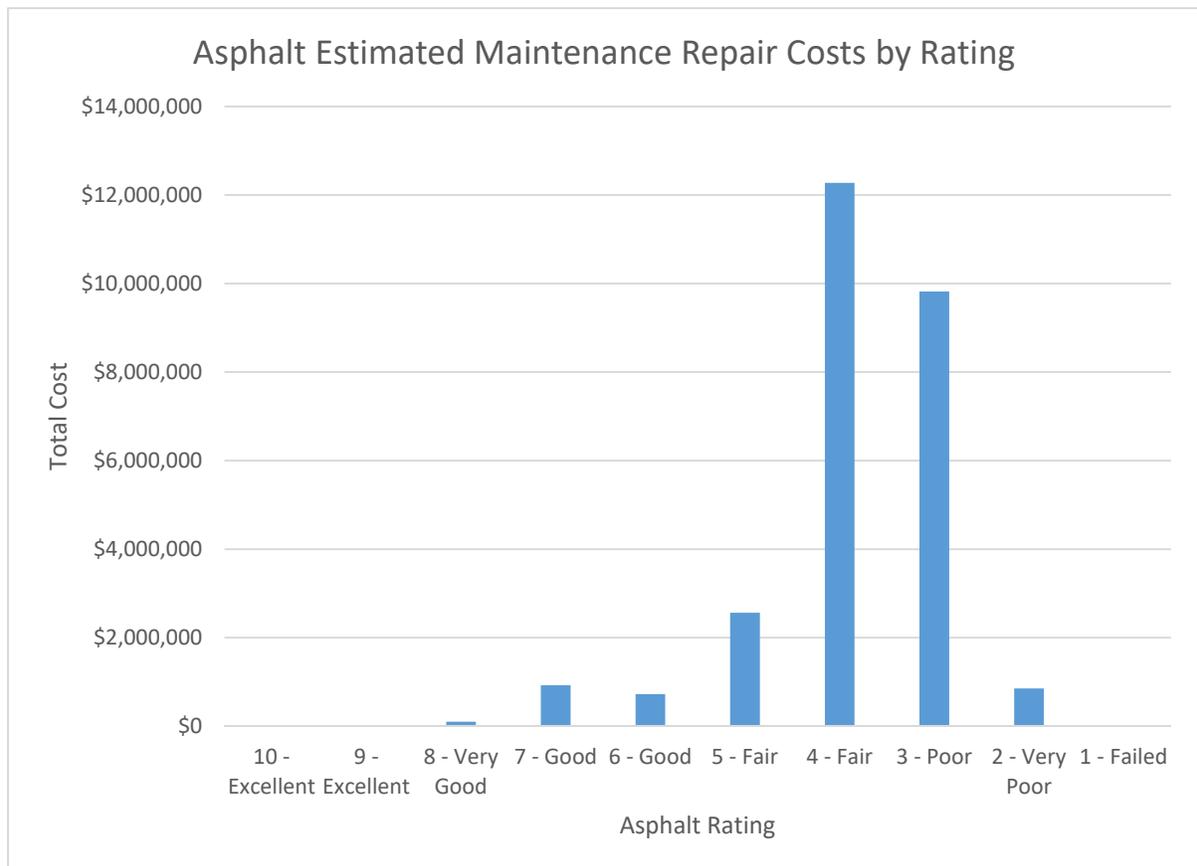
Total Pavement Maintenance & Repair Cost Estimate			
Maintenance/ Repair	Cost per Mile	Miles of Road	Total Cost
Crack Filling	\$6,000 - \$16,000	73.5	\$775,000
Cape Seal	\$90,000	7.1	\$639,000
Thin HMA	\$90,000	24.2	\$2,178,000
2" HMA	\$170,000	72.2	\$12,274,000
Mill and 2" HMA	\$230,000	42.7	\$9,821,000
Partial HMA Reconstruction	\$450,000	1.9	\$855,000
Total HMA Reconstruction	\$1,250,000	0.0	\$0
Light Spray/Cold Patching	\$5,000	17.6	\$88,000
A1 Surface	\$22,000	41.8	\$919,600
Heavy Spray/Cold Patching	\$20,000	8.3	\$166,000
Sealcoat Base Repair	\$18,000	8.3	\$149,400
Scarify, Add 2" CA-6, & A2 Surface	\$100,000	0.0	\$0
Fog Seal	\$7,500	41.8	\$313,500
		Total	\$28,178,500



Cost Estimate by Asphalt PASER Rating

Below is the total 2023 maintenance and repair cost estimate for the Lee County asphalt roads broken down by each PASER rating.

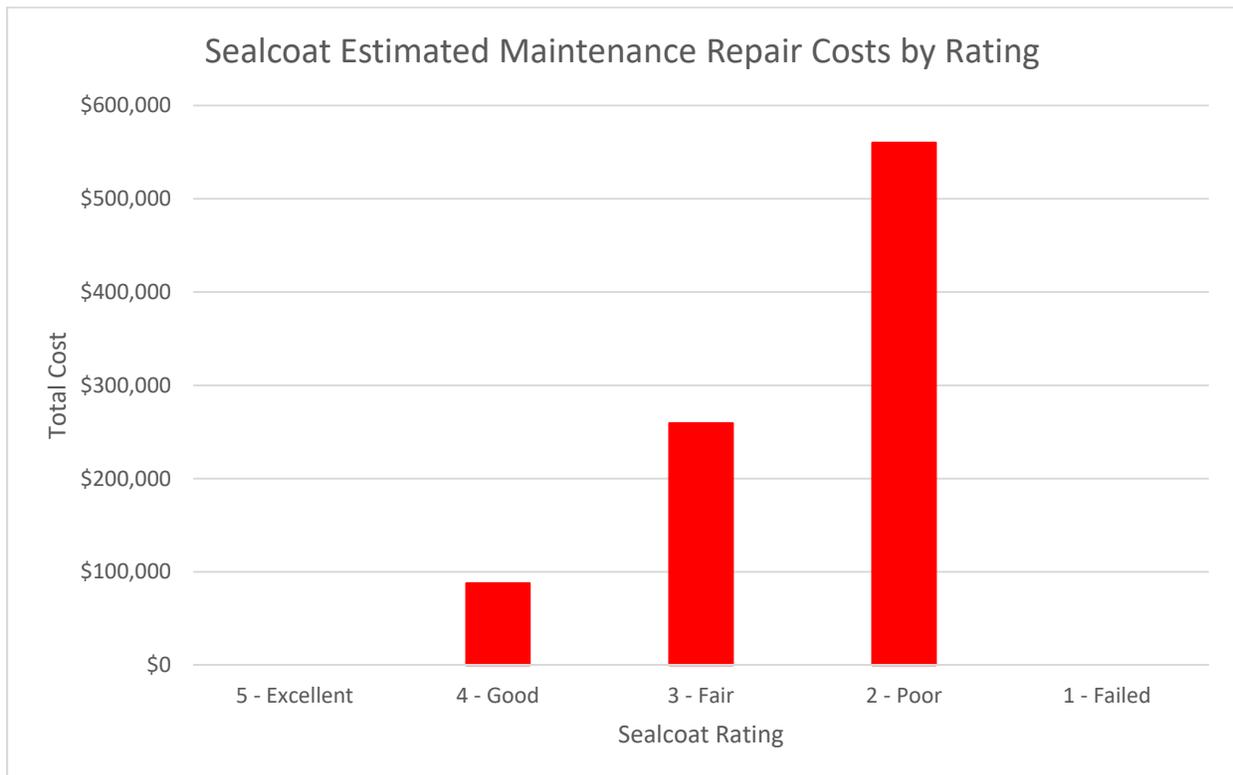
Asphalt Estimated Maintenance Repair Costs for Each Rating				
Rating	Maintenance/Repairs	Cost per Mile	Miles of Road	Total Cost
10 - Excellent	None	\$0	0.0	\$0
9 - Excellent	None	\$0	0.0	\$0
8 - Very Good	Crack Fill	\$6,000	17.5	\$105,000
7 - Good	Crack Fill/Sealcoat/Fog	\$37,500	24.7	\$926,250
6 - Good	Crack Fill/Cape Seal	\$102,000	7.1	\$724,200
5 - Fair	Crack Fill/Thin HMA	\$106,000	24.2	\$2,565,200
4 - Fair	2" HMA Overlay	\$170,000	72.2	\$12,274,000
3 - Poor	Mill and 2" HMA	\$230,000	42.7	\$9,821,000
2 - Very Poor	Partial Reconstruction	\$450,000	1.9	\$855,000
1 - Failed	Total Reconstruction	\$1,250,000	0.0	\$0
			Asphalt Total	\$27,270,650



Cost Estimate by Sealcoat PASER Rating

Below is the total 2023 maintenance and repair cost estimate for the Lee County sealcoat roads broken down by each PASER rating.

Sealcoat Estimated Maintenance Repair Costs for Each Rating				
Rating	Maintenance/Repairs	Cost per Mile	Miles of Road	Total Cost
5 - Excellent	None	\$0	0.0	\$0
4 - Good	Light Spray/Cold Patching	\$5,000	17.6	\$88,000
3 - Fair	A1 Surface & Fog Seal	\$29,500	8.8	\$259,600
2 - Poor	Base Repair, Spray Patching, Cold Patch, A1 Surface & Fog Seal	\$67,500	8.3	\$560,250
1 - Failed	Scarify, Add 2" CA-6, A2 Surface & Fog Seal	\$107,500	0.0	\$0
			Sealcoat Total	\$907,850



Discussion of PASER Rating Changes since 2019 and 2021

In April of 2019, a PASER study was first conducted by Highway Department staff. This was the first time that a PASER study had ever been conducted in Lee County. Since this first study, about 10 miles of sealcoat road have been paved with asphalt. All of these newly paved roads are in the southwest part of the county. Since the last PASER survey in 2021, several miles of other county roads also received some routine maintenance work. However, the majority of county roads received little or no maintenance over this time period. The good news is that the asphalt rating average had a slight increase and the sealcoat average rating has a significant increase. This compared to the last PASER survey in 2021 where the average ratings dropped. While the average asphalt ratings have increased slightly, they are still well below where they were in 2019 and below where we would like to see the average. One bit of good news is the average sealcoat rating has increased to the highest average we have seen since starting PASER ratings in 2019. Despite the fact that several county roads PASER ratings went up, some other roads were saw their PASER ratings drop due to normal wear and tear by traffic and weather on them.

Our current PASER rating averages are 4.71 for asphalt (Fair) and 3.27 for sealcoat (Fair). With the previous PASER survey in 2021, the averages were 4.67 for asphalt and 2.91 for sealcoat, and in 2019, 5.07 for asphalt and 3.17 for sealcoat. While we are encouraged that the rating averages have seemed to level off and even increased for now, it should be noted that over the last few years, we have benefited from an increase in funding due to the Illinois Capital Bill Passage in 2019.

The current estimate for construction and maintenance for the all the County road pavements is \$28.2 million. Broken down, asphalt makes up the overall majority of this cost with \$27.3 million leaving \$900k for sealcoat. This is a considerable increase from the last PASER survey in 2021 which found an estimate of \$22.1 million. This is an increase of \$6.1 million or 27.7%, which is more than the entire Highway Department's annual budget. In 2019 the estimate was 18.1 million which means there has been a \$10.1 million or 55.3% increase to today. While the average PASER ratings have increase slightly, the increase construction and maintenance costs due to inflation continues to drive the estimate higher. How much higher inflation will drive the estimate is difficult to predict, but the department staff does not expect the cost increases to stop in the near future. Historically, costs have increased about 1% to 2% per year, but recently, inflation has been driving cost increases at a significantly higher rate.

Conclusions

Lee County's highway system, with its 220 miles of highway, was found to be in a range of conditions from very good to very poor. The average PASER rating in 2023 was found to be 4.71 (Fair) for asphalt roads and 3.27 (Fair) for sealcoat roads. This is slight increase for the average asphalt rating from 2021 which was 4.67, but still a decrease from 2019 when it was 5.07. However, the average sealcoat PASER rating saw a significant increase from 2.91 in 2021 and slightly higher than 3.17 in 2019. Nearly all of the roads were found to be in need of some type of maintenance or repair. The current estimated cost to maintain or repair the entire highway system (not including bridges) is \$28.2 million, an increase of \$6.1 million from 2021 and a \$10.1 million increase from 2019. This shows that rising costs are growing faster than the County's revenue which is adding more strain to the Highway Department's budget.

The Highway Department's engineering staff believe that it is in the best interest of the county to maintain an average PASER rating of 6.0 or higher for asphalt and 3.0 or higher for sealcoat. Maintaining a higher average PASER rating will bring overall costs to taxpayers down as the cost for maintenance of good roads are much lower than repairing or reconstruction poor roads. The Department would like to put special emphasis on conducting pavement preservation activities on roads with higher PASER ratings (6.0 for asphalt & 3.0 for sealcoat). These roads can be preserved with maintenance activities that are less expensive than major reconstruction projects. These actions will extend the life of the pavements and keep their PASER ratings higher for longer. Pavement preservation activities require less road closure time than do major road repairs or reconstruction projects. This will further decrease the impact of delays on residents and drivers. Roads with lower PASER ratings typically require more expensive repair actions, longer road construction closures, and cause more damage to vehicles traveling on the roads. In 2022, the American Society of Civil Engineers (ASCE) estimated that each Illinois motorist will spend \$628 (or \$5.4 billion in total) in extra vehicle repairs and operating costs due to bad roads.

Since the Highway Department's funding is very limited, it is impossible to attain a goal of maintaining a higher PASER rating average at this time. As it currently stands, the funding available is not enough to properly maintain the highway system. This is concerning as it will allow the overall road system condition to deteriorate to ratings lower than they are at today. It will also lead to higher repair costs for taxpayers in the future. This trend is being seen across the country as the ASCE found in 2021 that number of roads in poor condition is increasing across the country due to years of underfunding. This has resulted in a \$786 billion backlog of road and bridge capital needs. Grant money is another source of funding that the highway staff are actively pursuing, but winning grants is often difficult and spotty at best and thus cannot be relied on as a regular source of funding. Since funding levels remain well below ideal levels, the department must carefully determine the most effective use of the funding that is available. Every year, the engineering staff creates a 5 year plan laying out how the department plans to use their funding. The PASER ratings provide important assistance in determining where and how the available funding should be spent.

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American Society of Civil Engineers. (2022). *2022 Report Card for Illinois Infrastructure*.

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Related Website Links

Lee County Highway Department:

<https://www.leecountyil.com/219/Highway-Department>

Illinois Department of Transportation:

<https://idot.illinois.gov/>

United States Department of Transportation – Federal Highway Administration:

<https://highways.dot.gov/>

Illinois Department of Transportation – Technology Transfer Center:

<https://idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/technology-transfer-center/index>

University of Wisconsin – Madison – Transportation Information Center:

<https://epd.wisc.edu/tic/resources/>

Appendix A
Lee County Asphalt PASER
Ratings Spreadsheet

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Asphalt Road Ratings

Rating #s: Excellent: 9 & 10, Very Good: 8, Good: 6 & 7, Fair: 4 & 5, Poor: 3, Very Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		To	From				
3/17/2023	Amboy Road	Rocky Ford Road	Robbins Road	1.0	4	4	Transverse cracks, cracks in wheel paths, some block cracking, crack filling needed
3/17/2023	Amboy Road	Robbins Road	Morgan Road	1.0	4	4	Transverse cracks, cracks in wheel paths, some block cracking, crack filling needed
3/17/2023	Amboy Road	Morgan Road	Peru Road	1.5	4	4	Transverse cracks, cracks in wheel paths, some block cracking, crack filling needed
3/17/2023	Amboy Road	Peru Road	Walton Road	1.5	4	4	Transverse cracks, cracks in wheel paths, some block cracking, crack filling needed
3/17/2023	Amboy Road	Walton Road	IL 26	1.0	4	4	Transverse cracks, cracks in wheel paths, some block cracking, crack filling needed
3/20/2023	Angling Road	Paw Paw Road	Moffitt Road	1.1	4	4	Transverse cracking, block cracking, longitudinal cracking, may soon be a '3'
3/20/2023	Angling Road	Moffitt Road	Cyclone Road	1.2	4	4	Transverse cracking, block cracking, longitudinal cracking, may soon be a '3'
3/20/2023	Angling Road	Cyclone Road	Cottage Hill Road	1.2	4	4	Transverse cracking, block cracking, longitudinal cracking
3/20/2023	Angling Road	Cottage Hill Road	Welland Road	1.2	4	4	Transverse cracking, block cracking, longitudinal cracking
3/20/2023	Ashton Road	Reynolds Road	Beach Road	1.5	4	4	Transverse cracks are rough, a few longitudinal crack in wheel paths, some block cracking
3/20/2023	Ashton Road	Beach Road	Village of Ashton	1.0	4	4	Transverse cracks are rough, a few longitudinal crack in wheel paths, some block cracking
3/14/2023	Atkinson Road	Maytown Road	Burke Road	0.5	8	2	Former sealcoat road, paved 2021
3/20/2023	Brooklyn Road	Spur Road	Johnson Street	0.5	4	3	Transverse cracking, longitudinal cracks, block cracking, rough pavement, may soon be a '3'
3/20/2023	Brooklyn Road	Johnson Street	Shaw Road	1.0	4	3	Transverse cracking, longitudinal cracks, block cracking, rough pavement, may soon be a '3'
3/21/2023	Brooklyn Road	Shaw Road	Butler Hill Road	1.6	3	3	Transverse cracking, longitudinal cracks, block cracking, some few patches, rough pavement
3/21/2023	Brooklyn Road	Butler Hill Road	US 30	2.0	3	3	Transverse cracking, longitudinal cracks, block cracking, some few patches, rough pavement
3/21/2023	Brooklyn Road	US 30	Nichols Road	1.0	3	3	Transverse cracking, some alligator cracking, some raveling, longitudinal cracks in wheel paths
3/21/2023	Brooklyn Road	Nichols Road	Lee Road	1.0	3	3	Transverse cracking, some alligator cracking, some raveling, longitudinal cracks in wheel paths
3/21/2023	Brooklyn Road	Lee Road	Herman Road	1.0	3	3	Transverse cracking, block cracking, some raveling, longitudinal cracks, some patches
3/21/2023	Brooklyn Road	Herman Road	McGirr Road	1.0	3	3	Transverse cracking, some alligator cracking, some raveling, longitudinal cracks in wheel paths
3/21/2023	Brooklyn Road	McGirr Road	Reynolds Road	1.0	3	3	Transverse cracking, some alligator cracking, some raveling, longitudinal cracks in wheel paths
3/14/2023	Burke Road	Atkinson Road	Harmon Road	1.0	8	2	Former sealcoat road, paved 2021
3/21/2023	Chicago Road	IL 251	Compton Road	0.5	7	8	Center joint crack, transverse cracks >10', isolated longitudinal cracks, needs crack filling
3/21/2023	Chicago Road	Compton Road	Fisk Road	1.1	7	8	Center joint crack, transverse cracks >10', isolated longitudinal cracks, needs crack filling
3/21/2023	Chicago Road	Fisk Road	Bingham Road	0.8	7	8	Center joint crack, transverse cracks >10', isolated longitudinal cracks, needs crack filling
3/21/2023	Chicago Road	Bingham Road	I-39	0.5	7	8	Center joint crack, transverse cracks >10', isolated longitudinal cracks, needs crack filling
3/21/2023	Chicago Road	I-39	German Road	0.6	4	4	Transverse cracking, some block cracking, longitudinal cracks in wheel paths
3/21/2023	Chicago Road	German Road	Moffitt Road	0.9	4	4	Transverse cracking, some block cracking, longitudinal cracks in wheel path
3/21/2023	Chicago Road	Moffitt Road	Village of Paw Paw limits	0.5	4	4	Transverse cracking, some block cracking, longitudinal cracks in wheel paths
3/20/2023	Chicago Road	Village of Paw Paw limits	Ogee Road	0.7	4	4	Transverse cracking, some block cracking, longitudinal cracks in wheel paths, may soon be a '3'
3/20/2023	Chicago Road	Ogee Road	County Line Road	0.8	3	3	Transverse cracking, block cracking, longitudinal cracks in wheel paths, block cracking
3/17/2023	Corregidor Road	South Bataan Road	North Bataan Road	0.7	4	4	Transverse cracks, cracks in wheel paths, block cracking
3/17/2023	Corregidor Road	North Bataan Road	US 30	1.3	4	4	Transverse cracks, cracks in wheel paths, block cracking
3/20/2023	County Line Road	Perry Road	Reynolds Road	1.0	4	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking
3/20/2023	County Line Road	Reynolds Road	McGirr Road	1.0	4	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking
3/20/2023	County Line Road	McGirr Road	Herman Road	1.0	4	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking
3/20/2023	County Line Road	Herman Road	N. Lee town limits	0.5	3	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking, some pavement slipping
3/20/2023	County Line Road	N. Lee town limits	Lee Road	0.5	2	2	Transverse cracks, longitudinal cracks, potholes, raveling, very poor condition
3/20/2023	Daysville Road	IL 38	Naylor Road	1.5	4	4	Transverse cracks, some longitudinal cracks in wheel paths, some patches
3/20/2023	Daysville Road	Naylor Road	Olge County line	1.5	4	4	Transverse cracks, some longitudinal cracks in wheel paths, some patches
3/17/2023	Eidena Road	Village of Eidena	South Eidena Road	0.6	4	5	Lots of transverse cracks some longitudinal cracks in wheel path, block cracking, some potholes
3/17/2023	Eidena Road	South Eidena Road	US 52	3.7	7	7	Transverse cracks >10 feet apart, crack filling needed, may be '6' soon
3/20/2023	Flagg Road	Lost Nation Road	Olge County line	0.6	4	4	Multiple transverse cracks, longitudinal cracks in wheel paths, may soon be a '3'
3/20/2023	Franklin Road	Village of Franklin Grove	Gap Road	0.6	8	4	Overlaid in 2022, no longer new condition

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Asphalt Road Ratings

Rating #s: Excellent: 9 & 10, Very Good: 8, Good: 6 & 7, Fair: 4 & 5, Poor: 3, Very Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		To	From				
3/20/2023	Franklin Road	Gap Road	McGirr Road	1.4	8	4	Overlaid in 2022, a few transverse cracks
3/20/2023	Franklin Road	McGirr Road	Herman Road	1.0	8	4	Overlaid in 2022, a few transverse cracks
3/20/2023	Franklin Road	Herman Road	Hillison Road	1.5	8	4	Overlaid in 2022, a few transverse cracks
3/20/2023	Franklin Road	Hillison Road	Inlet Road	1.2	8	4	Overlaid in 2022, a few transverse cracks
3/20/2023	Franklin Road	Inlet Road	US 30	0.4	8	4	Overlaid in 2022, a few transverse cracks
3/20/2023	Gap Road	Franklin Road	IL 38	0.4	8	4	Overlaid in 2022, a few transverse cracks
3/14/2023	Green Wing Road	Sublette Road	Maytown Road	1.1	5	6	Transverse cracks < 10', centerline crack, block cracking, some edge cracking
3/14/2023	Hamilton Road	Van Petten Road	Henry Road	1.0	4	4	Sealcoated in 2022, that temporarily filled cracks, sealcoat looks fair to poor
3/14/2023	Hamilton Road	Henry Road	Coon Road	1.0	4	4	Sealcoated in 2022, that temporarily filled cracks, sealcoat looks fair to poor
3/14/2023	Harmon Road	US 30	Porter Road	1.5	7	7	Transverse cracks >10' apart cracks filled
3/14/2023	Harmon Road	Porter Road	Sterling Road	1.0	7	7	Transverse cracks >10' apart cracks filled
3/14/2023	Harmon Road	Sterling Road	Harmon Grain Elevator	0.3	5	7	Transverse cracks >10' apart, block crackign has started
3/14/2023	Harmon Road	US 30	Cross Road	1.0	4	4	Transverse cracks, block cracking, wheel path cracks, needs sealcoat
3/14/2023	Harmon Road	Cross Road	Walker Road	1.0	5	4	Transverse cracks, block cracking, some edge cracking
3/14/2023	Harmon Road	Walker Road	Rock Island Road	1.3	5	4	Bridge approaches paved 2022, block cracking
3/14/2023	Harmon Road	Burke Road	Keigwin Road	0.5	8	9	HMA no longer new condition
3/14/2023	Indian Head Road	Base Line Road	Keigwin Road	2.1	3	4	Transverse cracks, moderate cracking, box cracking, isolated small areas alligator cracking
3/14/2023	Indian Head Road	Keigwin Road	Tampico Road	1.0	3	4	Transverse cracks, moderate cracking, cracking in wheel paths, Alligator cracking started
3/14/2023	Indian Head Road	Tampico Road	McElwee Road	1.0	3	4	Transverse cracks, moderate cracking, cracking in wheel paths, Alligator cracking started
3/14/2023	Indian Head Road	McElwee Road	Arch Road	2.0	3	4	Transverse cracks, moderate cracking, cracking in wheel paths, Alligator cracking started
3/14/2023	Indian Head Road	Arch Road	Dietz Road	1.0	3	4	Transverse cracks, moderate cracking, cracking in wheel paths, Alligator cracking started
3/14/2023	Indian Head Road	Dietz Road	Van Petten Road	1.0	3	3	Transverse cracks, moderate cracking, cracking in wheel paths, areas of alligator cracking
3/17/2023	Inlet Road	US 30	Whitney Road	1.0	2	3	Minor rutting longitudinal cracking in wheel paths, potholes & poor patching in wheel paths
3/17/2023	Inlet Road	Whitney Road	Lee Center Road	0.3	4	3	Transverse cracks, some longitudinal cracks in wheel path (new section split), may soon be 3
3/20/2023	Inlet Road	Lee Center Road	Green Wing Road	0.5	4	4	Longitudinal cracking in wheel paths, edge cracking, may soon be a 3
3/20/2023	Inlet Road	Green Wing Road	Pine Hill Road	0.8	7	8	Transverse cracks >10', some isolated longitudinal cracks, needs crack filling
3/20/2023	Inlet Road	Pine Hill Road	Rock Road	0.7	7	8	Transverse cracks >10', some isolated longitudinal cracks, needs crack filling, may soon be 6
3/20/2023	Inlet Road	Rock Road	Dively Road	0.3	7	8	Transverse cracks >10', some isolated longitudinal cracks, needs crack filling
3/20/2023	Inlet Road	Dively Road	Montavon Road	0.3	7	8	Transverse cracks >10', some isolated longitudinal cracks, needs crack filling
3/20/2023	Inlet Road	Montavon Road	Shaw Road	1.7	7	8	Transverse cracks >10', some isolated longitudinal cracks, needs crack filling
3/14/2023	Inlet Road	Shaw Road	Richardson Road	1.5	3	3	Transverse cracking, longitudinal cracking, areas alligator cracking, a few patches, some rutting
3/14/2023	Inlet Road	Richardson Road	Shady Oaks Road	1.0	3	4	Transverse cracking, longitudinal cracking, some patching, some rutting >1/2"
3/14/2023	Inlet Road	Shady Oaks Road	Tower Road	0.9	3	3	Transverse cracking, longitudinal cracking, areas of alligator cracking, areas of patching, some rutting
3/14/2023	Inlet Road	Tower Road	US 52	0.6	3	3	Block Cracking, alligator cracking starting some rutting
3/14/2023	Inlet Road	US 52	Sublette Road	0.4	2	3	Block cracking raveling of pavement, alligator cracking starting, north end worst
3/14/2023	Keigwin Road	Harmon Road	Ryan Road	1.3	7	9	Transverse cracks >10"
3/14/2023	Keigwin Road	Ryan Road	Indian Head Road	0.7	7	9	Transverse cracks >10"
3/14/2023	La Molle Road	Maytown Road	Todd Road	1.0	6	6	Transverse cracks, some longitudinal cracks, crack filling needed
3/14/2023	La Molle Road	Todd Road	St. Marys Road	1.0	6	6	Transverse cracks, some longitudinal cracks, crack filling needed
3/14/2023	La Molle Road	St. Marys Road	Baseline Road	1.1	5	6	Transverse cracks, some longitudinal cracks, block cracking, crack filling needed
3/17/2023	Lee Center Road	City of Amboy	Sterling Road	0.5	4	4	Some cracking in wheel paths, transverse cracking, a few filled potholes
3/17/2023	Lee Center Road	Sterling Road	Shaw Road	0.5	4	4	Transverse cracking, cracking in wheel paths, block cracking, some patching
3/20/2023	Lost Nation Road	IL 2	Maples Road	1.0	3	3	Multiple transverse cracks, longitudinal cracks in wheel paths, alligator cracking starting
3/20/2023	Lost Nation Road	Maples Road	Cap Road	1.2	4	4	Multiple transverse cracks, longitudinal cracks in wheel paths, may soon be a '3'

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Asphalt Road Ratings

Rating #s: Excellent: 9 & 10, Very Good: 8, Good: 6 & 7, Fair: 4 & 5, Poor: 3, Very Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		To	From				
3/20/2023	Lost Nation Road	Cap Road	Kingdom Road	1.0	4	4	Multiple transverse cracks, longitudinal cracks in wheel paths, may soon be a '3'
3/20/2023	Lost Nation Road	Kingdom Road	Flagg Road	0.7	4	4	Multiple transverse cracks, longitudinal cracks in wheel paths, may soon be a '3'
3/20/2023	Lowell Park Road	0.1 mi north US 52	Timber Creek Road	0.8	7	7	Centerline crack, some transverse cracks >10 feet apart, cracks are filled
3/20/2023	Lowell Park Road	Timber Creek Road	Penrose Road	1.0	7	7	Centerline crack, some transverse cracks >10 feet apart, cracks are filled
3/20/2023	Lowell Park Road	Penrose Road	Pilgrim Road	1.0	7	7	Centerline crack, some transverse cracks >10 feet apart, cracks are filled
3/20/2023	Maples Road	IL 38	Stony Point Road	1.0	5	5	Transverse cracks <10 feet apart, cracks are <1/2 inch open, crack filling needed, may be 4 soon
3/20/2023	Maples Road	Stony Point Road	Lost Nation Road	1.1	5	5	Transverse cracks <10 feet apart, cracks are <1/2 inch open, crack filling needed, may be 4 soon
3/14/2023	Maytown Road	Green Wing Road	La Molle Road	0.6	5	6	Some cracking, transverse cracks <10', some edge cracking, some wear, block cracking
3/14/2023	Maytown Road	1 mile west May Road	Van Orin Road	1.0	6	7	Centerline crack, transverse cracks >10', cracks 1/2" open
3/14/2023	Maytown Road	Van Orin Road	Morgan Road	1.0	6	7	Centerline crack, transverse cracks >10', 1/2"
3/14/2023	Maytown Road	IL 26	Rogers Road	1.0	8	9	HMA no longer new condition
3/14/2023	Maytown Road	Rogers Road	Pump Factory Road	1.0	8	9	HMA no longer new condition
3/14/2023	Maytown Road	Pump Factory Road	Game Road	1.0	8	9	HMA no longer new condition
3/14/2023	Maytown Road	Game Road	Atkinson Road	1.0	8	9	HMA no longer new condition
3/20/2023	Mound Hill Road	Pilgrim Road	Penrose Road	1.0	4	4	Transverse cracks <10 feet apart, block cracking, areas of longitudinal cracks in wheel paths
3/20/2023	Mound Hill Road	Penrose Road	Timber Creek Road	1.1	4	4	Transverse cracks <10 feet apart, block cracking, areas of longitudinal cracks in wheel paths
3/20/2023	Mound Hill Road	Timber Creek Road	Paris Road	0.5	4	4	Transverse cracks <10 feet apart, block cracking, areas of longitudinal cracks in wheel paths
3/20/2023	Mound Hill Road	Paris Road	Kilgore Road	1.5	4	4	Transverse cracks <10 feet apart, block cracking, areas of longitudinal cracks in wheel paths
3/20/2023	Mound Hill Road	Kilgore Road	Palmyra Road	0.2	4	4	Transverse cracks <10 feet apart, block cracking, areas of longitudinal cracks in wheel paths
3/20/2023	Nachusa Road	US 52	McGirr Road (east)	1.6	4	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking, some patching
3/20/2023	Nachusa Road	McGirr Road (east)	IL 38	1.9	4	4	Transverse cracks, longitudinal cracks in wheel paths, block cracking, some patching
3/14/2023	Nelson Road	Rock Island Road	N. side Village of Nelson	1.4	4	4	Transverse cracks, longitudinal cracks in wheel paths, wheel path cracks
3/17/2023	North Bataan Road	Subic Road	Corregidor Road	1.0	4	4	Transverse cracks, longitudinal cracks in wheel paths
3/20/2023	Paw Paw Road	US 30	Winterton Road	0.5	4	4	Transverse cracking, longitudinal cracks in wheel paths, block cracking, may soon be a '3'
3/20/2023	Paw Paw Road	Winterton Road	Mittan Road	0.8	4	4	Transverse cracking, longitudinal cracks in wheel paths, block cracking, may soon be a '3'
3/20/2023	Paw Paw Road	Mittan Road	Lake Road	0.5	3	4	Transverse cracking, longitudinal cracks in wheel paths block cracking, raveling in cracks
3/20/2023	Paw Paw Road	Lake Road	Moffet Road	1.2	3	4	Transverse cracking, longitudinal cracks in wheel paths block cracking, raveling in cracks
3/20/2023	Paw Paw Road	Moffet Road	Howlett Road	0.8	3	3	Transverse cracking, longitudinal cracks in wheel paths, areas of alligator cracking starting
3/20/2023	Paw Paw Road	Howlett Road	Dredge Road	0.7	3	4	Transverse cracking, longitudinal cracks in wheel paths block cracking, raveling in cracks
3/20/2023	Paw Paw Road	Dredge Road	Village of Paw Paw	1.0	3	4	Transverse cracking, longitudinal cracks in wheel paths block cracking, raveling in cracks
3/20/2023	Perry Road	IL 251	Town Line Road	1.0	3	3	Transverse cracks, some block cracking, isolated areas alligator cracking, road rides rough
3/20/2023	Perry Road	Town Line Road	Steward Road	1.5	3	3	Transverse cracks, some block cracking, isolated areas alligator cracking, road rides rough
3/20/2023	Perry Road	Steward Road	RR tracks	0.6	3	3	Pot holes, transverse cracks in need of strengthening (HMA only no concrete rating given)
3/20/2023	Perry Road	east of I-39	Paw Paw Road	0.1	4	4	Transverse cracks <10 feet apart, cracking in wheel paths (HMA only no concrete)
3/20/2023	Perry Road	Paw Paw Road	Locust Road	1.0	4	4	Transverse cracks < 10 feet apart, cracking in wheel paths
3/20/2023	Perry Road	Locust Road	Woodlawn Road	1.0	4	4	Transverse cracks < 10 feet apart, cracking in wheel paths
3/20/2023	Perry Road	Woodlawn Road	County Line Road	1.0	4	4	Transverse cracks < 10 feet apart, cracking in wheel paths
3/20/2023	Pine Hill Road	Reynolds Road	McGirr Road	1.0	5	5	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/20/2023	Pine Hill Road	McGirr Road	Herman Road	1.0	5	5	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/20/2023	Pine Hill Road	Herman Road	Hillison Road	1.5	5	5	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/20/2023	Pine Hill Road	Hillison Road	Clayton Road	1.0	5	6	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/20/2023	Pine Hill Road	Clayton Road	US 30	0.5	5	6	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/20/2023	Pine Hill Road	US 30	Inlet Road	1.0	5	6	Transverse cracks <10', block cracks, some edge cracking, needs crack filling
3/14/2023	Pump Factory Road	City of Dixon	Bloody Gulch Road	0.5	6	6	transverse cracks, chip seal on road, crack filling needed

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Asphalt Road Ratings

Rating #s: Excellent: 9 & 10, Very Good: 8, Good: 6 & 7, Fair: 4 & 5, Poor: 3, Very Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		To	From				
3/14/2023	Pump Factory Road	US 30	Rhodenbaugh Road	1.0	4	4	cracking, some rutting 1/2", chip seal on road
3/14/2023	Pump Factory Road	Rhodenbaugh Road	Sterling Road	1.5	4	4	cracking, some rutting 1/2", chip seal on road
3/20/2023	Reynolds Road	Brooklyn Road	Thorpe Road	1.0	4	4	Transverse cracks <10 feet apart, block cracking, cracks in wheel paths
3/20/2023	Reynolds Road	Thorpe Road	Town Hall Road	1.0	4	4	Transverse cracks <10 feet apart, block cracking, cracks in wheel paths
3/20/2023	Reynolds Road	Town Hall Road	Melugins Grove Road	0.5	4	4	Transverse cracks <10 feet apart, block cracking, cracks in wheel paths
3/20/2023	Reynolds Road	Melugins Grove Road	IL 251	1.0	4	4	Transverse cracks <10 feet apart, block cracking, cracks in wheel paths
3/20/2023	Reynolds Road	Brooklyn Road	Meridian Road	0.9	3	3	Transverse cracks, some longitudinal cracks, block cracking, some patching
3/20/2023	Reynolds Road	Meridian Road	Middlebury Road	1.0	3	3	Transverse cracks, some longitudinal cracks, block cracking, some patching
3/20/2023	Reynolds Road	Middlebury Road	Ashton Road	1.0	3	3	Transverse cracks, some longitudinal cracks, block cracking, some patching
3/20/2023	Reynolds Road	Ashton Road	Midway Road	1.0	5	4	Transverse cracks, some longitudinal cracks, extensive block cracking, mostly crack filled
3/20/2023	Reynolds Road	Midway Road	Pine Hill Road	1.5	5	4	Transverse cracks, some longitudinal cracks, extensive block cracking, crack filled
3/20/2023	Reynolds Road	Pine Hill Road	Buffalo Road	0.8	5	4	Transverse cracks, some longitudinal cracks, extensive block cracking, crack filled
3/20/2023	Reynolds Road	Buffalo Road	Willow Road	0.6	5	5	Transverse cracks, some longitudinal cracks, extensive block cracking, crack filled
3/20/2023	Reynolds Road	Willow Road	Village of Franklin Grove	1.0	5	4	Transverse cracks, some longitudinal cracks, extensive block cracking, crack filled
3/14/2023	Rock Island Road	Whiteside County line	Nelson Road	1.8	4	4	Block cracking, wheel path crack numerous, raveling of cracks visible
3/14/2023	Rock Island Road	Nelson Road	Bollman Road	1.2	4	5	Bridge approach by Nelson is '3', some potholes, transverse cracking, cracks in wheel paths
3/14/2023	Rock Island Road	Bollman Road	Walker Road	1.2	4	5	Transverse cracks, block cracking, some potholes, longitudinal cracking in wheel paths
3/14/2023	Rock Island Road	Walker Road	Harmon Road	0.6	5	5	Transverse cracks, block cracking, some longitudinal cracking, crack filling needed
3/14/2023	Rock Island Road	Harmon Road	Atkinson Road	1.1	6	6	Transverse cracks, some block cracking, some longitudinal cracking, crack filling
3/14/2023	Rock Island Road	Atkinson Road	just west Bloody Gulch Road	1.2	5	5	Transverse cracks, block cracking, some longitudinal cracking in wheel path, crack filling needed
3/14/2023	Rock Island Road	just west Bloody Gulch Road	City of Dixon	1.0	3	3	Potholes with poor patching, raveling of HMA, cracks in wheel paths
3/21/2023	Shaw Road	Lee Center Road	Searls Road	0.7	4	4	Transverse cracking less than 10' apart, longitudinal cracking, block cracking, minor rutting
3/21/2023	Shaw Road	Searls Road	Green Wing Road	1.6	5	5	Transverse cracking less than 10' apart, some longitudinal cracking, may soon be a '4'
3/21/2023	Shaw Road	Green Wing Road	Inlet Road	1.5	4	5	Transverse cracking less than 10' apart, some longitudinal cracking, minor rutting in places
3/21/2023	Shaw Road	Inlet Road	Isenburg Road	0.8	4	4	Transverse cracking less than 10' apart, longitudinal cracking in wheel paths, block cracking
3/21/2023	Shaw Road	Isenburg Road	Burkhardt Road	0.8	4	4	Transverse cracking less than 10' apart, longitudinal cracking in wheel paths, block cracking
3/21/2023	Shaw Road	Burkhardt Road	Beaver Road	1.5	4	4	Transverse cracking less than 10' apart, longitudinal cracking in wheel paths, block cracking
3/21/2023	Shaw Road	Beaver Road	Brooklyn Road	1.6	4	4	Transverse cracking less than 10' apart, longitudinal cracking in wheel paths, block cracking
3/21/2023	Shaw Road	Brooklyn Road	Hutchison Road	1.1	8	3	Overlaid 2021, isolated cracks, may soon be a '7', may need crack filling soon
3/21/2023	Shaw Road	Hutchison Road	Carnahan Road (east)	0.9	8	3	Overlaid 2021, isolated cracks, may soon be a '7', may need crack filling soon
3/21/2023	Shaw Road	Carnahan Road (east)	IL 251	1.0	8	3	Overlaid 2021, isolated pothole, may soon be a '7'
3/17/2023	South Bataan Road	Corregidor Road	Subic Road	1.1	4	4	Transverse cracks, some areas of wheel path cracks, some areas of patching
3/17/2023	South Eldena	Eldena Road	IL 26	1.8	4	5	Lots of transverse cracks some longitudinal cracks in wheel path, block cracking, some potholes
3/20/2023	South Paw Paw Road	Village of Paw Paw limits	Angling Road	0.3	4	4	Longitudinal cracking in wheel wells, block cracking
3/20/2023	Spur Road	IL 251	Brooklyn Road	1.5	4	4	Transverse cracking, longitudinal cracks, block cracking, rough pavement, may soon be a '3'
3/14/2023	Sterling Road	Harmon Road	Atkinson Road	1.0	7	7	A transverse cracks >10', center line crack, cracks filled
3/14/2023	Sterling Road	Atkinson Road	Hoyle Road	1.0	7	7	A transverse cracks >10', center line crack, cracks filled
3/14/2023	Sterling Road	Hoyle Road	Pump Factory Road	1.0	7	7	A transverse cracks >10', center line crack, cracks filled
3/14/2023	Sterling Road	Pump Factory Road	Dutch Road	1.0	7	7	A transverse cracks >10', center line crack, cracks filled
3/14/2023	Sterling Road	Dutch Road	IL 26	1.0	7	7	A transverse cracks >10', center line crack, cracks filled
3/14/2023	Sterling Road	IL 26	Walton Road	1.0	6	6	Transverse crack less than 10', cracks filled
3/20/2023	Steward Road	Perry Road	Elva Road	1.0	3	3	Transverse cracks quite rough, cracking in wheel paths, alligator cracking starting
3/20/2023	Steward Road	Elva Road	Hayes Road	1.5	3	3	Transverse cracks quite rough, cracking in wheel paths, alligator cracking starting
3/20/2023	Steward Road	Hayes Road	Ogle County Line	0.5	3	3	Transverse cracks quite rough, cracking in wheel paths, alligator cracking starting

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Asphalt Road Ratings

Rating #'s: Excellent: 9 & 10, Very Good: 8, Good: 6 & 7, Fair: 4 & 5, Poor: 3, Very Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		To	From				
3/20/2023	Steward Road	US 30	Cobb Lane Road	0.5	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
3/20/2023	Steward Road	Cobb Lane Road	Willow Creek Road	0.5	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
3/20/2023	Steward Road	Willow Creek Road	Lee Road	1.0	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
3/20/2023	Steward Road	Lee Road	Herman Road	1.0	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
2/20/2023	Steward Road	Herman Road (W)	Herman (East)	0.5	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
3/20/2023	Steward Road	Herman Road	1/2 north of Herman	0.5	3	4	Transverse cracking, longitudinal in wheel paths, block cracking, alligator cracking in places
3/20/2023	Steward Road	1/2 mile S. McGirr Road	McGirr Road	0.5	4	4	Transverse cracking close together, areas of longitudinal cracking in wheel paths, may soon be 3
3/20/2023	Steward Road	McGirr Road	Reynolds Road	1.0	4	4	Transverse cracking close together, areas of longitudinal cracking in wheel paths, may soon be 3
3/20/2023	Steward Road	Reynolds Road	Perry Road	1.0	3	4	Transverse cracking close together, areas of longitudinal cracking in wheel paths, may soon be 3
3/17/2023	Subic Road	South Bataan Road	North Bataan Road	0.9	5	5	Transverse cracks, block cracking, may soon be a '4'
3/14/2023	Sublette Road	US 52	Inlet Road	0.5	3	3	Transverse cracking and block cracking, areas of potholes, extensive cracking, some rutting
3/14/2023	Sublette Road	Inlet Road	Green Wing Road	1.0	5	5	Transverse cracks <10', secondary cracks, centerline cracking, some edge cracking
3/14/2023	Tampico Road	Indian Head Road	Eakle Road	1.0	8	9	HMA no longer new condition, a few isolated longitudinal cracks
3/14/2023	Tampico Road	Eakle Road	Hamilton Road	1.0	8	9	HMA no longer new condition
3/14/2023	Van Petten Road	Harmon Road	Ryan Road	1.0	7	7	Some edge cracking, transverse (>10') & longitudinal cracks, seal coat overlay
3/14/2023	Van Petten Road	Ryan Road	Indian Head Road	1.0	7	6	Some edge cracking, transverse (>10') & longitudinal cracks, seal coat overlay
3/14/2023	Walton Road	Sterling Road	village	0.5	6	5	Transverse crack less than 10', block cracking starting, cracks filled
3/14/2023	Walton Road	village	Amboy Road	0.5	5	4	Transverse cracks, block cracking, cracks filled

Appendix B
Lee County Asphalt PASER
Ratings Map

Appendix C
Lee County Sealcoat PASER
Ratings Spreadsheet

2023 Lee County Pavement Surface Evaluation and Rating (PASER)

Sealcoat Road Ratings

Rating #s: Excellent: 5, Good: 4, Fair: 3, Poor: 2, Failed: 1

See PASER Manual for more information about ratings.

Inspection Date	Road Name	Road Section		Approx. Mileage	PASER Rating	2021 Rating	Additional Comments
		From	To				
3/17/2023	Corregidor Road	Sterling	South Bataan Road	0.4	3	3	Minor surface wear, slight edge cracking, some flushing
3/14/2023	Harmon Road	Harmon Grain Elevator	Henry Road	0.2	3	3	Some edge cracking
3/14/2023	Harmon Road	Henry Road	Van Petten Road	1.0	3	3	Some edge cracking
3/17/2023	Lee Center Road	Shaw Road	Schier Road	1.3	2	3	Edge cracking, rutting especially along outside wheel path, needs crown improvement
3/17/2023	Lee Center Road	Schier Road	Inlet Road	1.6	2	3	Edge cracking, rutting especially along outside wheel path, needs drainage improvement
3/14/2023	Maytown Road	La Molle Road	Rocky Ford Road	1.8	4	2	HMA Wedging done 2022, to be sealcoated 2023, some edge cracking
3/14/2023	Maytown Road	Rocky Ford Road	May Road	0.7	4	2	HMA Wedging done 2022, to be sealcoated 2023, some edge cracking
3/14/2023	Maytown Road	May Road	1 mile west May Road	1.0	3	3	Minor bleeding, some transverse cracks, some edge cracking
3/14/2023	Maytown Road	Morgan	Carter Road	1.0	4	3	Some edge cracking, some wear, center in good condition
3/14/2023	Maytown Road	Carter Road	Downey Road	1.0	4	3	a few edges breaking off, center in good condition
3/14/2023	Maytown Road	Downey Road	Scout Road	0.5	4	3	Some edges breaking off, center in good condition
3/14/2023	Maytown Road	Scout Road	IL 26	1.5	4	3	Some edge breaking off, center in good condition
3/14/2023	Morgan Road	Amboy Road	River View Road	0.8	4	3	Minor edge cracking & edges breaking off
3/14/2023	Morgan Road	River View Road	Edwards Road	0.8	4	3	Minor edge cracking & edges breaking off
3/14/2023	Morgan Road	Edwards Road	Sleepy Hollow Road	1.0	4	3	Minor edge cracking & edges breaking off
3/14/2023	Morgan Road	Sleepy Hollow Road	Briar Knoll Road	1.0	4	3	Minor edge cracking & edges breaking off
3/14/2023	Morgan Road	Briar Knoll Road	Sublette Road	1.0	4	3	edge cracking and and breaking off
3/14/2023	Morgan Road	Sublette Road	Maytown Road	1.0	4	3	Minor edge cracking and minor bleeding
3/20/2023	Pilgrim Road	Sugar Grove Road	Mound Hill Road	0.7	3	3	Some edge cracking, minor rutting, minor flushing
3/14/2023	Pump Factory Road	Bloody Gulch Road	Lievan Road	1.5	4	3	Moderate edge cracking, some transverse cracking
3/14/2023	Pump Factory Road	Lievan Road	Walker Road	1.0	4	3	Moderate edge cracking, some transverse cracking
3/14/2023	Pump Factory Road	Walker Road	Hanne Road	1.0	4	3	Moderate edge cracking, some transverse cracking
3/14/2023	Pump Factory Road	Hanne Road	US 30	1.0	4	3	Moderate edge cracking, some transverse cracking
3/14/2023	Rocky Ford Road	Maytown Road	Sublette Road	1.2	2	2	Rutting, some bleeding, heavy edge cracking, poor patches, FDR w/ HMA in 2023
3/14/2023	Rocky Ford Road	Sublette Road	Briar Knoll Road	1.2	2	3	Rutting, some bleeding, heavy edge cracking, poor patches, FDR w/ HMA in 2023
3/14/2023	Rocky Ford Road	Briar Knoll Road	Sleepy Hollow Road	1.9	2	3	Some rutting, some bleeding, heavy edge cracking, poor patches, FDR w/ HMA in 2023
3/14/2023	Rocky Ford Road	Sleepy Hollow Road	Morman Road	0.8	3	3	Some edge cracking, some bleeding, FDR w/ HMA in 2023
3/14/2023	Rocky Ford Road	Morman Road	Amboy Road	1.0	3	3	Rutting in places, edge cracking, cracking along center joint, FDR w/ HMA in 2023
3/20/2023	Sugar Grove Road	Palmyra Road	Peek Home Road	1.1	2	3	moderate to heavy edge crack, edges breaking off
3/20/2023	Sugar Grove Road	Peek Home Road	Penrose Road	1.2	3	3	Some edge cracking, isolated edges breaking off
3/20/2023	Sugar Grove Road	Penrose Road	Pilgrim Road	1.5	3	3	Some edge cracking, isolated edges breaking off
3/14/2023	Van Petten Road	Indian Head Road	Schilpp Road	0.5	3	4	Edge cracking and breaking off, some wear and aggregate, Road rides moderately rough
3/14/2023	Van Petten Road	Schilpp Road	Eakle Road	0.5	3	4	Edge cracking and breaking off, some wear and aggregate, Road rides moderately rough
3/14/2023	Van Petten Road	Eakle Road	Hamilton Road	1.0	4	4	Edge cracking and breaking off

Appendix D
Lee County Sealcoat PASER
Ratings Map

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