



2021 Regional Pavement Condition Survey Report

Prepared by The Grand Valley Metro Council

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Purpose and Background

Purpose

The purpose of this report is to document the annual survey undertaken by GVMC and its member agencies to determine the overall pavement condition of the federal aid road network, or NFC in the Grand Rapids MPO area (see map on next page). The report has been developed with the distinct intent that updates can be developed without significant commitment of financial or staffing resources.

* Any reference to National Functional Class (“NFC”) in this document refers to the federal aid network with an NFC < 7. GVMC’s members identify federal aid roads as being “on the NFC”. As well, if “Local NFC” is referenced that assumes the omission of Michigan Department of Transportation (MDOT) roads where the Legasl System <> 1.

Background

For the Grand Valley Metro Council and its member communities, the desire to have up to date knowledge of the condition of the federal aid system began in 1995 with the initiation of the GVMC Pavement Management System (PaMS). While federal regulation requiring the maintenance of a PaMS came and went in the mid 90’s, GVMC and its member communities strongly supported continuation of the collection of pavement condition data.

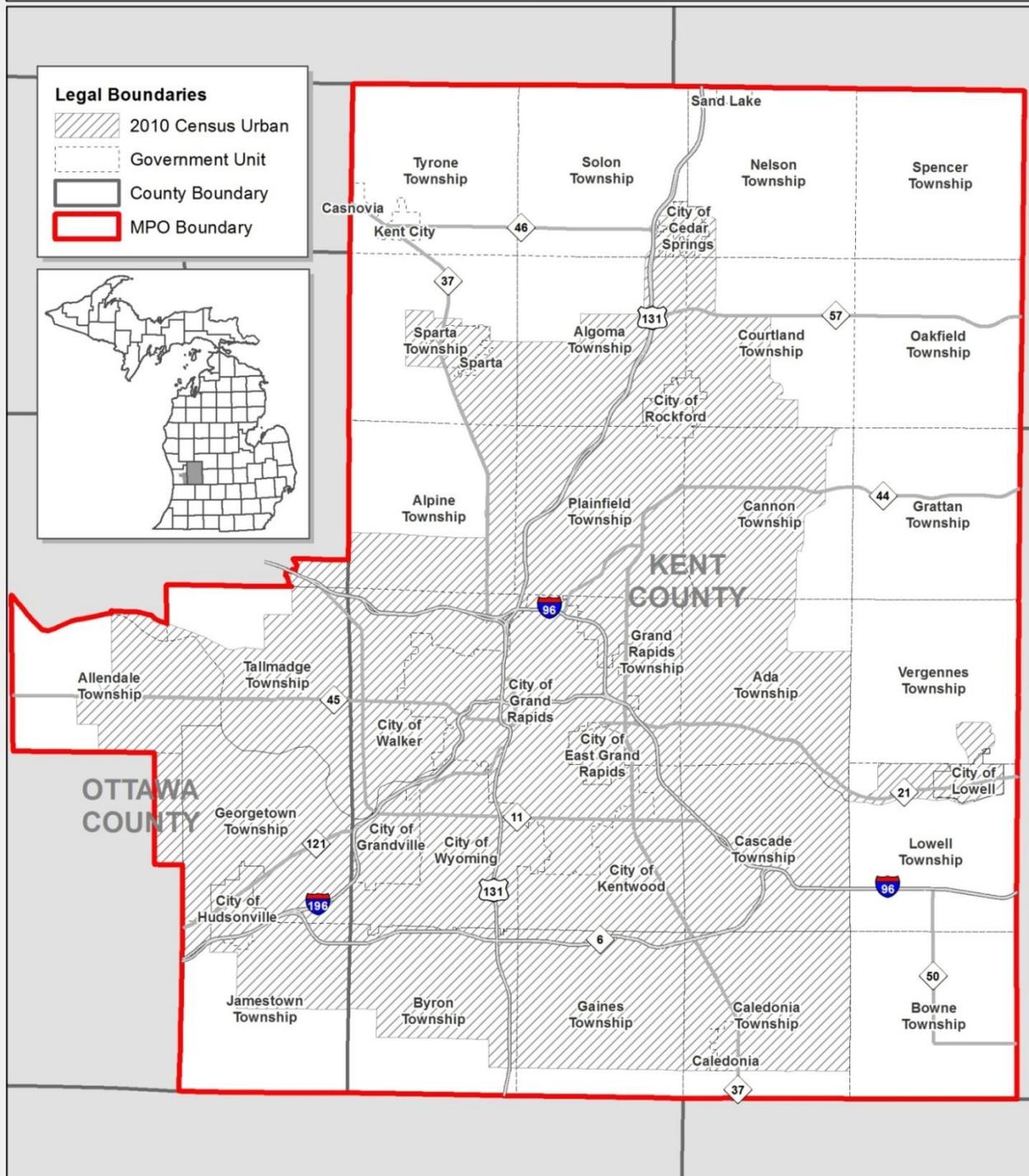
Act 499 of the Public Acts of 2002 mandated that beginning October 1, 2003, MDOT, each county road commission, and each city and village in the State of Michigan was required to annually prepare and publish a multiyear program, based on long-range plans, and developed through the use of an asset management process. In addition, projects contained in each local road agency’s annual multiyear program were to be consistent with the goals and objectives of the local road agency’s long-range plan. A project, funded in whole or part, with state or federal funds, was to be included in any local road agency’s multiyear plan.

Public Act No. 199 of Public Acts of 2007 was approved by the Governor on December 20, 2007. This act removed the long range plan as a potential basis for making programming decisions on transportation investments and required the use of an asset management process. P.A. 199 also made it a requirement that all reporting shall be consistent with categories established by the transportation asset management council.

In recent years GVMC staff has coordinated pavement condition gathering with all member agencies in the region. In addition, GVMC regularly provides technical assistance in the development of pavement asset management plans and other asset management required activities.

GVMC Boundary Map

Metropolitan Planning Organization Urban Boundary



0 1 2 3 4 5 Miles

Disclaimer: GVMC makes no warranty or guarantee regarding maps or other information provided herein. GVMC assumes no liability for errors, omissions, or inaccuracies that result in any decisions made or action taken upon any maps or information presented.

PASER Data Collection

Current Data Collection Efforts

Today more than ever the need for accurate up to date road condition information is critical. GVMC annually assists local communities in the gathering of this data on over 3,000 miles of federal aid and local facilities using the PASER rating system.

Any discussion regarding system conditions must include a clearly defined system to rate conditions. Beginning in 2012 GVMC stopped gathering PCI data and began relying exclusively on the PASER rating system for all planning and programming purposes.

The PASER pavement rating system is based on a scale of 1 to 10 with 10 being a newly constructed pavement and a 1 being a failed pavement with extensive loss of surface integrity that is well beyond its service life and is in dire need of reconstruction. The chart that follows depicts the various levels within the PASER rating system along with the conditions that can be expected for each level.

Michigan Asset Management Council Reporting Requirements

Established by Act 499 of the Public Acts of 2002, the Transportation Asset Management Council (TAMC) was created to expand the practice of asset management statewide and to enhance the efficiency of investing in Michigan's roads and bridges. Part of the TAMC's mission is to collect physical inventory and condition data on all roads and bridges in Michigan.

TAMC is a legislated body of representatives who report to the Michigan Transportation Commission from agencies who own roads or are responsible for road funding that coordinate:

- The collection of condition data for all roads and bridges
- The collection of asset investment data
- The reporting of collected data and analysis to the legislature and State Transportation Commission.

The method used by the TAMC to report the general condition of the roads in Michigan is to group the ratings into three simple and easy to understand categories. This good/fair/poor grouping is meant to easily depict the general condition of the roads under state and local jurisdiction to those with little or no knowledge in asset management.

The TAMC groups pavements according to the following groupings:
PASER 10-8 = Good, PASER 7-5 = Fair, PASER 4-1 = Poor

Michigan Asset Management Council PASER Asphalt Primer

<u>PASER</u>	<u>Condition</u>	<u>Distress Present</u>	<u>Possible Remedy</u>
10	Excellent	No Defects, new pavement	None
9	Excellent	No Defects, pavement < 1 yr	None
8	Very Good	Few widespread cracks	Little or none
7	Good	Cracking becoming prominent	Crack Seal
6	Good	Structure sound, block cracking	Seal Coat
5	Fair	Structure sound, crack width > 1/2	Thin Overlay
4	Fair	First signs of weakened structure	Structural Overlay >2"
3	Poor	Alligator cracking, severe block cracking	Mill w/ Structural Overlay 2"
2	Very Poor	Severe rutting, frequent potholes	Reconstruct
1	Failed	Complete Loss of surface integrity	Reconstruct

For more information on the specific techniques and terminology used for rating pavement condition using PASER please go to:

Asphalt

<http://www.apa-mi.org/docs/Asphalt-PASERManual.pdf>

Concrete

<https://www.ctt.mtu.edu/sites/default/files/resources/paser/concretepaser.pdf>

Brick

<https://www.ctt.mtu.edu/sites/default/files/resources/paser/brick&blockpaser.pdf>

Gravel

<https://www.ctt.mtu.edu/sites/default/files/resources/paser/gravelpaser.pdf>

The following collection of images show what both Concrete and Asphalt might look through PASER ratings from 10 to 1.

PASER Rating Photo Examples

PASER 10



Patterson – North of 28th Street (2008)

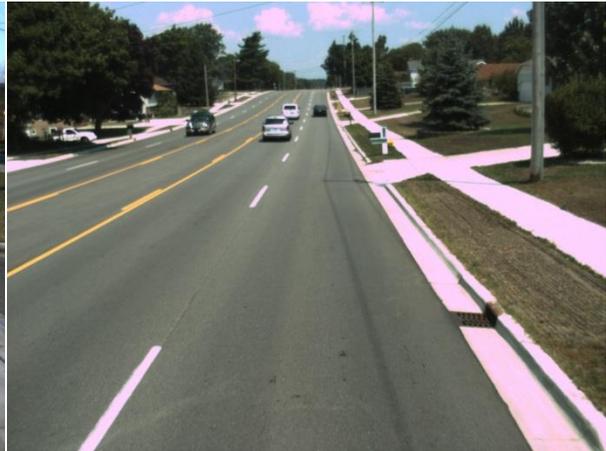


Monroe – North of Leonard (2008)

PASER 9



Baldwin Extension – West of I-196 (2008)



Balsam – North of Rosewood (2008)

PASER 8



M-6 – East of US-131 (2008)



36th Street East of East Paris (2008)

PASER 7



Leonard St – East of Remembrance (2008) Market Ave – East of Freeman (2008)

PASER 6



East Beltline Ave – South of Burton (2008) 29th Street – West of East Beltline (2008)

PASER 5



East Beltline – South of Michigan (2008)

Woodworth Ave – East of Coit (2008)

PASER 4



Burton Street – Near US-131 (2008)



Belmont Ave – North of Rogue River (2008)

PASER 3



Chicago Drive – West of 32nd (2008)



14th Avenue – South of 44th Street (2008)

PASER 2



Century Avenue North of Burton (2008)



Lakeside Drive – South of Robinson (2008)

PASER 1



Seward – South of Richmond (2008)



Sweet Street – East of Plainfield (2008)

Current MPO Conditions

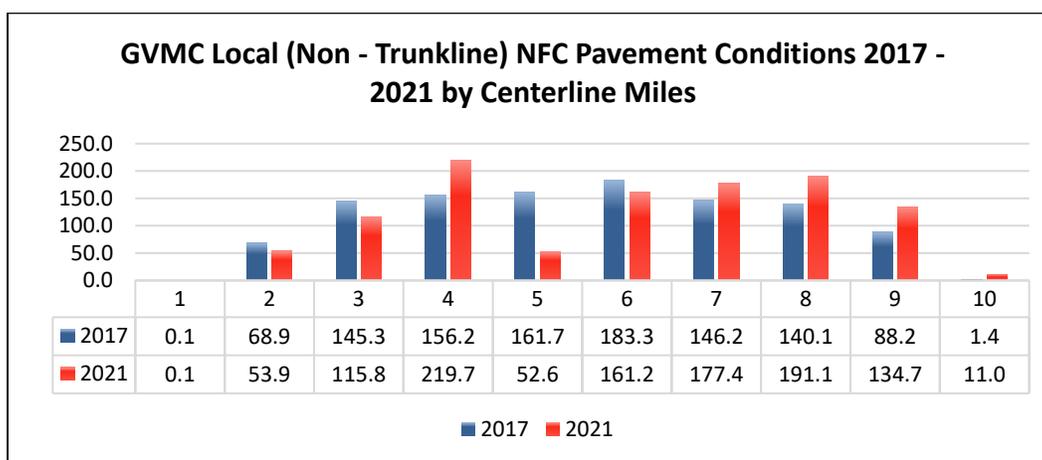
2021 Survey Results

It was an interesting survey year due to COVID-19 for a second year in a row and restrictions with personnel from the MDOT and our local government entities. Maintaining a safe distance in GVMC’s pavement collection van proved difficult limiting us to only 2 occupants at a time. Precautions taken included masks always being worn and a plastic divider outfitted to partition the driver and passenger.

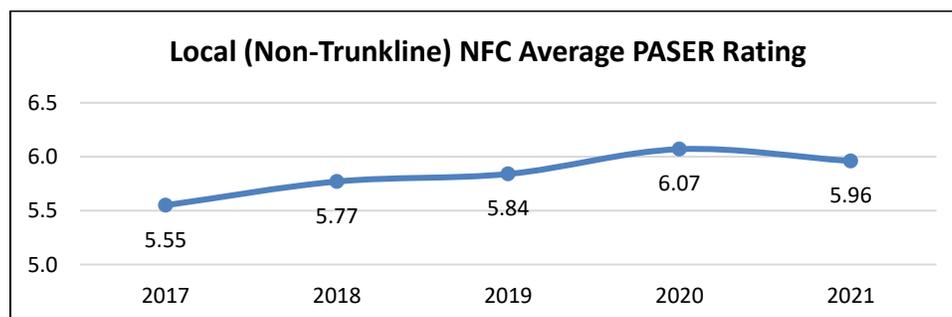
Despite these limitations, GVMC staff was able to evaluate 99% of the non-trunkline local federal aid Metropolitan Planning Organization (MPO) road network. The only exclusions from years past are the MDOT ramps which will be collected in 2022.

To view detailed condition information for the last 3 years please visit our interactive map at <https://www.gvmc.org/pavement-asset-management> . The following maps are in black and white to highlight the network being analyzed.

Compared to 5 years ago, the overall pavement condition in the GVMC area is on the rise. 2021 saw a slight decrease in the overall PASER rating average compared to 2020. It would stand to reason that with continued investment and use of the “Mix of Fix” strategy, we should be able to find our average into the high fair (PASER of 7) for the MPO in the near future.



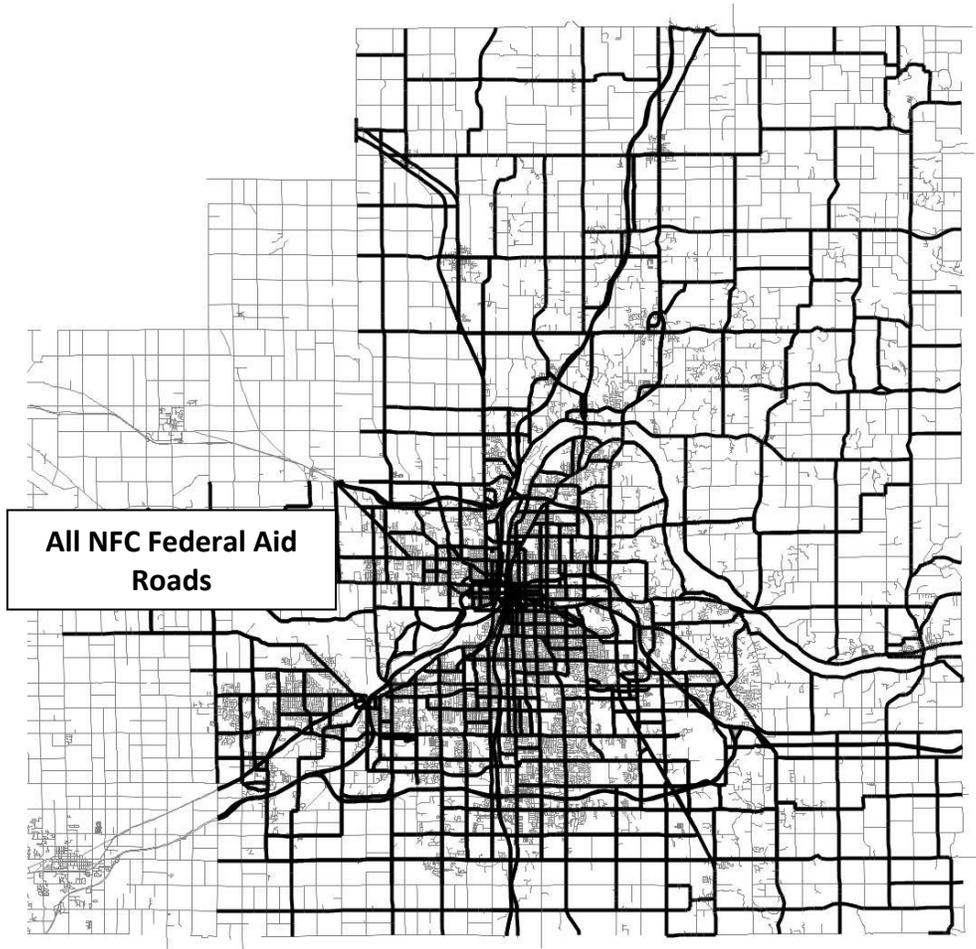
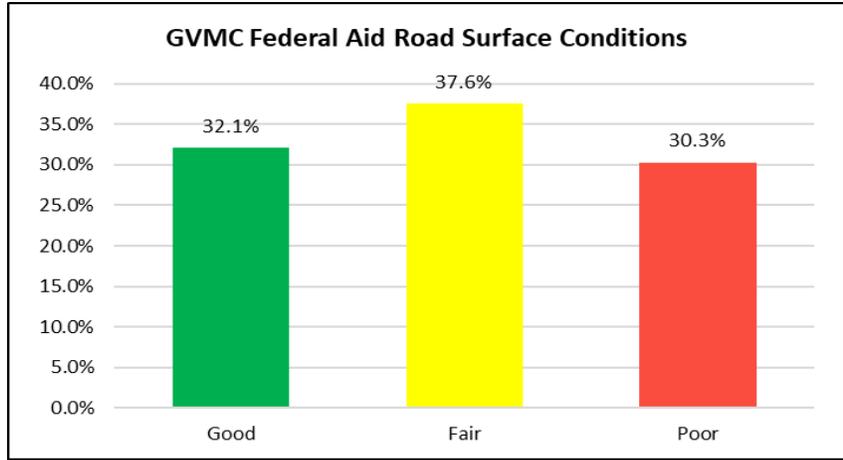
2017 Overall Rating = 5.55 2021 Overall Rating = 5.96



All MPO NFC Federal Aid Pavement Conditions

Average PASER = 6.46 (Good/Fair = 69.62%)

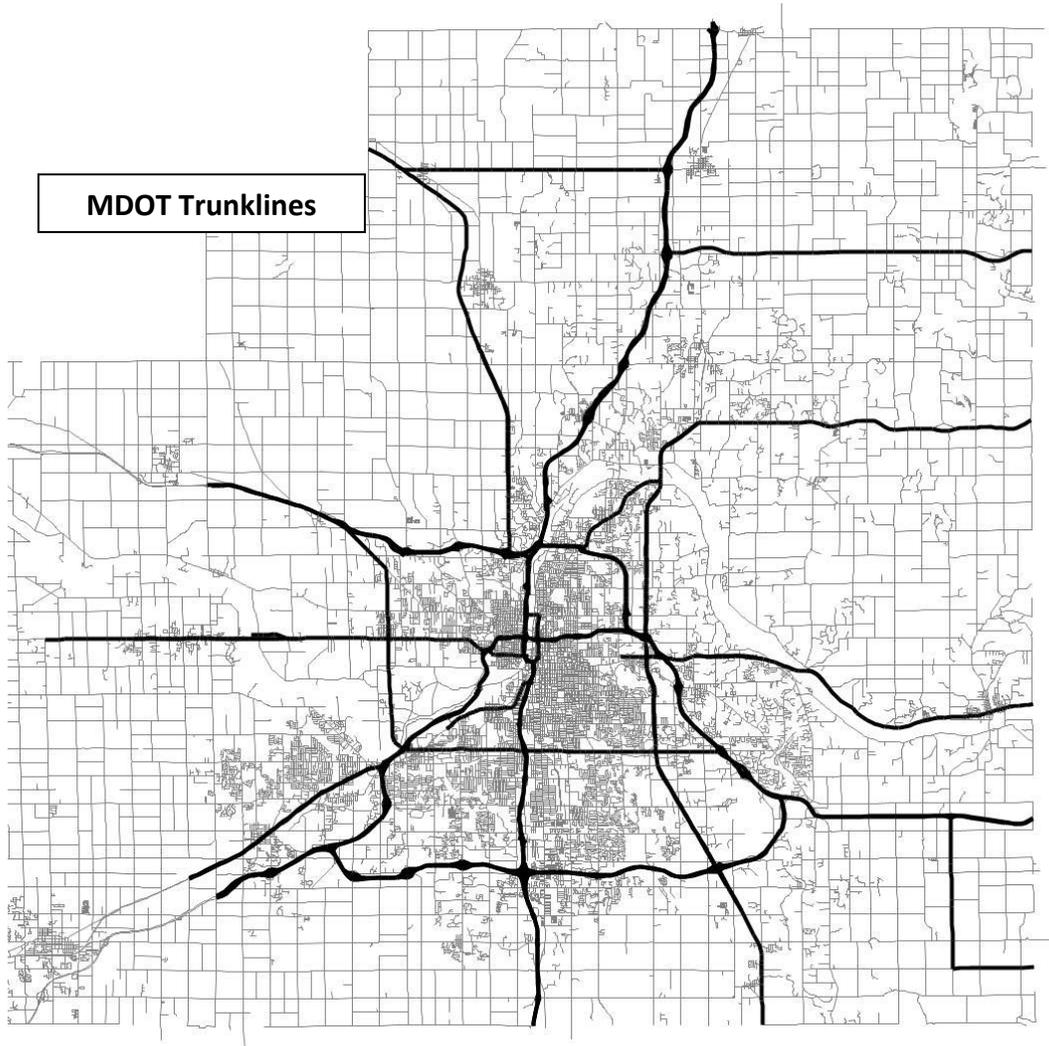
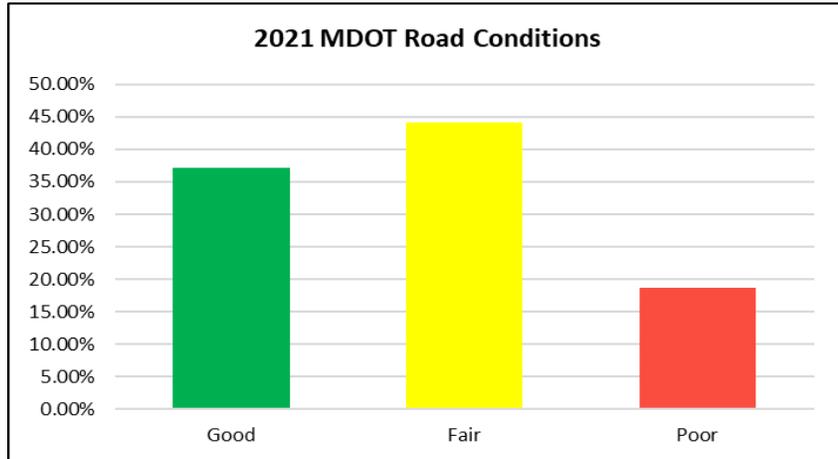
<u>PASER</u>	<u>Miles</u>	<u>Percent</u>
1	0.1	0.01%
2	56.0	3.62%
3	125.5	8.11%
4	288.3	18.64%
5	69.2	4.47%
6	242.9	15.70%
7	268.9	17.39%
8	275.2	17.79%
9	205.3	13.27%
10	15.3	0.99%
Total	1,546.84	100%



MDOT Trunkline Pavement Conditions

Average PASER = 6.695 (Good/Fair = 81.29%)

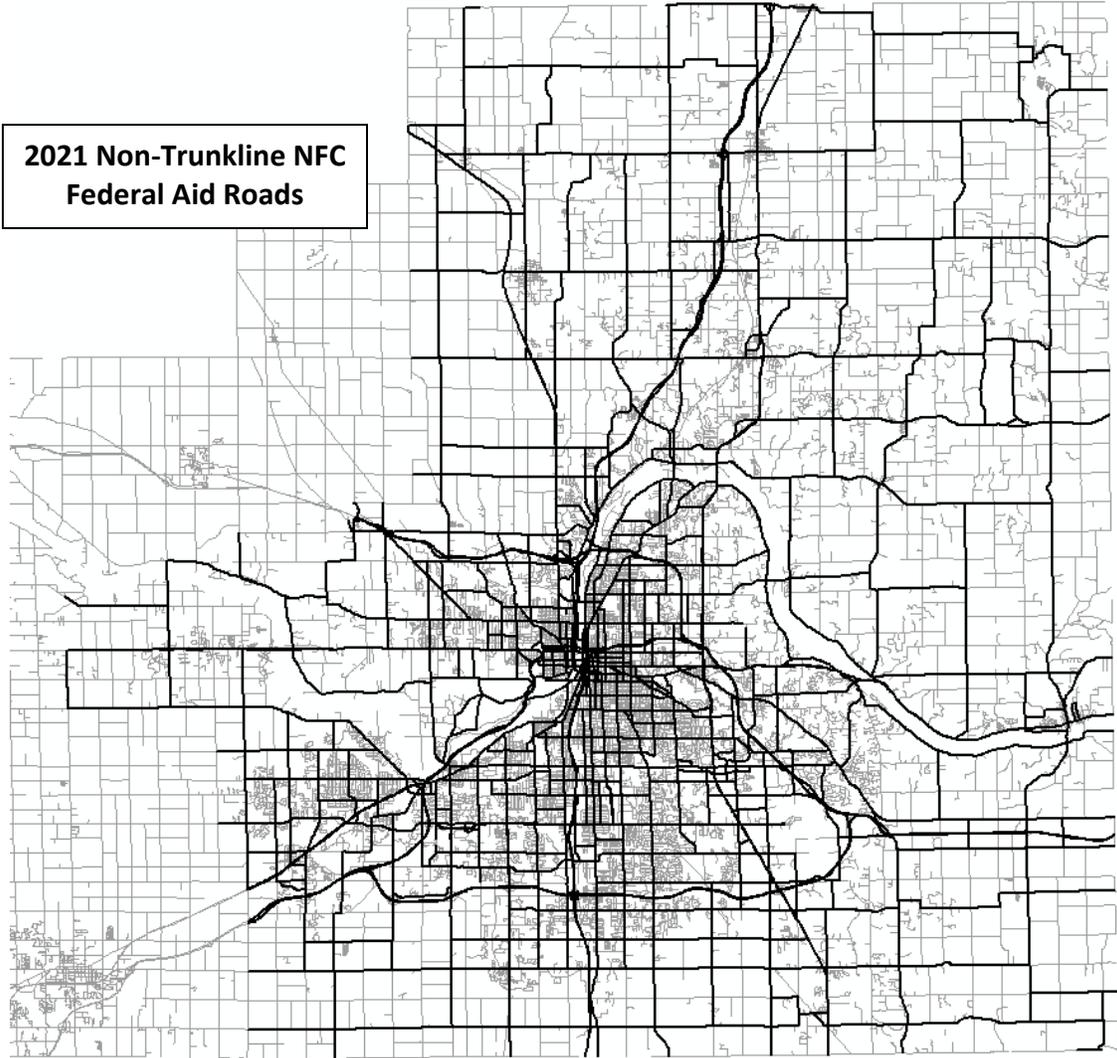
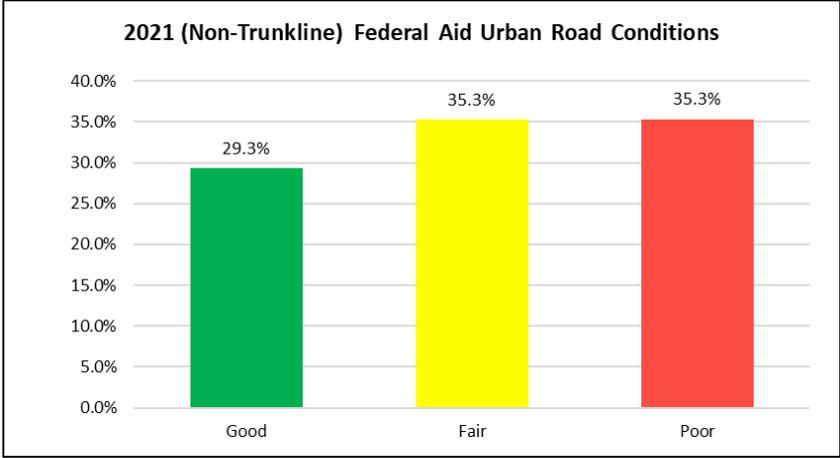
PASER	Miles	Percent
1	0	0.00%
2	2.045	0.48%
3	9.682	2.26%
4	68.605	15.98%
5	16.582	3.86%
6	81.69	19.03%
7	91.512	21.32%
8	84.171	19.61%
9	70.664	16.46%
10	4.33	1.01%
Total	429.281	100.00%



2021 Non-Trunkline Federal Aid Pavement Conditions

Average PASER= 5.96 (Good/Fair = 64.66%)

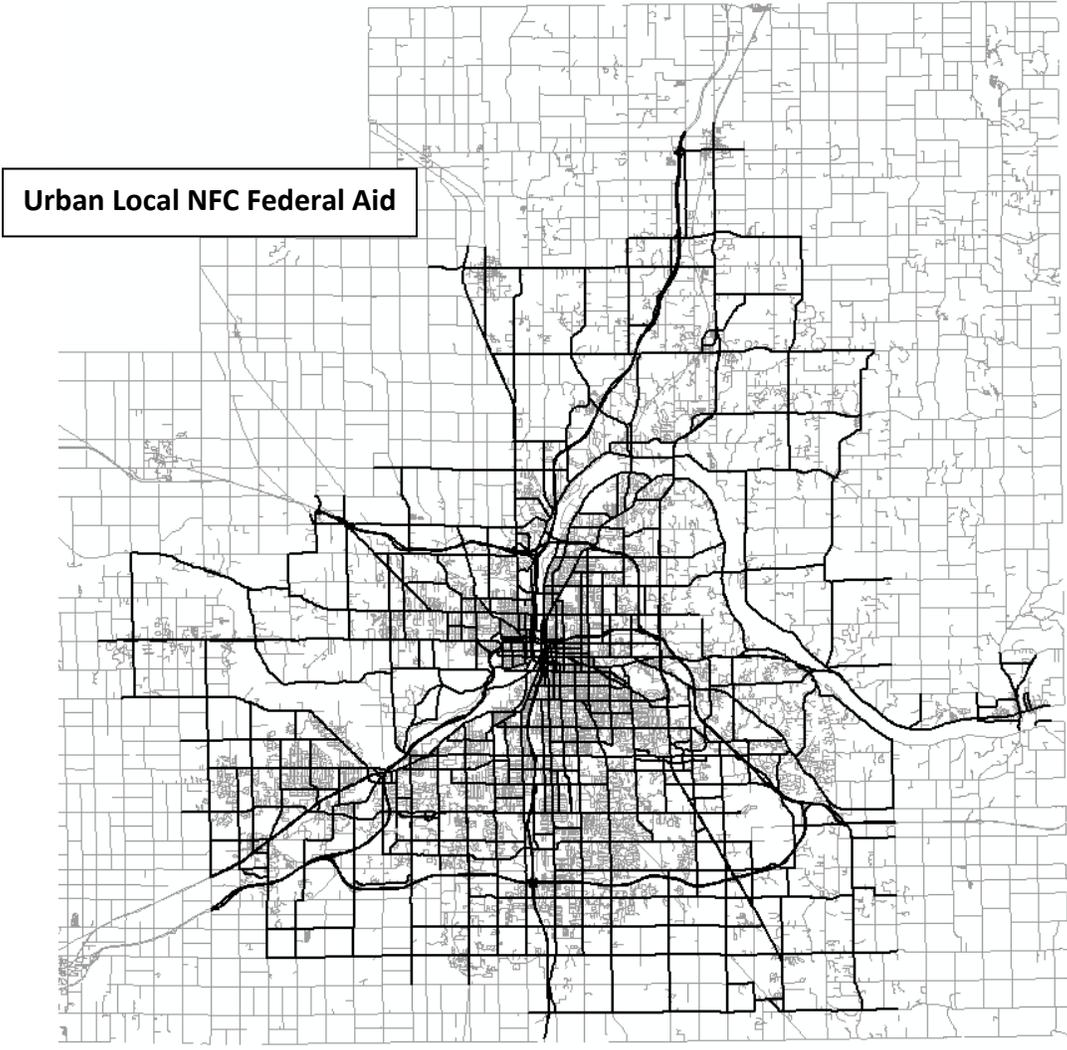
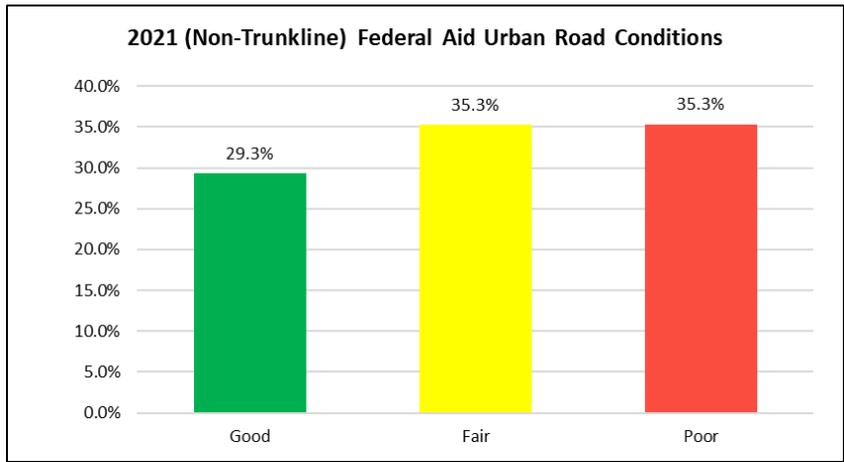
PASER	Miles	Percent
1	0.106	0.01%
2	45.755	5.32%
3	85.017	9.88%
4	173.245	20.13%
5	37.885	4.40%
6	124.565	14.48%
7	141.438	16.44%
8	148.045	17.20%
9	93.442	10.86%
10	11.007	1.28%
Total	860.505	100%



2021 Non-Trunkline Local Urban Federal Aid

Average PASER = 5.92 (Good/Fair = 64.66%)

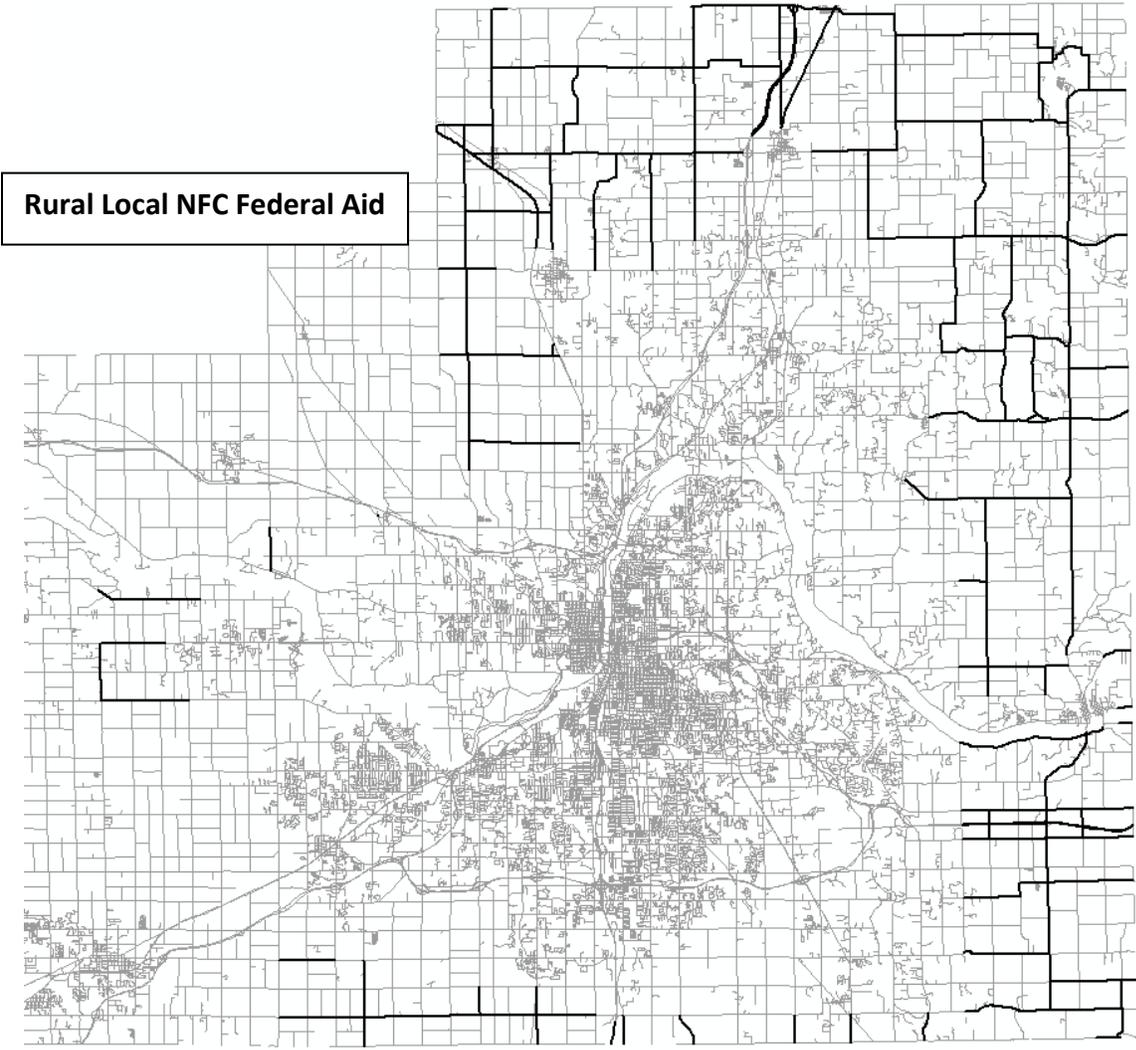
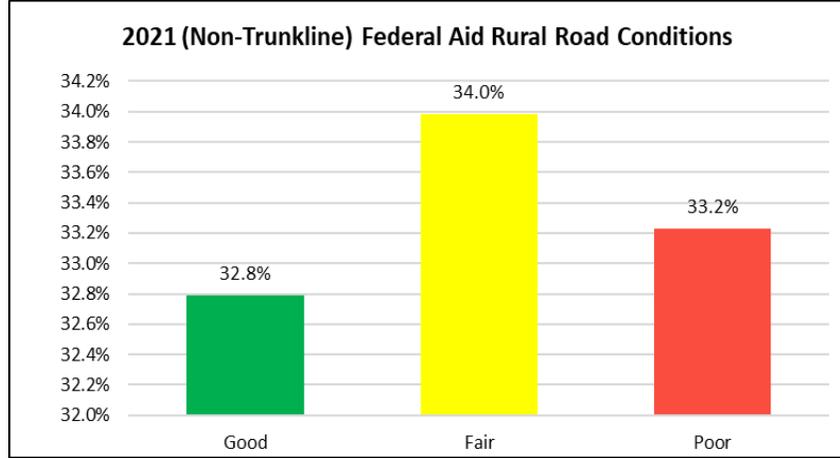
PASER	Miles	Percent
1	0.106	0.01%
2	45.755	5.32%
3	85.017	9.88%
4	173.245	20.13%
5	37.885	4.40%
6	124.565	14.48%
7	141.438	16.44%
8	148.045	17.20%
9	93.442	10.86%
10	11.007	1.28%
Total	860.505	100%



2021 Non-Trunklin Local Rural Federal Aid

Average PASER = 6.05 (Good/Fair = 66.76%)

PASER	Miles	Percent
1	0	0.00%
2	8.18	3.18%
3	30.797	11.98%
4	46.446	18.07%
5	14.713	5.72%
6	36.67	14.26%
7	35.98	14.00%
8	43.029	16.74%
9	41.23	16.04%
10	0	0.00%
Total	257.045	100%



Pavement Conditions by Jurisdiction

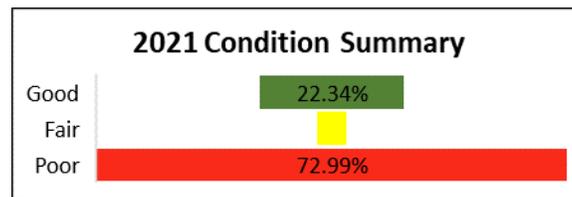
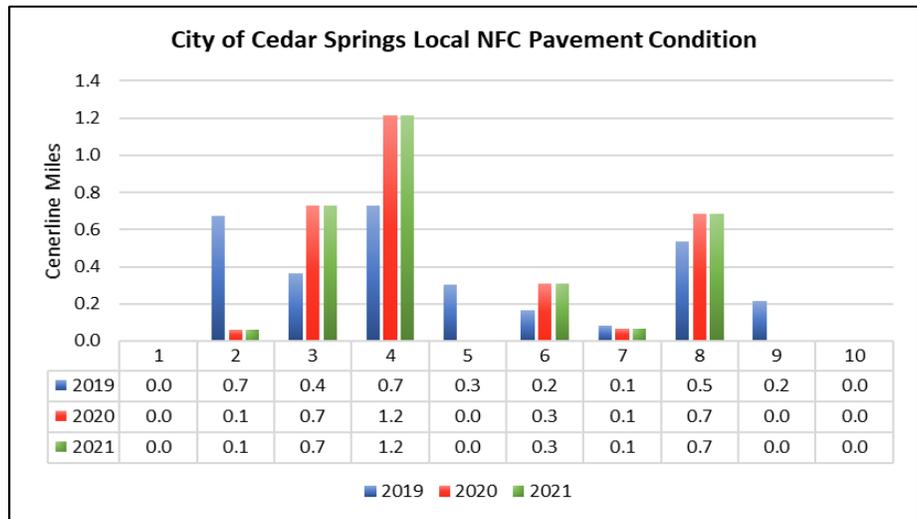
City of Cedar Springs

2019 System Average – 4.776

2020 System Average – 4.882

2021 System Average – 4.540

PASER	Miles	Percent
1	0	0.00%
2	0.106	3.46%
3	1.221	39.82%
4	0.911	29.71%
5	0	0.00%
6	0.08	2.61%
7	0.063	2.05%
8	0.685	22.34%
9	0	0.00%
10	0	0.00%
Total	3.066	100.00%



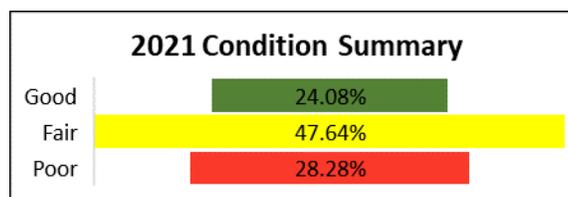
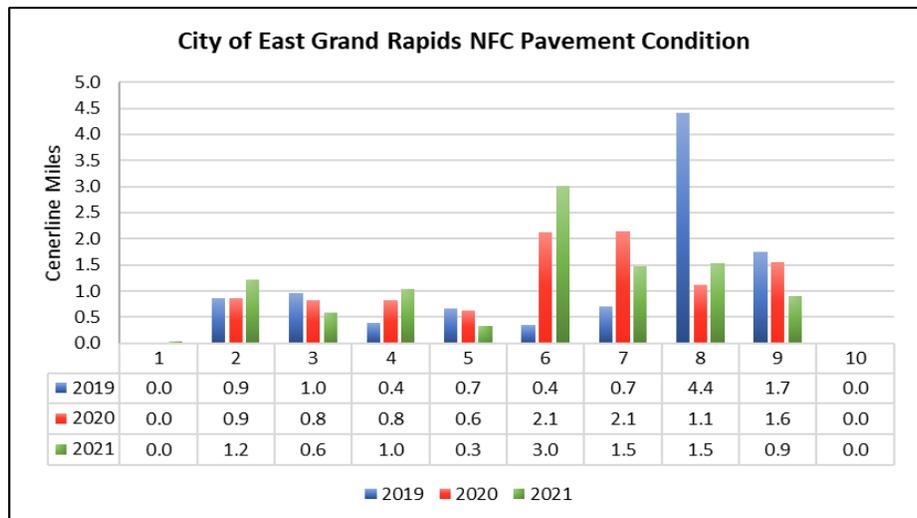
City of East Grand Rapids

2019 System Average—6.696

2020 System Average—6.085

2021 System Average—5.814

PASER	Miles	Percent
1	0.025	0.25%
2	1.21	12.00%
3	0.576	5.71%
4	1.042	10.33%
5	0.325	3.22%
6	3.015	29.89%
7	1.465	14.52%
8	1.525	15.12%
9	0.904	8.96%
10	0	0.00%
Total	10.087	100.00%



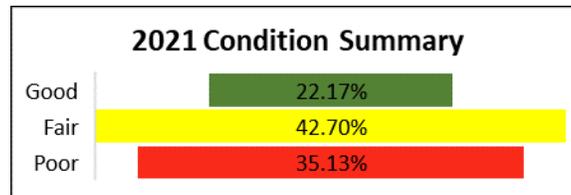
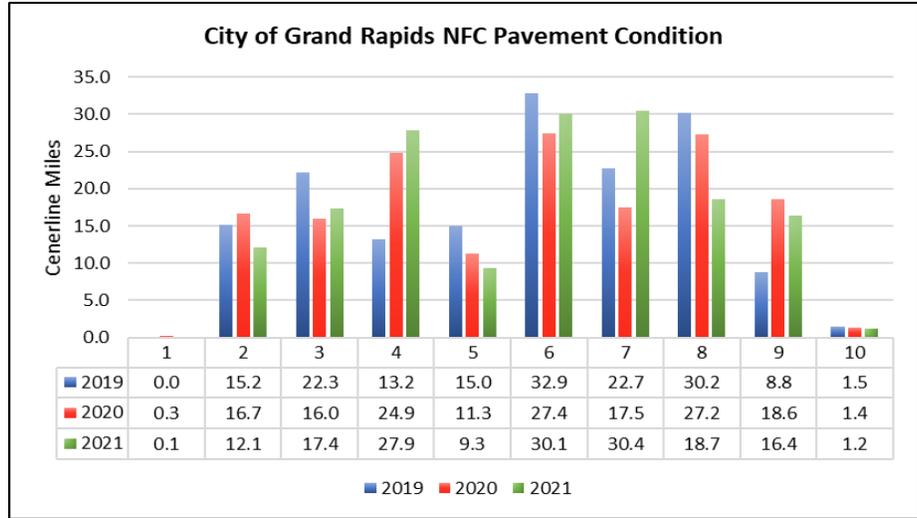
City of Grand Rapids

2019 System Average—5.737

2020 System Average—5.74

2021 System Average—5.729

PASER	Miles	Percent
1	0.081	0.05%
2	12.127	7.42%
3	17.365	10.62%
4	27.85	17.04%
5	9.348	5.72%
6	30.052	18.38%
7	30.412	18.60%
8	18.655	11.41%
9	16.401	10.03%
10	1.188	0.73%
Total	163.479	100.00%



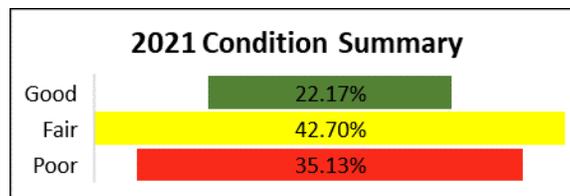
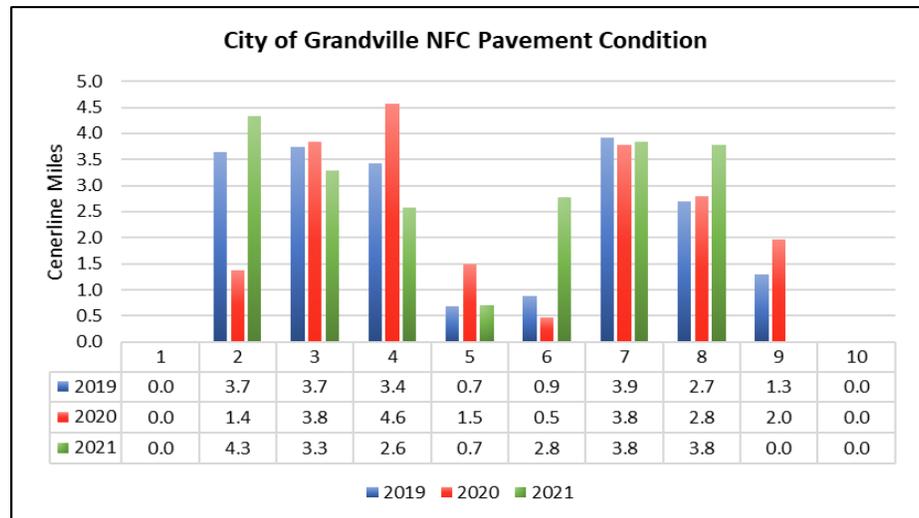
City of Grandville

2019 System Average – 4.950

2020 System Average – 5.74

2021 System Average – 4.984

PASER	Miles	Percent
1	0	0.00%
2	4.335	20.36%
3	3.279	15.40%
4	2.579	12.11%
5	0.697	3.27%
6	2.784	13.08%
7	3.836	18.02%
8	3.781	17.76%
9	0	0.00%
10	0	0.00%
Total	21.291	100.00%



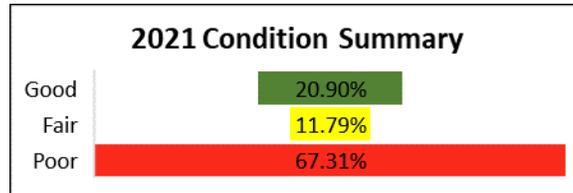
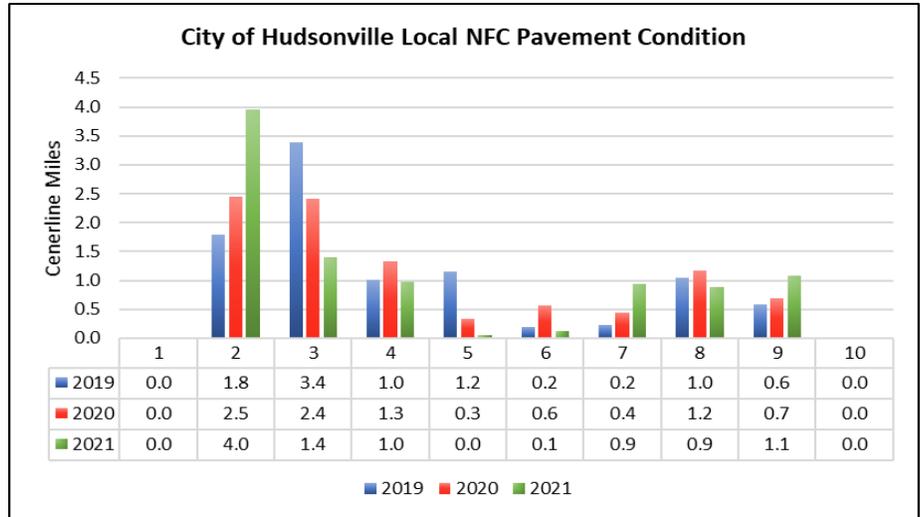
City of Hudsonville

2019 System Average – 4.249

2020 System Average – 4.386

2021 System Average – 4.292

PASER	Miles	Percent
1	0	0.00%
2	3.955	42.06%
3	1.395	14.84%
4	0.979	10.41%
5	0.046	0.49%
6	0.123	1.31%
7	0.94	10.00%
8	0.887	9.43%
9	1.078	11.46%
10	0	0.00%
Total	9.403	100.00%



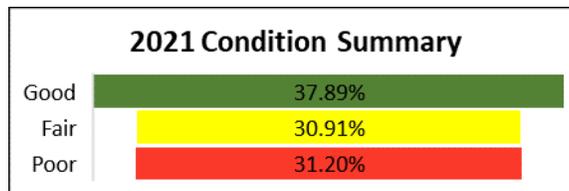
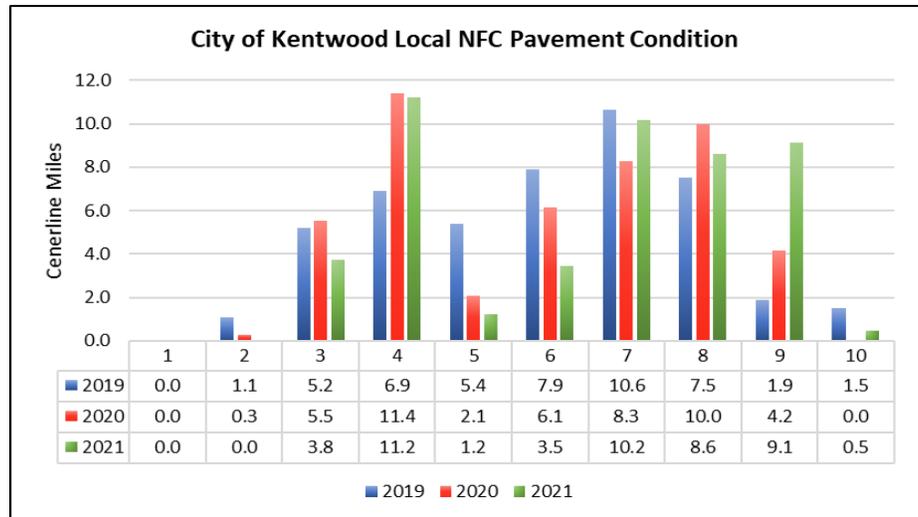
City of Kentwood

2019 System Average – 5.956

2020 System Average – 6.412

2021 System Average – 6.451

PASER	Miles	Percent
1	0	0.00%
2	0	0.00%
3	3.752	7.82%
4	11.228	23.39%
5	1.211	2.52%
6	3.469	7.23%
7	10.158	21.16%
8	8.593	17.90%
9	9.149	19.06%
10	0.45	0.94%
Total	48.01	100.00%



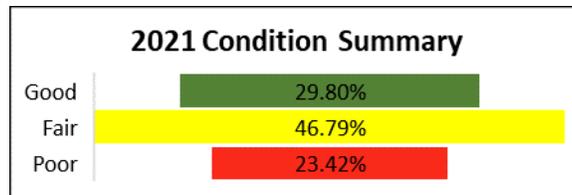
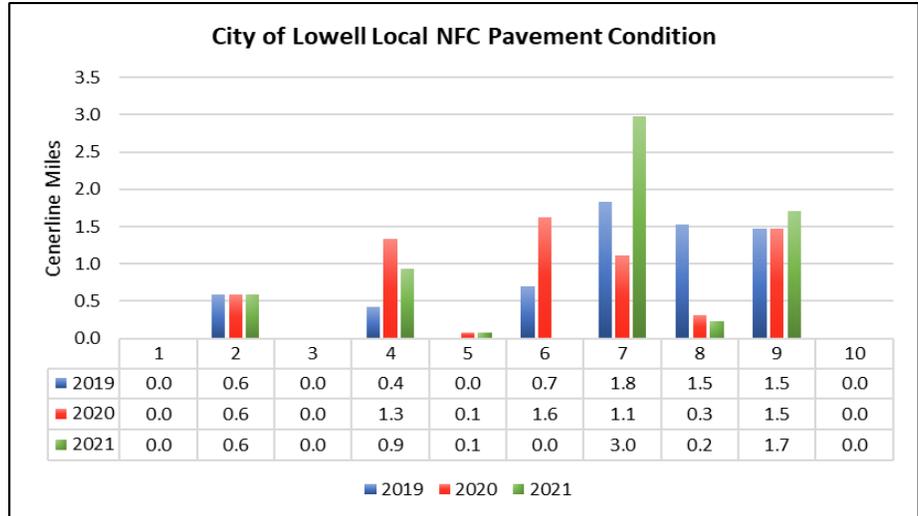
City of Lowell

2019 System Average – 6.932

2020 System Average – 6.154

2021 System Average – 6.650

PASER	Miles	Percent
1	0	0.00%
2	0.594	9.09%
3	0	0.00%
4	0.936	14.33%
5	0.085	1.30%
6	0	0.00%
7	2.972	45.49%
8	0.234	3.58%
9	1.713	26.22%
10	0	0.00%
Total	6.534	100.00%



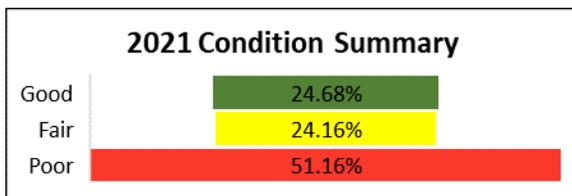
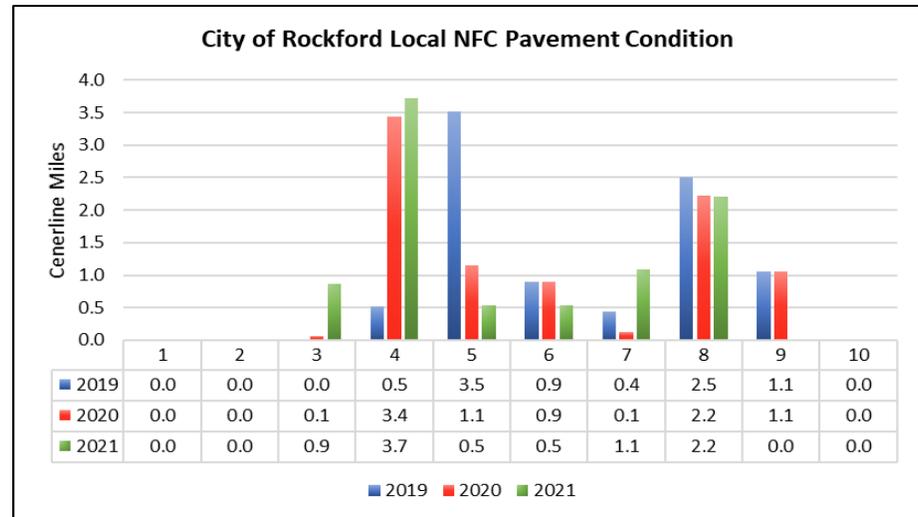
City of Rockford

2019 System Average – 6.456

2020 System Average – 5.949

2021 System Average – 5.434

PASER	Miles	Percent
1	0	0.00%
2	0	0.00%
3	0.873	9.73%
4	3.717	41.43%
5	0.54	6.02%
6	0.539	6.01%
7	1.089	12.14%
8	2.214	24.68%
9	0	0.00%
10	0	0.00%
Total	8.972	100.00%



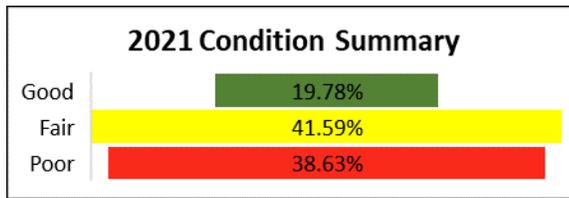
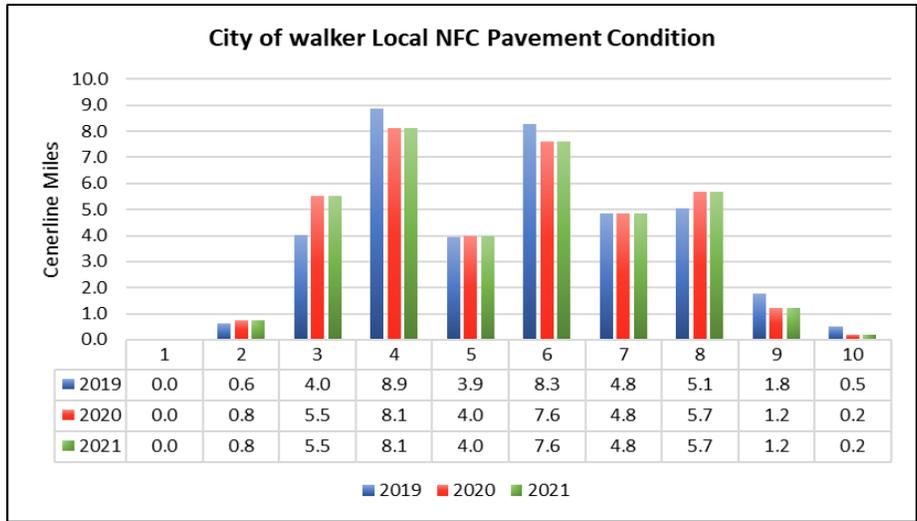
City of Walker

2019 System Average - 5.636

2020 System Average - 5.497

2021 System Average - 5.581

<u>PASER</u>	<u>Miles</u>	<u>Percent</u>
1	0	0.00%
2	0.592	1.56%
3	6.291	16.56%
4	7.792	20.51%
5	3.852	10.14%
6	7.066	18.60%
7	4.881	12.85%
8	3.167	8.34%
9	3.836	10.10%
10	0.51	1.34%
Total	37.987	100.00%



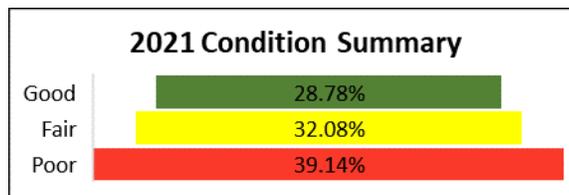
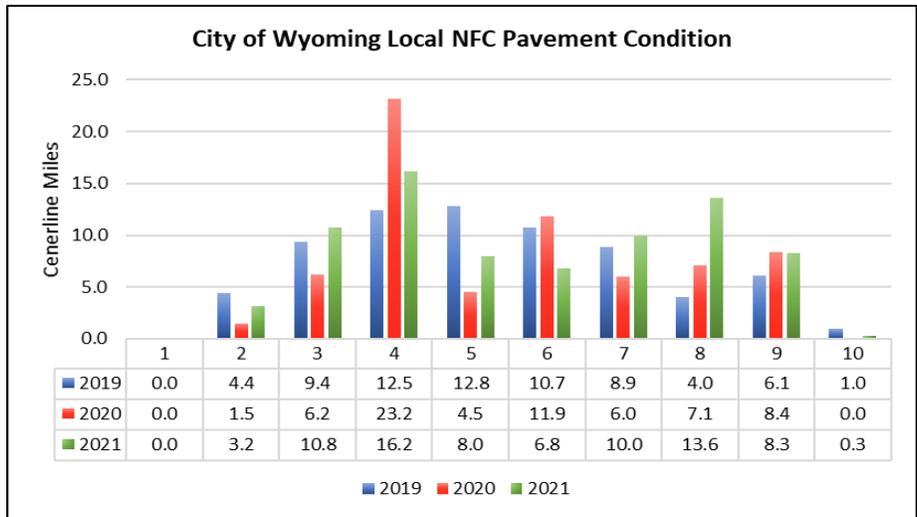
City of Wyoming

2019 System Average - 5.617

2020 System Average - 5.797

2021 System Average - 5.713

<u>PASER</u>	<u>Miles</u>	<u>Percent</u>
1	0	0.00%
2	3.176	4.12%
3	10.758	13.97%
4	16.213	21.05%
5	7.957	10.33%
6	6.76	8.78%
7	9.993	12.97%
8	13.558	17.60%
9	8.286	10.76%
10	0.327	0.42%
Total	77.028	100.00%



Kent County Road

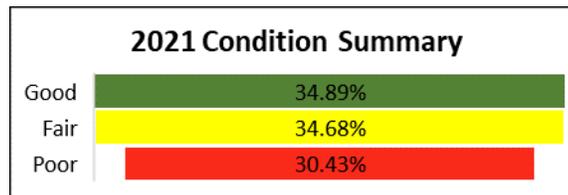
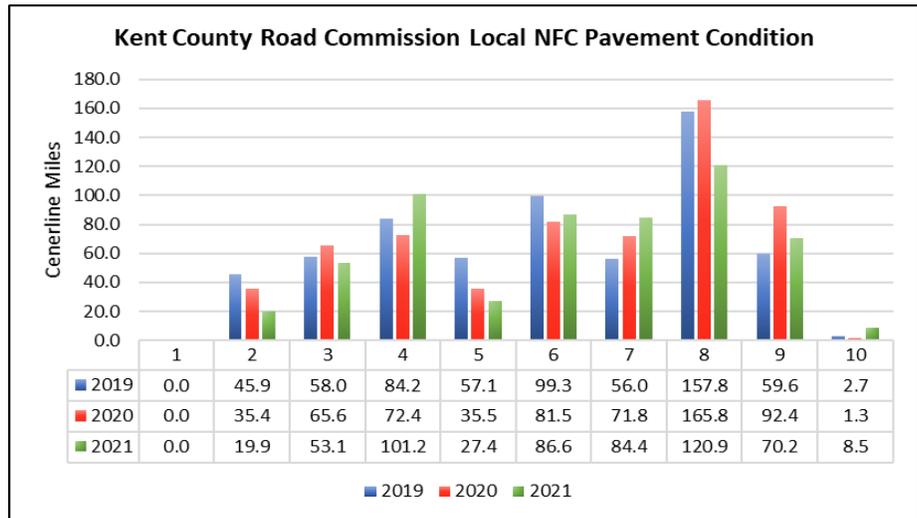
Commission

2019 System Average - 5.965

2020 System Average - 6.269

2021 System Average - 6.179

PASER	Miles	Percent
1	0	0.00%
2	19.909	3.48%
3	53.055	9.27%
4	101.192	17.68%
5	27.438	4.79%
6	86.624	15.14%
7	84.411	14.75%
8	120.94	21.13%
9	70.207	12.27%
10	8.532	1.49%
Total	572.308	100.00%



Ottawa County Road

Commission

2019 System Average - 5.583

2020 System Average - Not Rated (NR)

2021 System Average - 6.793

PASER	Miles	Percent
1	0	0.00%
2	4.864	3.62%
3	12.138	9.04%
4	42.203	31.44%
5	1.099	0.82%
6	18.664	13.91%
7	18.899	14.08%
8	14.363	10.70%
9	21.991	16.38%
10	0	0.00%
Total	134.221	100.00%

