

Public Works & Assets 3 Year Paving Plan 2022-2024



DEPARTMENT OF
**PUBLIC
WORKS**

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3-Year Paving Program FY 22 Update

Overview

The 3-Year Paving Program specifies the Louisville Metro maintained roadways that are scheduled to be paved over the next 3 fiscal years, beginning July 1, 2021, assuming a consistent level of funding for the duration of the plan, and the anticipated changes in the average Pavement Condition Index (PCI) as a result. Included with this program is Public Works' Pavement Management Plan that is designed to proactively maintain the condition of the public roads and prolong service life by performing short-term repairs and street maintenance techniques that are more cost effective than full reconstruction.

For planning purposes, Public Works is using a paving budget of \$20,000,000 for fiscal years 2022, 2023, and 2024. The three tables below show the proposed funding by fiscal year for each road classification.

FY 22 Proposed Paving Budget

Total Budget	\$20,000,000	% of budget
Arterial	\$3,573,622	17.9%
Collector	\$5,696,127	28.5%
Local	\$10,730,452	53.7%
Balance	-\$202	

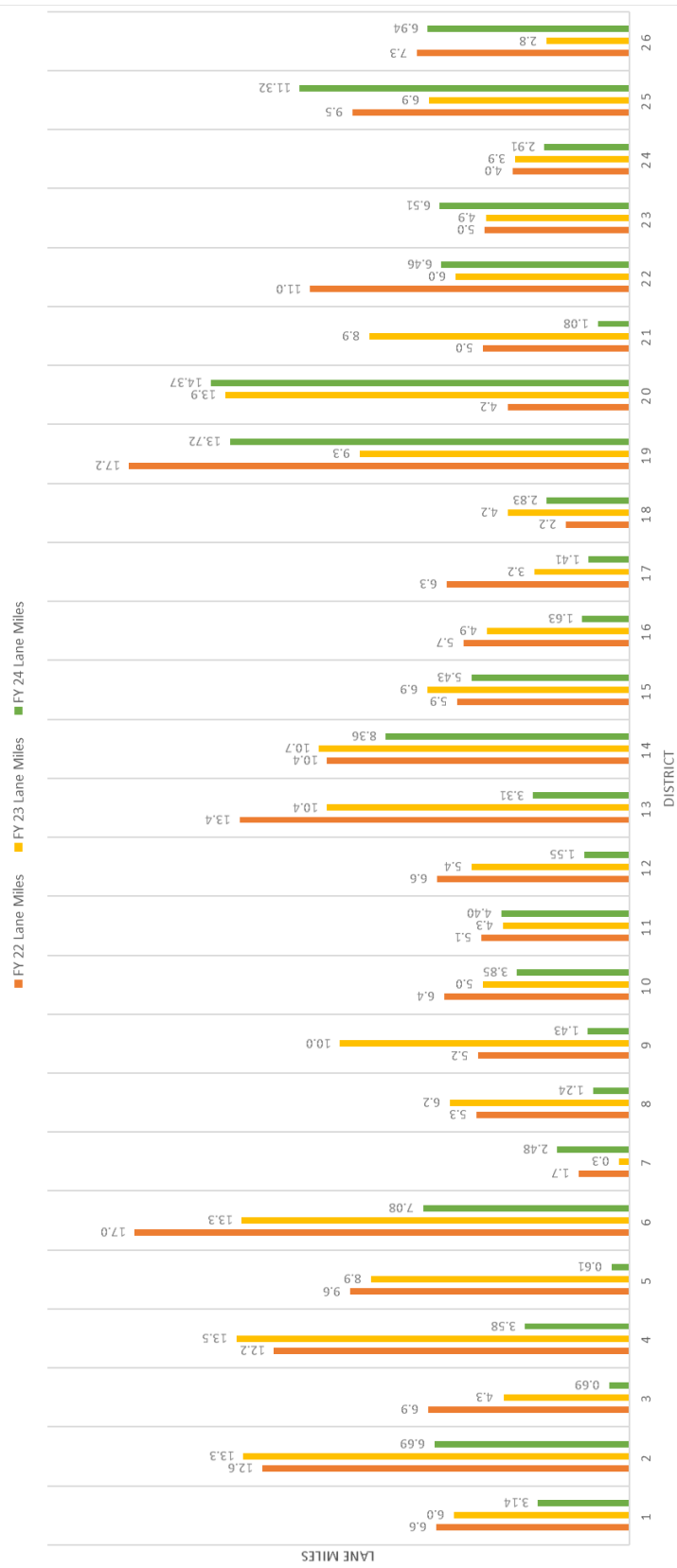
FY 23 Proposed Paving Budget

Total Budget	\$20,000,000	% of budget
Arterial:	\$2,233,464	11.2%
Collector:	\$4,404,124	22.0%
Local:	\$13,370,813	66.9%
balance:	-\$8,402	

FY 24 Proposed Paving Budget

Total Budget	\$20,000,000	% of budget
Arterial:	\$2,284,574	11.4%
Collector:	\$5,707,689	28.5%
Local:	\$12,005,189	60.0%
balance:	\$2,548	

LANE MILES TO BE PAVED BY DISTRICT PER FISCAL YEAR



Each road is assigned a Pavement Condition Index (PCI) between 0 & 100 depending on the number and type of distresses across the roadway segment. This method, developed by the United States Army Corps of Engineers and standardized by ASTM D6433, objectively indicates the condition of the roadway and is a valuable tool in the planning of future maintenance needs. Table 1 below describes the conditions typical within each of the PCI ranges:

Table 1: PCI descriptions

Condition	Description
Very Good-Excellent (PCI = 86-100)	Newly constructed for resurfaced pavement with few signs of distress.
Good (PCI = 71-85)	Pavement requiring mostly preventive maintenance and showing only low levels of distress.
Fair (PCI = 56-70)	Pavement at the low end of this range is significantly distressed and may require a combination of rehabilitation and preventive maintenance.
Poor (PCI = 41-55)	Deteriorated pavement requiring immediate attention, including rehabilitative work.
Very Poor (PCI = 40-0)	Pavement showing extensive distress and requiring major rehabilitation or reconstruction.

Purpose

This program was developed to prioritize road paving projects over the next 3 years and demonstrate the affect the projects will have on the overall PCI throughout Metro and the funding necessary to meet the goals established by Public Works that will ensure acceptable pavement conditions for citizens traveling the roadways.

Projects were prioritized based on road classification and predicated PCI with the goal of achieving an average PCI greater than 55 on 80% of the arterial and collector roads with fewer than 2% having a PCI less than 40 PCI over the next 3 years. The goal on the local roads is to have at least 72% with an average PCI greater than 55 and no more than 10% with a PCI less than 40 over the next 10 years. Concentrating on the arterial and collector roads in the immediate future will offer the highest benefit to the traveling public since these roads carry the highest volumes of traffic. Maintaining these roads above a 55 PCI through a combination of rehabilitation and preventative maintenance will also prolong the life

of the road and reduce maintenance costs by catching distresses before the roadway has failed and requires a full reconstruction.

The paving budget for arterial and collector classified roads is allocated based on worst-first regardless of Council District since these roads span multiple districts and carry the highest volumes of traffic. About 30% to 40% of the paving budget is applied to arterial and collector roadways. Local road paving is prioritized by Council District with each District getting a proportional share of the paving funds based on the quantity of roads within the District. Districts with average PCI's less than Public Works' goals is allocated additional funds in order to raise the average PCI so it is consistent across all of Louisville Metro. Refer to the **Weighted Average PCI of Roadways by Classification & Council District** table on page 8 of this report for a breakdown of the average PCI by Council District for each of the road classifications.

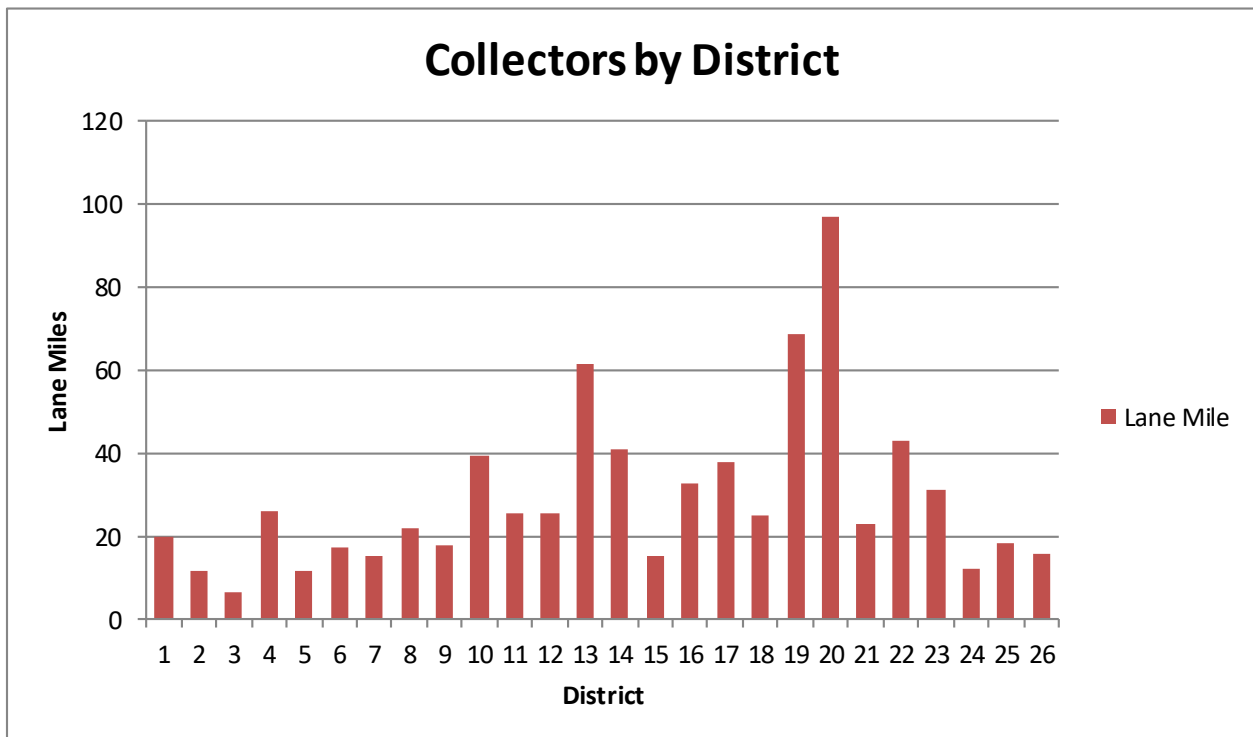
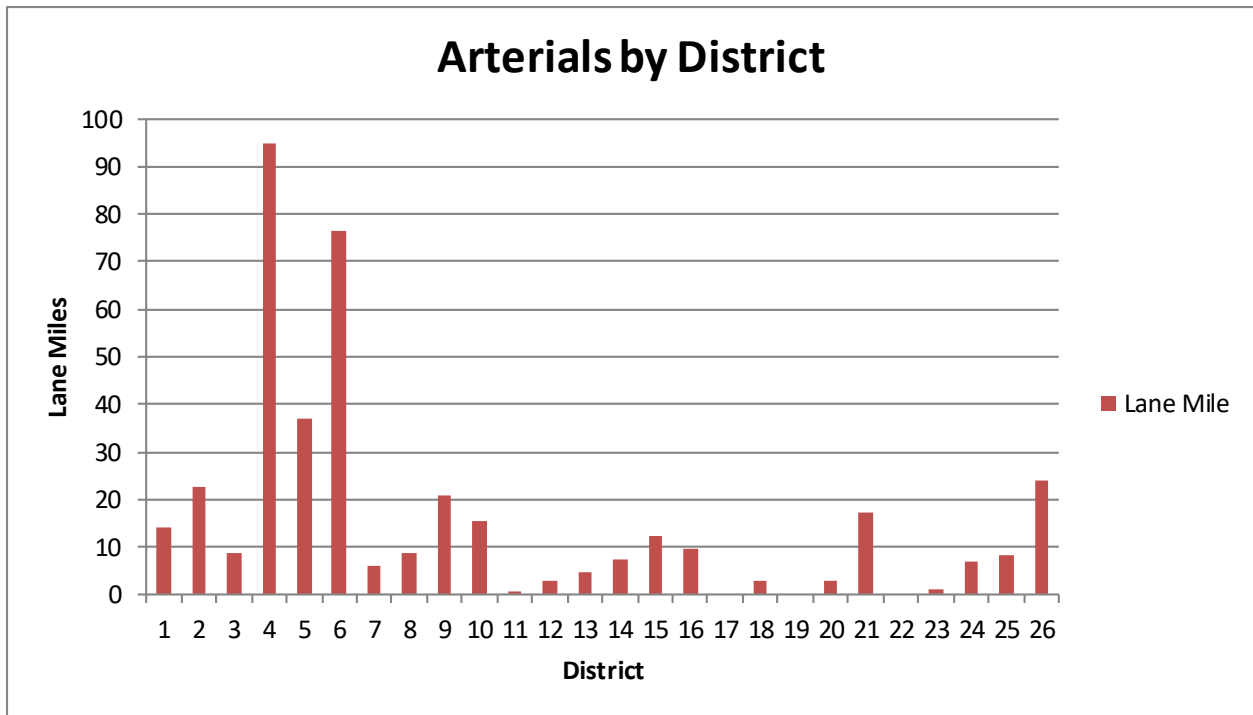
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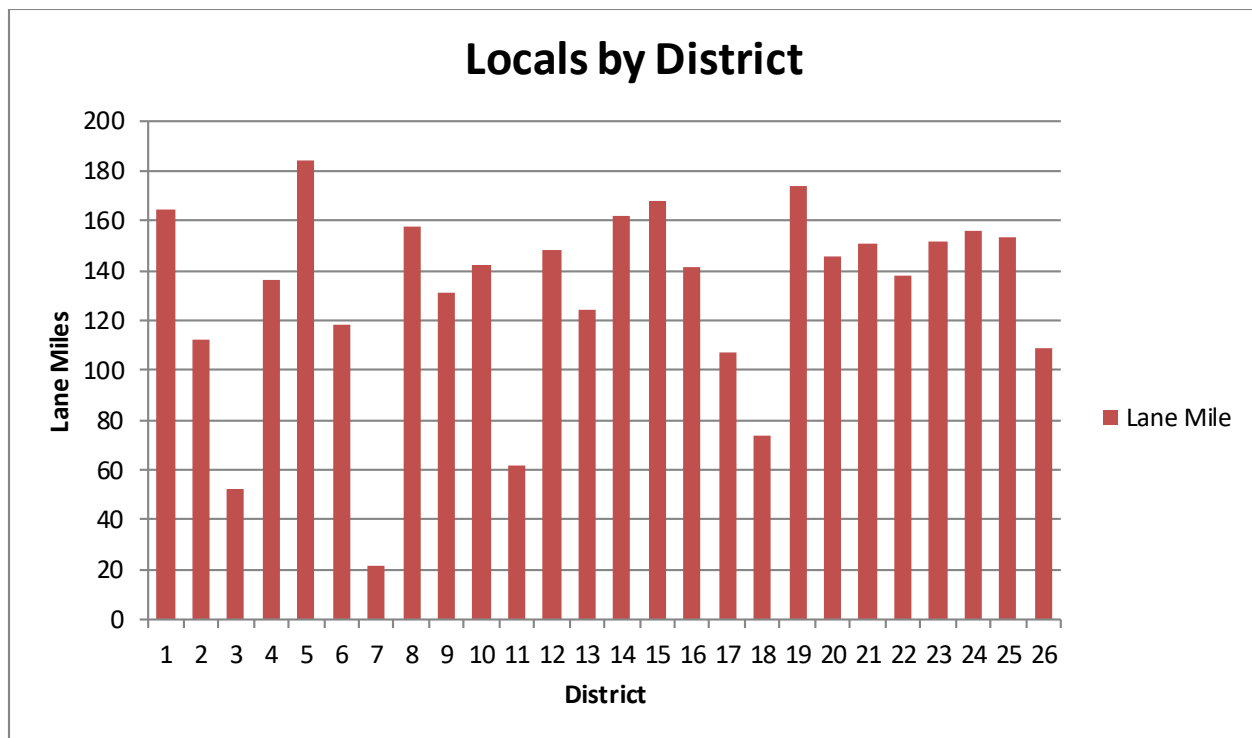
Public Works is responsible for maintaining over 2,181 centerline miles of roadway, which equates to about 4,546 actual lane miles. Centerline miles are simply a measurement of length from point to point and do not consider the number of lanes or direction of traffic. Lane miles are a measurement of traversable roadway which must be paved or plowed and assumes an average lane width of 11.7 ft. Each road is given a classification based on volume of traffic, density of development, abutting uses and overall connectivity. Table 2 shows Public Works' current roadway inventory:

Classification	Centerline Miles	Lane Miles
Arterial	129	428
Collector	356	743
Local	1,696	3,392
TOTAL	2,181	4,563

Table 2: Roadway inventory by classification

The 3 graphs below show the number of lane miles of each roadway classification within each Council District. Each road segment can only be associated with one district; however, the actual road may serve as the border between two districts.





To date, Public Works has conducted three surveys of Metro maintained roadways with the purpose of determining the PCI. The first survey, completed in 2013, established a PCI value for all classifications of roads. The second survey, completed in late 2015, included only the arterial and collector classified roadways. Our most recent survey, completed in 2020, rated all roadways for PCI.

In conjunction with our 2020 survey, the consultant generated a 5-Year PAVER Plan and report utilizing the data collected which can be found in the appendix of this document. The 5-Year PAVER Plan was completed utilizing PAVER which is a software developed by the US Corps of Engineers (USCE). Using the PCI data collected, the PAVER software developed a standard rate of degradation for each roadway classification. The rates of degradation show that our roadway network lasts approximately 9-13 years following paving before the roadway reaches a PCI of 55, which suggests resurfacing should be completed again. Public Works is not in agreement with these curves at this time and believe additional surveys need to be conducted to help establish more accurate degradation curves.

Another aspect of the 5-Year PAVER Plan involves the various treatment types available for pavement preservation and associated costs. Public Works consistently has utilized mill and overlay paving techniques, and crack sealing preventative maintenance techniques (performed by Public Works Roads crews, separate from paving). Based on our current capabilities, the 5-Year PAVER Plan suggests Metro has \$660,635,623.30 of unfunded need at the beginning of the plan and will have \$826,108,792.20 unfunded need at the completion of 5 years in which \$20,000,000.00 is spent on paving each year. This \$165,473,168.90 increase of unmet need over 5 years suggests that Metro needs to be spending a little over \$53,000,000.00 each fiscal year to maintain the roadway network (not including year to year inflation). Public Works does not agree with these numbers, and our analysis of the data and suggests there is \$69,000,000.00 in unmet need. This unmet need shows reasonable progress made since 2015 when Public Works estimated a total unmet need of \$120,000,000. Public Works is estimating that the

required paving budgets to maintain our roadways is increasing from an estimated \$18,000,000 in 2015, to \$22,738,562 in 2022. With an estimated 4% inflation year after year, we anticipate needing about \$31,000,000 in annual maintenance by 2030. Below is a chart of our estimated annual maintenance need over that time, as well as some calculated budgets which will help remove the outstanding backlog.

ALL ROADS				
Fiscal Year	Annual Maint.	Budget	Unmet Need	Growth Rate
2022	\$ 22,738,562	\$ 30,411,899	\$ 61,386,663	4%
2023	\$ 23,648,105	\$ 31,628,375	\$ 55,861,859	
2024	\$ 24,594,029	\$ 32,893,510	\$ 49,796,853	
2025	\$ 25,577,790	\$ 34,209,250	\$ 43,157,266	
2026	\$ 26,600,902	\$ 35,577,621	\$ 35,906,838	
2027	\$ 27,664,938	\$ 37,000,725	\$ 28,007,324	
2028	\$ 28,771,535	\$ 38,480,754	\$ 19,418,398	
2029	\$ 29,922,397	\$ 40,019,985	\$ 10,097,546	
2030	\$ 31,119,293	\$ 41,620,784	\$ 0	

Both the 5-Year PAVER Plan generated by PAVER and Public Works analysis of the data suggests that the Metro paving program needs to begin spending a significant portion of yearly funding on preventative maintenance techniques such as crack seal, chip seals, fog seals, asphalt rejuvenators, micro-surfacing, etc. In 2018 Metro performed a trial of Micro-surfacing on several roadways and encountered less than desirable results. One obstacle that Public Works will have moving forward with preventative maintenance will be how we can perform this work economically because there are very few if any companies that perform preventative maintenance work in the state of Kentucky. The micro-surfacing crew hired in 2018 came from Michigan which resulted in a noticeably high mobilization that had considerable impacts to the average unit cost of the project per square foot.

The roads proposed for paving in Fiscal Years 2022, 2023 & 2024 are shown in Appendices D, E & F or online at:

<https://lojic.maps.arcgis.com/apps/View/index.html?appid=7ea7f41f7a174becacb3b37912698b2d>

The link to the map above also includes the current PCI for all Metro maintained roads calculated as part of the 2020 survey. In addition to the local, collector and arterial classified roads, this map includes public alleys and frontage roads maintained by Public Works.

The table below show the average condition for each road classification and the overall status of our road conditions as it relates to our pavement condition goals based on the 2020 pavement inspections.

Condition of Roadways by Classification					
PCI	Local	Primary Collector	Secondary Collector	Minor Arterial	Major Arterial
100 - 86	22%	46%	42%	51%	40%
85 - 71	23%	21%	13%	20%	27%
70 - 56	20%	13%	10%	11%	25%
55 - 41	15%	10%	18%	8%	5%
40 - 0	20%	10%	17%	10%	3%
>55	64%	80%	65%	82%	91%
<40	19%	10%	17%	8%	3%

Weighted Average PCI of Roadways by Classification & Council District					
District	Local	Primary Collector	Secondary Collector	Minor Arterial	Major Arterial
1	61	80	57	83	85
2	61	66	39	68	N/A
3	59	69	N/A	76	N/A
4	52	78	85	82	76
5	53	81	N/A	81	83
6	50	76	N/A	84	79
7	72	83	67	75	N/A
8	65	84	N/A	83	N/A
9	53	74	N/A	69	N/A
10	67	75	N/A	81	N/A
11	75	73	80	94	N/A
12	68	71	79	52	N/A
13	66	65	60	57	N/A
14	63	77	55	61	N/A
15	59	87	N/A	84	N/A
16	74	92	69	71	N/A
17	67	79	62	53	N/A
18	63	80	72	91	N/A
19	72	80	68	69	N/A
20	71	85	83	89	N/A
21	55	73	60	79	N/A
22	70	75	65	N/A	N/A
23	67	80	47	67	N/A
24	66	75	26	58	N/A
25	67	57	36	66	N/A
26	68	63	39	74	N/A
Average	64	76	70	78	78

Conclusion

While the results of the pavement survey completed in December 2020 gave Public Works an additional datum point to help predict the rate of degradation, the results from the PAVER software analysis does not accurately reflect the rate of degradation Louisville Metro has experienced over the last 8 years because the actual age of the pavement is not known for most of the roadway segments. However, using the PAVER analysis to estimate the funding required to maintain the roadways is conservative and will likely result in exceeding the established goals ahead of schedule.

Progress is being made since the creation of the Public Works Pavement Management Program in Fiscal Year 2018 as shown in the table below but additional funds are needed to address the deficiencies within the secondary collector and local classified roads which are not meeting the 10-year goal Public Works set for the condition of the roadway network.

Weighted Avg PCI			
Classification	2013	2015	2020
Local	65	N/A	64
Secondary Collector	68	68	70
Primary Collector	66	66	76
Minor Arterial	60	60	78
Major Arterial	65	65	78
Alley	N/A	N/A	22
Frontage	N/A	N/A	69

Public Works will continue to work with contractors in our region to find an economical preservation technique to extend the life of the pavement and will continue to utilize the Public Works Roads Division to perform preventative maintenance including pothole patching and crack sealing. However, for a successful preservation program, contractor support will be necessary due to the total quantity of roads that need to be maintained each year.

Based on the data from the 2020 survey, the annual paving budget for Louisville Metro should be expanded to \$31,000,000 for the next fiscal year, and then increased each year to account for inflation as we approach our pavement condition goals. Additional funds will be used for the full mill and overlay treatments required once a road has exceeded its useful life and for preservation treatments during the life of the road that will slow the rate of degradation. The goal of the plan is to provide the right treatment at the right time to preserve the pavement condition as economically as possible.

Public Works intends to expand the Metro paving program to include preventative maintenance techniques which will help extend the life of our roadways. Public Works request that consideration be made to at least fund the annual maintenance paving need as shown each year above, but also provide consideration in additional funding for paving to eliminate unmet need. In addition to this request, we also suggest that consideration be made to obtain new PCIs with all arterial and collector roads measured every 2 or 3 years and local classified roads measured every 5 years.

Appendix A:

Proposed spending by Council District and Road Classification for FY 22

FY 22 District	Local Estimate	Pri Coll Estimate	Sec Coll Estimate	Min Art Estimate	Maj Art Estimate	Total	FY 22 Lane Miles
1	\$463,831	\$155,676	\$23,742	\$0	\$0	\$643,249	6.6
2	\$381,729	\$139,301	\$93,299	\$663,433	\$0	\$1,277,762	12.6
3	\$178,470	\$323,727	\$0	\$193,283	\$0	\$695,480	6.9
4	\$582,111	\$54,247	\$0	\$680,984	\$0	\$1,317,342	12.2
5	\$924,075	\$0	\$0	\$0	\$0	\$924,075	9.6
6	\$527,625	\$226,619	\$0	\$695,464	\$272,847	\$1,722,555	17.0
7	\$72,790	\$99,389	\$0	\$0	\$0	\$172,179	1.7
8	\$519,654	\$0	\$0	\$0	\$0	\$519,654	5.3
9	\$331,142	\$0	\$0	\$180,549	\$0	\$511,691	5.2
10	\$459,021	\$157,900	\$0	\$0	\$0	\$616,921	6.4
11	\$197,027	\$306,652	\$0	\$0	\$0	\$503,678	5.1
12	\$431,487	\$0	\$0	\$219,232	\$0	\$650,719	6.6
13	\$763,014	\$72,617	\$475,927	\$0	\$0	\$1,311,558	13.4
14	\$459,699	\$270,507	\$296,360	\$0	\$0	\$1,026,566	10.4
15	\$565,548	\$0	\$0	\$0	\$0	\$565,548	5.9
16	\$178,760	\$0	\$0	\$400,858	\$0	\$579,618	5.7
17	\$300,776	\$14,702	\$302,927	\$0	\$0	\$618,404	6.3
18	\$208,637	\$0	\$0	\$0	\$0	\$208,637	2.2
19	\$495,361	\$39,175	\$1,095,866	\$0	\$0	\$1,630,401	17.2
20	\$399,254	\$0	\$0	\$0	\$0	\$399,254	4.2
21	\$479,477	\$0	\$0	\$0	\$0	\$479,477	5.0
22	\$351,374	\$0	\$740,822	\$0	\$0	\$1,092,196	11.0
23	\$473,989	\$0	\$0	\$0	\$0	\$473,989	5.0
24	\$383,449	\$0	\$0	\$0	\$0	\$383,449	4.0
25	\$296,779	\$390,484	\$0	\$266,973	\$0	\$954,236	9.5
26	\$305,373	\$416,189	\$0	\$0	\$0	\$721,563	7.3
Total	\$10,730,452	\$2,667,185	\$3,028,942	\$3,300,776	\$272,847	\$20,000,202	202.13

Appendix B:

Proposed spending by Council District and Road Classification for FY 23

FY 23	Local	Pri Coll	Sec Coll	Min Art	Maj Art		FY 23
District	Estimate	Estimate	Estimate	Estimate	Estimate	Total	Lane Miles
1	\$612,159	\$0	\$0	\$0	\$0	\$612,159	6.0
2	\$554,967	\$0	\$0	\$938,272	\$0	\$1,493,239	13.3
3	\$433,792	\$0	\$0	\$0	\$0	\$433,792	4.3
4	\$927,299	\$138,401	\$0	\$364,113	\$0	\$1,429,813	13.5
5	\$902,799	\$0	\$0	\$0	\$0	\$902,799	8.9
6	\$992,653	\$0	\$0	\$416,820	\$0	\$1,409,473	13.3
7	\$34,819	\$0	\$0	\$0	\$0	\$34,819	0.3
8	\$627,125	\$0	\$0	\$0	\$0	\$627,125	6.2
9	\$806,686	\$263,240	\$0	\$0	\$0	\$1,069,926	10.0
10	\$387,157	\$133,679	\$0	\$0	\$0	\$520,835	5.0
11	\$273,565	\$178,702	\$0	\$0	\$0	\$452,267	4.3
12	\$358,737	\$205,634	\$0	\$0	\$0	\$564,371	5.4
13	\$362,019	\$0	\$745,454	\$0	\$0	\$1,107,473	10.4
14	\$491,278	\$0	\$182,898	\$514,259	\$0	\$1,188,435	10.9
15	\$816,421	\$0	\$0	\$0	\$0	\$816,421	8.0
16	\$338,757	\$0	\$170,108	\$0	\$0	\$508,865	4.9
17	\$297,093	\$0	\$35,322	\$0	\$0	\$332,415	3.2
18	\$351,002	\$78,940	\$0	\$0	\$0	\$429,942	4.2
19	\$546,112	\$353,893	\$93,013	\$0	\$0	\$993,018	9.3
20	\$450,494	\$0	\$1,039,698	\$0	\$0	\$1,490,191	13.9
21	\$855,376	\$200,088	\$0	\$0	\$0	\$1,055,464	10.2
22	\$446,576	\$172,764	\$0	\$0	\$0	\$619,340	6.0
23	\$501,099	\$0	\$0	\$0	\$0	\$501,099	4.9
24	\$316,678	\$0	\$88,221	\$0	\$0	\$404,898	3.9
25	\$397,187	\$324,070	\$0	\$0	\$0	\$721,258	6.9
26	\$288,965	\$0	\$0	\$0	\$0	\$288,965	2.8
Total	\$13,370,813	\$2,049,411	\$2,354,713	\$2,233,464	\$0	\$20,008,402	190.13

Appendix C:

Proposed spending by Council District and Road Classification for FY 24

FY 24	Local	Pri Coll	Sec Coll	Min Art	Maj Art		FY 24
District	Estimate	Estimate	Estimate	Estimate	Estimate	Total	Lane Miles
1	\$480,277	\$0	\$0	\$0	\$0	\$480,277	4.7
2	\$467,558	\$0	\$0	\$0	\$0	\$467,558	4.6
3	\$265,359	\$0	\$0	\$0	\$0	\$265,359	2.6
4	\$740,283	\$0	\$0	\$0	\$0	\$740,283	7.3
5	\$923,758	\$0	\$0	\$0	\$0	\$923,758	9.1
6	\$812,861	\$0	\$0	\$113,027	\$0	\$925,888	8.8
7	\$43,162	\$0	\$0	\$0	\$0	\$43,162	0.4
8	\$392,228	\$168,107	\$0	\$397,600	\$0	\$957,935	8.1
9	\$893,815	\$0	\$0	\$0	\$0	\$893,815	8.8
10	\$230,173	\$395,079	\$0	\$0	\$0	\$625,252	5.2
11	\$159,471	\$0	\$223,269	\$0	\$0	\$382,740	3.5
12	\$324,554	\$0	\$186,649	\$0	\$0	\$511,202	4.6
13	\$338,689	\$0	\$0	\$524,850	\$0	\$863,539	7.3
14	\$603,718	\$310,860	\$0	\$0	\$0	\$914,578	8.7
15	\$586,237	\$0	\$0	\$337,347	\$0	\$923,584	8.3
16	\$402,367	\$0	\$0	\$0	\$0	\$402,367	4.0
17	\$254,345	\$0	\$0	\$0	\$0	\$254,345	2.5
18	\$201,145	\$572,622	\$108,093	\$65,612	\$0	\$947,473	8.5
19	\$470,181	\$0	\$770,967	\$0	\$0	\$1,241,148	11.0
20	\$425,351	\$0	\$0	\$0	\$0	\$425,351	4.2
21	\$716,512	\$0	\$119,371	\$101,061	\$0	\$936,944	8.9
22	\$394,249	\$677,821	\$547,732	\$0	\$0	\$1,619,803	14.7
23	\$564,070	\$891,550	\$0	\$0	\$0	\$1,455,620	13.4
24	\$475,386	\$184,930	\$0	\$745,077	\$0	\$1,405,394	11.9
25	\$403,582	\$345,598	\$0	\$0	\$0	\$749,180	7.0
26	\$435,858	\$205,042	\$0	\$0	\$0	\$640,899	6.1
Total	\$12,005,189	\$3,751,608	\$1,956,081	\$2,284,574	\$0	\$19,997,452	184.30

FY 2022 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
1	Clarion Ct	Lees Ln	Dead End	45	1,474	25	36,280	\$56,234	Local
1	S 28th St	Dumesnil St	Greenwood Ave	35	2,022	35	70,780	\$109,709	Local
1	Fordson Way	S 43rd St	S 41st St	27	1,317	29	37,860	\$58,683	Local
1	Winnrose Way	S 43rd St	Cecil Ave	27	1,007	24	24,170	\$37,464	Local
1	S 41st St	Hale Ave	Dead End	48	1,354	28	37,914	\$58,767	Local
1	Cecil Ave	Hale Ave	Dead End	47	1,429	48	68,595	\$106,322	Local
1	S 42nd St	Hale Ave	Virginia Ave	62	507	30	15,220	\$23,591	Local
1	Ellerholt Ct	Virginia Ave	Dead End	32	324	26	8,427	\$13,062	Local
2	Kern Ct	Dead End	Fegenbush Ln	54	349	30	10,458	\$16,210	Local
2	Belrad Dr	Beechbrook Rd	Fegenbush Ln	15	1,454	24	34,810	\$53,956	Local
2	Sebree Ln	Kranet Way	Belrad Dr	23	740	26	19,228	\$29,803	Local
2	Coram Way	Dead End	Sebree Ln	26	421	26	10,934	\$16,948	Local
2	Kranet Way	Beechbrook Rd	Sebree Ln	34	614	26	15,970	\$24,754	Local
2	Newport Rd	Fegenbush Ln	Dead End	20	1,561	32	49,956	\$77,432	Local
2	Applegrove Ln	Newport Rd	Newport Rd	65	981	20	19,615	\$30,403	Local
2	Cawood Dr	Newport Rd	Belrad Dr	30	907	22	19,945	\$30,914	Local
2	Beechbrook Rd	Kranet Wat	Belrad Dr	14	618	24	14,839	\$23,000	Local
2	Buechel Bank Rd	Bruce Ave	Bardstown Rd	26	674	24	14,370	\$22,274	Local
2	Handley Ave (West)	Dead End	Buechel Bank Rd	19	1,291	28	36,152	\$56,036	Local
3	Bolling Ave	Dixie Hwy	S 17th St	20	1,567	28	43,732	\$67,785	Local
3	W Burnett Ave	Dixie Hwy	S 17th St	47	1,483	22	32,628	\$50,573	Local
3	S 17th St	W Hill St	W Burnett Ave	34	621	30	18,628	\$28,873	Local
3	McCloskey Ave	W Hill St	W Burnett Ave	56	630	32	20,154	\$31,239	Local
4	W Washington St	N 8th St	N 9th St	26	474	20	9,471	\$14,680	Local
4	N 9th St	W Main St	W Washington St	37	254	36	9,143	\$14,172	Local
4	Roy Wilkins Ave	I 64 Ramp	W Market St	20	514	36	18,489	\$28,658	Local
4	Barrett Ave	E Broadway	Baxter Ave	25	1,691	39	63,865	\$98,991	Local
4	Rubel Ave	Payne St	E Broadway	19	620	36	22,181	\$34,381	Local
4	S Campbell St	E Main St	Dead End	21	3,063	39	118,715	\$184,008	Local
4	E Madison St	S Shelby St	Dead End	29	1,115	37	41,253	\$63,942	Local
4	S Clay St	E Jefferson	E Muhammad Ali	?	995	36	35,820	\$143,280	Local
5	Cedar St	S 26th St	S 30th St	26	1,795	30	53,656	\$83,167	Local

FY 2022 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
5	S 31st St	W Madison St	Dead End	17	711	30	21,320	\$33,046	Local
5	S 30th St	W Market St	W Madison St	19	1,964	36	70,686	\$109,563	Local
5	Larkwood Ave	S 32nd St	Dead End	25	362	24	8,699	\$13,483	Local
5	W Jefferson St	S 32nd St	Dead End	79	337	26	8,753	\$13,567	Local
5	S 32nd St	River Park Dr	W Market St	41	2,371	33	77,559	\$120,216	Local
5	W Madison St	S 26th St	S 31st St	29	2,318	36	83,459	\$129,361	Local
5	Vermont Ave	S 31st St	I 264 Ramp	15	1,105	36	39,785	\$61,667	Local
5	S/N 34th St	W Market St	N 35th St	18	2,951	27	79,675	\$123,496	Local
5	Vermont Ave	S 40th St	Southwestern Pkwy	18	3,403	36	122,508	\$189,887	Local
5	S/N Shawnee Ter	W Market St	Duncan St	30	1,263	19	24,062	\$46,621	Local
6	St James Ct	W Magnolia Ave	W Hill St	18	2,170	71	186,783	\$289,514	Local
6	Hale Ave	Dixie Hwy	S 26th St	28	2,778	30	83,338	\$129,174	Local
6	St Louis Ave	Dixie Hwy	Wilson Ave	52	1,970	28	55,150	\$85,483	Local
6	S Floyd St	E Burnett Ave	Dead End	25	378	40	15,132	\$23,455	Local
7	Erin Way	Millgate Rd	Meadowgate Ln	50	584	24	14,017	\$21,726	Local
7	Flagstaff Ct	Dead End	Dead End	32	901	18	16,218	\$25,138	Local
7	Maricopa Dr	Farnham Dr	Creekwood Rd	42	428	18	7,707	\$11,946	Local
7	Maricopa Ct	Dead End	Farnham Dr	61	501	18	9,019	\$13,979	Local
8	Alta Vista Rd	Lexington Rd	Maple Rd	47	1,645	22	36,189	\$56,093	Local
8	Alta Vista Ct	Alta Vista Rd	Dead End	34	1,526	18	27,467	\$42,574	Local
8	Lucia Ave	Baxter Av	Bardstown Rd	10	800	36	28,797	\$44,635	Local
8	Ellwood Ave	Baxter Ave	Bardstown Rd	29	621	34	21,127	\$32,747	Local
8	McCoy Way	Trevilian Way	Gladstone Ave	56	1,513	24	36,312	\$56,284	Local
8	Gladstone Ave	Taylorsville Rd	Dead End	12	423	21	8,728	\$13,528	Local
8	Landor Ave	Denham Rd	Taylorsville Rd	24	1,457	20	29,136	\$45,161	Local
8	Drayton Dr	Denham Rd	Taylorsville Rd	21	1,743	21	36,597	\$56,725	Local
8	Denham Rd	Valletta Rd	Pee Wee Reese Rd	49	1,632	21	34,588	\$53,611	Local
8	Bonnycastle Ter	Bonnycastle Ave	Bonnycastle Ave	24	1,265	18	22,777	\$45,000	Local
8	Highland Ave	Baxter Ave	Dudley Ave	21	1,446	28	39,545	\$61,295	Local
8	Dudley Ave	Highland Ave	Dead End	15	209	12	2,512	\$12,000	Local
9	University Ave	Brownsboro Rd	Regan Ave	34	1,390	21	29,015	\$44,973	Local
9	Riedling Dr	Thistlewood Dr	Zorn Ave	44	3,069	21	65,977	\$102,264	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
9	Ridgedale Rd	Brownsboro Rd	Dead End	12	755	23	17,450	\$27,048	Local
9	Moran Pl	Ridgedale Rd	Dead End	11	243	22	5,340	\$8,277	Local
9	Le Blanc Ct	N Hite Ave	Dead End	37	212	22	4,665	\$7,231	Local
9	Fleming Ave	N Hite Ave	N Birchwood Ave	46	1,426	20	28,521	\$44,208	Local
9	N Birchwood Ave	Brownsboro Rd	Cleveland Blvd	23	1,917	26	49,834	\$77,243	Local
9	Cleveland Blvd	N Birchwood Ave	University Rd	12	642	20	12,838	\$19,899	Local
10	Ashview Ter	English Ave	Dead End	33	350	26	9,107	\$14,116	Local
10	English Ave	Meade Ave	Harrison Ave	47	527	21	11,221	\$17,393	Local
10	Meade Ave	McKinley Ave	Hess Ln	28	1,146	18	20,637	\$31,987	Local
10	Greenup Rd	McKinley Ave	Hess Ln	46	1,129	18	20,275	\$31,426	Local
10	Filson Ave	Clarks Ln	French Ave	67	1,691	18	30,437	\$47,177	Local
10	E Burnett Ave	Clarks Ln	French Ave	57	1,663	19	32,039	\$49,660	Local
10	Greenup Rd	Thruston Ave	Dead End	57	1,140	17	19,861	\$30,785	Local
10	French Ave	Colin Ave	Filson Ave	67	1,378	19	26,617	\$41,256	Local
10	Thruston Ave	Parklawn Dr	Poplar Level Rd	38	3,297	18	59,345	\$91,985	Local
10	Parkway Dr	Alexander Ave	Poplar Level Rd	44	3,549	19	66,604	\$103,236	Local
11	Hope Ct	Hunsinger Ln	Dead End	38	185	26	4,823	\$7,476	Local
11	Debra Way	McMahan Blvd	Sunrise Way	44	1,847	24	44,331	\$68,713	Local
11	Fieldside Cir	Ridgehurst Pl	Ridgehurst Pl	40	1,654	23	38,172	\$59,167	Local
11	Stone Hollow Dr	Ridgehurst Pl	Fieldside Cir	41	623	24	14,963	\$23,193	Local
11	Stone River Ct	Ridgehurst Pl	Dead End	28	566	22	12,449	\$19,296	Local
11	Ridgehurst Ct	Ridgehurst Pl	Dead End	61	563	22	12,376	\$19,183	Local
12	Freeport Dr	Trade Port Dr	Dead End	29	3,831	32	122,597	\$190,025	Local
12	Transport Ct	Freeport Dr	Dead End	41	581	32	18,592	\$28,818	Local
12	Memory Ln	Terry Rd	Wood Rd	26	2,863	18	52,030	\$80,647	Local
12	Capella Ln	Sylvania Rd	Wood Rd	55	2,527	19	48,019	\$74,429	Local
12	Sylvania #4 Rd	Sylvania Rd	Rutledge Rd	37	2,063	18	37,141	\$57,569	Local
13	Lone Oak Ave (North)	Outer Loop	Dead End	17	262	24	6,298	\$9,762	Local
13	Markwell Ln	Preston Hwy	Obrecht Way	45	2,293	21	44,871	\$69,550	Local
13	Obrecht Way	Markwell Ln	Dead End	26	451	23	10,514	\$16,297	Local
13	Southacres Dr	Obrecht Way	Minyard Dr	40	956	22	21,021	\$32,583	Local
13	Garrow Ave	Clay Ave	Southacres Dr	45	1,224	21	25,921	\$40,178	Local

FY 2022 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
13	Garrow Ct	Garrow Ave	Dead End	61	237	16	3,787	\$5,870	Local
13	Commerce Crossings Dr	Cooper Chrch Rd	Dead End	30	5,127	36	184,573	\$286,088	Local
13	Carbine Ln	Commerce Crossings Dr	Dead End	34	443	24	10,637	\$16,487	Local
13	Interchange Dr	Preston Hwy	Commerce Crossings Dr	43	4,053	36	146,971	\$227,805	Local
13	Interchange Way	Interchange Dr	Dead End	22	592	36	21,302	\$33,018	Local
13	Whites Ln	Gerald Way	Dead End	10	1,364	12	16,372	\$25,377	Local
14	Appollo Ct	Appollo Ln	Dead End	64	741	24	17,772	\$27,547	Local
14	Appollo Ln	Ponder Ln	Appollo Ct	66	1,386	24	33,263	\$51,558	Local
14	Halma Dr	Donerail Way	Omar Khayyam Blvd	54	1,015	24	24,364	\$37,764	Local
14	Middleground Dr	Donerail Way	Omar Khayyam Blvd	52	1,323	24	31,741	\$49,199	Local
14	Donerail Way	Halma Dr	Count Fleet Dr	43	1,439	24	34,544	\$53,543	Local
14	Plaudit Way	Count Turf Dr	Dead End	42	2,308	24	55,386	\$85,848	Local
14	Donau Ln	Reigh Count Dr	Plaudit Way	41	1,328	24	31,868	\$49,395	Local
14	Reigh Count Dr	Donau Ln	Plaudit Way	60	787	24	18,893	\$29,284	Local
14	Count Turf Dr	Donerail Way	Plaudit Way	45	2,151	23	48,749	\$75,561	Local
15	Bellevue Ave	Longfield Ave	Brentwood Ave	58	1,397	25	35,580	\$55,149	Local
15	Cliff Ave	Longfield Ave	Brentwood Ave	73	1,399	25	35,007	\$54,261	Local
15	Brentwood Ave	Warren Ave	S 5th St	34	2,503	30	75,086	\$116,383	Local
15	W Evelyn Ave	Warren Ave	S 5th St	23	2,470	30	74,093	\$114,844	Local
15	Homeview Dr	Taylor Blvd	Bohannon Ave	30	394	32	12,600	\$19,530	Local
15	Calhoun Ave	Taylor Ave	Bohannon Ave	17	390	24	9,357	\$14,503	Local
15	Queen Ave	Taylor Ave	Dead End	61	1,606	31	50,243	\$77,877	Local
15	Anna Ln	Manslick Rd	Yolanda Dr	28	3,015	24	72,904	\$113,001	Local
16	Aspenwood Ave	Seminary Dr	Chickering Woods Dr	42	2,453	32	79,564	\$123,324	Local
16	Aspenwood Way	Aspenwood Ave	Wooded Meadow Rd	35	436	22	9,587	\$14,860	Local
16	Wooded Meadow Rd	Woods Club Rd	Dead End	53	1,121	23	26,178	\$40,576	Local
17	Juniper Forest Pl	Willow Forest Dr	Dead End	47	863	22	18,996	\$29,444	Local
17	Willow Forest Dr (west loop)	Cedar Forest Pl	Willow Forest Dr	45	2,510	22	55,220	\$85,591	Local
17	Maple Forest Dr	Westport Rd	Willow Forest Dr	43	290	22	6,385	\$9,897	Local
17	Cedar Forest Way	Cedar Forest Pl	Dead End	56	238	22	5,245	\$8,130	Local
17	Cedar Forest Pl	Willow Forest Dr	Dead End	70	923	22	20,314	\$31,487	Local
17	Redbud Forest Pl	Willow Forest Dr	Dead End	58	592	22	13,019	\$20,179	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
17	Cherry Forest Cir (all)	Willow Forest Dr	Cherry Forest Cir	61	2,199	22	48,388	\$75,001	Local
17	Southlake Dr	LaGrange Rd	Dead End	46	940	23	21,463	\$33,268	Local
17	Willow Lake Ct	Southlake Dr	Dead End	39	251	20	5,019	\$7,779	Local
18	Woodsdale Ave	Blossomwood Dr	Lynnbrook Dr	24	740	23	17,019	\$26,379	Local
18	Blossomwood Dr	Woodsdale Ave	Laurelwood Ave	27	2,569	24	61,662	\$95,576	Local
18	Rockwood Dr	Brookhaven Ave	Brookhaven Ave	39	2,330	24	55,924	\$86,682	Local
19	Arnold Palmer Blvd	Aiken Rd	Old Henry Rd	23	3,730	45	165,207	\$256,071	Local
19	Eastpoint Pkwy	middle section not paved in FY 20		39	4,421	44	205,841	\$239,290	Local
20	Saratoga Woods Dr	Saratoga Club Rd	Pleasant Lawn Ct	45	2,273	24	54,556	\$84,562	Local
20	Saratoga Ridge Dr	Saratoga Woods Dr	Pleasant Lawn Ct	54	1,674	24	40,175	\$62,271	Local
20	Steep Ridge Ct	Saratoga Ridge Dr	Dead End	58	310	22	6,828	\$10,583	Local
20	Carolina Springs Ct	Saratoga Ridge Dr	Dead End	63	554	22	12,197	\$18,905	Local
20	Newport Trace Ct	Saratoga Woods Dr	Dead End	28	240	22	5,283	\$8,189	Local
20	Coventry Hill Rd	Easum Rd	Saratoga Woods Dr	67	552	24	13,241	\$20,524	Local
20	Old Billtown Rd	Michael Edward Dr	Dead End	39	480	18	8,645	\$13,400	Local
20	Michael Edward Dr	Billtown Rd	Sprucewood Dr	43	923	34	31,382	\$48,642	Local
20	Sprucewood Ct	Sprucewood Dr	Dead End	38	149	18	2,677	\$4,149	Local
20	Sprucewood Dr	Michael Edward Dr	Sprigwood Ln	26	1,958	23	44,346	\$68,736	Local
20	Fairwood Ln	Fairground Rd	Dead End	67	1,064	23	24,098	\$37,352	Local
20	Fairwood Ct	Fairwood Ln	Dead End	68	168	16	2,680	\$4,154	Local
20	Firwood Ct	Firwood Ln	Dead End	68	157	18	2,831	\$4,388	Local
20	Candywood Ln	Dead End	Dead End	43	480	18	8,644	\$13,398	Local
21	School Way	Forum Ave	Southern Pky	24	1,121	24	26,906	\$41,704	Local
21	Forum Ave	School Way	Southern Pky	25	1,407	24	33,762	\$52,331	Local
21	W Kingston Ave	Southern Pky	S 3rd St	45	1,950	30	57,693	\$89,424	Local
21	Christopher Pl	W Kingston Ave	S 4th St	14	897	20	18,034	\$27,953	Local
21	S 5th St	Burkley Ave	Christopher Pl	51	1,653	26	42,642	\$66,095	Local
21	Burkley Ave	W Kenwood Way	Southern Pky	20	1,158	28	32,428	\$50,263	Local
21	S 4th St	Burkley Ave	W Kingston Ave	55	2,450	27	66,792	\$103,528	Local
21	W Amherst Ave	Southside Dr	Dead End (west)	44	1,422	22	31,083	\$48,179	Local
22	Cris Dr	Dead End	Dead End	52	689	23	15,943	\$24,712	Local
22	Dart Dr	Edsel Ln	Cris Dr	28	641	23	14,780	\$22,909	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
22	Eagles Crest Ct	Mercury Dr	Dead End	46	907	20	18,140	\$28,117	Local
22	Edsel Ln	Ferndale Rd	Dead End	38	2,783	23	64,477	\$99,939	Local
22	Fair Ln	S Watterson Trl	Edsel Ln	28	468	28	13,098	\$20,302	Local
22	Ferncliff Ln	Cris Dr	Ferndale Rd	33	477	24	11,437	\$17,727	Local
22	Keira Ridge Ct	Mercury Dr	Dead End	50	458	20	9,159	\$14,196	Local
22	Mercury Dr	Dead End	Edsel Ln	42	2,873	22	62,736	\$97,241	Local
22	Meter Ct	Mercury Dr	Dead End	42	166	22	3,646	\$5,651	Local
22	Sprint Ct	Dart Dr	Dead End	53	400	24	9,595	\$14,872	Local
22	Van Ct	Dead End	Mercury Dr	81	167	22	3,682	\$5,707	Local
23	Woodrow Way	Briscoe Ln	Moorhaven Dr	21	2,101	20	42,815	\$66,363	Local
23	Richiewayne Dr	Dead End	Smyrna Pky	50	1,219	23	28,377	\$43,984	Local
23	Timmy Ln	Applegate Ln	Richiewayne Dr	32	621	26	16,155	\$25,040	Local
23	Timmy Ct	Timmy Ln	Dead End	81	463	20	9,268	\$14,365	Local
23	Trakia Ct	Michael Ray Dr	Dead End	34	351	18	6,309	\$9,779	Local
23	Petra Ct	Michael Ray Dr	Dead End	37	341	20	6,819	\$10,569	Local
23	Mar Vista Ct	Michael Ray Dr	Dead End	65	262	18	4,707	\$7,296	Local
23	La Cima Ct	Michael Ray Dr	Dead End	84	200	20	4,000	\$6,200	Local
23	Diablo Ct	Gregory Way	Dead End	56	257	18	4,626	\$7,170	Local
23	Boca Chica Ct	Gregory Way	Dead End	48	260	18	4,682	\$7,257	Local
23	Rodney Cir	Michael Ray Dr	Dead End	60	665	18	11,970	\$18,554	Local
23	Malibu Dr	Michael Ray Dr	Dead End	60	366	26	9,510	\$14,741	Local
23	Gregory Way	Michael Ray Dr	Dead End	35	1,163	24	27,909	\$43,260	Local
23	Michael Ray Dr	Joyce Dr	Smyrna Pky	44	5,482	23	128,652	\$199,411	Local
24	Monaco Dr/Layne Rd	Shepherdsville Rd	Morningside Way	39	2,211	24	52,198	\$80,907	Local
24	Buena Vista Ct	Outer Loop	Monaco Dr	61	634	24	15,207	\$23,571	Local
24	Red Rock Ct	Sandstone Blvd	Dead End	46	398	24	9,547	\$14,798	Local
24	Bluestone Rd	Yellowsands Dr	Dead End	54	713	24	17,105	\$26,513	Local
24	Yellowsands Dr	Sandstone Blvd	Moorhaven Dr	38	943	24	22,628	\$35,073	Local
24	Sandstone Blvd	Whispering Hills Blvd	Yellowsands Dr	24	1,830	24	43,931	\$68,093	Local
24	Flagstone Ct	Rock Hollow Dr	Dead End	30	117	24	2,812	\$4,359	Local
24	Rock Forest Dr	Whispering Hills Blvd	Rock Hollow Dr	28	829	24	19,888	\$30,826	Local
24	Rock Hollow Dr	Rock Forest Dr	Whispering Hills Blvd	37	1,343	24	32,241	\$49,973	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
24	Seebolt Dr	Briscoe Ln	Dead End	68	897	20	17,946	\$27,816	Local
24	Pattie Ln	Shepherdsville Rd	Seebolt Dr	52	694	20	13,884	\$21,520	Local
25	Cristland Rd	3rd Street Rd	Dead End	30	4,254	23	99,079	\$153,572	Local
25	Allanwood Rd	Red Stone Hill Rd	Dead End	39	1,128	26	29,339	\$45,475	Local
25	Red Stone Hill Rd	Manslick Rd	Dead End (All)	26	3,055	15	45,662	\$70,776	Local
25	Roycewood Ct	Dead End	Roycewood Rd	62	237	22	5,225	\$8,099	Local
25	Roycewood Rd	Dead End	Allanwood Rd	52	553	22	12,165	\$18,856	Local
26	Clingstone Way	Hikes Ln	Orchard Manor Cir	45	351	24	8,419	\$13,049	Local
26	Orchard Manor Cir	Whitehall Ter	Dead End	40	1,434	24	34,096	\$52,849	Local
26	Manner Dale Dr	Cabinwood Dr	Pomeroy Dr	33	3,135	24	74,732	\$115,835	Local
26	Vogue Ave (all)	Klondike Ln	Roselawn Blvd	44	2,287	22	50,314	\$77,987	Local
26	Roselawn Blvd (west)	Manner Dale Dr	Vogue Ave	51	1,339	22	29,454	\$45,654	Local
2	Jefferson Blvd	Fern Valley Rd	McCawley Rd	41	6,320	64	390,255	\$663,433	Min Art
3	Wilson Ave	W Hill St	Algonquin Pky	42	2,879	39	113,696	\$193,283	Min Art
4	E Chestnut St	S 1st St	S Campbell St	58	4,584	41	186,672	\$317,342	Min Art
4	E Muhammad Ali Blvd	S 1st St	E Chestnut St	53	5,485	39	213,907	\$363,642	Min Art
6	S 7th St	S 9th St	Algonquin Pky	46	4,905	33	160,498	\$272,847	Maj Art
6	S 6th St	W Broadway	W Ormsby Ave	73	4,840	63	304,187	\$517,119	Min Art
6	W Oak St	S 1st St	S 7th St	38	2,821	37	104,909	\$178,345	Min Art
9	Grinstead Dr	Lexington Rd	S Petterson Ave	54	1,939	55	106,205	\$180,549	Min Art
12	Trade Port Dr	Johnsontown Rd	Greenbelt Hwy	29	3,793	34	128,960	\$219,232	Min Art
16	River Rd	Blankenbaker Ln	Lime Kiln Ln	35	10,500	23	235,799	\$400,858	Min Art
25	Stonestreet Rd	Valley College Dr	3rd Street Rd	22	2,815	56	157,043	\$266,973	Min Art
1	S Crums Ln	Mae Ave	Cane Run Red	51	4,193	23	94,349	\$155,676	Pri Coll
1	Mae Ave	Crums Ln	S Crums Ln	27	654	22	14,389	\$23,742	Sec Coll
2	***Buechel Bank Rd ***	Barley Ave	Bruce Ave	27	4,106	21	84,425	\$139,301	Pri Coll
2	Dahl Rd	Guest Ave	Poplar Level Rd	39	3,141	18	56,545	\$93,299	Sec Coll
4	N Shelby St	Franklin St	E Witherspoon St	35	967	34	32,877	\$54,247	Pri Coll
6	S Floyd St	E St Catherine St	E Burnett Ave	44	3,710	37	137,345	\$226,619	Pri Coll
7	Lyndon Ln	Herr Ln	Westport Rd	30	2,502	24	60,236	\$99,389	Pri Coll
10	Clarks Ln	Preston Hwy	Poplar Level Rd	55	4,434	22	95,697	\$157,900	Pri Coll
11	Six Mile Ln	Taylorville Rd	Old Six Mile Ln	40	2,050	26	49,186	\$81,157	Pri Coll

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
11	Watterson Trl	S Hurstbourne Pkwy	Stony Brook Dr	40	3,083	33	102,162	\$168,567	Pri Coll
11	Six Mile Ln	Green Garden Ct	Stony Brook Dr	42	1,278	28	34,502	\$56,928	Pri Coll
13	Blevins Gap Rd	Greyling Dr	Lonsome Hollow Rd	24	2,201	20	44,010	\$72,617	Pri Coll
13	Keys Ferry Rd	W Manslick Rd	Mitchell Hill Rd	40	8,597	19	166,919	\$275,416	Sec Coll
13	Greyling Dr	W Manslick Rd	Blevins Gap Rd	28	5,964	21	121,522	\$200,511	Sec Coll
14	E Orell Rd	Dixie Hwy	Blevins Gap Rd	45	4,820	22	108,355	\$178,786	Sec Coll
14	Ashby Ln	Dixie Hwy	Greenbelt	49	7,714	22	163,944	\$270,507	Pri Coll
14	Blevins Gap Rd	Stonestreet Rd	Bearcamp Rd	19	3,563	20	71,257	\$117,574	Sec Coll
17	Lakeland Rd	Freys Hill Rd	Evergreen Wynde	23	445	20	8,910	\$14,702	Pri Coll
17	Collins Ln	Chamberlain Ln	Westport Rd	23	5,810	24	126,087	\$208,044	Sec Coll
17	Rollington Rd	Westport Rd	County Line	40	3,065	19	57,505	\$94,883	Sec Coll
3	Ralph Ave	Dixie Hwy	Gerald Dr	42	8,489	24	196,198	\$323,727	Pri Coll
19	Dorsey Ln	McMeekin Ln	Ward Ave	42	841	28	23,742	\$39,175	Pri Coll
19	Flat Rock Rd	Shelbyville Rd	Aiken Rd	40	20,311	23	447,535	\$738,433	Sec Coll
19	Clark Station Rd	Shelbyville Rd	Spotswood Ln	39	10,927	20	216,626	\$357,433	Sec Coll
22	Cedar Creek Rd	Bardstown Rd	Cooper Chapel Rd	40	20,702	19	386,754	\$638,144	Sec Coll
22	Oak Grove Rd	Independence School Rd	Thixton Ln	20	3,889	16	62,229	\$102,678	Sec Coll
25	St Anthony Church Rd	St Andrews Church Rd	Manslick Rd	22	11,698	20	236,657	\$390,484	Pri Coll
26	Kresge Way	Breckenridge Ln	S Hubbards Ln	38	2,634	50	131,587	\$217,119	Pri Coll
26	Browns Ln	Shelbyville Rd	Kresge Way	45	5,308	23	120,649	\$199,071	Pri Coll

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
1	Farnsley Rd	Cane Run Rd	Dead End	37	1,321	17	22,890	\$37,768	Local
1	Ronald Ct	Cane Run Rd	Dead End	37	359	20	7,171	\$11,832	Local
1	Catalpa St	Virginia Ave	Wilson Ave	30	2,422	35	86,122	\$142,102	Local
1	Doerhoefer Ave	S 44th St	Dead End (east)	23	1,061	13	13,173	\$21,735	Local
1	Bridwell Dr	Kaufman Ln	Dead End	31	2,966	19	55,835	\$92,128	Local
1	Mary Rose Dr	Bridwell Dr	Lencott Dr	51	760	20	15,004	\$24,756	Local
1	S 31st St	Southern Ave	Dr William G Weathers Dr	31	1,580	22	34,754	\$57,345	Local
1	Woodland Ave	Olive St	S 32nd St	20	2,380	33	80,177	\$132,292	Local
1	Greenwood Ave	S 26th St	S 29th St	29	1,583	36	55,879	\$92,200	Local
2	Lambert Ave	Buechel Bank Rd	Beechbrook Rd	25	1,922	23	44,129	\$72,813	Local
2	Lambert Ct	Lambert Ave	Dead End	54	438	18	7,891	\$13,020	Local
2	Bartholomew Dr	Lambert Ave	Dead End	62	462	22	10,169	\$16,779	Local
2	Ayars Ct	Lambert Ave	Dead End	11	346	20	6,911	\$11,404	Local
2	Sanford Ave	Buechel Bank Rd	Lambert Ave	53	1,584	21	33,262	\$54,882	Local
2	Landing Dr	Lambert Ave	Norfolk Dr	55	476	24	11,435	\$18,867	Local
2	Norfolk Dr	Fegenbush Ln	Landing Dr	19	1,432	26	37,229	\$61,429	Local
2	Beechbrook Rd	Kranet Way	Norfolk Dr	39	623	24	14,950	\$24,667	Local
2	Norbrook Dr	Fegenbush Ln	Dead End	55	1,123	28	31,456	\$51,902	Local
2	Exeter Ave	E Indian Trl	Stokes Ct	20	1,425	36	51,289	\$84,627	Local
2	Ellington Ave	Stokes Ct	Petersburg Rd	46	1,438	36	51,766	\$85,414	Local
2	Kilgore Ct	Exeter Ave	Dead End	39	350	24	8,405	\$13,869	Local
2	Wheatley Ct	Exeter Ave	Dead End	66	441	24	10,591	\$17,475	Local
2	Stokes Ct	Ellington Ave	Dead End	46	351	24	8,416	\$13,886	Local
2	Bunche Ct	Ellington Ave	Dead End	64	173	24	4,162	\$6,868	Local
2	Tubman Ct	Ellington Ave	Dead End	25	178	24	4,282	\$7,065	Local
3	Hardesty Ave	Dixie Hwy	S 23rd St	23	1,515	18	27,268	\$42,265	Local
3	Plantation Dr	Wingfield Ln	Millers Ln	43	1,527	18	27,493	\$42,614	Local
3	Catalpa St	Wilson Ave	Dead End (south)	29	985	31	30,528	\$50,372	Local
3	W Gaulbert Ave	Cypress St	Wilson Ave	35	1,631	27	43,917	\$72,463	Local
3	Hemlock Ct	W Gaulbert Ave	Dead End	56	187	28	5,240	\$8,646	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
3	S 28th ST	W Gaulbert Ave	Dead End	51	215	26	5,595	\$9,233	Local
3	Olive St	W Gaulbert Ave	Dead End	55	301	30	9,026	\$14,894	Local
3	Wilart Dr	Dixie Hwy	McCloskey Ave	19	1,370	22	30,147	\$49,743	Local
3	Wallie Ann Ct	Bernheim Ln	Adelia Ave	30	1,501	21	32,377	\$53,421	Local
3	McCloskey Ave	Bernheim Ln	Wilart Dr	21	825	22	18,150	\$29,948	Local
3	Harold Ave	Dixie Hwy	Dead End	52	1,824	20	36,480	\$60,193	Local
4	S 11th St	W Chestnut St	W Broadway	33	1,063	41	43,988	\$72,581	Local
4	Magazine St	S 10th St	S 11th St	34	471	42	19,802	\$32,673	Local
4	S 10th St	Magazine St	Read Alley	34	219	42	9,195	\$15,172	Local
4	Walter Barnes Way	W Chestnut St	Read Alley	37	251	40	10,029	\$16,547	Local
4	Rubel Ave	E Broadway	Morton Ave	30	1,341	35	47,144	\$77,787	Local
4	Benton Ave	St Anthony Pl	Rubel Ave	23	312	28	8,728	\$14,401	Local
4	St Anthony Pl	E Broadway	Barret Ave	33	1,162	31	35,434	\$58,466	Local
4	Edward St	St Anthony Pl	Morton Ave	25	1,234	36	44,468	\$73,373	Local
4	Debarr St	Rubel Ave	Barret Ave	32	1,127	30	33,808	\$55,783	Local
4	S 17th St	W Broadway	W Chestnut St	18	959	35	33,565	\$55,382	Local
4	Cedar St	S 19th St	S 15th St	39	1,923	37	71,173	\$117,435	Local
4	S 18th St	Green Alley	Eddy St	47	492	34	16,742	\$27,625	Local
4	S 17th St	Cedar St	W Madison St	25	904	36	32,544	\$53,697	Local
4	Rowan St	N 22nd St	N 24th St	16	958	36	34,500	\$56,924	Local
4	Duncan St	N 22nd St	N 24th St	14	960	36	34,552	\$57,010	Local
4	W Main St	N 22nd St	N 25th St	40	1,439	60	86,329	\$142,443	Local
5	Doerhoefer Ave	S 44th St	S 45th St	25	599	15	8,940	\$14,751	Local
5	S 45th St	W Broadway	Garland Ave	33	1,118	29	32,743	\$54,025	Local
5	N 21st St	Bank St	Rowan St	19	1,874	24	44,982	\$74,221	Local
5	Short St	Griffiths Ave	Owen St	16	362	26	9,415	\$15,535	Local
5	Griffiths Ave	N 22nd St	Bank St	18	1,754	34	59,640	\$98,406	Local
5	N 20th St	Rowan St	Bank St	15	1,617	34	54,969	\$90,699	Local
5	N 20th St	Bank St	Portland Ave	15	710	34	24,135	\$39,823	Local
5	Lytle St	N 20th St	N 22nd St	23	714	36	25,695	\$42,397	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
5	N 23rd St	Portland Ave	Northwestern Pkwy	20	911	35	31,437	\$51,871	Local
5	N 25th St	Portland Ave	Northwestern Pkwy	27	1,026	35	35,924	\$59,275	Local
5	N 27th St	Portland Ave	Northwestern Pkwy	18	997	36	35,891	\$59,219	Local
5	Carter St	Portland Ave	Northwestern Pkwy	25	601	36	21,625	\$35,681	Local
5	N 36th St	Northwestern Pkwy	Pflanz Ave	38	267	24	6,404	\$10,567	Local
5	N 35th St	Northwestern Pkwy	Parker Ave	18	2,209	40	88,362	\$145,797	Local
5	N 34th St	Northwestern Pkwy	Pflanz Ave	35	265	36	9,530	\$15,724	Local
5	N 33rd St	Northwestern Pkwy	Pflanz Ave	20	263	58	15,270	\$25,196	Local
5	Cedar Grove Ter	Northwestern Pkwy	Dead End	20	781	54	42,188	\$69,610	Local
6	Lindbergh Dr	Algonquin Pkwy	Dead End	46	3,139	29	94,314	\$155,618	Local
6	Wurtele Ave	7th Street Rd	Colorado Ave	32	1,902	32	60,879	\$100,450	Local
6	Weller Ave	7th Street Rd	Colorado Ave	29	1,388	26	36,096	\$59,558	Local
6	Tennessee Ave	7th Street Rd	Lindbergh Dr	33	1,381	25	34,463	\$56,865	Local
6	Lincoln Ave	7th Street Rd	Taylor Blvd	25	3,816	27	101,682	\$167,775	Local
6	Lillian Ave	7th Street Rd	Colorado Ave	31	2,016	25	51,525	\$85,017	Local
6	Colorado Ave	Central Ave	Algonquin Pkwy	20	2,260	27	58,595	\$96,681	Local
6	S 16th St	W Breckinridge St	W Oak St	29	2,614	32	83,649	\$138,021	Local
6	S 17th St	W Kentucky St	W Oak St	28	1,746	33	58,064	\$95,806	Local
6	W St Catherine St	S 15th St	S 16th St	21	745	30	22,340	\$36,861	Local
7	Chippewa Rd	Elfin Ave	Napanee Rd	42	318	22	6,995	\$11,541	Local
7	Napanee Rd	Chippewa Rd	St Matthews Ave	19	588	24	14,108	\$23,278	Local
8	Edward St	Morton Ave	Rufer Ave	19	1,800	36	64,788	\$106,901	Local
8	Ray Ave	Grinstead Dr	Longest Ave	23	1,326	30	39,776	\$65,631	Local
8	Ridgeway Ave	Willow Ave	Dead End	10	1,245	20	24,891	\$41,071	Local
8	Spring Dr	Speed Ave	Woodford Pl	18	1,722	36	61,984	\$102,273	Local
8	Bonnycastle Ave	Bardstown Rd	Cherokee Rd	38	2,859	29	82,864	\$136,725	Local
8	Alta Ave	Bardstown Rd	Cherokee Rd	25	3,135	30	94,055	\$155,191	Local
8	Parsons Pl	Alta Ave	Bonnycastle Ave	30	442	18	7,961	\$13,135	Local
8	Grasmere Ter	Grasmere Dr	Dead End	11	313	12	3,756	\$6,197	Local
9	St Matthews Ave	Napanee Rd	Ormond Rd	31	362	22	7,959	\$13,133	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
9	Rock Creek Dr	Cannons Ln	Pee Wee Reese Rd	32	3,261	20	63,880	\$105,401	Local
9	Circle Hill Rd	Rock Creek Dr	Old Cannons Ln	29	2,588	23	60,702	\$110,175	Local
9	Homestead Blvd	Rock Creek Dr	Circle Hill Rd	31	1,122	24	26,919	\$44,416	Local
9	Huntington Rd	Rock Creek Dr	Old Cannons Ln	19	1,712	22	37,664	\$62,145	Local
9	Lake Ave	Mellwood Ave	Dead End	19	1,985	23	45,650	\$105,452	Local
9	Kennedy Ave	Frankfort Ave	Grinstead Dr	31	1,384	18	25,325	\$41,786	Local
9	Kennedy Ct	Kennedy Ave	Dead End	41	586	20	11,338	\$18,707	Local
9	Avon Ct	Kennedy Ave	Kennedy Ct	14	172	22	3,793	\$6,258	Local
9	Springdale Rd	Grinstead Dr	Pleasantview Ave	20	686	24	16,457	\$27,155	Local
9	Pleasantview Ave	Grinstead Dr	Lexington Rd	18	1,878	29	54,763	\$90,359	Local
9	Meadowlark Ave	Seminary Rd	Stilz Ave	16	851	16	13,612	\$22,460	Local
9	Mount Holly Ave	Brownsboro Rd	Lindsay Ave	19	1,215	24	27,378	\$45,174	Local
9	Bauer Ave	Lexington Rd	Wilmington Ave	21	527	22	11,587	\$19,119	Local
9	Macon Ave	Lexington Rd	Wilmington Ave	18	482	24	11,569	\$19,089	Local
9	Wendover Ave	Lexington Rd	Wilmington Ave	26	436	22	9,592	\$15,826	Local
9	Wallace Ave	Lexington Rd	Wilmington Ave	18	387	26	10,058	\$16,595	Local
9	Wilmington Ave	Wallace Ave	Frankfort Ave	28	537	25	13,622	\$22,476	Local
9	Wiltshire Ave	Wilmington Ave	Willis Ave	14	577	22	12,703	\$20,959	Local
10	Audubon Ridge Dr	Illinois Ave	Dead End	49	1,027	31	24,880	\$41,052	Local
10	Audubon Ridge Ct	Audubon Ridge Dr	Dead End	20	857	22	18,850	\$31,102	Local
10	Spratt St	Goss Ave	St Michael St	36	1,171	35	41,392	\$68,297	Local
10	St Michael St	Ellison Ave	Dead End	41	712	28	19,943	\$32,906	Local
10	Ellison Ave	Barret Ave	Spratt Ave	36	2,430	38	92,326	\$152,338	Local
10	Reutlinger Ave	E Oak St	Ellison Ave	23	1,330	28	37,249	\$61,460	Local
11	Eastside Dr	Manner Gate Dr	Hunsinger Ln	19	890	24	21,351	\$35,229	Local
11	Eastside Ct	Eastside Dr	Dead End	69	90	24	2,154	\$3,554	Local
11	Shaker Mill Ct	Shaker Mill Rd	Dead End	28	265	22	5,836	\$9,629	Local
11	Plain Field Ct	Shaker Mill Rd	Dead End	33	304	22	6,691	\$11,040	Local
11	Shaker Mill Rd	Westwood Farms Dr	Plain Field Ct	51	1,982	24	47,557	\$78,470	Local
11	Garden View Ct	Westwood Farms Dr	Dead End	58	436	22	9,593	\$15,828	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
11	Westwood Farms Dr	Six Mile Ln	Plain Field Ct	51	2,395	30	65,407	\$107,921	Local
11	Westwood Farms Ct	Westwood Farms Dr	Dead End	80	328	22	7,208	\$11,894	Local
12	Vista John Dr	Manslick Rd	Stephan Dr	37	1,411	23	32,840	\$54,187	Local
12	Lynn Myra Ct	Vista John Dr	Dead End	40	238	22	5,235	\$8,637	Local
12	Terudon Dr	Manslick Rd	Vista John Dr	28	736	24	17,666	\$29,149	Local
12	De Mel Ave	Manslick Rd	Dead End	24	1,904	22	40,680	\$67,123	Local
12	Nancy Ave	Dawn Dr	Dead End	22	808	24	19,389	\$31,992	Local
12	Stephan Rd	Vista John Dr	Oswego Cir	25	1,043	20	20,868	\$34,432	Local
12	Frank Lee Ave	Terry Rd	Dead End	41	819	20	16,390	\$27,044	Local
12	Wilke Farm Ave	Frank Lee Ave	Ree Dr	49	1,284	22	28,248	\$46,609	Local
12	Wade Lee Ct	Wilke Farm Ave	Dead End	37	209	20	4,171	\$6,881	Local
12	Mount Marcy Rd	Mount Holyoke Dr	Alps Rd	25	1,330	24	31,930	\$52,685	Local
13	Clay Ave	Minor Ln	Preston Hwy	25	3,415	17	56,963	\$93,988	Local
13	Minyard Dr	Clay Ave	Minor Ln	29	1,931	26	51,053	\$84,237	Local
13	Meadow Hill Rd	Minyard Dr	Dead End	9	206	24	4,946	\$8,161	Local
13	Sunset Dr	Minor Ln	Clay Ave	39	1,117	18	20,111	\$33,184	Local
13	Lonesome Hollow Rd	Bleevins Gap Rd	Dead End	24	2,990	18	51,943	\$85,707	Local
13	Joyner Hill Rd	Lonesome Hollow Rd	Dead End	33	1,150	11	12,645	\$20,865	Local
13	Snawder Ln	Jefferson Hill Rd	Dead End	21	1,267	10	12,669	\$20,903	Local
13	Lonesome Hollow Rd	Jefferson Hill Rd	Dead End	37	756	12	9,075	\$14,974	Local
14	Mark Dr	Vicki Ln	Robbins Rd	21	407	24	9,768	\$16,118	Local
14	Vicki Ln	W Pages Ln	Stephan Dr	31	1,266	22	27,858	\$45,965	Local
14	Stephan Dr	Dixie Hwy	Vicki Ln	29	2,218	25	55,804	\$92,077	Local
14	Sally Dr	W Pages Ln	Stephan Dr	36	1,218	21	25,574	\$42,197	Local
14	Chase Rd	W Pages Ln	Stephan Dr	43	1,154	20	23,090	\$38,098	Local
14	Minette Ct	Stephan Dr	public dead end	13	374	18	6,735	\$11,113	Local
14	Fashion Way	Bethany Ln	Nocturne Dr	18	1,660	23	38,004	\$62,707	Local
14	Dixie Garden Dr	Dixie Hwy	Blaze Way	52	2,735	27	68,720	\$113,388	Local
14	Nocturne Dr	Fashion Way	Blaze Way	59	1,163	24	27,915	\$46,060	Local
14	Schooler Ln	Stonestreet Rd	Dead End	17	1,190	12	14,276	\$23,555	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
15	Estate Dr	Delmar Ln	Dead End	19	907	23	20,771	\$34,272	Local
15	Delmar Ln	Naneen Dr	Sadie Ln	33	1,315	24	31,572	\$52,093	Local
15	Sadie Ln	Bryce Dr	Dead End (north)	54	878	15	13,630	\$22,490	Local
15	Delmar Ct	Sadie Ln	Dead End	27	575	22	12,643	\$20,860	Local
15	Garvey Dr	Estate Dr	Dead End	19	1,224	23	27,219	\$44,912	Local
15	Garvey Ct	Garvey Dr	Dead End	50	227	24	5,436	\$8,970	Local
15	Rhonda Way	Naneen Dr	Garvey Dr	45	1,324	24	31,781	\$52,438	Local
15	Joetta Ct	Rhonda Way	Dead End	37	165	24	3,968	\$6,547	Local
15	Bicknell Ave	Taylor Blvd	Parthenia Ave	26	2,752	28	81,111	\$133,833	Local
15	Churchman Ave	Cayuga St	Bluegrass Ave	22	2,385	26	62,117	\$102,494	Local
15	La Salle Ave	Cayuga St	Bluegrass Ave	34	2,152	25	54,473	\$89,880	Local
15	Alma Ave	Churchman Ave	Locust Ave	35	322	12	3,866	\$6,379	Local
15	Locust Ave	Alma Ave	Old Bluegrass Ave	43	529	10	5,294	\$8,735	Local
15	Old Bluegrass Ave	Churchman Ave	Dead end near Locust Ave	63	434	22	9,556	\$15,767	Local
15	Alma Ave	Churchman Ave	Hazelwood Ave	36	1,269	22	27,285	\$45,020	Local
15	Hazelwood Ave	Bicknell Ave	Bluegrass Ave	24	1,512	24	36,280	\$59,862	Local
15	Friden Way	Manslick Rd	Tracy Way	35	1,011	23	23,236	\$38,340	Local
15	Rolling Ridge Rd	Friden Way	Dead End	39	482	24	11,567	\$19,086	Local
15	Knight Rd	Tracy Way	Manslick Rd	21	531	22	11,684	\$19,279	Local
15	Tracy Way	Knight Rd	Hazelwood Ave	63	888	24	21,311	\$35,162	Local
16	Branning Rd	Brownsboro Rd	end of Metro R/W	15	597	18	15,000	\$24,750	Local
16	Spring Farm Rd	Wolf Pen Branch Rd	4945 Spring Farm Rd	34	3,544	22	77,962	\$128,637	Local
16	Tamerlane Rd	Woodside Rd	Tuckaho Rd	33	961	24	23,065	\$38,057	Local
16	Tuckaho Rd	Tamerlane Rd	2510 Tuckaho Rd	38	389	22	8,556	\$14,117	Local
16	Oak Pointe Dr (south)	Halifax Dr	Halifax Dr	27	1,397	24	33,520	\$55,308	Local
16	Cronin Dr	Halifax Dr	Halifax Dr	47	1,989	24	47,205	\$77,888	Local
17	Spring Gate Dr	Chamberlain Ln	Stone Glen Rd	20	832	24	19,968	\$32,948	Local
17	Glen Meadow Rd	Brownsboro Glen Rd	Spring Gate Dr	16	272	22	5,978	\$9,863	Local
17	Rolling Springs Ct	Rock Bay Dr	Dead End	28	667	24	16,000	\$26,400	Local
17	Rolling Springs Pl	Rolling Springs Ct	Dead End	53	283	24	6,787	\$11,198	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
17	Spring Mill Rd	Rock Bay Dr	Rock Bay Dr	34	3,262	24	78,281	\$129,163	Local
17	Woods View Pl	Spring Mill Rd	Dead End	21	734	24	17,607	\$29,051	Local
17	Spring Forest Dr	Spring Mill Rd	Dead End	31	467	24	11,199	\$18,479	Local
17	Spring Forest Ct	Spring Forest Dr	Dead End	36	206	24	4,935	\$8,142	Local
17	Spring Mill Pl	Spring Mill Rd	Dead End	25	529	24	12,692	\$20,942	Local
17	Oakland Forest Ct	Spring Mill Rd	Dead End	47	275	24	6,610	\$10,906	Local
18	Hobbs Station Rd	Lodge Hill Rd (south)	Sable Wing Cir (south)	35	4,052	51	190,576	\$314,450	Local
18	Talon Way	Dead End	Dead End	30	1,007	22	22,152	\$36,552	Local
19	Hiawatha Ave	Heafer Rd	N English Station Rd	26	1,789	22	29,921	\$49,370	Local
19	Hines Rd	Berrytown Rd	Dead End	37	931	14	13,585	\$22,416	Local
19	Hines Ct	Heafer Rd	Dead End	34	490	16	7,837	\$12,931	Local
19	Lilly Ln	LaGrange Rd	Dead End	40	673	20	13,452	\$44,392	Local
19	Winding Creek Pl	Oakhurst Rd	Dead End	32	1,096	24	26,303	\$43,400	Local
19	Winding Creek Ct	Winding Creek Pl	Dead End	24	194	24	4,665	\$7,697	Local
19	Treeline Ct	Winding Creek Pl	Dead End	23	130	48	6,230	\$10,279	Local
19	Golden Leaf Pl	Golden Leaf Way	Dead End	24	921	23	21,078	\$34,779	Local
19	Wood Thrush Trace	Golden Leaf Pl	Dead End	18	246	24	5,898	\$9,732	Local
19	Golden Leaf Way (all)	Forest Oaks Dr	Golden Leaf Way	24	1,933	23	44,684	\$73,729	Local
19	Majestic Woods Pl	Forest Oaks Dr	Dead End	68	383	22	8,428	\$13,905	Local
19	Greensbrook Pl	Forest Oaks Dr	Dead End	40	569	24	13,653	\$22,527	Local
19	Forest Oaks Dr	Arnold Palmer Blvd	N Beckley Station Rd	32	3,064	24	74,266	\$122,539	Local
19	Whisperwood Trace	Forest Oaks Dr	Dead End	54	329	22	7,239	\$11,945	Local
19	Winterbranch Way	Forest Oaks Dr	Dead End	72	858	22	18,865	\$31,127	Local
19	Garden Hill Pl	N Beckley Station Rd	Dead End	67	974	22	21,420	\$35,343	Local
20	Hopewell Rd	Taylorsville Rd	Dead End	23	2,708	21	52,472	\$86,579	Local
20	Electron Dr	Blankenbaker Pkwy	Constant Comment Pl	19	863	33	28,472	\$46,978	Local
20	Constant Comment Pl	From J-Town R/W north of Electron	Dead End (south)	22	987	35	42,616	\$70,317	Local
20	Old Hady Rd	Dead End	Dead End	18	669	20	13,389	\$30,000	Local
20	Mary Dell Ln	Billtown Rd	Cynthia Dr	26	1,401	22	30,826	\$50,862	Local
20	Chenoweth Park Ln	Mary Dell Ln	Dead End (south)	22	623	22	13,698	\$22,601	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
20	Burkett Ct	Mary Dell Ln	Dead End	52	258	18	4,641	\$7,658	Local
20	Sloane Ct	Mary Dell Ln	Dead End	61	226	18	4,071	\$6,718	Local
20	Dry Ridge Ln	Dry Ridge Rd	Dead End	18	3,077	12	36,921	\$60,919	Local
20	Landis Lakes Dr	S English Station Rd	Landis Lakes Ct	33	1,682	25	41,128	\$67,861	Local
21	Carroll Ave	Durrett Ln	Scholar St	28	1,774	20	35,313	\$58,266	Local
21	Howard St	Carroll Ave	Dead End	35	1,583	16	26,177	\$43,192	Local
21	Lacona Ln	Carroll Ave	Campobello St	20	1,013	24	24,305	\$40,104	Local
21	Scholar St	Carroll Ave	Campobello St	14	1,046	23	24,060	\$39,698	Local
21	Zeta Ct	Campobello St	Dead End	52	90	20	1,798	\$2,967	Local
21	Cavelle Ave	Durrett Ln	Dead End	27	1,791	18	32,235	\$53,188	Local
21	S 2nd St	W Southern Heights Ave	W Wellington Ave	31	2,074	30	59,491	\$98,159	Local
21	Meridale Ave	W Southern Heights Ave	S 2nd St	59	1,055	25	26,367	\$43,505	Local
21	W Wampum Ave	S 3rd St	S 1st St	27	967	26	25,139	\$41,479	Local
21	W Wellington Ave	Southern Pkwy	S 1st St	31	1,485	30	44,540	\$73,490	Local
21	Woodmore Ave	New Cut Rd	Lawnside Dr	46	2,695	24	64,675	\$106,714	Local
21	Palatka Rd	Dead End	Dead End	44	1,212	24	29,100	\$48,014	Local
21	Kane Ct	Palatka Rd	Dead End	24	121	22	2,658	\$4,386	Local
21	Lawnside Dr	Palatka Rd	Lenoak Dr	39	617	23	14,251	\$23,515	Local
21	Lenoak Dr	Palatka Rd	Lawnside Dr	57	716	22	15,745	\$25,980	Local
21	Alvina Way	Southside Dr	Aurora Dr	36	1,205	24	28,914	\$47,707	Local
21	Gerber Ave	Alvina Way	Dead End	56	509	22	11,190	\$18,464	Local
21	Ivan Ct	Alvina Way	Dead End	48	335	24	8,046	\$13,275	Local
21	Aurora Dr	Palatka Rd	Dead End	39	716	22	15,743	\$25,977	Local
22	Dobson Ln	Brentlinger Ln	Dead End	18	2,400	11	27,273	\$45,000	Local
22	Gainsborough Dr	Johnson School Rd	Annalisa Dr	32	2,077	23	48,747	\$80,432	Local
22	Jefferson Ave	Bardstown Rd	Fern Creek Rd	17	986	16	15,770	\$26,021	Local
22	Kentucky Ave	Bardstown Rd	Fern Creek Rd	21	1,177	16	18,838	\$31,083	Local
22	Artis Way	Beulah Church Rd	Dead End	39	3,091	24	74,190	\$122,414	Local
22	Fox Ledge Ct	Artis Way	Dead End	50	334	20	6,684	\$11,029	Local
22	Ledge Pointe Ct	Artis Way	Dead End	63	309	20	6,174	\$10,187	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
22	Stone Ledge Rd	Artis Way	Dead End	55	1,301	20	26,022	\$42,937	Local
22	Stone Ledge Ct	Stone Ledge Rd	Dead End	71	368	18	6,624	\$10,930	Local
22	Artis Pl	Artis Way	Dead End	39	194	22	4,267	\$7,041	Local
22	Warrenton Hill Ct	Artis Way	Dead End	38	993	20	19,864	\$32,776	Local
22	Wellington Hill Ct	Warrenton Hill Ct	Dead End	31	810	20	16,197	\$26,726	Local
23	Denise Dr	Lois Ave	Dead End	33	4,379	24	105,091	\$173,400	Local
23	Adkins Rd	Honor Ave	Dead End	45	1,099	22	24,169	\$39,880	Local
23	Lois Ave	Beth Rd	Dead End	58	2,034	23	48,486	\$80,002	Local
23	Beth Rd	Denise Dr	Dead End	45	1,927	23	44,467	\$73,371	Local
23	Senator Ln	Denise Dr	Honor Ave	19	890	24	21,351	\$35,229	Local
23	Cherita Rd	Denise Dr	Honor Ave	46	874	22	19,219	\$31,711	Local
23	Amalfi Ave	Denise Dr	Cherriville Rd	29	359	22	7,903	\$13,040	Local
23	Honor Ave	Amalfi Ave	Adkins Rd	46	1,435	23	33,010	\$54,467	Local
24	Bluebell Dr	Blue Lick Rd	Narcissus Dr	48	2,617	24	62,800	\$103,621	Local
24	Weigela Dr	Blue Lick Rd	Bluebell Dr	45	550	24	13,201	\$21,782	Local
24	Tulip Cir	Bluebell Dr	Dead End	56	214	22	4,714	\$7,778	Local
24	Bellflower Dr	Blue Lick Rd	Dead End	37	608	23	13,778	\$22,734	Local
24	Narcissus Dr	Bluebell Dr	Dead End	19	1,202	24	28,844	\$47,593	Local
24	Delee Way	Narcissus Dr	Dead End	34	363	24	8,714	\$14,378	Local
24	Woodsend Rd	Dead End	Dead End	26	1,078	18	19,401	\$32,011	Local
24	Wood Hollow Rd	Oldshire Rd	Woodsend Rd	37	803	24	19,281	\$31,813	Local
24	Tolkien Ct	Wood Hollow Rd	Dead End	16	589	18	10,594	\$17,480	Local
24	Abbydale Ct	Wood Hollow Rd	Dead End	36	589	18	10,598	\$17,487	Local
25	Carol Way	Manslick Rd	Chet Ln	21	1,433	22	31,529	\$52,023	Local
25	Chet Ln	Carol Way	Cartledge Ct	27	817	22	17,967	\$29,646	Local
25	Cartledge Ct	Chet Ln	3rd Street Rd	45	1,165	16	18,639	\$30,754	Local
25	Bamberie Cross Rd	Chet Ln	3rd Street Rd	47	1,053	22	23,169	\$38,229	Local
25	Burr Ln	Carol Way	Dead End	28	816	24	19,577	\$32,302	Local
25	Fordhaven Rd	St Anthony Church Rd	public road end	37	1,359	29	39,418	\$65,041	Local
25	Springfield Dr	St Anthony Church Rd	public road end	14	887	24	21,292	\$35,132	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
25	Heritage Pl	Manslick Rd	Dead End	26	597	30	17,906	\$29,544	Local
25	Potomac Pl	Manslick Rd	Dead End	30	616	26	16,028	\$26,446	Local
25	Quaker Ct	Constitution Dr	Dead End	17	389	20	7,784	\$12,844	Local
25	Constitution Dr	Manslick Rd	Dead End	45	1,105	25	27,410	\$45,227	Local
26	Brockton Ln	Hendon Rd	Commander Dr	42	2,240	23	51,629	\$85,187	Local
26	Commander Dr	Brockton Ln	Herb Ln	35	854	26	22,208	\$36,643	Local
26	Doreen Way	Brockton Ln	Herb Ln	32	878	28	24,583	\$40,562	Local
26	Nadina Dr	Wedgewood Way	Herb Ln	39	874	23	20,108	\$33,178	Local
26	Wedgewood Way (north)	Brockton Ln	Herb Ln	26	936	23	21,212	\$35,000	Local
26	Rosedale Blvd	Brockton Ln	Radiance Rd	41	249	24	5,970	\$9,851	Local
26	Kings Hwy	Rosedale Blvd	Talisman Rd	34	719	24	17,268	\$28,491	Local
26	Taylorsville Rd	Brockton Ln	Dead End	64	760	16	12,153	\$20,052	Local
2	Fegenbush Ln	Bardstown Rd	Fern Valley Rd	56	9,572	48	481,165	\$938,272	Min Art
4	S Preston St	E Hill St	I 65 Ramp	53	911	35	31,896	\$63,793	Min Art
4	E Liberty St	S Preston St	Baxter Ave	62	4,314	37	159,742	\$319,484	Min Art
6	W Oak St	Dixie Hwy	S 26th St	20	2,754	39	106,709	\$213,418	Min Art
6	Dixie Hwy	Hale Ave	W Burnett Ave	55	3,120	36	112,670	\$225,340	Min Art
14	Johnsontown Rd	Dixie Hwy	Trade Port Dr	47	7,413	36	270,663	\$541,325	Min Art
4	N 2nd St	River Rd	W Main St	55	905	20	18,437	\$32,450	Pri Coll
4	W Washington St	N 1st St	N 2nd St	29	493	22	10,855	\$19,105	Pri Coll
4	E Washington St	N 1st St	N Preston St	55	1,655	29	48,900	\$86,064	Pri Coll
9	Winchester Rd	Cannons Ln	Thompson Ave	44	2,148	29	60,807	\$107,021	Pri Coll
9	Stilz Ave	Lexington Rd	Frankfort Ave	54	2,575	34	87,916	\$154,731	Pri Coll
10	Robards Ln	Gardiner Ln	Bishop Ln	42	3,718	20	75,525	\$132,923	Pri Coll
11	Chenoweth Run Rd	Blankenbaker Pkwy	Taylorsville Rd	37	4,135	24	100,962	\$177,693	Pri Coll
12	Blanton Ln	St Andrews Church Rd	Dixie Hwy	36	5,256	23	116,177	\$204,472	Pri Coll
13	Jefferson Hill Rd	Keys Ferry Rd	Snawder Ln	37	12,301	19	227,760	\$400,857	Sec Coll
13	Top Hill Rd	Snawder Ln	Mitchell Hill Rd	45	9,914	19	193,401	\$340,385	Sec Coll
14	Medora Rd	Blevins Gap Rd	Pendleton Rd	30	5,167	20	103,332	\$181,865	Sec Coll
16	Hitt Rd	Ballardsville Rd	County Line	46	4,370	22	96,106	\$169,147	Sec Coll

FY 2023 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
17	Old Harrods Creek Rd	LaGrange Rd	End of Metro R/W	32	1,085	19	19,956	\$35,123	Sec Coll
18	UPS Dr	Whipps Mill Rd	Ormsby Station Rd	34	1,239	36	44,599	\$78,494	Pri Coll
19	Aiken Rd	Bush Farm Rd	N Beckley Station Rd	22	2,202	24	52,550	\$92,488	Sec Coll
19	Urton Ln	N English Station Rd	Rockbridge Rd	51	9,449	25	199,939	\$351,893	Pri Coll
20	Dawson Hill Rd	Brush Run Rd	End of Metro R/W	43	16,894	18	291,519	\$513,073	Sec Coll
20	Old Heady Rd	Taylorsville Rd	Hopewell Rd	43	12,887	20	256,754	\$451,888	Sec Coll
21	E Kenwood Dr	Southside Dr	Tecumseh Ave	22	1,992	23	46,213	\$81,335	Pri Coll
21	W Kenwood Dr	Tecumseh Ave	New Cut Rd	46	2,906	23	66,831	\$117,622	Pri Coll
22	Fern Creek Rd	Bardstown Rd	Lovers Ln	39	5,209	19	97,607	\$171,788	Pri Coll
20	Rehl Rd	S Pope Lick Rd	S English Station Rd	41	1,956	20	39,126	\$68,863	Sec Coll
24	Smyrna Rd	Briscoe Ln	Outer Loop	26	2,266	22	49,842	\$87,722	Sec Coll
25	Manslick Rd	St Anthony Church Rd	Palatka Rd	42	8,143	23	183,090	\$322,239	Pri Coll

FY 2024 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
1	Young Ave	William E Summers III Ave	Louis Coleman Jr Dr	22	2,473	25	59,567	\$98,286	Local
1	S 36th St	Southern Ave	Chauncey Ave	36	1,506	28	42,174	\$69,586	Local
1	S 38th St	Southern Ave	Bohne Ave	45	1,270	26	32,512	\$53,645	Local
1	Chauncey Ave	S 38th St	Dead End	46	1,650	26	42,363	\$69,900	Local
1	Lees Ln	Camp Ground Rd	public road end	32	3,155	22	67,525	\$111,417	Local
1	Riedley Rd	Farnsley Rd	Monica Lynn Rd	18	1,448	19	28,531	\$47,077	Local
1	Wayne Rd	Riedley Rd	Orchard Way	34	502	20	10,040	\$16,566	Local
1	Wayne Rd	Dienes Way	public road end	8	380	22	8,364	\$13,801	Local
2	Ridgecrest Rd	Rangeland Rd	Rookwood Ave	33	3,710	24	89,786	\$148,146	Local
2	Russett Blvd	Ridgecrest Rd	Dead End	27	1,723	24	39,814	\$65,694	Local
2	Rookwood Ave	Robinwood Rd	Red Leaf Rd	32	1,675	23	37,853	\$62,458	Local
2	Red Fern Rd	Robinwood Rd	Red Leaf Rd	34	1,871	22	41,153	\$67,902	Local
2	Rural Way	Rustic Way	Shepherdsville Rd	37	3,398	22	74,763	\$123,359	Local
3	Brick Kiln Ln	Dixie Hwy	Dead End	27	1,771	18	32,084	\$52,939	Local
3	Elderwood Way	Manslick Rd	Dead End	17	1,102	23	25,615	\$42,265	Local
3	Manslick Ct	Manslick Rd	Dena Dr	18	348	24	8,363	\$13,799	Local
3	Carl Ct	Dena Dr	Dead End	30	491	26	12,773	\$21,075	Local
3	Dena Dr	Elderwood Way	Dead End	16	947	22	20,832	\$34,373	Local
3	Farnsley Rd	Cane Run Rd	Riedley Rd	32	1,039	18	18,694	\$30,845	Local
3	McCloskey Ave	Algonquin Pkwy	W Hill St	35	1,949	26	42,463	\$70,063	Local
4	Finzer St	S Shelby St	Logan St	12	380	40	15,211	\$25,098	Local
4	S Clay St	E Broadway	E Ormsby Ave	41	5,316	36	190,918	\$315,015	Local
4	Baroness Ave	S Clay St	S Shelby St	34	587	30	17,605	\$29,049	Local
4	Speckert Ct	S Clay St	S Shelby St	42	375	24	9,002	\$14,853	Local
4	Caldwell St	S Hancock St	Logan St	27	1,548	32	50,279	\$82,960	Local
4	Roselane St	S Clay St	S Shelby St	17	585	26	15,220	\$25,114	Local
4	Shelby Pkwy	S Shelby St	Chester Ave	12	219	18	3,945	\$6,509	Local
4	Gwendolyn St	S Preston St	S Jackson St	18	560	30	16,787	\$27,699	Local
4	Shelby Pkwy	S Preston St	S Jackson St	20	559	30	16,772	\$27,674	Local
4	Camp St	Dead End	Dead End	35	2,716	29	81,025	\$133,691	Local
4	S Hancock St	Camp St	E Ormsby Ave	31	345	36	12,403	\$20,466	Local
4	E St Catherine St	S Shelby St	Steve Magre Alley	28	625	31	19,487	\$32,154	Local

FY 2024 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
5	S 35th St	W Broadway	Dead End (south)	43	965	26	25,085	\$41,390	Local
5	Sutcliffe Ave	W Broadway	Garland Ave	14	1,427	26	37,099	\$61,213	Local
5	S 37th St	W Broadway	Garland Ave	12	1,405	26	36,538	\$60,287	Local
5	S 38th St	W Broadway	Garland Ave	18	1,360	24	32,637	\$53,852	Local
5	S 39th St	W Broadway	Garland Ave	39	1,333	30	39,995	\$65,992	Local
5	Northwestern Pkwy	Bank St	N 38th St	34	2,576	39	87,535	\$144,433	Local
5	Northwestern Pkwy	I-64 Ramp	Dead End (west)	23	4,085	43	177,589	\$293,022	Local
5	Northwestern Pkwy	N 22nd St	N 16th St	25	3,196	39	123,375	\$203,569	Local
6	Wilson Ave	Dixie Hwy	S 15th St	21	2,661	28	74,497	\$122,920	Local
6	Baldwin St	Wilson Ave	W Ormsby Ave	17	455	29	13,210	\$21,797	Local
6	S 17th St	W Ormsby Ave	Dead End (south)	34	647	28	18,122	\$29,901	Local
6	S 16th St	W Ormsby Ave	Dead End (south)	24	642	24	16,454	\$27,149	Local
6	S 16th St	W Oak St	W Ormsby Ave	18	789	32	25,133	\$41,469	Local
6	S 17th St	W Oak St	W Ormsby Ave	42	791	30	23,760	\$39,204	Local
6	Hale Ave	Dixie Hwy	S 15th St	25	2,364	28	66,180	\$109,197	Local
6	Oldham St	S 15th St	Dead End	9	202	32	6,479	\$10,691	Local
6	S 25th St	Howard St	W Ormsby Ave	31	3,703	28	103,687	\$171,084	Local
6	Humler St	Maple St	Garland Ave	11	1,159	28	32,438	\$53,523	Local
6	S 23rd St	Garland Ave	Dumesnil St	37	2,797	29	80,392	\$132,648	Local
6	S 23rd St	Maple St	Garland Ave	22	1,153	28	32,290	\$53,279	Local
7	Clarkwood Rd	Blankenbaker Ln	Blankenbaker Ln	41	1,090	24	26,159	\$43,162	Local
8	Dorothy Ave	Douglass Blvd	Edgehill Rd	21	1,786	31	55,411	\$91,429	Local
8	Fernwood Ave	Sherwood Ave	Roanoke Ave	31	2,587	21	55,418	\$91,439	Local
8	Patterson Ave	Bardstown Rd	Willow Ave	29	1,582	28	45,579	\$75,206	Local
8	Willow Ave	Grinstead Dr	Patterson Ave	31	361	38	13,705	\$45,226	Local
8	Wallace Ave	Taylorsville Rd	Woodbourne Ave	23	1,514	29	43,315	\$71,470	Local
8	Barret Ave	Eastern Pkwy	Dead End	46	481	22	10,581	\$17,458	Local
9	N & S Spring St	Mellwood Ave	Lexington Rd	29	2,229	40	88,707	\$146,366	Local
9	Arlington Ave	N Spring St	Quill St	23	223	34	7,585	\$12,516	Local
9	Quill St	Arlington Ave	Dead End	24	344	18	6,187	\$10,208	Local
9	Locust St	N Spring St	Dead End (east)	31	263	30	7,876	\$12,995	Local
9	Saunders Ave	Payne St	Dead End	22	1,042	24	26,802	\$44,222	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
9	Cherry Ln	Lexington Rd	Aubert Ave	23	906	18	16,308	\$26,909	Local
9	Dayton Ave	Breckenridge Ln	Fairfax Ave	17	910	31	28,131	\$46,416	Local
9	Nanz Ave	Breckenridge Ln	Meridian Ave	17	436	22	9,586	\$15,817	Local
9	S Peterson Ave	Frankfort Ave	Grinstead Dr	29	1,990	27	50,441	\$83,228	Local
9	George Rogers Clark Pl	S Peterson Ave	S Galt Ave	16	467	28	13,067	\$21,560	Local
9	Frankfort Ave	Stoecker Ave	River Rd	34	2,062	38	69,293	\$114,334	Local
9	Hughes Rd	Broadfields Dr	End of Metro R/W to east	24	1,577	23	36,235	\$59,787	Local
9	Plymouth Rd	Ridge Line Dr	End of Metro R/W to east	32	466	22	10,245	\$16,905	Local
9	Ridge Line Dr	Broadfields Dr	Hughes Rd	42	1,059	25	26,486	\$43,702	Local
9	Jarvis Ln	Zorn Ave	Brownsboro Rd	32	4,854	22	101,768	\$167,917	Local
9	Brownsboro Ter (all)	Jarvis Ln	Mockingbird Hill Rd	30	1,398	19	26,194	\$43,220	Local
9	Mockingbird Hill Rd (all)	Brownsboro Ter	Mockingbird Ln	28	933	18	16,795	\$27,711	Local
10	Colonel Sanders Ln	Gardiner Ln	Dead End	35	1,183	28	39,029	\$64,398	Local
10	Allgeier Ct	Colonel Sanders Ln	Dead End	35	660	16	10,554	\$17,414	Local
10	Pinewood Rd	Produce Rd	Petunia Ave	18	1,941	32	62,127	\$102,509	Local
10	Quarry Hill Rd	Poplar Level Rd	Whippoorwill Rd	20	475	22	10,457	\$17,254	Local
10	Odanial Ave	Whippoorwill Rd	Illinois Ave	25	722	24	17,332	\$28,597	Local
11	Summerfield Dr	Six Mile Ln	Weather Way	38	2,788	35	96,649	\$159,471	Local
12	Mt Howard Ct	Matterhorn Dr	Dead End	19	181	22	3,974	\$6,558	Local
12	Foraker Cir	Matterhorn Dr	Dead End	49	181	18	3,264	\$5,386	Local
12	Matterhorn Ct	Matterhorn Dr	Dead End	50	178	16	2,846	\$4,696	Local
12	Hunters Point Ct	Hunters Point Cir	Dead End	37	125	22	2,754	\$4,543	Local
12	Bowmont Ct	Hunters Point Cir	Dead End	39	384	20	7,679	\$12,671	Local
12	Full Moon Ct	Hunters Point Cir	Dead End	26	444	20	8,873	\$14,641	Local
12	Darrell Dr	Greenview Dr	Dead End	34	434	24	10,407	\$17,171	Local
12	Christie Ave	Meyers Ln	Dead End	29	832	29	24,118	\$39,794	Local
12	Durst Dr	Uranus Dr	Feyhurst Dr	29	1,030	22	22,658	\$37,385	Local
12	Uranus Dr	Feyhurst Dr	Durst Dr	42	361	22	7,934	\$13,091	Local
12	Grandel Blvd	Terry Rd	Grandmeadow Ln	37	1,683	23	39,116	\$64,541	Local
12	Grandel Pointe Ct	Grandmeadow Ln	Dead End	38	393	24	9,421	\$15,545	Local
12	Romania Dr	Blanton Ln	Dead End	27	2,059	20	41,178	\$82,355	Local
13	Holgate Dr	Hasbrook Dr	county line	19	343	22	7,556	\$12,467	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
13	Hasbrook Dr	Holgate Dr	Ashbrooke Gardens Dr	37	3,300	27	90,593	\$149,479	Local
13	Ashbrooke Gardens Dr	Christman Dr	Garden Trace Dr	34	975	24	23,401	\$38,612	Local
13	Ashbrooke Gardens Ct	Ashbrooke Gardens Dr	Dead End	33	165	22	3,624	\$5,980	Local
13	Brooke Trace Cir	Hasbrook Dr	Dead End	41	290	22	6,385	\$10,536	Local
13	Dupin Dr	Minor Ln	Dead End	20	1,104	23	25,230	\$41,630	Local
13	Bowie Dr	Dupin Dr	Hickock Dr	33	957	23	21,617	\$35,668	Local
13	Deanna Dr	Hickock Dr	Dupin Dr	23	850	22	18,691	\$30,839	Local
13	Hickock Dr	Bowie Dr	Dead End	34	169	24	4,050	\$6,682	Local
13	Bowie Ct	Bowie Dr	Dead End	22	187	22	4,119	\$6,796	Local
14	Janna Dr	Dixie Garden Dr	Marilee Dr	49	945	23	21,451	\$35,394	Local
14	Patricia Dr	April Way	Janna Dr	32	837	24	20,084	\$33,138	Local
14	April Way	Patricia Dr	Marilee Dr	19	629	22	13,846	\$22,845	Local
14	Floradora Dr	Janna Dr	Fashion Way	41	2,406	24	57,741	\$95,273	Local
14	Marilee Dr	Janna Dr	April Way	29	983	23	22,543	\$37,195	Local
14	Morning Glory Ln	Devonshire Dr	Bluebonnet Rd	38	2,600	24	62,409	\$102,974	Local
14	Canna Dr	Morning Glory Ln	Dead End	29	1,931	23	45,370	\$74,860	Local
14	Trillium Dr	Morning Glory Ln	Dead End	31	1,917	24	44,587	\$73,568	Local
14	Columbine Dr	Greenwood Rd	Morning Glory Ln	27	3,244	24	77,861	\$128,470	Local
15	Boxley Ave	Crittenden Dr	S Floyd St	35	1,691	24	40,585	\$66,966	Local
15	Helm St	Central Ave	Dead End	12	1,298	21	27,714	\$45,729	Local
15	Harwell Ave	Boxley Ave	Dead End	15	440	22	9,670	\$15,956	Local
15	New High St	Boxley Ave	Dead End	42	799	22	17,576	\$29,000	Local
15	Bowman Ave (all)	Dead End	Dead End	19	660	23	15,575	\$25,699	Local
15	Reed St	Crittenden Dr	Bowman Ave	39	342	32	10,947	\$18,062	Local
15	W Southern Heights Ave	Parthenia Ave	Dead End	27	2,437	26	63,367	\$104,555	Local
15	Seelbach Ave	Parthenia Ave	Lentz Ave	25	1,849	22	40,684	\$67,128	Local
15	Powell Ave	Seelbach Ave	Dead End	28	351	26	9,133	\$15,070	Local
15	Craig Ave	Strader Ave	Dead End	34	1,417	26	36,832	\$60,773	Local
15	Lentz Ave	Berry Blvd	Seelbach Ave	38	2,972	28	83,212	\$137,300	Local
16	Worthington Ln	Brownsboro Rd	Moser Farm Rd	37	2,381	47	109,826	\$181,213	Local
16	Taylor Farm Ct (all)	Dead End	Dead End	36	1,152	21	24,288	\$40,075	Local
16	Avenue of the Woods	Brownsboro Rd	Ash Tree Cir	31	1,091	43	46,214	\$76,253	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
16	Sprig Leaf Cir	Fallen Leaf Cir	Dead End	38	527	20	10,536	\$17,384	Local
16	Fallen Leaf Cir	Avenue of the Woods	Sycamore Woods Dr	50	908	22	19,985	\$32,975	Local
16	Wood Briar Rd	Avenue of the Woods	Dead End	45	1,500	22	33,010	\$54,467	Local
17	Collins Ln	Chamberlain Ln	Old LaGrange Rd	24	832	20	16,638	\$27,453	Local
17	Langdon Dr	Westport Rd	Blossom Ln	24	921	29	26,719	\$44,087	Local
17	Nutwood Rd	Evergreen Rd	End of Metro R/W to east	32	2,304	13	32,521	\$53,659	Local
17	Lake Vista Dr	Indian Lake Dr	Dead End	45	1,918	24	46,038	\$75,962	Local
17	Lake Vista Ct	Lake Vista Dr	Dead End	39	608	20	12,160	\$20,064	Local
17	Coventry Greens Dr	Indian Lake Dr	Coventry Greens Ct	28	1,004	20	20,073	\$33,120	Local
18	Hobbs Station Rd	Sable Wing Cir (south)	Dead End	43	1,796	32	54,443	\$89,831	Local
18	Foxboro Dr	Vannah Ave	Skylark Dr	42	2,371	23	53,846	\$88,847	Local
18	Volpaire Dr	Dorsey Ln	Exmoor Ave	22	567	24	13,617	\$22,468	Local
19	Taunton Vale Rd	Crosstimbers Dr	Rutland Club Ct	35	946	26	24,595	\$40,583	Local
19	Rutland Club Ct	Taunton Vale Rd	Dead End	42	1,069	23	23,389	\$38,591	Local
19	Snaffel Bit Ct	Dead End	Dead End	44	739	22	16,263	\$26,833	Local
19	Draw Rein Ct	Rutland Club Ct	Dead End	22	424	20	8,485	\$14,000	Local
19	Magisterial Dr	Stanley Gault Pkwy	Nelson Miller Pkwy	20	1,332	27	35,959	\$59,332	Local
19	Complete Ct	Elite Dr	Dead End	25	472	22	10,379	\$17,126	Local
19	Forest Centre Ct	Nelson Miller Pkwy	Dead End	23	808	24	19,399	\$32,008	Local
19	Park View Ct	Nelson Miller Pkwy	Dead End	42	490	24	11,752	\$19,391	Local
19	Highland Ave	Shelbyville Rd	Dead End	22	520	16	8,326	\$27,476	Local
19	Spring Dr	Shelbyville Rd	Dead End	33	600	16	9,603	\$31,691	Local
19	Pamela Jo Ave	Gilliland Rd	Dead End	22	594	16	9,499	\$31,347	Local
19	Forest Creek Way	Lake Forest Pkwy	Dead End	25	842	22	18,515	\$30,550	Local
19	Maple Ridge Pl	Lake Forest Pkwy	Dead End	26	482	22	10,594	\$17,480	Local
19	Oak Branch Rd	Lake Forest Pkwy	Lake Forest Pkwy	36	1,646	24	39,504	\$65,181	Local
19	Oak Bluff Ct	Oak Branch Rd	Dead End	31	269	22	5,926	\$9,777	Local
19	Oak Branch Ct	Oak Branch Rd	Dead End	47	243	22	5,342	\$8,814	Local
20	Harrods Old Trace	Taylorsville Rd	Dead End	21	1,334	21	28,009	\$46,214	Local
20	Stone Lakes Dr	Lakemont Ct	Stone Lakes Dr	28	719	24	17,255	\$28,471	Local
20	Lake Spring Dr	Stone Lakes Dr	Lake Spring Ct	40	310	24	7,443	\$12,282	Local
20	Pleasant Glen Dr	Taylorsville Rd	Pleasant Glen Ct	40	1,329	31	41,208	\$67,993	Local

FY 2024 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
20	Dunbar Valley Rd	Taylorville Rd	Meeting House Rd	25	4,146	20	82,923	\$136,824	Local
20	Meeting House Rd	Dead End	Dead End	40	3,576	20	71,525	\$118,016	Local
20	Dunbar Crest Ln	Meeting House Rd	Dead End	56	471	20	9,425	\$15,551	Local
21	Kenneth Ct	Thalia Ave	Southside Dr	14	329	16	5,268	\$8,691	Local
21	Carolyn Rd	E Kenwood Dr	Southside Dr	40	908	23	21,138	\$34,877	Local
21	E Esplanade Ave	Seminole Ave	Carolyn Rd	38	1,629	23	38,143	\$62,936	Local
21	Seminole Ave	W Kenwood Dr	Seneca Trl	36	1,030	16	16,479	\$27,191	Local
21	Tecumseh Ave	W Kenwood Dr	Seneca Trl	35	1,007	22	22,149	\$36,545	Local
21	W Kenwood Way	S 2nd St	S 3rd St	15	574	26	14,934	\$24,641	Local
21	S 2nd St	W Kingsron Ave	W Kenwood Way	49	2,352	26	61,147	\$100,893	Local
21	W Kingston Ave	Southside Dr	S 3rd St	30	882	33	29,183	\$48,152	Local
21	Ashbury Rd	Southside Dr	S 3rd St	38	920	36	33,117	\$54,643	Local
21	Iroquois Ave	Southside Dr	S 3rd St	23	994	20	19,884	\$32,808	Local
21	Rochester Dr	Southside Dr	S 3rd St	41	1,039	20	20,789	\$34,302	Local
21	Laclede Ln	Preston Hwy	Dead End	27	524	26	14,022	\$23,137	Local
21	W Woodlawn Ave	Taylor Blvd	Peachtree Ave	22	1,175	19	22,687	\$37,433	Local
21	Bicknell Ave	Taylor Blvd	Peachtree Ave	39	1,060	25	26,488	\$43,706	Local
21	Carrico Ave	Taylor Blvd	Peachtree Ave	34	993	24	23,844	\$39,342	Local
21	Peachtree Ave	W Ashland Ave	Bluegrass Ave	33	2,499	26	64,979	\$107,215	Local
22	Farmhill Ct	Farmstead Ln	Dead End	37	241	22	5,311	\$8,764	Local
22	Farmstead Ln	Farmhill Ct	Dead End	31	1,476	24	35,425	\$58,451	Local
22	Seaton Ln	Seatonville Rd	OBryan Rd	29	1,447	23	32,924	\$54,324	Local
22	Seaton Brooke Ln	Seaton Ln	Dead End	29	1,026	22	22,563	\$37,229	Local
22	Cedar Branch Ct (all)	Seaton Brooke Ln	Dead End	41	631	22	13,877	\$22,897	Local
22	Wimsatt Way	Bardstown Rd	Dead End	24	1,084	31	34,925	\$57,627	Local
22	Paula Marie Pl	Wimsatt Way	Dead End	26	392	26	10,183	\$16,803	Local
22	Shean Ct	Wimsatt Way	Dead End	59	642	26	16,682	\$27,526	Local
22	Bardstown Woods Blvd (north)	Old Bardstown Rd	Marceitta Way	29	1,965	24	47,156	\$77,808	Local
22	Marceitta Way	Slippery Elm Dr	Bardstown Woods Blvd	38	340	24	8,155	\$13,456	Local
22	Bardstown Woods Ct	Bardstown Woods Blvd	Dead End	42	533	22	11,737	\$19,366	Local
23	Leven Blvd	Mt Washington Rd	Cassidy Ln	30	2,216	24	53,424	\$88,150	Local
23	Samuel Long Way	Dead End	Dead End	51	801	22	17,612	\$29,059	Local

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District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
23	Charles Lindsey Ct	Leven Blvd	Dead End	51	223	22	4,911	\$8,103	Local
23	Lindsey Wade Ct	Leven Blvd	Dead End	66	406	22	8,943	\$14,756	Local
23	Leven Ct	Leven Blvd	Dead End	24	155	22	3,411	\$5,629	Local
23	Lantana Dr	Cooper Chapel Rd	Admiral Dr	30	4,162	23	92,780	\$153,087	Local
23	Satinwood Ct	Lantana Dr	Dead End	33	451	18	8,114	\$13,388	Local
23	Leslee Ct	Lantana Dr	Dead End	39	193	20	3,861	\$6,370	Local
23	Larch Ct	Lantana Dr	Dead End	38	220	18	3,957	\$6,529	Local
23	Burlwood Dr	Dead End	Dead End	45	1,477	24	34,806	\$57,429	Local
23	Burlwood Ct	Burlwood Dr	Dead End	52	229	20	4,575	\$7,548	Local
23	Pagoda Dr	Cooper Chapel Rd	Burlwood Dr	49	1,632	24	39,179	\$64,646	Local
23	Pagoda Ct	Pagoda Dr	Dead End	50	197	16	3,159	\$5,212	Local
23	Firethorn Way	Pagoda Dr	Lantana Dr	41	619	22	13,616	\$22,467	Local
23	John Paul Ln	Dead End	Dead End	58	1,282	23	29,418	\$48,540	Local
23	John Paul Ct	John Paul Ln	Dead End	50	601	18	10,821	\$17,854	Local
23	Admiral Dr	Lantana Dr	Dead End	72	422	22	9,274	\$15,302	Local
24	Bost Ln	Tuesday Way	Bonaventure Blvd	36	3,414	23	76,409	\$126,075	Local
24	Foreman Ln	Blue Lick Rd	Oakmont Dr	37	3,391	23	77,555	\$127,966	Local
24	Longbranch Ct	Bost Ln	Dead End	22	319	16	5,099	\$8,413	Local
24	Kiki Ct	Bost Ln	Dead End	34	391	16	6,252	\$10,315	Local
24	Santa Paula Ln	Dead End	Dead End	30	1,828	23	42,099	\$69,463	Local
24	Cathay Ct	Linda Rd	Dead End	35	440	24	10,555	\$17,416	Local
24	Burnt Cedar Ln	Dead End	Dead End	42	1,036	23	24,019	\$39,631	Local
24	Burnt Cedar Ct	Burnt Cedar Ln	Dead End	36	450	16	7,192	\$11,867	Local
24	Cameo Ct	Pebblebrook Ln	Dead End	33	193	24	4,621	\$7,625	Local
24	Linda Rd	Santa Paula Ln	Burnt Cedar Ln	61	689	24	16,527	\$27,269	Local
24	Pebblebrook Ln	Santa Paula Ln	Burnt Cedar Ln	43	771	23	17,785	\$29,346	Local
25	Neptune Pl	Haney Way	Dead End	46	934	20	18,353	\$30,282	Local
25	Myrick Pl	Neptune Pl	Dead End	66	149	64	9,564	\$15,780	Local
25	Logby Pl	Neptune Pl	Dead End	53	207	14	2,892	\$4,772	Local
25	Stalwert Pl	Haney Way	Dead End	41	793	23	18,235	\$30,087	Local
25	John Law Way	Glen Hill Manor Dr	John Law Ct	22	301	22	6,624	\$10,929	Local
25	John Law Ct	Dead End	Dead End	31	737	18	13,257	\$21,874	Local

FY 2024 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
25	Stitch Pl	Haney Way	Haney Way	37	330	16	5,272	\$8,699	Local
25	Youngtown Dr	S Dodge Ln	Haney Way	28	622	24	14,926	\$24,627	Local
25	Flushing Way	Case Way	Dead End	33	2,379	23	54,996	\$90,744	Local
25	Cod Dr	Case Way	Youngtown Dr	27	1,333	23	31,243	\$51,551	Local
25	Case Way	Flushing Way	Dead End	51	525	18	9,452	\$15,596	Local
25	Deshane Pl	Haney Way	Dead End	25	446	18	8,023	\$13,237	Local
25	Haney Way	Grafton Hall Rd	Grecian Rd	32	642	22	14,134	\$23,321	Local
25	Dorton Dr	Haney Way	Braves Ln	44	1,460	24	35,032	\$57,803	Local
25	Francell Ct	Millers Ln	Dead End	24	162	16	2,594	\$4,280	Local
26	Noe Way	Hikes Ln	Stanton Blvd	30	1,366	30	40,017	\$66,028	Local
26	Noe Ct	Noe Way	Dead End	34	132	20	2,636	\$4,349	Local
26	Klonway Ct	Klonway Dr	Dead End	23	120	24	2,886	\$4,761	Local
26	Klonway Dr	Klondike Ln	Layside Dr	26	2,271	24	54,620	\$90,123	Local
26	Leman Dr	Graf Dr	Manner Dale Dr	23	1,279	24	30,703	\$50,659	Local
26	Nepperhan Rd	Manner Dale Dr	Dead End	24	2,872	24	68,923	\$113,723	Local
26	White Plains Rd	Mamaroneck Rd	Wimpole Rd	36	1,163	25	29,273	\$48,301	Local
26	Wimpole Rd	White Plains Rd	Pomeroy Dr	36	585	26	15,210	\$25,097	Local
26	Wimpole Ct	Wimpole Rd	Dead End	28	428	24	10,281	\$16,963	Local
26	White Plains Ct	White Plains Rd	Dead End	55	400	24	9,608	\$15,853	Local
6	S 16th St	W Lee St	Algonquin Pkwy	62	1,460	36	52,571	\$105,142	Min Art
8	Barret Ave	E Broadway	Castlewood Ave	64	5,644	34	184,930	\$369,861	Min Art
13	Grade Ln	Crittenden Dr	Outer Loop	56	8,678	28	244,116	\$488,232	Min Art
15	Gagel Ave	Manslick Rd	Railroad crossing	62	6,061	24	156,906	\$313,811	Min Art
18	McMahan Blvd	Taylorville Rd	Browns Ln	62	1,293	27	30,517	\$61,035	Min Art
21	Park Blvd	Crittenden Dr	Park Blvd	61	1,237	38	47,005	\$94,010	Min Art
24	Shepherdsville Rd	Outer Loop	E Manslick Rd	63	7,993	28	220,645	\$441,291	Min Art
24	Jefferson Blvd	McCawley Rd	Outer Loop	64	2,111	60	125,902	\$251,804	Min Art
8	Douglass Blvd	Norris Pl	Sewanee Dr	48	1,421	33	47,234	\$86,910	Pri Coll
8	Barret Ave	Castlewood Ave	Eastern Pkwy	60	1,934	24	44,129	\$81,197	Pri Coll
10	Belmar Dr	Preston Hwy	Thru railroad viaduct	46	1,347	24	32,676	\$65,352	Pri Coll
10	Jennings Ln	Bishop Ln	E Indian Trl	53	5,930	26	151,082	\$302,163	Pri Coll
11	Heatherbrook Dr	Eastside Dr	Hunsinger Ln	47	487	24	11,686	\$21,502	Sec Coll

FY 2024 Paving Plan

District	Road	From	To	PCI	CL (feet)	Width	Area (ft2)	Estimate	Class
11	Hunsinger Ln	Rimonte Dr	Manner Dale Dr	50	5,616	20	109,656	\$201,767	Sec Coll
12	Intermodal Dr	Greenbelt Hwy	Cane Run Rd	60	2,898	35	101,439	\$186,649	Sec Coll
14	Thompson Ln	W Pages Ln	Johnsontown Rd	55	3,361	20	66,410	\$122,194	Pri Coll
14	Blevins Gap Rd	Dixie Hwy	Medora Rd	56	5,127	20	102,536	\$188,666	Pri Coll
18	Mill Brook Rd	Whipps Mill Rd	Ormsby Station Rd	51	1,433	41	58,746	\$108,093	Sec Coll
18	Dorsey Ln	Forest Garden Ln	Dead End at railroad	59	3,424	27	93,141	\$171,380	Pri Coll
18	Ormsby Station Rd	N Hurstbourne Pkwy	N Hurstbourne Pkwy	59	4,255	51	218,066	\$401,242	Pri Coll
19	Long Run Rd	Shelbyville Rd	end of Metro R/W	53	14,518	24	347,883	\$640,104	Sec Coll
19	Bush Farm Rd	Old Henry Rd	Aiken Rd	57	2,198	33	71,121	\$130,863	Sec Coll
21	Vim Dr	Preston Hwy	Guest Ave	60	3,423	20	64,876	\$119,371	Sec Coll
22	S Watterson Trl	Bardstown Rd	S Hurstbourne Pkwy	54	7,830	21	177,103	\$325,870	Pri Coll
22	Fairground Rd	Bardstown Rd	Billtown Rd	51	10,315	19	191,278	\$351,951	Pri Coll
22	Johnson School Rd	Beulah Church Rd	Cedar Creek Rd	51	7,438	20	149,609	\$275,280	Sec Coll
22	Hudson Ln	Bardstown Rd	first Fairground Rd X-sect	53	5,971	18	107,483	\$197,768	Sec Coll
22	Gentry Ln	Cedar Creek Rd	Fairmount Rd	55	2,388	17	40,589	\$74,684	Sec Coll
23	S Watterson Trl	S Hurstbourne Pkwy	Fegenbush Ln	59	9,286	26	242,925	\$446,982	Pri Coll
23	Smyrna Pkwy	E Manslick Rd	point 400' south of Theiler	52	3,403	71	241,613	\$444,568	Pri Coll
24	Robbs Ln	Outer Loop	Shepherdsville Rd	54	2,302	21	48,615	\$89,452	Pri Coll
24	Briscoe Ln	Shepherdsville Rd	Lariat Rd	54	2,296	22	51,890	\$95,478	Pri Coll
25	Arnoldtown Rd	Hardwood Forest Dr	3rd Street Rd	50	8,880	21	187,825	\$345,598	Pri Coll
26	Meadow Dr	Bardstown Rd	Goldsmith Ln	48	4,073	27	111,436	\$205,042	Pri Coll

LOUISVILLE 5-YEAR PAVER PLAN



Created on: 4-22-2021

Jacob Pellmann

Mandli Communications

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1. Overview

1.1 Background

Louisville Metro Public Works operates an Excel-based database that maintains information on the roadway segments within Louisville Metro, including the Pavement Condition Index. The Pavement Condition Index is the initial criteria used by Public Works in determining future paving projects.

1.2 Scope

Mandli Communications conducted an automated pavement condition rating for approximately 2,178 centerline miles of roadway. This included arterial, collector, and local roadways. Ratings were given in accordance with ASTM 6433-20 “Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys” and based on the actual distresses measured as a result of the automated inspection. These distresses were then loaded into PAVER 7 software, an open source software maintained by Colorado State University, which calculates PCI in accordance with ASTM 6433-20. Using the resulting PCI scores deterioration curves were modeled for both asphalt and concrete pavements. A 5-Year pavement management plan was created using the current budget available to Louisville Metro Public Works. The following report details the plan configuration and the predicted network condition resulting from this configuration including the given budget.

2 Project Configuration

2.1 Pavement Data Collection

Mandli Communications utilized the X-35 vehicle platform, shown in figure 2.1.1 to collect the Louisville pavement network. The vehicles are equipped with:

1. Nine right-of-way cameras each capture images at 4096 x 2160 resolution with over 360-degrees of coverage surrounding the vehicle.
2. Two HDL-32 LiDAR heads that collect and produce a 3-D point cloud
3. Two Laser Crack Measurement Pods that capture the full width of the driven lane. The 3000 data points that scan the roadway create both a 2D and 3D representation of the pavement.
4. iXblue ATLANS-C Position Orientation System (POS) collects vehicle position, velocity, altitude, track, speed, and dynamics to deliver submeter accuracy (Positioned between the HDL-32s and the LCMS pods). All Mandli data is synced with the positional system allowing for simultaneous review of the data.
5. Kistler Correxit L-Motion Distance Measurement Instrument (DMI) provides a precise and immediate measure of the vehicle's linear distance traveled and is used to constrain potential velocity and displacement errors. It accurately measures distance within +/- one-thousandth mile per mile and displays the distance in miles to four decimal places.

The data collection vehicles utilize the Laser Crack Measurement System (LCMS), produced by Pavemetrics, to capture pavement distress and rutting data using automated methods that are then reviewed, analyzed, and compiled to produce PCI scores. This vehicle platform was used for all roads collected on the Louisville-Metro network. Divided roads were collected in each direction and undivided roads were collected in a single direction.



2.2 Deterioration Curve Models

Deterioration curves were created using Mandli condition data and the last major construction age data provided by Louisville. Four deterioration curves were created for this project including asphalt arterials, asphalt collectors, asphalt locals, and a general concrete curve. In all cases outlier data points were found at the extremes of the age ranges. Of concern were very new sections with very low condition scores and very old sections with very good condition scores. These outliers were removed using light blue bounding lines shown in the curves below. The remaining data was then fitted with a polynomial trend line that models the deterioration of Louisville roadways.

A **Critical PCI** was assigned to each curve just prior to the inflection point of the curve, often found between a PCI of 50 and 70. The critical PCI signifies the optimal time to perform a major rehabilitation project as the road is about to deteriorate more rapidly for a given amount of time. As a road deteriorates the cost to bring a road back to a PCI of 100 becomes significantly more expensive. By trying to select projects nearest the Critical PCI the road has reached the optimal balance of age while still being cost effective to repair.

In the following sections curves display the PCI score measured by Mandli versus age of a pavement section. Each point on the graph, shown as green X's or red Triangles, represent individual RWCOMPKEY pavement sections. The green X's are within the 95% envelope while the red triangle are outside this envelope and are considered outliers.

2.2.1 Asphalt Arterials

The curve below shows the deterioration for asphalt arterial roads with a critical PCI of approximately 70 PCI (in **Orange**) occurring at approximately 7.4 years after construction. This curve, in **Green**, was made using 970 data points.

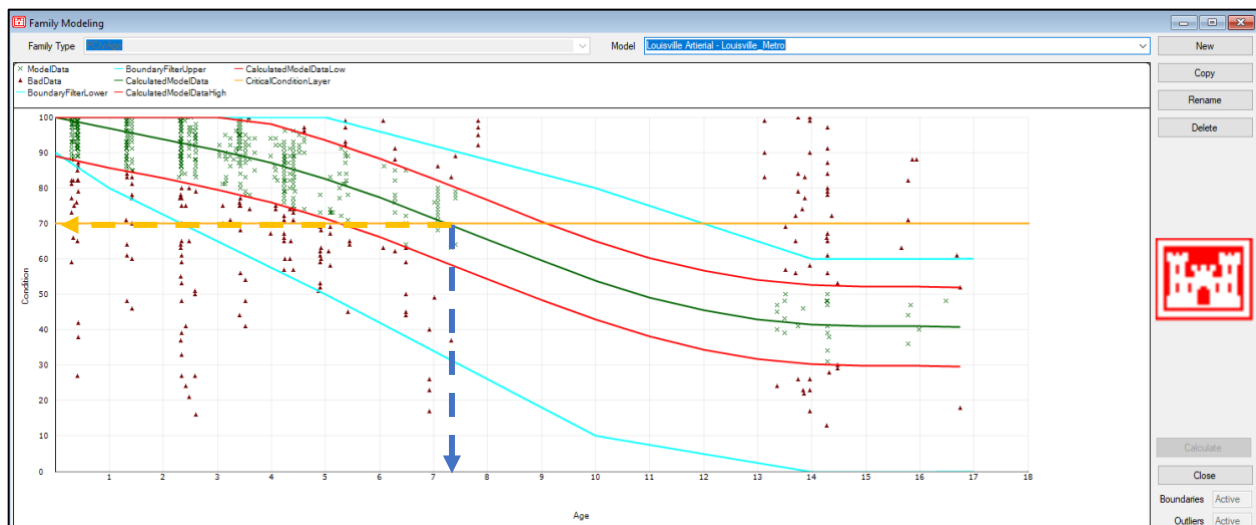


Figure 2.2.1: Deterioration curve of asphalt arterial roads

2.2.2 Asphalt Collectors

The following curve for asphalt collector roads had a critical PCI score of 70 at an age of 8.7 years old and was made from 1451 data points.

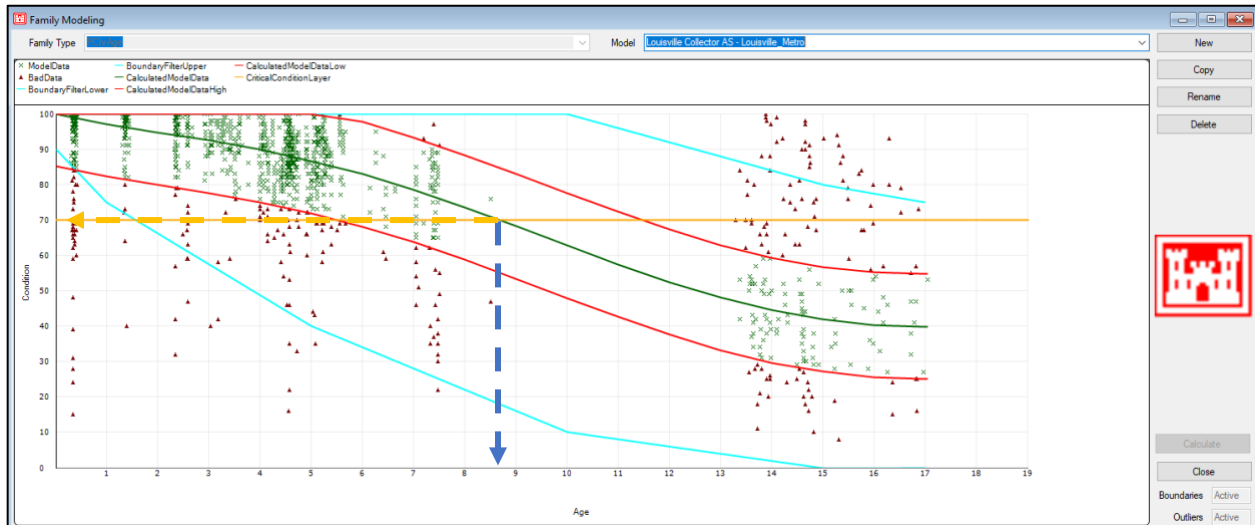


Figure 2.2.2: Deterioration curve for asphalt collector roads

2.2.3 Asphalt Locals

Local roads suffered from poor trend fitting likely due to the high number of data points, 7119 points, and last treatment date errors seen in other deterioration curves. The initial curve is shown below.

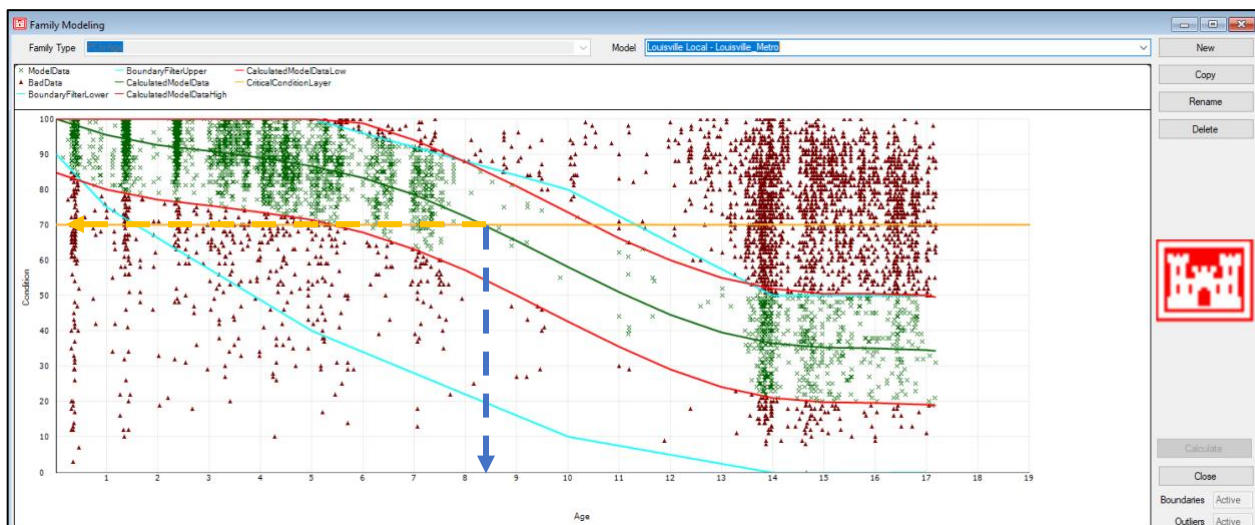


Figure 2.2.3.a: Deterioration curve for asphalt local roads

As an alternative to this initial curve Mandli used PCI scores reported by a previous vendor collected in 2012 to estimate the average deterioration rate of local roads. That analysis yielded an average deterioration rate of 2.4 PCI point per year. Several predicted PCI scores were input into PAVER for a set of theoretical ages. The resulting deterioration curve is provided below with a critical PCI of 60.

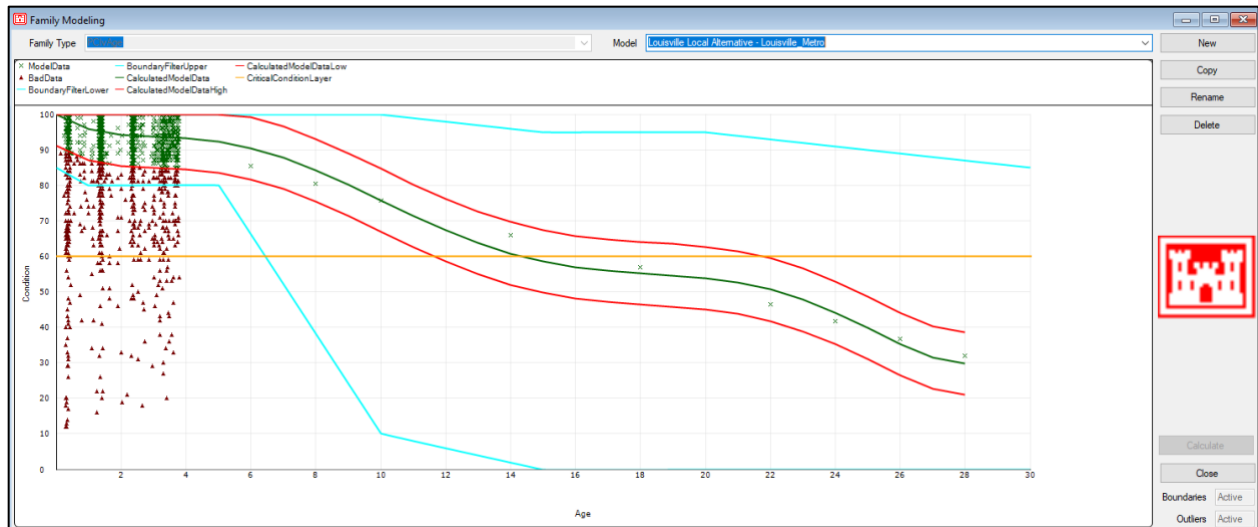


Figure 2.2.3.b: Deterioration curve for asphalt local roads

2.2.4 Concrete Roads

The data for concrete sections was not as plentiful (325) and did not seem to imply a clear trend. The curve below was made by excluding higher PCI scores for older roads as done previously. The resulting curve did not have a clear inflection point to indicate a critical PCI. A rule of thumb that was passed was that critical PCI often occurs between 50 to 70. Here We've chosen 65 as the critical PCI with a corresponding age of 18 years.

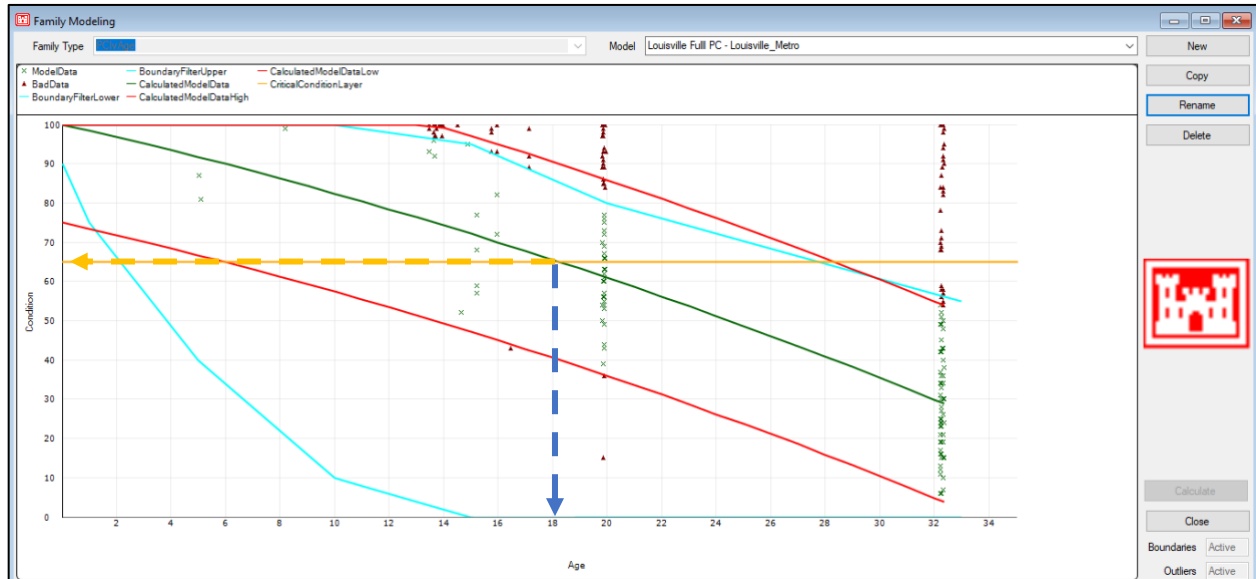


Figure 2.2.4: Deterioration curve for concrete roads

2.3 Cost by Condition

In PAVER the costs of projects are not calculated solely based on the distresses present. Instead, a cost of repair based on the PCI value used. The deterioration models mentioned above only model what will happen to the PCI score in the future, not individual distresses. Thus, project costs derived from the future condition of a road are best estimated if those costs can be correlated to the condition score. In all treatment types, the cost by condition is still driven by unit costs of treatments which were provided by Louisville. In the following sections additional detail is provided for the various cost by condition trends.

2.3.1 Asphalt Preservation

In the case of preservations, in this projects case crack seal, the cost by condition was determined by running a Consequences of Localized Distress Maintenance report. This report only looks at the current distresses and calculates the cost to repair distresses using preservation treatments, in this case crack seal. The resulting plot is shown below. The final Cost by Condition values for asphalt preservation was created using the more conservative costing assumption provided by this plot, shown in Orange.

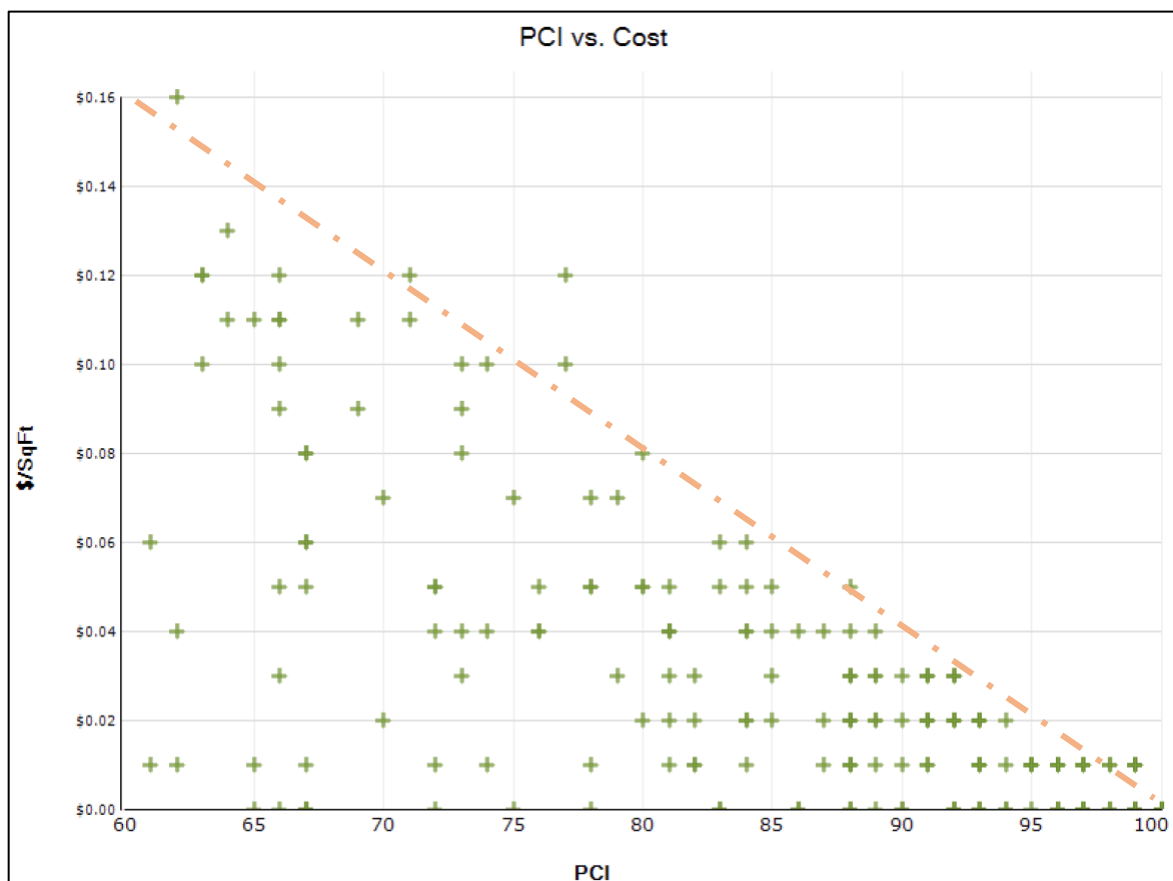


Figure 2.3.1: Unit cost vs condition plot of preservations based on the current need on Louisville roadways. The diagonal orange line indicated the trend line used to create the price vs PCI table for preservations.

2.3.2 Asphalt Major M &R

For major **maintenance** and **rehabilitation** (M&R) on asphalt the unit cost of full reconstruction on a given road and a less extreme treatment, like a 1.5 in overlay, were matched with appropriate PCI scores. A trend line was then made between these points to provide the Cost vs Condition values for each 10 point interval in PAVER. Below is a sample plot for the cost by condition for arterial and collector roads which use a 12 inch mill and overlay at a cost of \$9.53/sq ft.

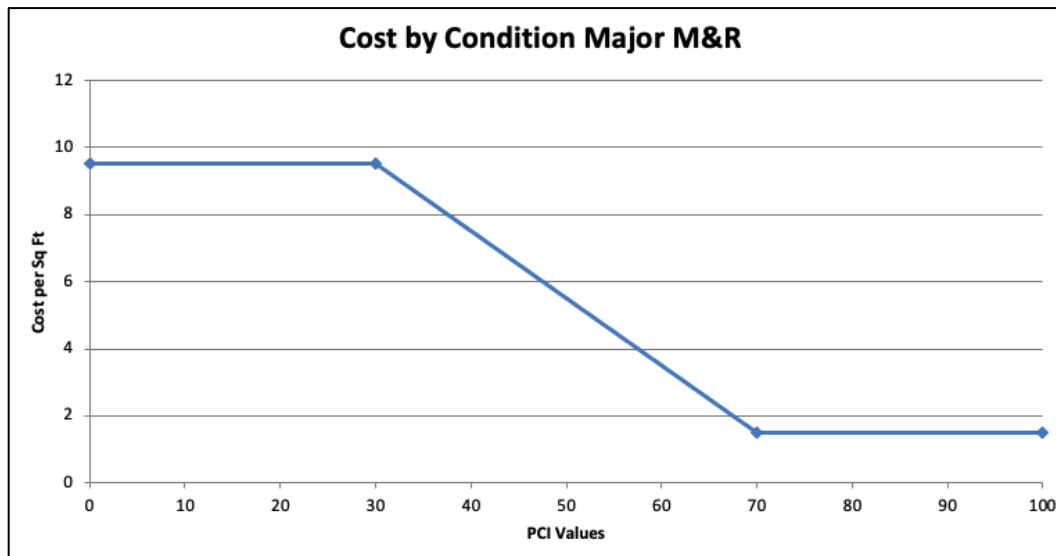


Figure 2.3.2: Unit cost by condition for major rehabilitation.

2.3.3 Concrete Major M&R

For concrete M&R the only treatment strategy currently used by Louisville is the replacement of slabs. To create the cost by condition curve the unit cost provided by Louisville was reduced by the distress density of shattered slabs for a given PCI deduct. To do this the Divided Slab deduct curve was used from ASTM 6433 and the high severity trend line was used. The assumption here is that only high severity shattered slabs are replaced. Below is the deduct curve and an example of the cost by condition chart for Arterial Slab replacement, 10 inch depth replacement.

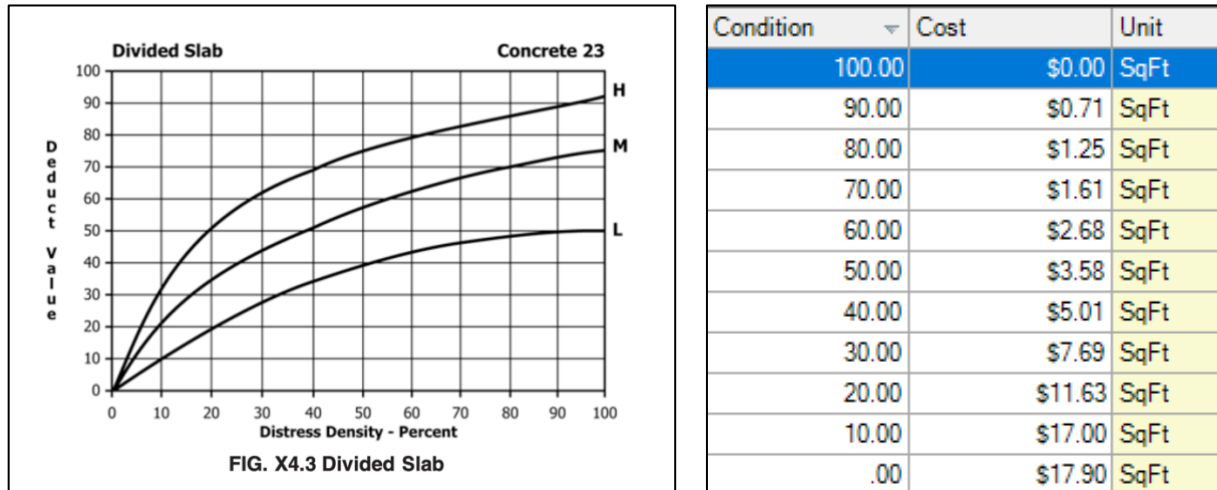


Figure 2.3.3.a: Deterioration curve divided slabs on concrete from ASTM 6433 (Left). Table 2.3.3.b: Cost vs Condition table used in PAVER based on the Deduct curve for divided slabs (Right).

2.4 Planned Projects

Louisville provided Mandli with a list of approximately 471 RWCOMPKEY sections that are scheduled for repair in the spring of 2021 before the start of the next fiscal year. These projects were all 1.5 inch asphalt overlays and were scheduled in PAVER for end of May. When PAVER then creates a five year plan beginning Jun 1st of 2021 the PCI of each of these sections is reset to 100 following the schedules construction date. The PCI of these sections then follows the deterioration trend they have been assigned. This way these sections will not be considered for any major M&R or even preservations for at least the first few years. These reset PCIs will also count toward the overall Annual Condition Plots for each of the functional classes.

2.5 Budget

Functional Class	Annual Budget
Arterial	\$4,000,000
Collector	\$4,000,000
Local	\$12,000,000
TOTAL	\$20,000,000

3 5-Year Plan

3.1 Arterial Roads

In summary, arterial roads are able to approximately maintain their current condition of approximately 80. The condition distribution is weighted more toward satisfactory and good roads and these are maintained through the 5-year plan. Fair roads are largely removed since those sections fall along the critical PCI value so those are the first candidates for major M&R. Lastly, unfunded projects are kept relatively stable after each year at approximately \$35 million. This budget seems to be keeping the status quo but an increase in budget would be required to begin to make significant strides toward removing the backlog.

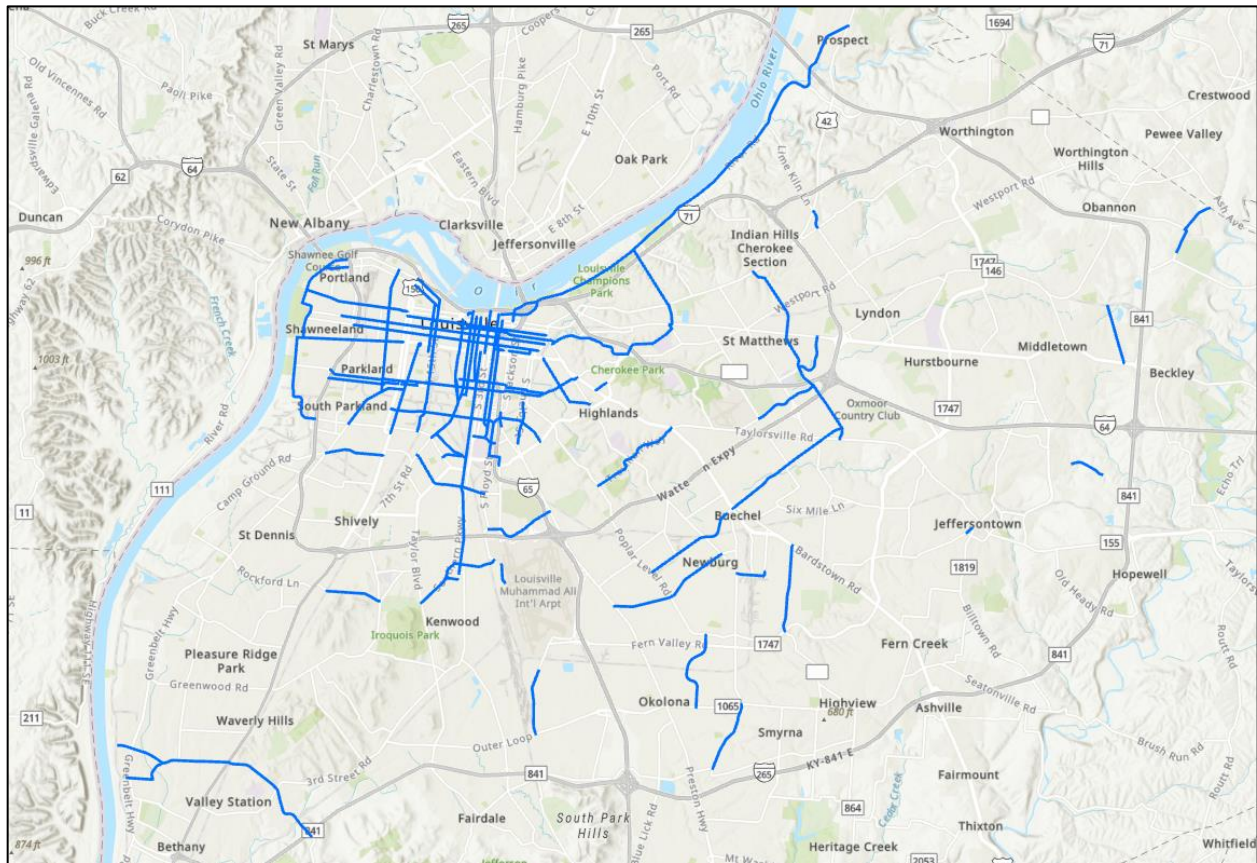


Figure 3.1: Map of all arterial roads in the Louisville network.

3.1.1 Condition Performance

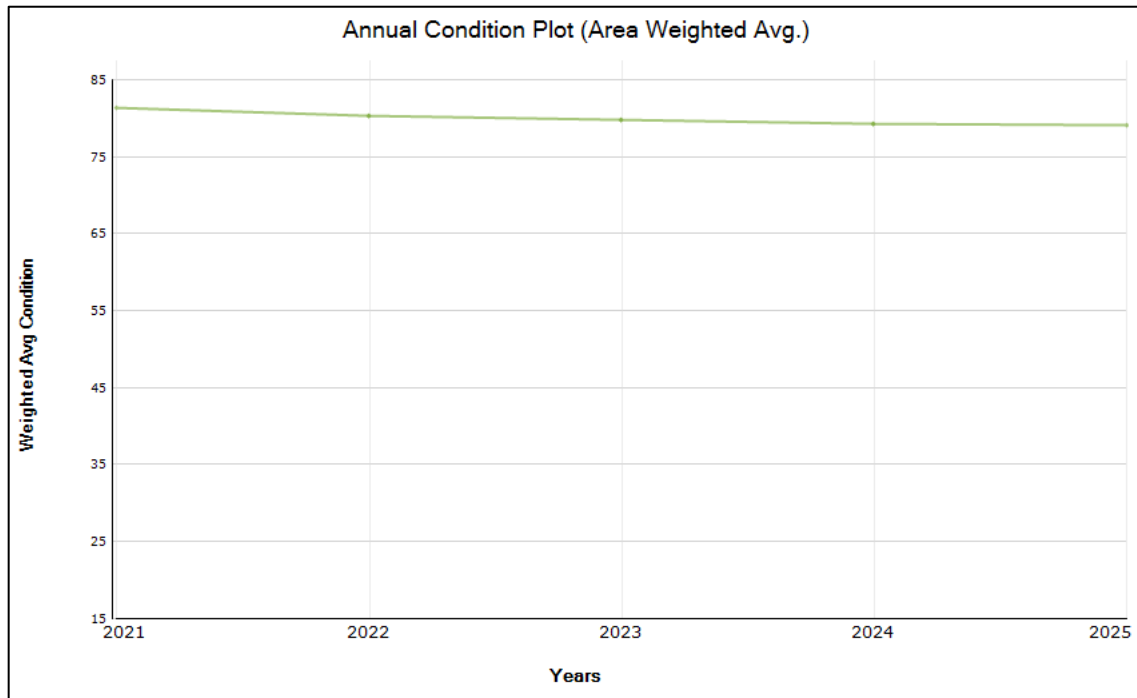


Figure 3.1.1: Annual PCI condition plot of all arterial roads after performing the planned work established by PAVER.

3.1.2 Funding Usage

Table 3.1.2 Arterial Funding Usage over 5-years

Year	Preventive Funded	Major Under Critical Funded	Total
2021	\$191,628.47	\$3,805,608.10	\$3,997,236.57
2022	\$219,054.74	\$3,775,875.56	\$3,994,930.30
2023	\$218,307.74	\$3,768,916.24	\$3,987,223.97
2024	\$239,517.05	\$3,752,711.54	\$3,992,228.59
2025	\$246,596.32	\$3,745,016.05	\$3,991,612.37

Note: Only roads that were under the critical PCI were considered for major treatments in order to maximize preventative treatments on the network.

3.1.3 Condition Distribution

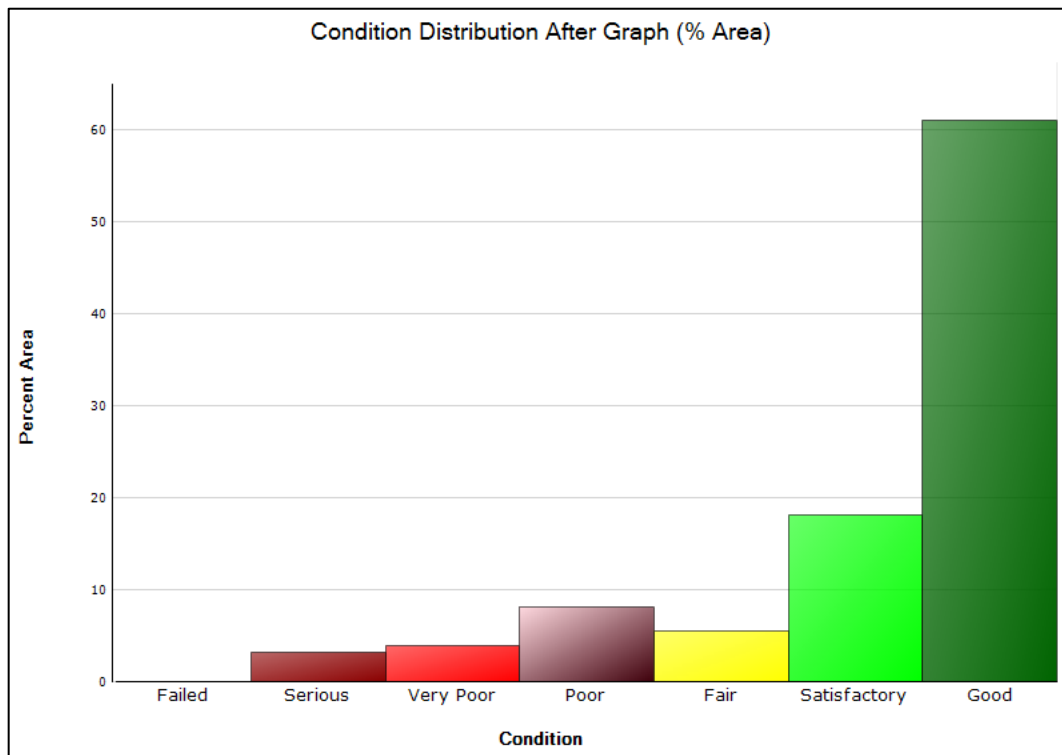


Figure 3.1.3.a: Condition distribution at the end of 2021 for all arterial roads following prescribed treatment in PAVER.

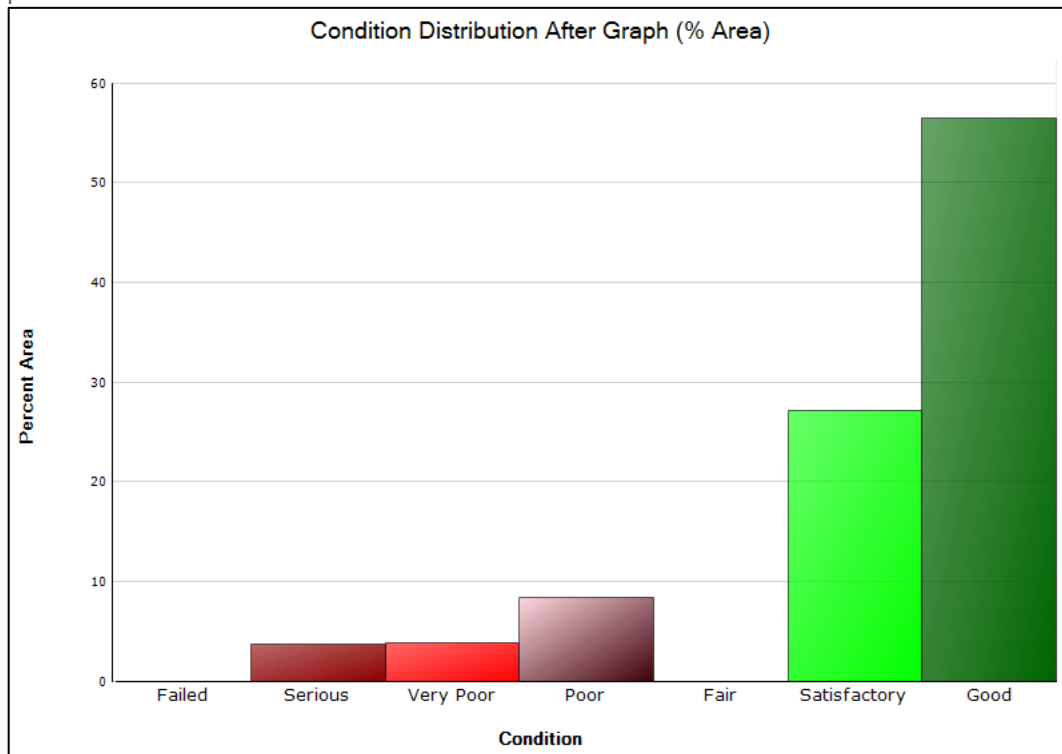


Figure 3.1.3.b: Condition distribution at the end of 2025 for all arterial roads following prescribed treatment in PAVER.

Table 3.1.3 Condition Distribution Table for Arterial Roads

Year	% Failed	% Serious	% Very Poor	% Poor	% Fair	% Satisfactory	% Good
2021		3	4	8	5	18	61
2022		4	4	12		19	62
2023		4	3	11		21	61
2024		4	4	9		24	59
2025		4	4	9		27	57

3.1.4 Unfunded Projects

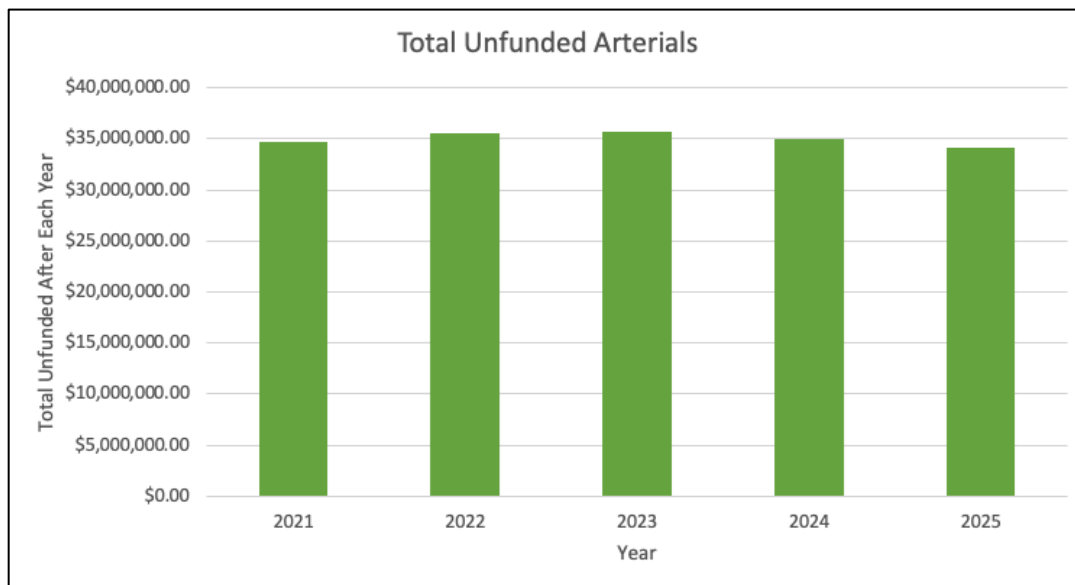


Figure 3.1.4: Total dollar value of unfunded project remaining on arterials after each year of the 5-year plan.

Table 3.1.4 Unfunded Projects Table for All Arterial Roads

Year	Preventive Unfunded	Major Under Critical Unfunded	Total Unfunded
2021	\$0.00	\$34,760,106.35	\$34,760,106.35
2022	\$0.00	\$35,507,706.84	\$35,507,706.84
2023	\$0.00	\$35,701,684.55	\$35,701,684.55
2024	\$0.00	\$34,985,819.90	\$34,985,819.90
2025	\$0.00	\$34,154,490.40	\$34,154,490.40

3.2 Collector Roads

Regarding collectors, we are seeing a slow decline in overall PCI across the 5-years from the starting average of 76 to 72 after the scheduled work in 2025. Condition distribution is similar to arterials with over 70% of roads falling into satisfactory condition or better. However, at the end of the 5-year plan more roads fall into the Poor or poorer condition categories than before starting the plan. We see such a large number of sections in the very poor category due to the deterioration curves established earlier. The curve reaches a lower plateau of 40 so most distresses will only fall as low as this value. This does not create an issue in the grand scheme of the project planning as the treatment for a section with a PCI of 40 vs a PCI of 20 will result in the same type of treatment. Finally, the total unfunded projects are increasing after each year ending just over \$102 million in back log projects. This trend in backlog is suggesting that collector roads are likely underfunded and the overall network health of these roads is deteriorating. Addition funds will be required to at least keep these roads at a stable condition and more funds will be required if the backlog is to be reduced.

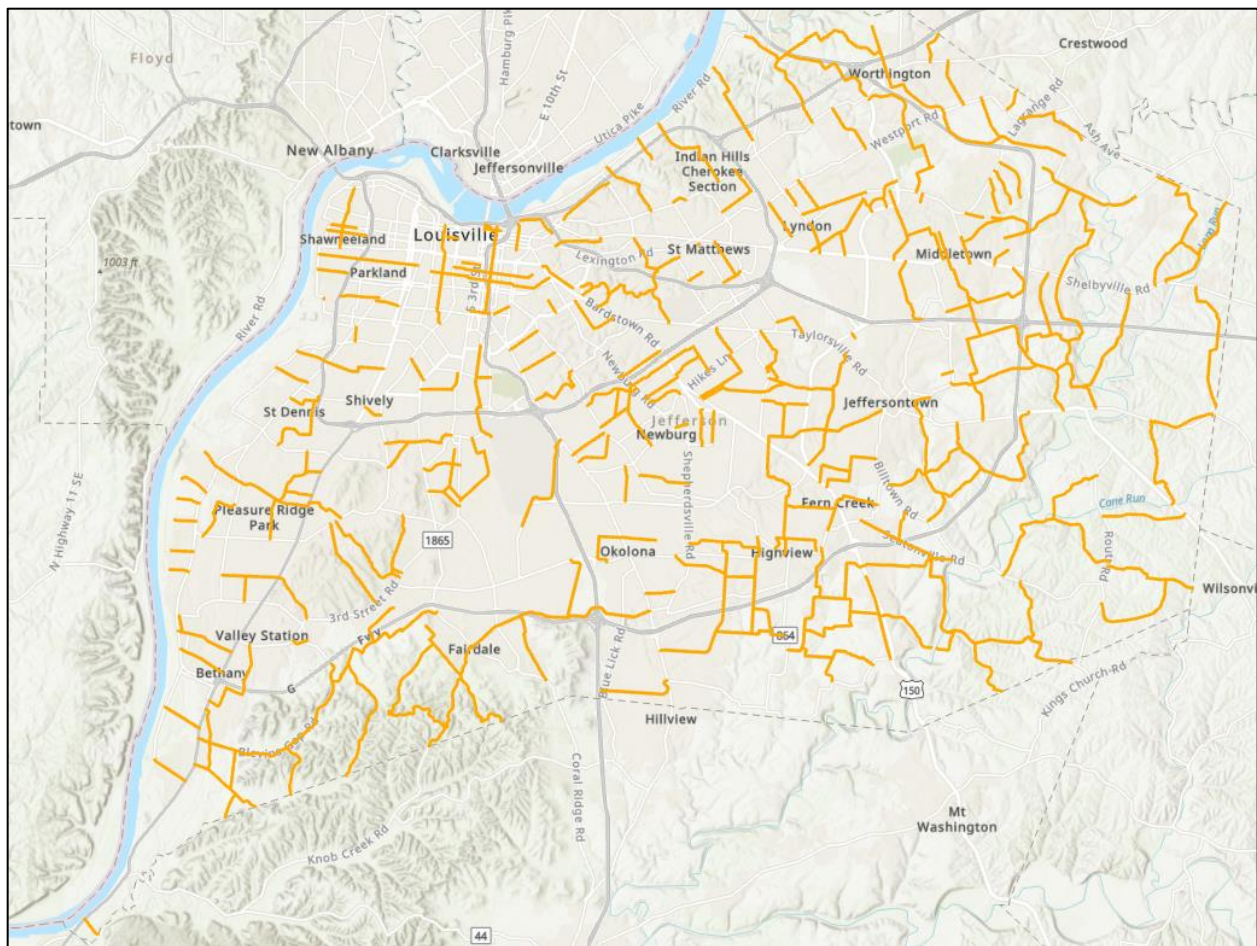


Figure 3.2: Map of all collector roads in the Louisville network.

3.2.1 Condition Performance

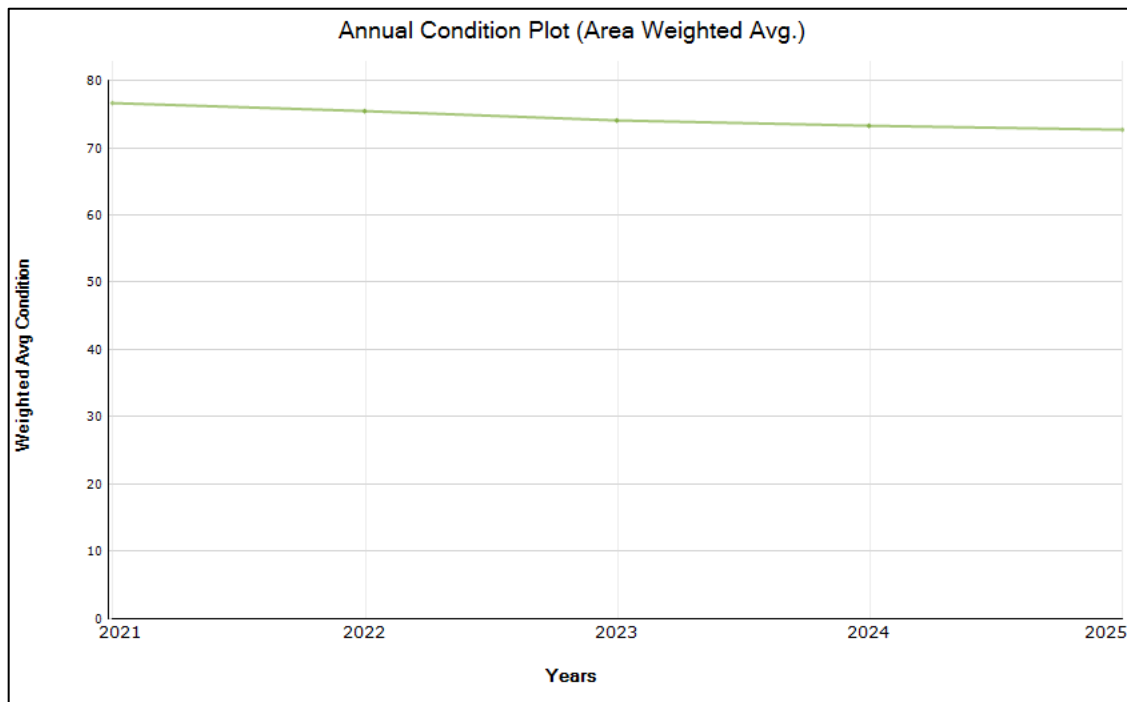


Figure 3.2.1: Annual PCI condition plot of all collector roads after performing the planned work established by PAVER.

3.2.2 Funding Usage

Table 3.2.2 Collector Funding Usage over 5-years

Year	Preventive Funded	Major Under Critical Funded	Total
2021	\$203,712.97	\$3,794,085.58	\$3,997,798.54
2022	\$221,897.25	\$3,774,222.33	\$3,996,119.58
2023	\$262,079.65	\$3,734,920.25	\$3,996,999.90
2024	\$248,268.00	\$3,749,247.76	\$3,997,515.75
2025	\$270,309.08	\$3,729,481.71	\$3,999,790.79

Note: Only roads that were under the critical PCI were considered for major treatments in order to maximize preventative treatments on the network.

3.2.3 Condition Distribution

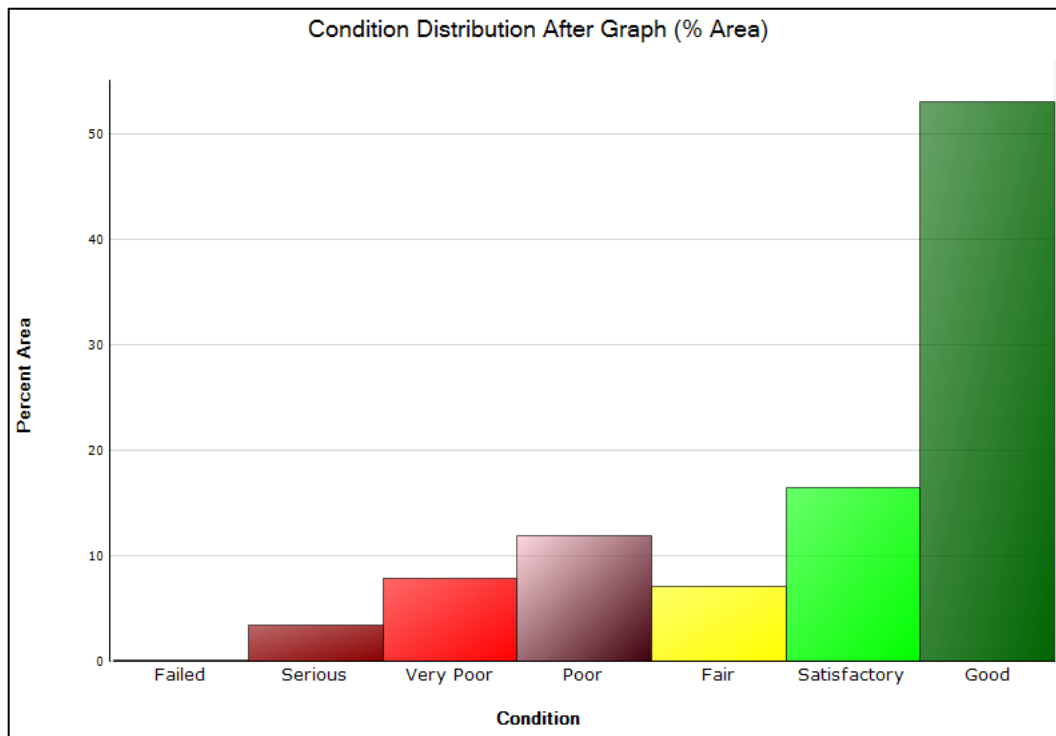


Figure 3.2.3.a: Condition distribution at the end of 2021 for all collector roads following prescribed treatment in PAVER

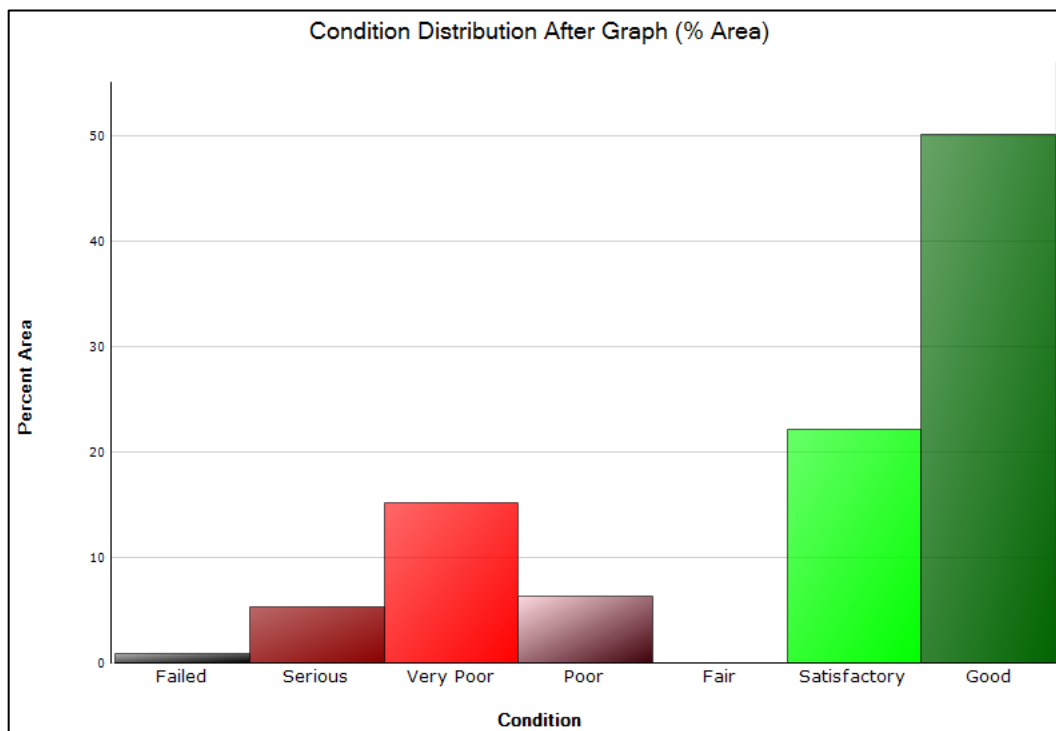


Figure 3.2.3.b: Condition distribution at the end of 2025 for all collector roads following prescribed treatment in PAVER

Table 3.2.3 Condition Distribution Table for Collector Roads

Year	% Failed	% Serious	% Very Poor	% Poor	% Fair	% Satisfactory	% Good
2021		3	8	12	7	17	53
2022		4	9	14	3	17	53
2023		5	9	14		19	53
2024	1	5	13	10		18	54
2025	1	5	15	6		22	50

3.2.4 Unfunded Projects

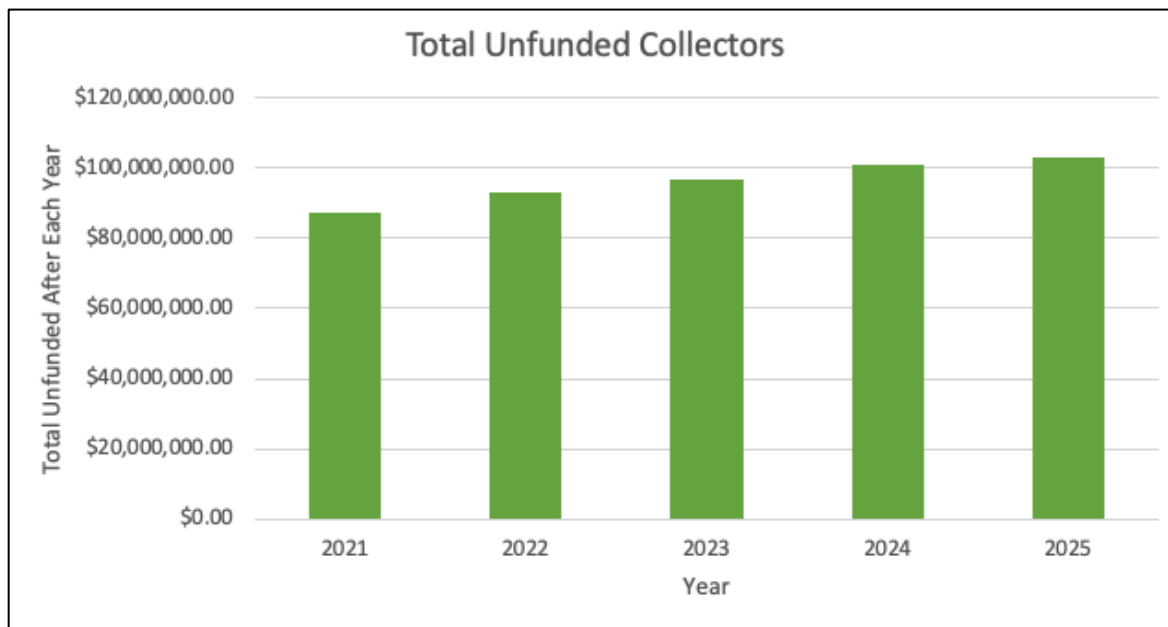


Figure 3.2.4: Total dollar value of unfunded project remaining on collector roads after each year of the 5-year plan.

Table 3.2.4 Unfunded Projects Table for All Collector Roads

Year	Preventive Unfunded	Major Under Critical Unfunded	Total Unfunded
2021	\$0.00	\$87,545,088.21	\$87,545,088.21
2022	\$0.00	\$93,161,820.63	\$93,161,820.63
2023	\$0.00	\$96,717,154.46	\$96,717,154.46
2024	\$0.00	\$100,965,059.80	\$100,965,059.80
2025	\$0.00	\$102,915,502.93	\$102,915,502.93

3.3 Local Roads

Local Roads show the fastest decline in overall PCI during the 5-year plan starting at 64 and falling to 56 at the end of 2025. The condition distribution is more balanced compared to collectors and arterials with the good and satisfactory roads being less prominent than the other two functional classes. By the end of the 5-year plan the condition distribution weights still on the side of Fair and better but is closer to an even distribution between poor/poorer and fair/good. For local roads unfunded projects experience the largest increase over the 5-year plan starting at around \$538 million and ending at nearly \$689 million. All these results suggest that local roads need significantly more funding if the backlog is to be maintained at even more will be required to remove this backlog.

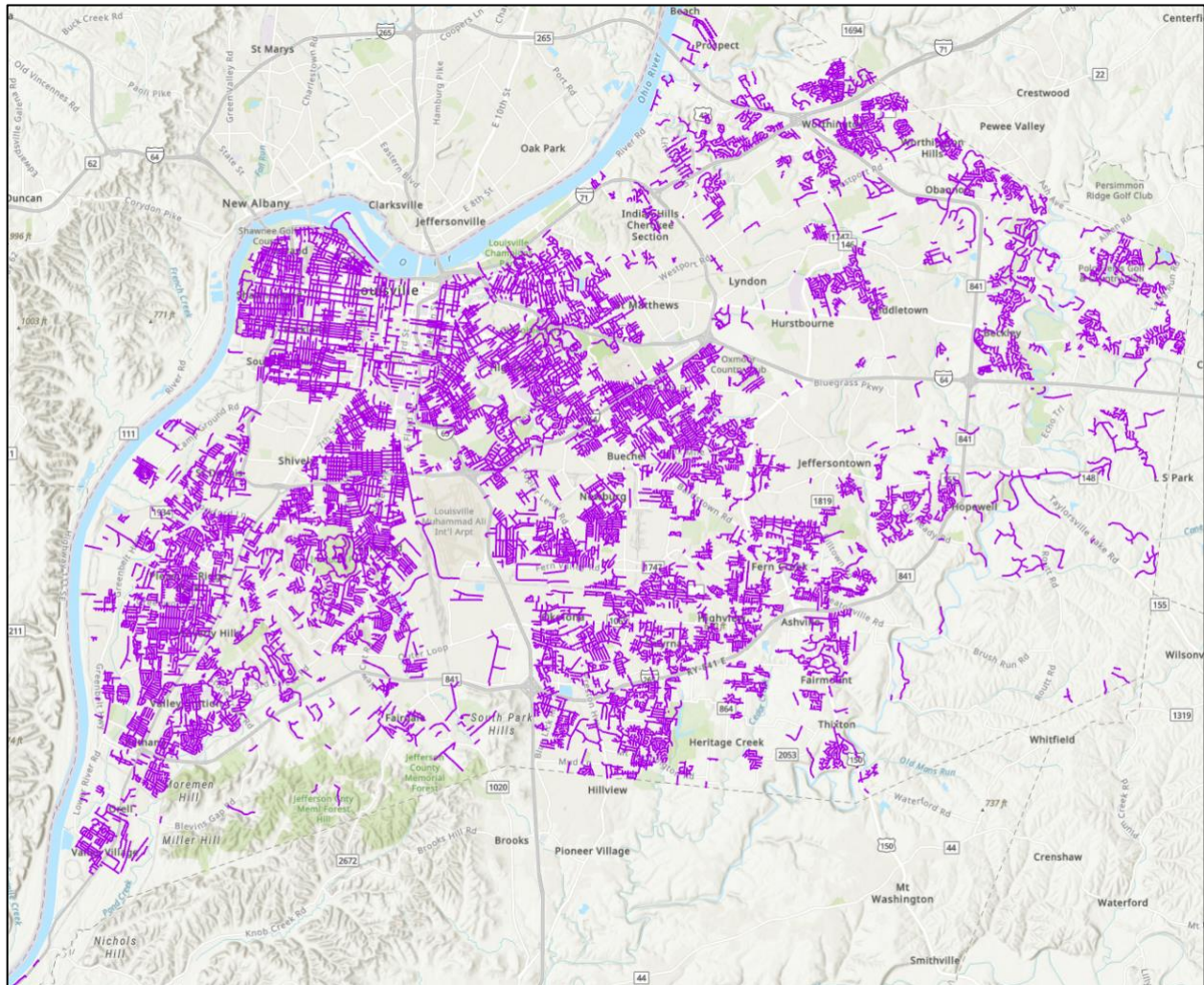


Figure 3.3: Map of all local roads in the Louisville network.

3.3.1 Condition Performance

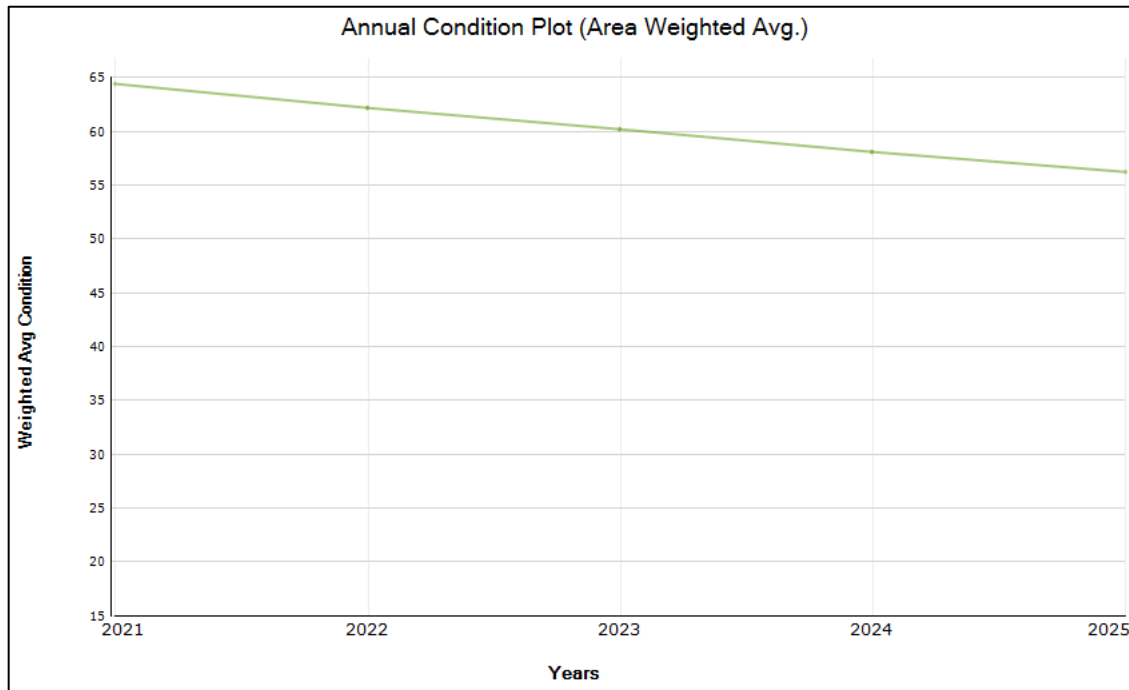


Figure 3.3.1: Annual PCI condition plot of all local roads after performing the planned work established by PAVER.

3.3.2 Funding Usage

Table 3.3.2 Local Funding Usage over 5-years

YEAR	Preventive Funded	Major Under Critical Funded	Total
2021	\$3,402,203.75	\$8,597,593.59	\$11,999,797.33
2022	\$3,698,262.51	\$8,298,934.17	\$11,997,196.68
2023	\$3,934,188.91	\$8,065,770.74	\$11,999,959.65
2024	\$3,857,087.55	\$8,142,911.76	\$11,999,999.32
2025	\$3,906,337.43	\$8,093,426.30	\$11,999,763.74

3.3.3 Condition Distribution

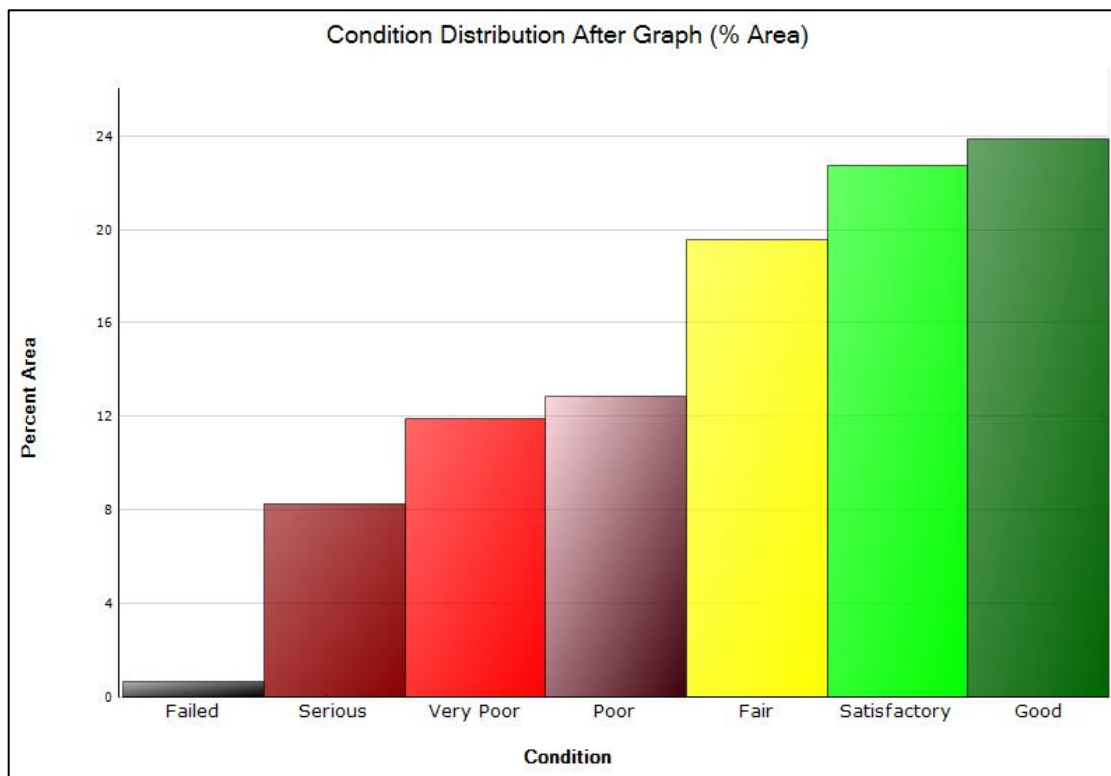


Figure 3.3.3.a: Condition distribution at the end of 2021 for all local roads following prescribed treatment in PAVER.

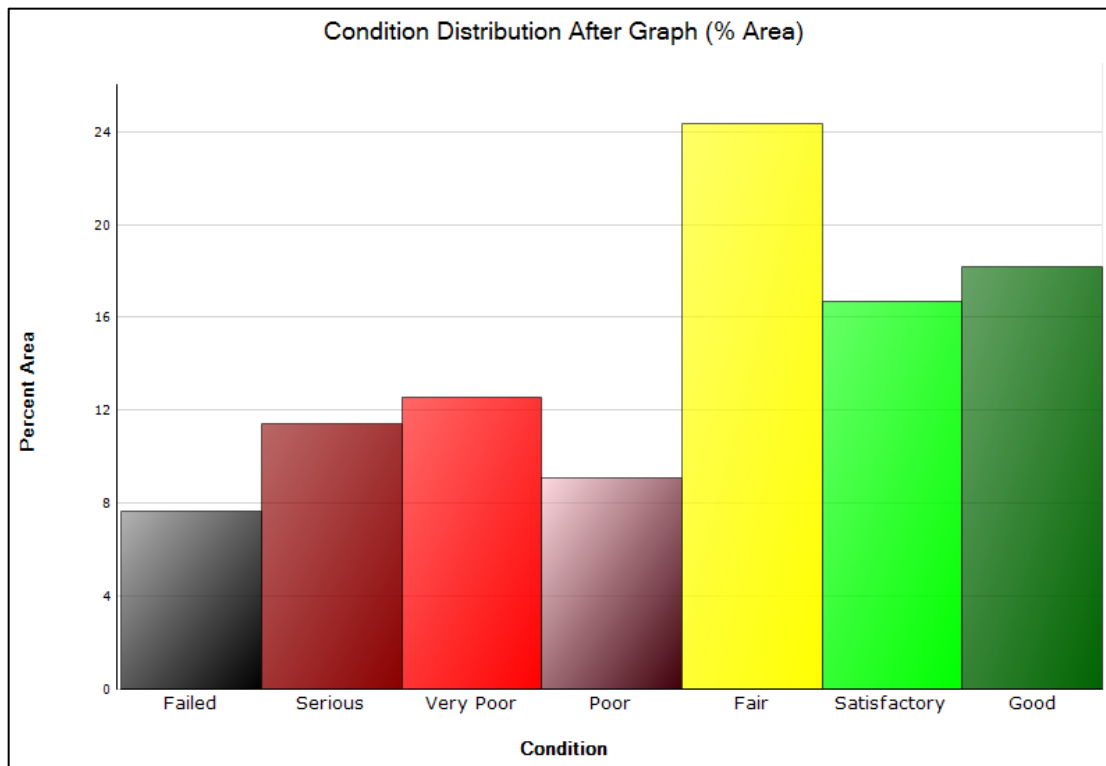


Figure 3.3.3.a: Condition distribution at the end of 2025 for all local roads following prescribed treatment in PAVER.

Table 3.3.3 Condition Distribution Table for Local Roads

YEAR	% Failed	% Serious	% Very Poor	% Poor	% Fair	% Satisfactory	% Good
2021	1	8	12	13	20	23	24
2022	2	9	14	10	22	22	22
2023	3	9	15	10	22	21	20
2024	5	10	15	9	23	19	18
2025	8	11	13	9	24	17	18

3.3.4 Unfunded Projects

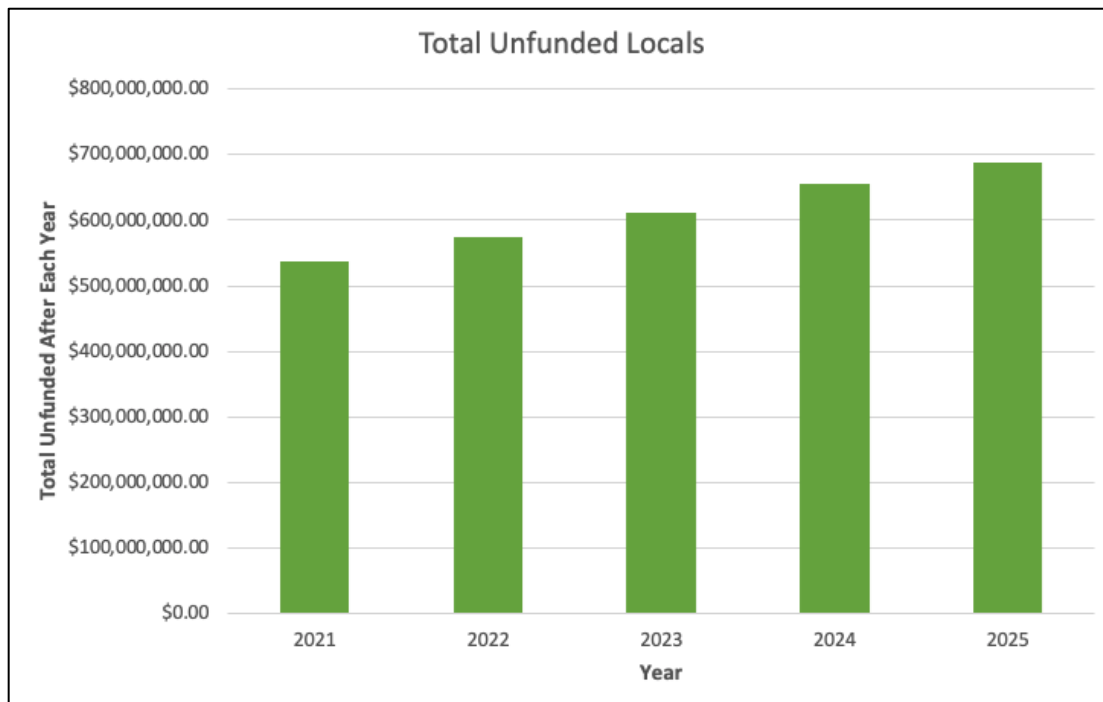


Figure 3.3.4: Total dollar value of unfunded project remaining on local roads after each year of the 5-year plan.

Table 3.3.4 Unfunded Projects Table for All Local Roads

Year	Preventive Unfunded	Major Under Critical Unfunded	Total Unfunded
2021	\$0.00	\$538,330,428.77	\$538,330,428.77
2022	\$0.00	\$575,479,467.04	\$575,479,467.04
2023	\$0.00	\$612,205,821.78	\$612,205,821.78
2024	\$0.00	\$654,848,328.64	\$654,848,328.64
2025	\$0.00	\$689,038,800.91	\$689,038,800.91

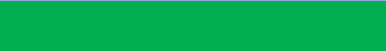
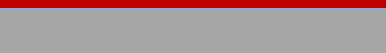
The Louisville network as a whole has a weighted average PCI of 68, arterials have an average of 80, collectors an average of 76, and locals an average of 64. Arterial roads will be able to nearly maintain the current average PCI with current allocated funds but have approximately \$35 million in unfunded projects. Collector roads are predicted to go down in average PCI and see an increase in unfunded projects from \$87 million to \$103 million during the 5-year plan currently in place. This indicates these roads are underfunded to some degree. Lastly, local roads see the largest decrease in average PCI during the 5-year plan and the unfunded projects jump from \$538 million to \$689 million by the end of the plan. Local roads appear to be more underfunded than collectors.

To address the results from the Local roads an important point to make is that PAVER is trying to apply only the treatments currently used by Louisville which includes mill and pave. Mill and pave is a very expensive treatment and it is trying to recommend this treatment where ever the condition theoretically warrant it. An alternative approach used by other organizations is to heavily restrict the use of these mill and pave treatments on local or very low volume roads and use preservations in place of these treatments. The condition of these roads will not be necessarily brought up to a high average condition rating but the cost-effective nature of this strategy allows organizations to keep their good roads in good shape along with their most important roads.

Mandli would recommend the addition of global preservation, such as slurry seal, be used on all roads, and a heavy restriction of major rehabs on local roads. This is obviously a large change in treatment philosophy and may involve addition analysis to determine what this new approach may look like in terms of funding and planning.

5 Appendix A - PCI Rating Classifications and Condition Examples

5.1 PCI Rating Classifications

PCI Rating	PCI Range	PAVER Color Legend
GOOD	86-100	
SATISFACTORY	71-85	
FAIR	56-70	
POOR	41-55	
VERY POOR	26-40	
SERIOUS	11-25	
FAILED	0-10	

5.2 Condition Examples



Figure 5.2.1.a : Mandli Right of way (ROW) imagery of a road with a PCI score of [87](#), which is considered **Good** (Left). **Figure 5.2.1.b:** Image of the LCMS Rage Downward Image with Overlay of the road depicted in Figure 5.2.1.a.



Figure 5.2.2.a: Mandli Right of way (ROW) imagery of a road with a PCI score of [58](#), which is on the lower side of **Fair** (Left). **Figure 5.2.2.b:** Image of the LCMS RAGE Downward Image with Overlay of the road depicted in Figure 5.2.2.a.



Figure 5.2.3.a : Mandli Right of way (ROW) imagery of a road with a PCI score of [28](#), which is classified as **Very Poor** (Left). **Figure 5.2.3.b**: Image of the LCMS Rage Downward Image with Overlay of the road depicted in Figure 5.2.3.a.

6 Appendix B - Condition Map of Louisville

