

- L. Sheehan, Chair
- H. LeGris, Vice-Chair
- D. Wu
- T. Fogle
- S. Lynch
- B. Monarrez
- D. Gray
- P. Worley
- F. Brown
- D. Seigny



AGENDA
Environmental Quality & Public Works Committee
December 5, 2023
1:00 P.M.

- | | | |
|------|---|---------|
| I. | Approval of the October 24, 2023 Committee Summary | (1-2) |
| II. | Consent Decree Remedial Measures Plan [Sheehan/Martin] | (3-22) |
| III. | Environmental Best Practices in Our Paving Process [Worley/Allen] | (23-33) |
| IV. | Environmental Commission – Ordinance Update [Sheehan/Downey] | (34-47) |
| V. | Items Referred to Committee | (48) |

"Environmental Quality and Public Works committee to which shall be referred matters relating to the department of Environmental Quality and Public Works and its divisions, including capital improvement projects and any related partner agencies."- Council Rules & Procedures, Section 2.102 (3). Effective January 1, 2023. Adopted by Urban County Council September 22, 2022.

2023 Meeting Schedule

February 7	September 12
April 18	October 24
May 23	December 5
July 11	



Environmental Quality & Public Works Committee

October 24, 2023

Summary and Motions

Chair Sheehan called the meeting to order at 1:04 p.m. Committee Members Wu, Fogle, Lynch, Monarrez, Gray, Worley, F. Brown, and Sevigny were present. Committee Member LeGris was absent.

I. Approval of September 12, 2023 Committee Summary

Motion by Gray to approve the September 12, 2023 Environmental Quality & Public Works Committee Summary. Seconded by Monarrez. Motion passed without dissent.

II. Annual Snow Plan Update

Rob Allen, Director of Streets and Roads, spoke about the snow season expense and the salt supply. He displayed a map to illustrate the route rankings based on street types (arterial, collector, residential, etc.). He described the coordination of the snow plan and said there is now Rank 1E which ranks above Rank 1 for streets that provide emergency access to certain critical facilities. The goal is to clear the roadway within 48 hours and clear the sidewalk within 96 hours. He explained sidewalk snow removal is executed by combined forces of the Divisions of Environmental Services, Parks, Fire, and Facilities. He pointed out the clearing begins after the snow stops. He reviewed staffing in the various divisions that assist with snow removal, and he mentioned there are five contract employees who also assist as needed. He provided a timeline for the finalization of the plan which will be posted to the webpage on October 25, 2023. Looking ahead, he mentioned the route optimization study intended to help drivers become more efficient and he noted this should be implemented next year. Finally, he mentioned the partners involved in treating the roads and rights-of-way throughout this process. When asked how much additional funding is needed, Commissioner Albright said there was \$825,000 submitted for the fund balance discussion. Speaking about other technology, Allen mentioned there are three weather monitoring stations and he hopes having these will provide earlier alerts of impending weather. When asked if street rankings ever change, Allen said if traffic count changes or facilities change, the rank would change. Addressing the price per ton for salt, Allen said the salt comes from Canada and weather in the northeast impacts cost the most. No action was taken on this item.

III. Annual MS4 Program Update

Lindsie Nicholas, MS4 Section Manager in Division of Water Quality, defined MS4 as the Municipal Separate Storm Sewer System. She explained that state statute authorizes a community like Lexington to discharge stormwater runoff from its MS4 into waters of the Commonwealth. Lexington is issued a stormwater discharge permit by the Kentucky Department for Environmental Protection and the individual permit lasts five years. Permit compliance revolves around meeting objectives of ten program elements. She spoke about the ten program elements that fall into three categories: public engagement, pollution prevention, and monitoring and reporting. The MS4 program is funded through the Water Quality Management fee and approximately \$7.7 million was spent in 2022 to meet the goals and objectives of the Stormwater Quality Management Program. Moving forward, Nicholas said the intent is to hone the watershed vision and maintain partnerships with stormwater management stakeholders. When asked about testing and reporting from 2016-2024 and if the plan is to continue the cycle, Nicholas said they review a watershed each year and they plan to examine what needs to change based on data

collected. When asked about specific conductance, Nicholas said it is a good indicator of pollution in the waterways. There is salt in the winter from roadway salt applications that impacts this. Explaining what the results mean, Nicholas said the table shows the percentage of water quality results that met regulatory benchmarks and non-regulatory reference points. When asked if these studies drive which areas to focus on, Nicholas confirmed they do and they take the information and data collection to tailor the next permit or program. No action was taken on this item.

IV. Waste Digester Feasibility Study

Nancy Albright, Commissioner of Environmental Quality and Public Works, provided an update on the Waste Digester Feasibility Study which was recommended by this committee in May 2022. She explained the purpose behind the study is to evaluate the feasibility of an in-vessel waste composting solution for municipal solid waste. There is a particular focus on scalability and yard waste, specifically looking at the Sevierville digester system as well as other options. She reviewed the objectives which include three landfill diversion options: rotary drum system, tunnel reactor system, and source separated organic – aerated static piles. She reviewed each of the alternatives for landfill diversion and how each of these systems would operate. She pointed out challenges to utilizing the rotary drum and the tunnel reactor. She provided cost estimates for each of the systems and said the consultant recommended moving forward with source separated organics – aerated static pile. Addressing how common the rotary drum is, Albright said there were fourteen rotary drums at their peak and there are four today. This is because of maintenance and contracting. In comparison, there is only one tunnel reactor and there are 300 source-separated systems. Expanding on why the rotary drum is not the best option, Albright said you would need fourteen acres for each rotary drum installation and only eight acres is needed for the source-separated system. When asked if the static pile would create another problem with gas emissions, Albright said this is something to consider. Speaking about the rollers which could break down trash and recyclables, Albright explained the percentage of breakdowns is different in Sevierville than Lexington. Albright said both systems would require maintenance, just different types. There was a request for a full report detailing what our current costs are compared to these options. The committee also discussed creating a subcommittee to examine this further. [*Note: A Waste Digester work group was established on November 14, 2023.] No action was taken on this item.

V. Items Referred to Committee

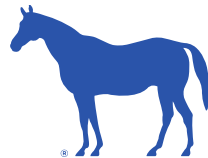
The meeting adjourned at 2:37 p.m.

CONSENT DECREE AND REMEDIAL MEASURES PLAN UPDATE

Charles H. Martin, P.E., Director of Division of Water Quality

Environmental Quality & Public Works Committee

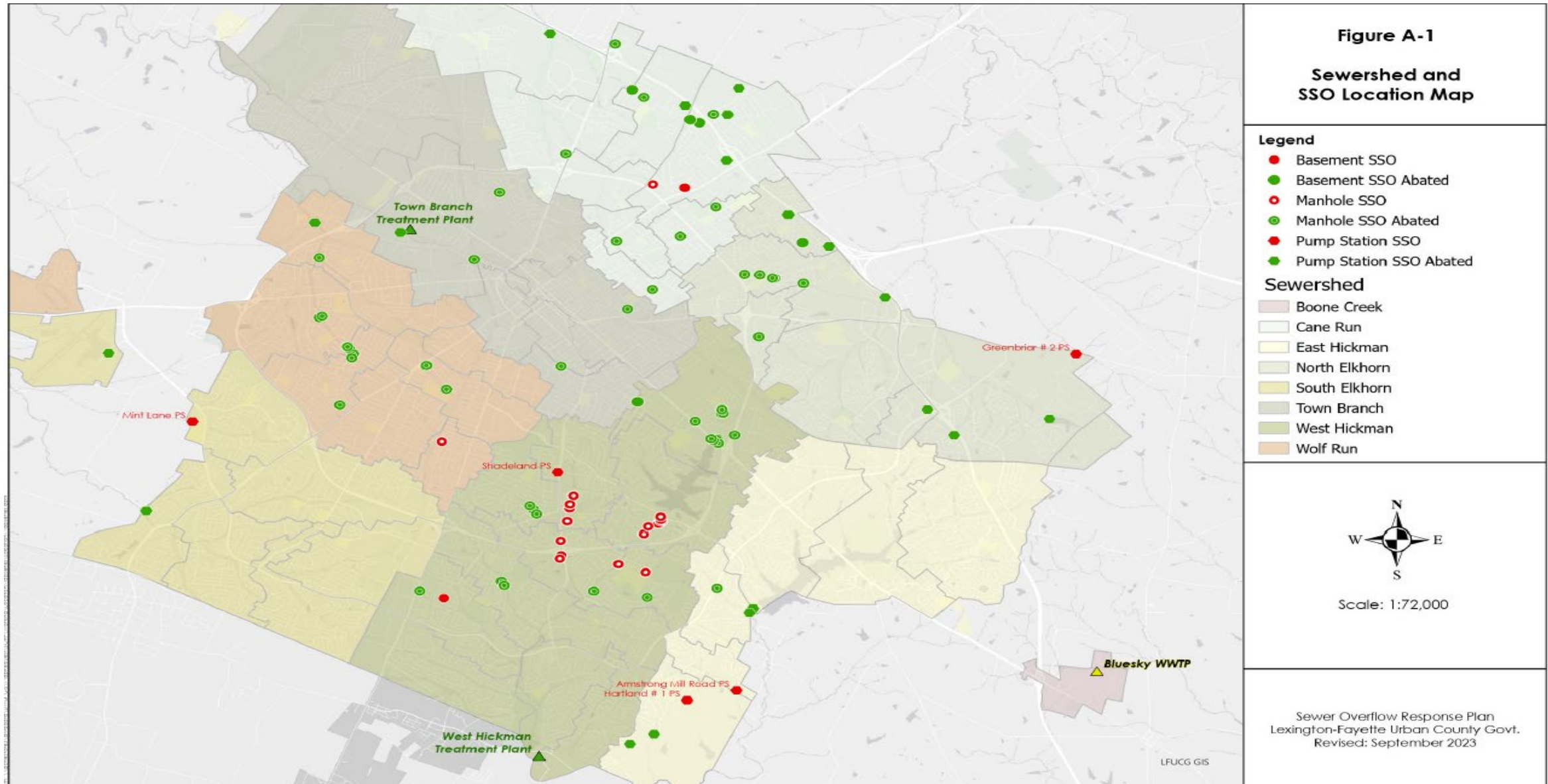
December 5, 2023



LEXINGTON

AGENDA

- Overall Consent Decree Status
- Remaining Capital Obligation - Overview.
- Active and Upcoming Projects (12-month view).
- Questions



OVERALL CONSENT DECREE STATUS

- All stormwater and supplement project obligations are complete.
- Capacity, Management, Operations and Maintenance (CMOM) obligations are ongoing / last forever.
- Sanitary Sewer Remedial Measures Plan (RMP) projects continue pending approval of a revised schedule.

SCHEDULE MODIFICATION STATUS

(2nd Material Modification)

LFUCG has requested:

- Extension of the full compliance deadline from 12/31/26 to 12/31/30.
- Removal of interim project deadlines as a measure of compliance.
- Elimination of Quarterly Reports
- Submission of electronic reports as opposed to paper hardcopies.

EPA and KY have conceptually agreed to:

- Extending the full compliance deadline.
- Project completion deadlines as the singular measure of compliance.
- Semi –annual reports in the quarterly report format.

2nd Material Modification Status

- Draft orders between parties have been exchanged.
- Filing with 6th District Court expected by late November 2023.

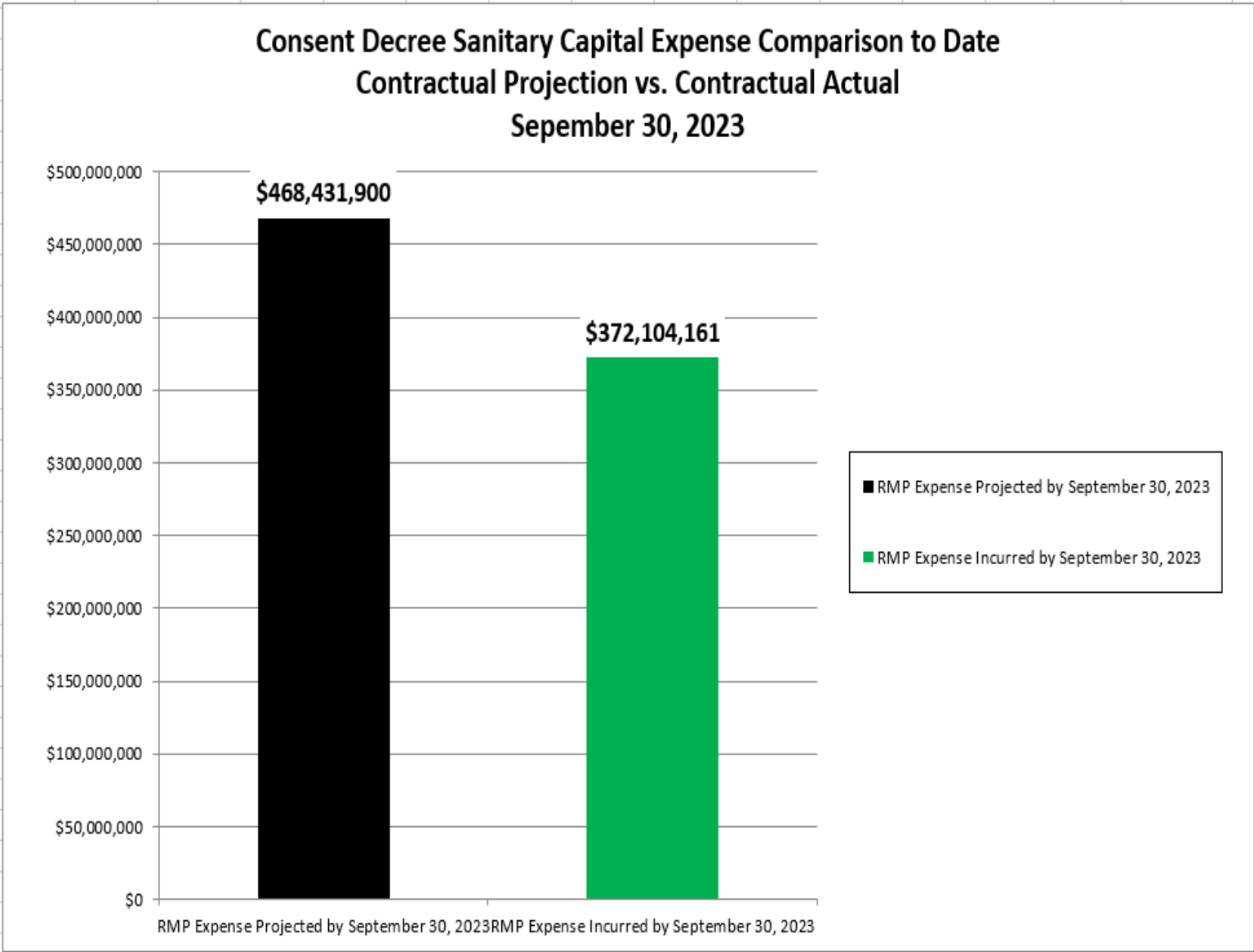
In the meantime, the work continues.

Remaining Capital Obligation Projects

	TOTAL PROJECTS**	COMPLETE	ACTIVE	PENDING
Collection & Conveyance*	80	52	14	14
Treatment Plants	37	23	8	6
TOTAL	117	75	22	20

* Includes Blenheim Way project not yet on approved list.

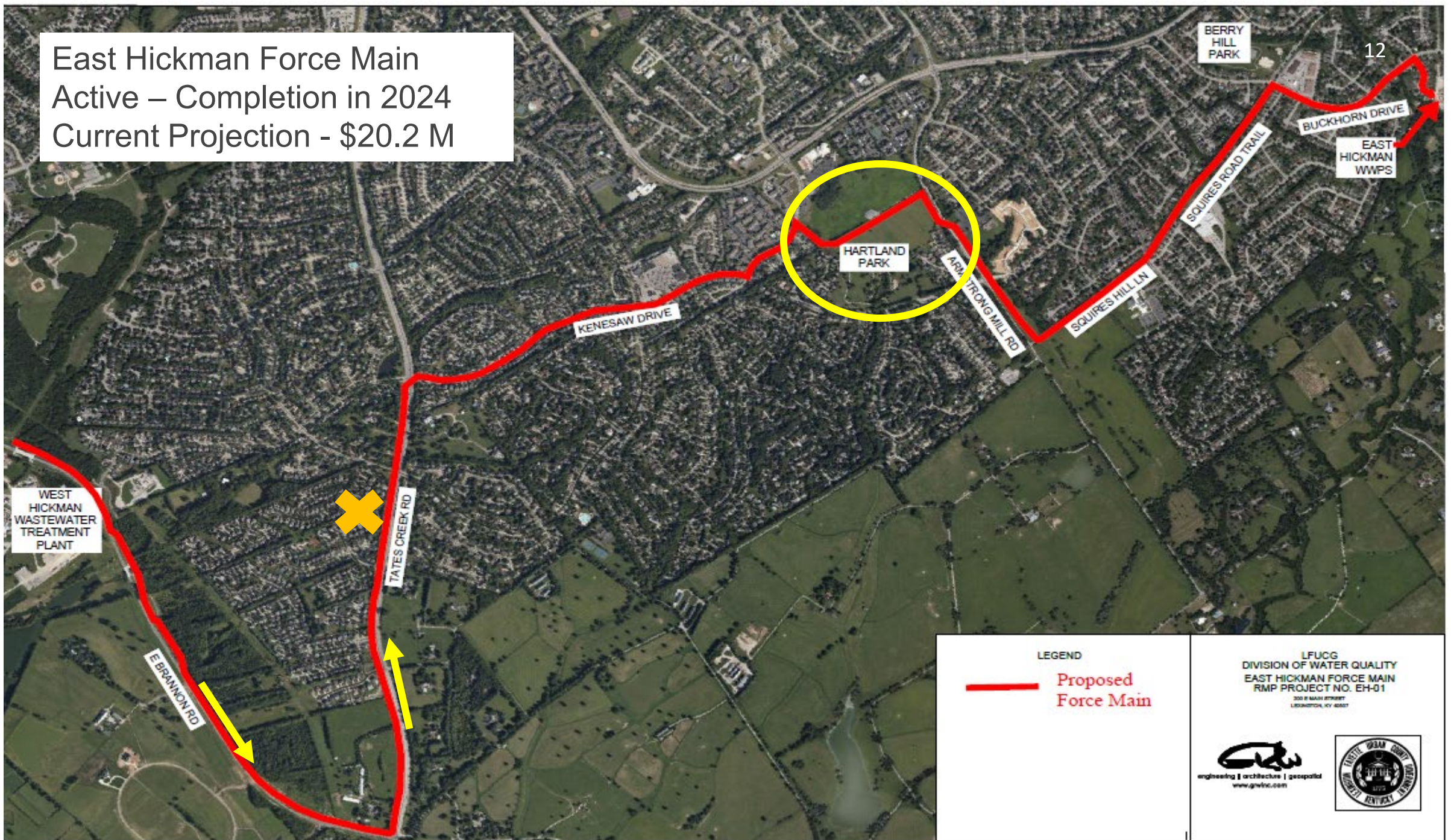
** Otherwise as totaled by 3Q2023 report.



Projected Verses
Actual Expense
September 2023

Active and Upcoming Projects (12-month view)

East Hickman Force Main
Active – Completion in 2024
Current Projection - \$20.2 M



LEGEND

 Proposed Force Main

LFUGG
DIVISION OF WATER QUALITY
EAST HICKMAN FORCE MAIN
RMP PROJECT NO. EH-01
300 E MAIN STREET
LEICESTER, KY 40427


engineering | architecture | geospatial
www.gwsinc.com



Legend
RMP Project Pipe
— WH 10 - West Hickman Main Trunk E



West Hickman Sanitary Trunk E

Active – Completion in 2024
Current Projection - \$9.2 M

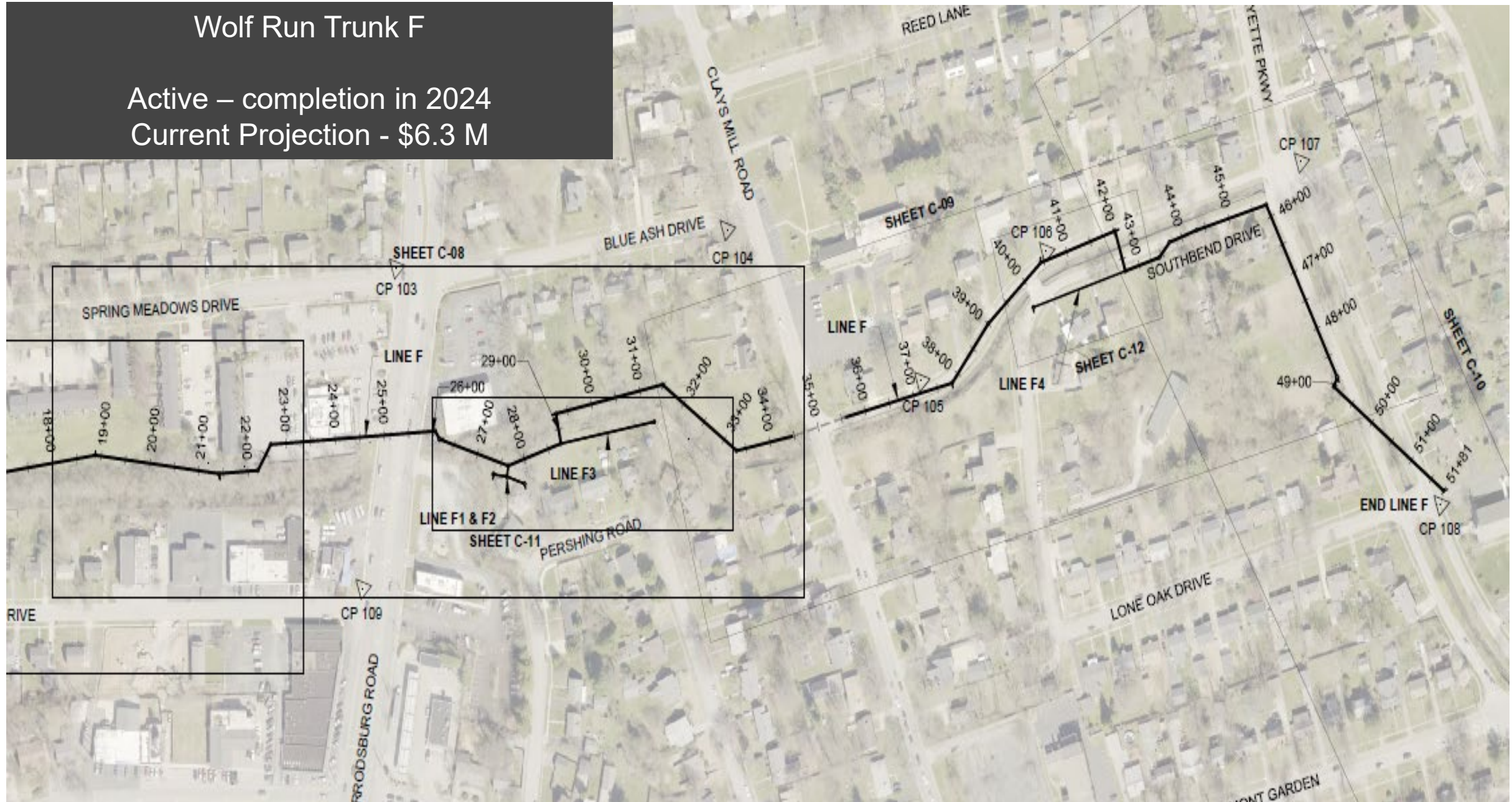


Delong Road Pump Station
Active – Completion mid 2025
Current Projection - \$9.5 M
(grant funded)

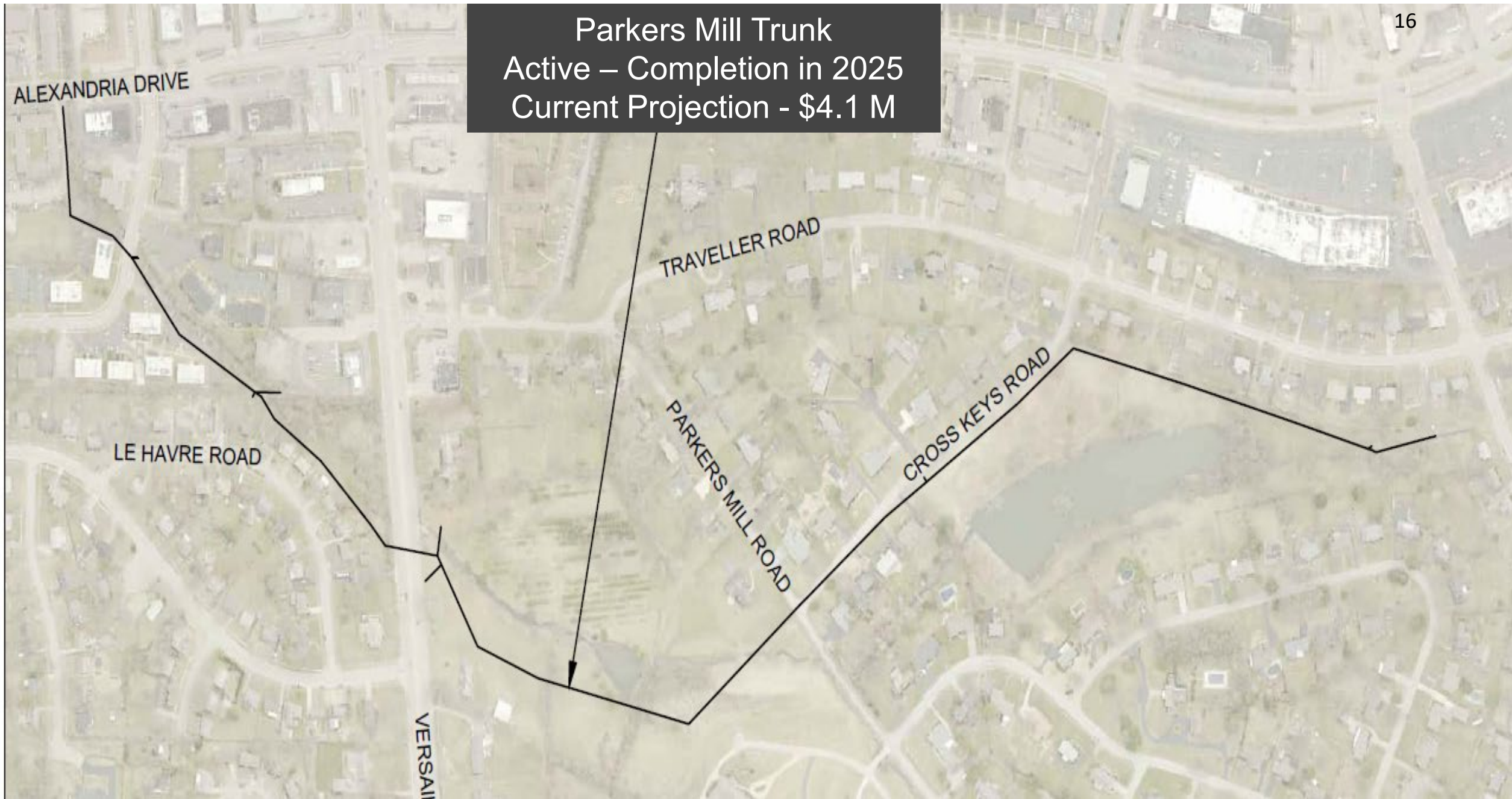


Wolf Run Trunk F

Active – completion in 2024
Current Projection - \$6.3 M



Parkers Mill Trunk
Active – Completion in 2025
Current Projection - \$4.1 M



Legend

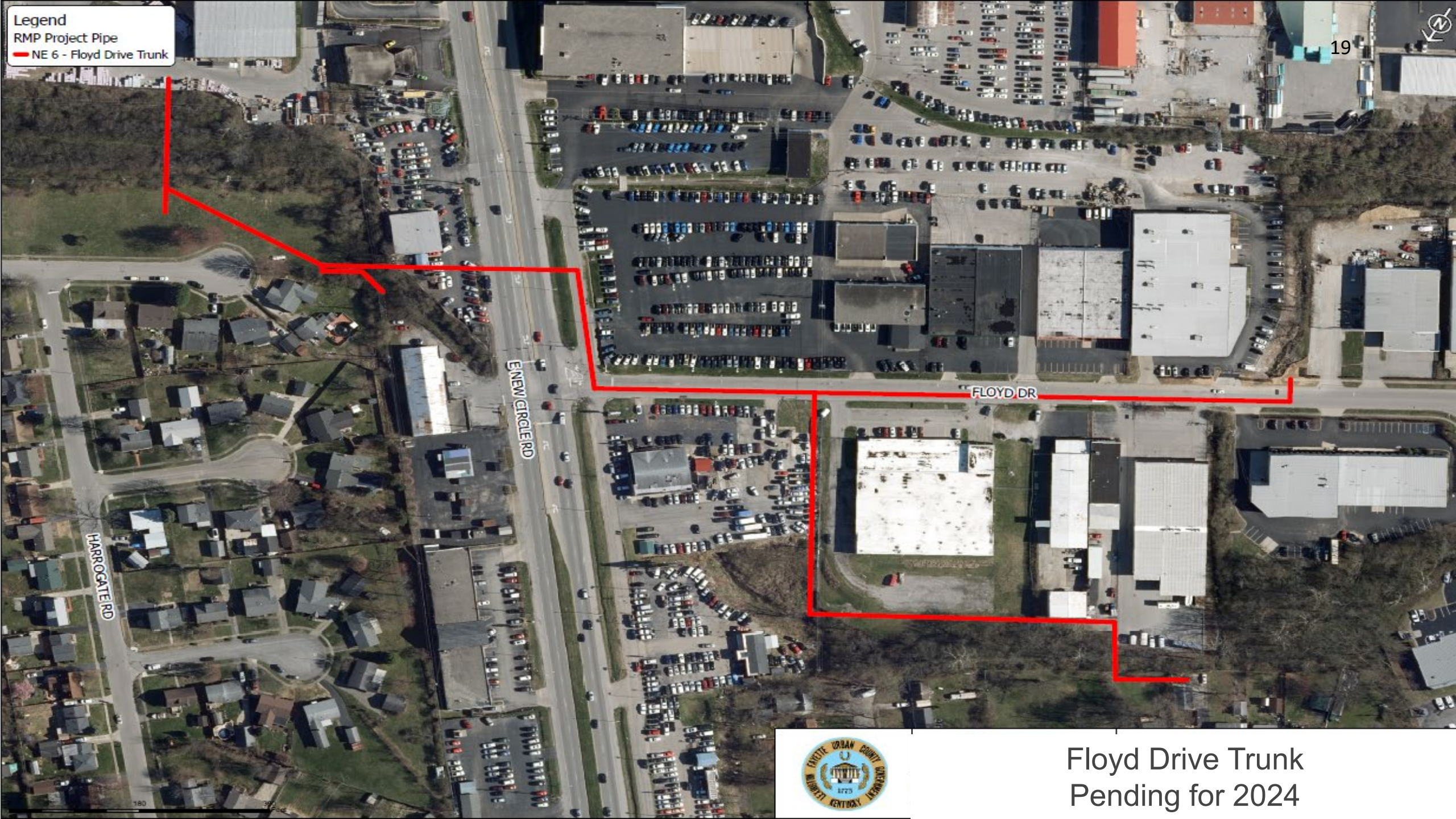
RMP Project Pipe

- CR 14 - New Circle Trunk A
- CR 15 - New Circle Trunk B

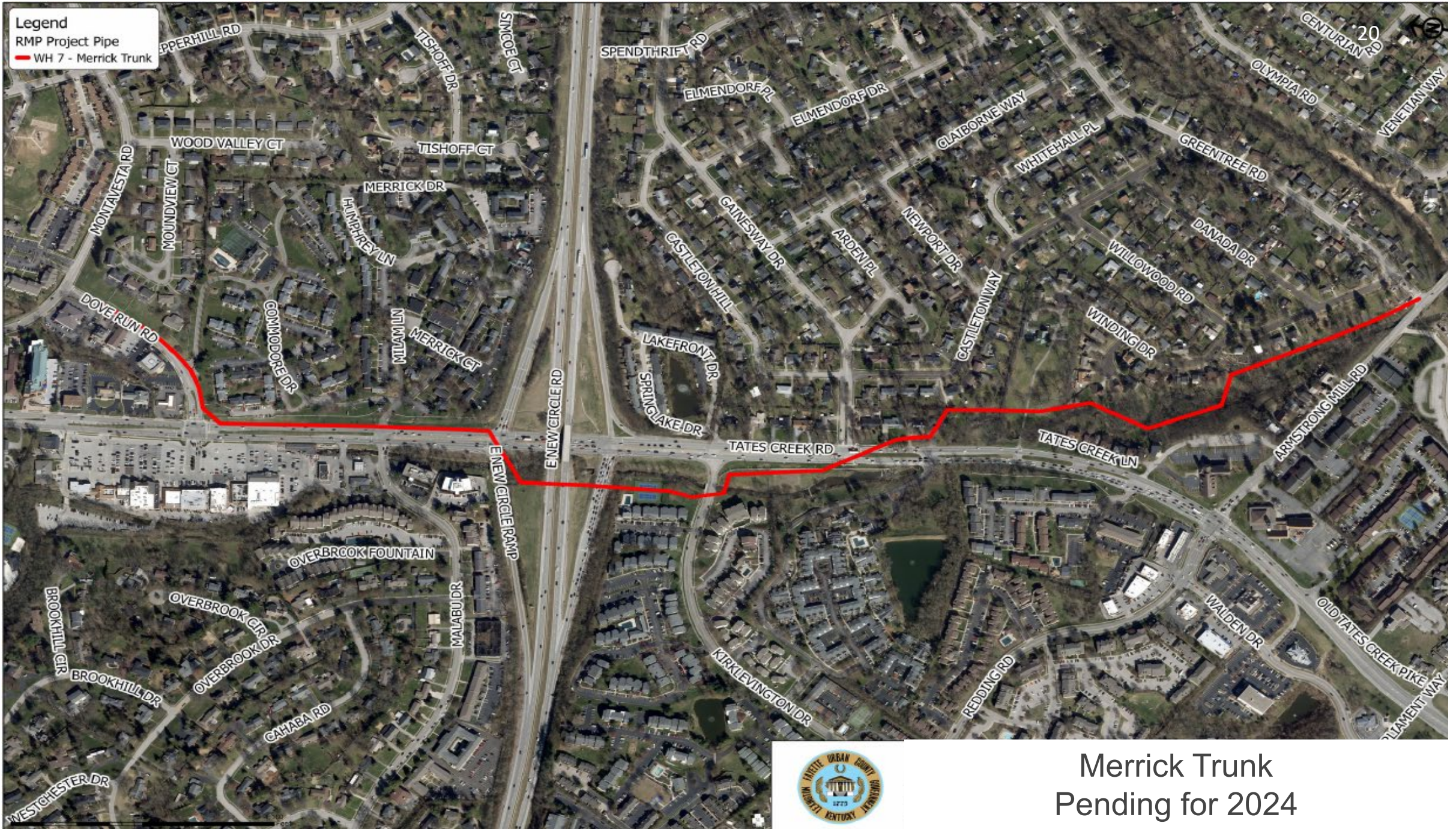


New Circle A&B Trunk
Pending for 2024





Floyd Drive Trunk
Pending for 2024



Merrick Trunk
Pending for 2024

SUMMARY

- Lexington's remaining primary Consent Decree obligation is the Remedial Measures Plan (RMP).
- Lexington is expecting to receive an extension to account for the impact of the COVID-19 pandemic.
- 64% of the RMP projects are complete with another 19% currently active in design, easements or construction.
- Overall RMP costs still comfortably under budget but inflation has begun to erode prior savings.



QUESTIONS

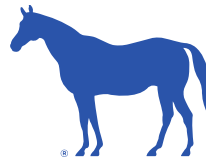


ENVIRONMENTAL BEST PRACTICES IN OUR PAVING PROCESS

Rob Allen, Director of Streets and Roads

Environmental Quality and Public Works Committee

December 5, 2023



LEXINGTON

Reclaimed or Recycled Asphalt Pavement (RAP)

- Potential future federal funding or grants for environmentally friendly and sustainable product use in paving?
- FHWA is starting to require the use of higher RAP in mixes. LFUCG testing of higher RAP mixes will be an industry example.
- Higher RAP with additives is comparable to slightly less expensive per ton to asphalt mixes with mostly virgin materials.
- High RAP use reduces carbon emissions by 30% in manufacturing asphalt.
- The combination of higher RAP and additives (fiber and/or polymers) to strengthen and extend the life of the pavement is ahead of what other cities and agencies are currently practicing.
- 45% RAP is about the highest percentage that can be used currently. This is because a certain % of new materials helps balance the mix design and lowers the amount of heating during production to reduce emissions.

High RAP content asphalt

- Nationally, research is being conducted on how to replace more virgin material with recycled material in pavement mixes.
- LFUCG and KY DOT paving specifications currently contain about 20% RAP. LFUCG has tested experimental pavements that contain up to 45% RAP.
 - 10,000 tons in FY 2024 selected Collectors.
 - 6,000 tons in FY 2023 Mercer Rd. rebuild from Greendale to bridge.
 - 2,000 tons in FY 2022 Fiber and Polymer. One lane of inner and outer MOW from Airport to Versailles.
- Conducted additional testing and monitoring by LFUCG, external agencies (Blankenship Asphalt Testing & Technology), and contractor (ATS) and manufacturer's representatives since first use in FY22.
- Mercer Road FY23 was the first paving experiment with heavy truck traffic. Using high RAP and an additive made from soy bean oil and aramid (Kevlar) fibers. Fibers extend the life of the pavement by adding strength to resisting wear and tear. The additives help prevent and resist pavement cracking and rutting. Soy bean derivative, which is sustainable, softens and rejuvenates the asphalt in the RAP and allows for it to be combined with virgin materials.

Adding Kevlar fibers to our asphalt

- Collectors and arterials were historically paved using PG 76-22, a stiffer, stronger mix for higher traffic roads. PG 76-22 stiffness does not allow higher RAP %'s to be used.
- We have begun using PG 64-22 with Kevlar® fiber in FY24 for resurfacing Collector Roads. This allows the increase of RAP from 22% to 45% effectively doubling the amount of recycled asphalt we can use.
- This is another innovation that LFUCG is leading the way in KY and the US (similar to our early adoption of the seatbelt law and the smoking ban).
- Louisville has been successfully using fiber in all their resurfaced roads for several years but not high RAP mixes.
- Using high RAP is one of the few circumstances where environmental stewardship meets cost savings. PG 64-22 alone is less expensive per ton than PG 76-22. Adding fibers and the higher RAP offset costs so that this mix is as durable and the roughly the same cost as the PG 76 mix while using more recycled product.



High RAP, Fiber, and Polymer Roads

BATT



Figure 1 – REARM constructed pavement on Mercer Rd looking west



Figure 2 – Mercer Rd REARM surface section

BATT



Figure 3 – REARM constructed pavement on Cedar St looking southeast towards S Upper St

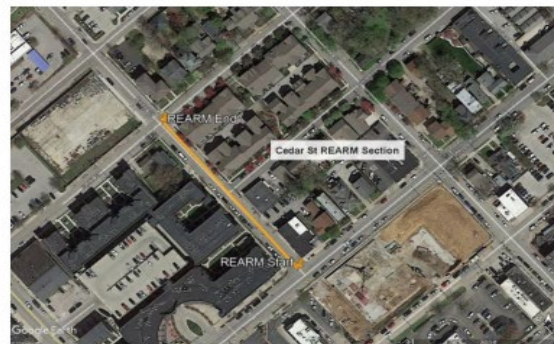


Figure 4 – Cedar St REARM pavement section

Man O'War Boulevard Pavement Results
FWD Testing Services
Lexington, Kentucky
S&ME Project No. 21830008



1.0 Project Information

Project information has been developed between email correspondence and field discussions between Phil Blankenship and Mary Whitby with S&ME in November 2021. Phil provided S&ME with a map (Figure 1-1) below to identify the proposed test sections. The green, red, and purple sections were identified to have full depth asphalt with fiber and the orange section had fiber only in the top 1.5 inches of asphalt. The project is located in Lexington, Kentucky on Man O'War Boulevard between Terminal Drive and Versailles Road.

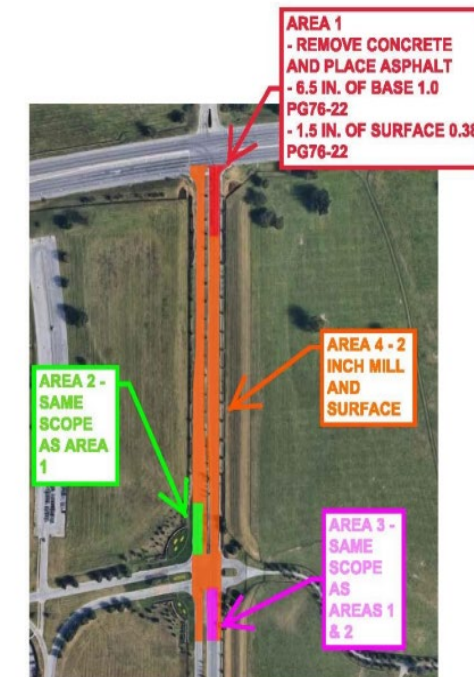
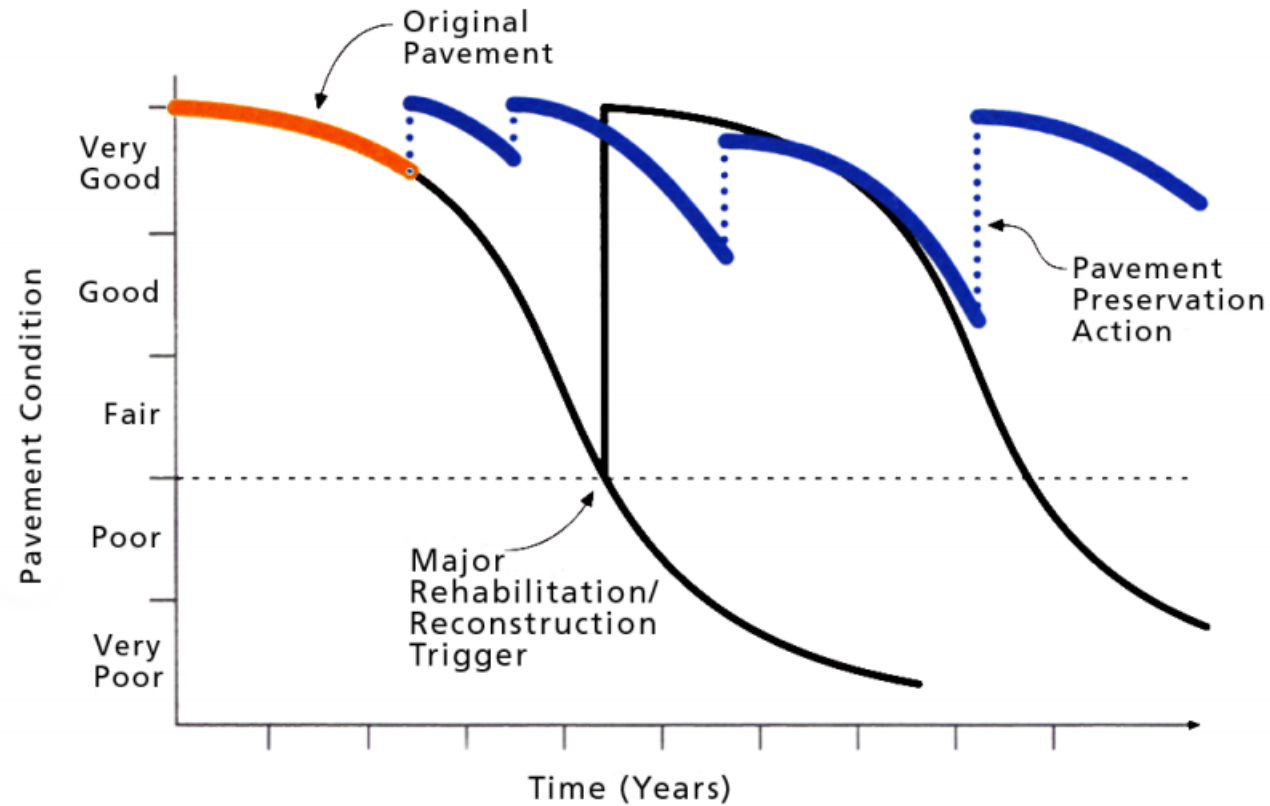


Figure 1-1: Project Location Map

Preventive Maintenance practices – “Keep Good Roads Good”

- The goal of our maintenance program is to invest 10% of paving funds in to preventative maintenance practices. The 2 main preventive maintenance methods used by LFUCG are pavement rejuvenation and crack sealing.
 - These 2 practices can extend the life of pavement 5-10 years.
 - Rejuvenate pavements in years 3-5 after resurfacing. Adding chemicals that have evaporated back in to the pavement to keep it flexible and to retain strength. Like hair conditioner for asphalt.
 - Crack seal in years 5-7 after resurfacing to keep water out of the pavement to prevent freeze thaw cycling.
- Rejuvenation and crack sealing can extend the service life of pavement by several years and save agencies 10-30% versus the cost of traditional mill and fill resurfacing (Wang). Multiple studies estimate every dollar spent upon preventative maintenance saves \$6-10 in rehabilitation costs (NPS.gov.../pavement-preservation). Some municipalities in California and Texas are using 5, 5 year cycles before resurfacing. Note-these are hot and arid climates compared to Lexington.
- There are other effective preventative maintenance methods used by the KY DOT and other agencies. Cape seal, chip seal, fog seal, micro-surfacing, and pressure paving to name a few. These treatments require closing roads or lanes of traffic for an extended time which **does not get favorable responses** from Lexington drivers.

Benefits of Pavement Preservation



Next Steps

- Continue to monitor the performance of the pavements that have received high RAP mixes.
- Continue to work with our partners to investigate additional opportunities to reduce the environmental impact of our paving practices in manufacturing and construction.

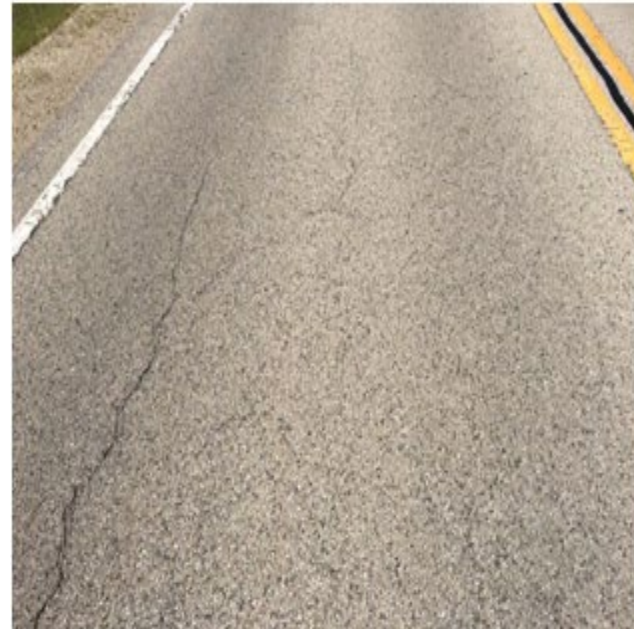
Rejuvenation



Crack Sealing



Before



After



Questions?



LEXINGTON

A Much Needed Updating of Ordinances Related to the Environmental Commission

Environmental Commission
Grace Downey- Chairperson

Agenda and Objective

On behalf of the Environmental Commission, I would like to propose an update to the ordinance as related to our commission and its memberships, officers and rules of procedures, and purposes.

Agenda

- Who we are
- What we do
- Rationale for changes in ordinance
- What we would like to change



Materials

➤ Link to current ordinance-

https://library.municode.com/ky/lexington-fayette_county/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVMEENIMCO

- Chapter 2- Administration
 - Article V- Metropolitan Environmental Improvement Commission
 - Section 2-96
 - Section 2-97
 - Section 2-99





1. Who we are

The Lexington-Fayette County Environmental Commission currently consists of up to forty members of the community who volunteer their time and expertise who want to better the city's natural environment and its practices:

- There are representatives from each district on the Environmental Commission
- We meet 9-11 times a year, typically on the first Monday of the month
- We promote environmentally sustainable practices and celebrate individuals and groups who work toward a better natural environment for Lexington and Fayette County





2. What we do

The Lexington-Fayette County Environmental Commission serves to improve the natural environment in our city and county. Among other things, we:

- Work with stakeholders to address environmental policies and problems in our community
- Use the varied backgrounds of our Commissioners to represent the public interest in a better environment and educate on current ordinances/practices
- Promote sustainability and environmental resilience practices



*Please take a moment to
find the ordinance document.*



The Environmental Commission would like to make changes to their by-laws and the current ordinance related to these by-law changes.





The by-laws of the Environmental Commission have not been revised since 1989

The Environmental Commission created an ad-hoc committee to review our current practices and if needed, revise our bylaws to better match our intentions and goals.

We want to update our bylaws in order to more effectively meet the needs of the public

Most of the bylaw revisions can be made with a $\frac{2}{3}$ vote of the Environmental Commission.

A few of our bylaws come directly from city ordinance however, and need council's assistance in having them revised.



What exactly needs revision?

Sec. 2-96. Established.

A commission for environmental improvement is hereby created which shall be known as ~~the "Metropolitan Environmental Improvement Commission of the Lexington-Fayette Urban County Government,"~~ "The Environmental Commission of Lexington-Fayette County," hereinafter called the "environmental commission."

Sec. 2-97. Membership.

The environmental commission shall consist of ~~not more than forty (40) nor less than twenty (20) members~~ twenty-five (25) members appointed by the mayor subject to the confirmation by the council. One member shall be a member of the urban county council, and shall be an ex-officio, non-voting member. The remaining membership shall be representative of all residents of the urban county and shall include at least ~~two (2) members~~ one (1) but no more than ~~(3) members~~ from each of the twelve (12) urban county council districts.

What exactly needs revision?

Sec. 2-99. Officers and rules of procedure.

The officers of the environmental commission shall consist of a chairman, a vice-chairman, a secretary, a treasurer, an information officer, and three (3) directors, elected by the membership at the June meeting to serve a two-year term ~~from July 1 to June 30~~ in accordance with its bylaws. The duties of the officers shall be implied by the respective titles and such as may be specified in the bylaws. The environmental commission shall determine its own rules and order of business and shall provide for keeping a record of its proceedings.

Thank you for your time. Any questions following this meeting can be directed to Grace Leppert Downey at kgldowney@gmail.com or katherine.downey@scott.kyschools.us



ORDINANCE NO. _____ - 2023

AN ORDINANCE AMENDING SECTION 2-96 OF THE LEXINGTON-FAYETTE URBAN COUNTY CODE OF ORDINANCES TO RENAME THE “METROPOLITAN ENVIRONMENTAL IMPROVEMENT COMMISSION OF THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT” TO THE “ENVIRONMENTAL COMMISSION OF LEXINGTON-FAYETTE COUNTY,” CONSISTENT WITH CURRENT PRACTICE; AMENDING SECTION 2-97 OF THE CODE OF ORDINANCES TO REDUCE THE NUMBER OF MEMBERS TO TWENTY-FIVE (25) AND ADDING A COUNCILMEMBER AS A NON-VOTING EX-OFFICIO MEMBER; AND AMENDING SECTION 2-99 OF THE CODE OF ORDINANCES TO ADD AN INFORMATION OFFICER AS AN OFFICER OF THE COMMISSION AND SETTING OFFICERS’ TERMS AT TWO (2) YEARS; EFFECTIVE UPON PASSAGE OF COUNCIL.

BE IT ORDAINED BY THE COUNCIL OF THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT:

Section 1 – That Section 2-96 of the Lexington-Fayette Urban County Code of Ordinances be and hereby is amended to read as follows:

Sec. 2-96. Established.

A commission for environmental improvement is hereby created which shall be known as ~~the “Metropolitan Environmental Improvement Commission of the Lexington-Fayette Urban County Government,”~~ “The Environmental Commission of Lexington-Fayette County,” hereinafter called the “environmental commission.”

Section 2 – That Section 2-97 of the Lexington-Fayette Urban County Code of Ordinances be and hereby is amended to read as follows:

Sec. 2-97. Membership.

The environmental commission shall consist of ~~not more than forty (40) nor less than twenty (20) members~~ twenty-five (25) members appointed by the mayor subject to the confirmation by the council. One member shall be a member of the urban county council, and shall be an ex-officio, non-voting member. The remaining membership shall be representative of all residents of the urban county and shall include at least ~~two (2) members~~ one (1) but no more than (3) members from each of the twelve (12) urban county council districts.

Section 3 – That Section 2-99 of the Lexington-Fayette Urban County Code of Ordinances be and hereby is amended to read as follows:

Sec. 2-99. Officers and rules of procedure.

The officers of the environmental commission shall consist of a chairman, a vice-chairman, a secretary, a treasurer, an information officer, and three (3) directors, elected by the membership at the June meeting to serve a two-year term ~~from July 1 to June 30~~ in accordance with its bylaws. The duties of the officers shall be implied by the respective titles and such as may be specified in the bylaws.

The environmental commission shall determine its own rules and order of business and shall provide for keeping a record of its proceedings.

Section 4 – That each member of the Environmental Commission who does not conform to the district requirements of this amendment at the time of this Ordinance’s passage may continue as members of the Environmental Commission until such time as the member moves outside the boundaries of Lexington-Fayette County, resigns, is removed by a majority of the Urban County Council, or the member’s term otherwise ends.

Section 5 – That this Ordinance shall become effective on the date of its passage.

PASSED URBAN COUNTY COUNCIL:

MAYOR

ATTEST:

CLERK OF THE URBAN COUNTY COUNCIL
PUBLISHED:
0613-23:EPT:X:\CASES\MAYOR\23-LE0001\LEG\00784146.DOCX

ITEMS REFERRED TO COMMITTEE

Environmental Quality & Public Works

Referral Item	Current Sponsor	Date Referred	Last Presentation	Status	Legistar File ID
1 Waste Digester Feasibility Study	L. Sheehan/D. Seigny	March 29, 2022	October 24, 2023		0445-22
2 Explore Lexington's Sustainability Options	L. Sheehan	February 20, 2018	May 23, 2023		0499-21
3 Environmental Best Practices In Our Paving Process	P. Worley	April 18, 2023		December 5, 2023	1255-23
4 Streets and Roads Fleet Depreciation and Replacement	H. LeGris	May 30, 2023			
5 Short-Term Rentals (STR) Enforcement	H. LeGris	May 30, 2023			
6 Environmental Commission - Ordinance Updates	L. Sheehan	June 13, 2023		December 5, 2023	0743-23
7 Update to Chapter 8 in Code of Ordinances related to blasting	D. Gray	July 11, 2023			
8 Review of revenue and expenditure of Refuse, Street Lights, and Street Sweeping (before the FY25 budget is finalized)	D. Seigny	August 22, 2023			
9 Examine the issue of odor control at the Waste Water Treatment Plant	J. Reynolds	October 31, 2023			
10 Microtransit	C. Ellinger	November 14, 2023			
Annual / Periodic Updates					
11 Recycling General Practices * Note several recycling items were combined into this one item on March 9, 2021	P. Worley	March 9, 2021	January 19, 2021	January, 2024	0292-19
12 Backyard Composting - Home Compost Pilot Program	H. LeGris	February 2, 2021	May 23, 2023		0500-21
13 Urban Forestry / Street Trees Update	H. LeGris	September 17, 2019	July 11, 2023		0501-21
14 Capacity Assurance Program (CAP) Audit Update	L. Sheehan	August 30, 2018	April 18, 2023	Spring 2028	0964-20
15 Annual Energy Improvement Fund Update	L. Sheehan	January 10, 2017	July 11, 2023		0572-22
16 Annual Snow/Ice Removal Plan	L. Sheehan	February 15, 2014	October 24, 2023		1034-22
17 Annual Pavement Management Plan / Curbs Assessment	L. Sheehan	May 26, 2020	April 18, 2023		0440-22
18 Annual Stormwater Priority List Update	L. Sheehan	February 20, 2018	September 12, 2023		0922-22
19 Annual Municipal Separate Storm Sewer System (MS4) Program Update	L. Sheehan	February 20, 2018	October 24, 2023		1122-22
20 Annual Consent Decree and Remedial Measures Plan Update	L. Sheehan	January 22, 2019	March 1, 2022	December 5, 2023	0222-22
21 Annual Division and Program Review (Pilot Program)	L. Sheehan	November 30, 2021	November 1, 2022		0127-22

Updated 11.14.23, KJT