

AGENDA

CALL TO ORDER

AGENDA ITEMS

- [1.](#) Inflow and Infiltration Study Findings
- [2.](#) Annual Update to the Capital Improvement Plan (CIP)

ADJOURNMENT

For information on how to view prior meetings, please visit our website at <https://www.lansingks.org>. If you require any special assistance, please notify the City Clerk prior to the meeting.

WORKSESSION ITEM

TO: Tim Vandall, City Administrator
FROM: Anthony J. Zell, Jr., Wastewater Utility Director
DATE: January 21, 2025
SUBJECT: Inflow and Infiltration Study Report

Director Zell and staff from the City's collection system consulting firm, George Butler Associates (GBA) will present the findings from the 2024 I/I study, as well as plans going forward. A copy of the conclusions and recommendations from the 2024 report is attached. A copy of the full 197-page report will be available for your review at a later date.

4 Conclusions and Recommendations

4.1 Conclusions

The objectives of this project were:

1. Check for pipe connectivity, structural defects, and potential sources of I&I in existing manholes and sanitary sewer lines within Wildwood South sewer district.
2. Use the data collection to update the City's GIS and ensure accurate routing is documented.

Both objectives were met through the manhole inspections, smoke and dyed water testing, and CCTV completed in this Project Area. GIS update recommendations were discussed in Section 3. Many sources of I&I were discovered throughout the various field inspections and can be addressed with a basin-wide rehabilitation project.

An overall conclusion for this project area is:

- The general condition of the City's sanitary sewer system is **good**. The sanitary sewer lines generally appear to be in good shape but approximately 33% of the 53 lines inspected have significant structural defects or inflow and infiltration that should be fixed. The manhole structures are in the same condition, with approximately 29% needing some level of rehabilitation. There were 29 significant and 18 minor I&I sources identified during CCTV and smoke testing in the sanitary sewer system that could be addressed to reduce rainfall I&I into the system, which, for a 175-acre project area, is a moderate number of sources.

4.2 Recommendations

4.2.1 Maintenance Items

During CCTV inspections there were 14 instances of roots intruding into the sewer lines.

- It is recommended that the City continue with its routine root cutting program to keep the sewer lines clear from blockages caused by roots.

During CCTV and manhole inspections there were minor defects observed in a majority of the structures which were not severe enough for repairs to be cost effective at this time. However, these defects may worsen over time.

- It is recommended that the City implement a routine inspection program in order to ensure that proactive maintenance can be performed as needed in the future.

4.2.2 Construction Items

Based on structural condition assessments of the 50 successfully inspected manholes, it is recommended that the City perform rehabilitation on 18 manholes. The manholes in need of rehabilitation, as well as the type of rehabilitation recommended, are listed in Appendix A, Table A-1.

Inspection attempts were made at all manholes assigned to this project to confirm pipe connectivity. Out of the 54 structures selected for inspections and analysis, four (4) were not able to be inspected.

- It is recommended that the City locate and raise to grade manholes UMH-1 and D-08-125. The presence and location of both manholes were confirmed during CCTV. CCTV discovered a utility cross bore in MH D-08-125, repair of which has been added to the manhole rehab recommendations list. It is recommended that a surface inspection be conducted once manholes are raised in order to confirm there are no other major defects present.
- It is recommended that the City construct a standard manhole at the current location of UMH-2. This will allow proper access to the line connecting UMH-2 to D-07-065 for cleaning and maintenance.
- It is recommended that the City abandon UMH-3 and its associated downstream line.

Smoke testing exposed several areas of rainfall I&I into the sanitary system that should be addressed.

- It is recommended that the City address the following I&I sources:
 - The exposed pipe at 300 Olive Street that was discovered during smoke testing should be disconnected and properly abandoned.
 - Fix broken caps or replace missing caps on 17 cleanouts listed in Table 2-10.
- It is also recommended that the City evaluate the cost-effectiveness of disconnecting the following private sources:
 - Disconnect five (5) foundation drains located at the following addresses:
 - 100 S 3rd St most likely connected to line segment D-07-07-065 – D-07-070
 - 210 S 2nd St most likely connected to line segment D-08-065 – D-08-070
 - 310 E Kansas Ave most likely connected to line segment D-07-075 – D-07-065
 - 307 E Kay St most likely connected to line segment D-08-165 – D-08-060

The repairs in Appendix A, Table A-2 should be completed based on CCTV inspections. Line items highlighted in blue should be priority.

The recommended rehabilitation is shown in Figure 4-1 and listed in Appendix A.

4.2.3 Administrative Items

The CCTV performed showed that the City's GIS network is lacking correct information on the material for several segments.

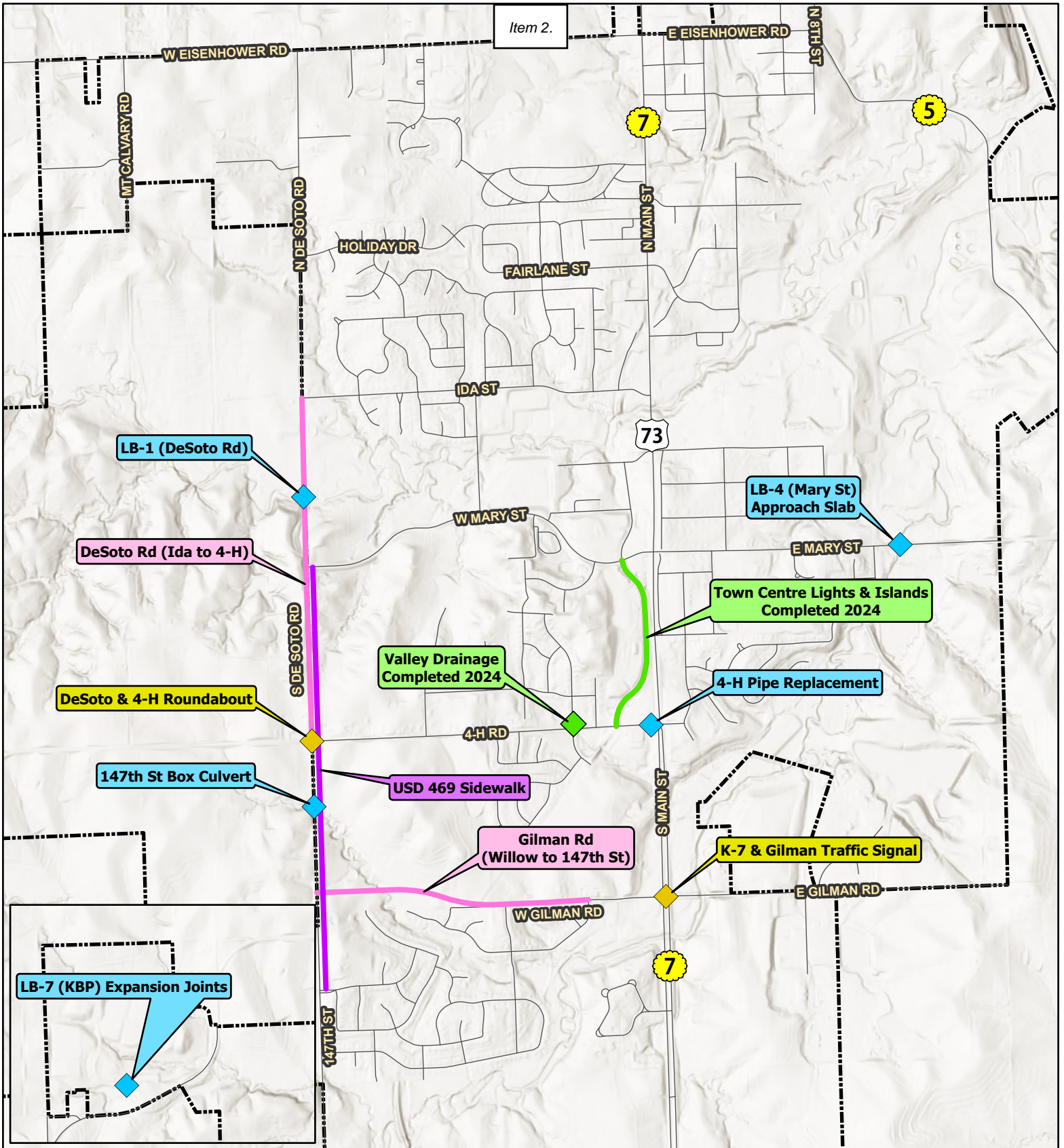
- It is recommended the City consider performing a system-wide update to incorporate CCTV data and manhole inspection data into their GIS databases. The lines with the necessary changes are listed in Table 3-1.

WORK SESSION AGENDA ITEM

TO: Tim Vandall, City Administrator
FROM: Mike Spickelmier, Director of Public Works *MOWS 1/17/24*
DATE: January 23, 2025
SUBJECT: Capital Improvement Plan (CIP) Update Work Session

Background: Annual Update to the Capital Improvement Plan (CIP)

1. 2025 Pavement Preservation Plan (Mill & Overlay)
 - a. 2024 Street Rating Exhibit
 - b. 2024 last Paved Exhibit
 - c. 2025 Proposed Streets / Alternates
 - i. Centre Drive
 - ii. 147th South of McIntyre
 - iii. Mary Street
2. Major Street Projects
 - a. DeSoto & 4H Roundabout (On Hold – No MARC Funding)
3. Stormwater Projects
 - a. 147th Street Box Culvert
 - b. Bridge LB-1
 - c. 4H Pipe near K-7
 - d. Unfunded Projects
4. Long Range Future Projects
 - a. DeSoto Road Upgrades
 - b. Gilman Road Extension



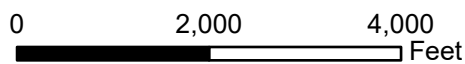
Legend

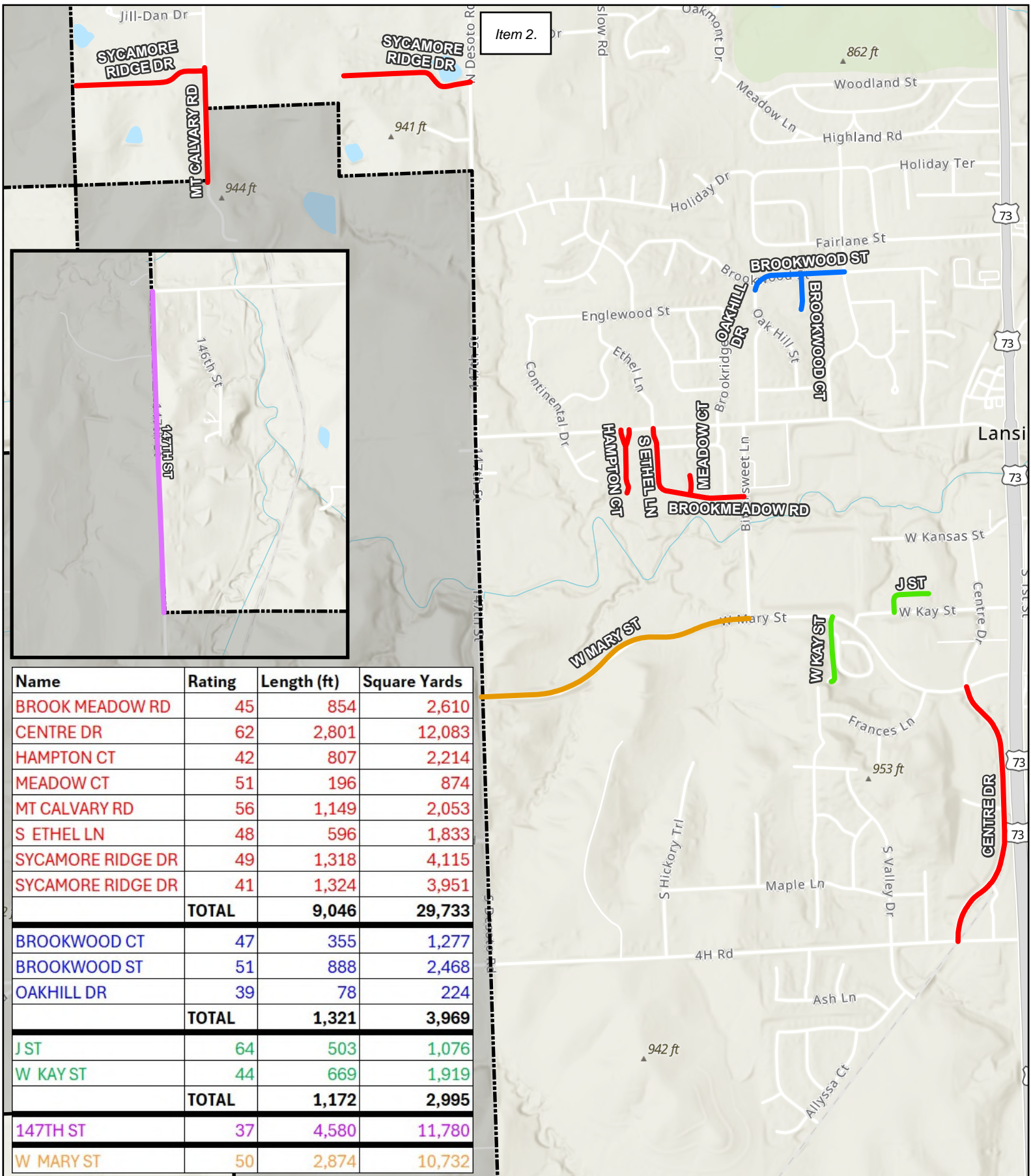
- ◆ Completed Project
- Completed Project
- ◆ Major Stormwater/Bridge Maintenance
- ◆ Major Street & Intersection Projects
- Identified Potential Future Projects
- Major Street & Intersection Projects
- Identified Potential USD Projects

**Capital Improvement Projects - 2025
Lansing, KS**



1 inch = 2,000 feet



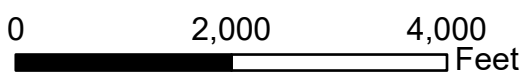


Name	Rating	Length (ft)	Square Yards
BROOK MEADOW RD	45	854	2,610
CENTRE DR	62	2,801	12,083
HAMPTON CT	42	807	2,214
MEADOW CT	51	196	874
MT CALVARY RD	56	1,149	2,053
S ETHEL LN	48	596	1,833
SYCAMORE RIDGE DR	49	1,318	4,115
SYCAMORE RIDGE DR	41	1,324	3,951
TOTAL		9,046	29,733
BROOKWOOD CT	47	355	1,277
BROOKWOOD ST	51	888	2,468
OAKHILL DR	39	78	224
TOTAL		1,321	3,969
JST	64	503	1,076
W KAY ST	44	669	1,919
TOTAL		1,172	2,995
147TH ST	37	4,580	11,780
W MARY ST	50	2,874	10,732

- Legend**
- Bid Type**
- Proposed Base Bid - 9,046 LF
 - Proposed Alternate 1 - 1,321 LF
 - Proposed Alternate 2 - 1,172 LF
 - Proposed Alternate 3 - 4,580 LF
 - Proposed Alternate 4 - 2,874 LF

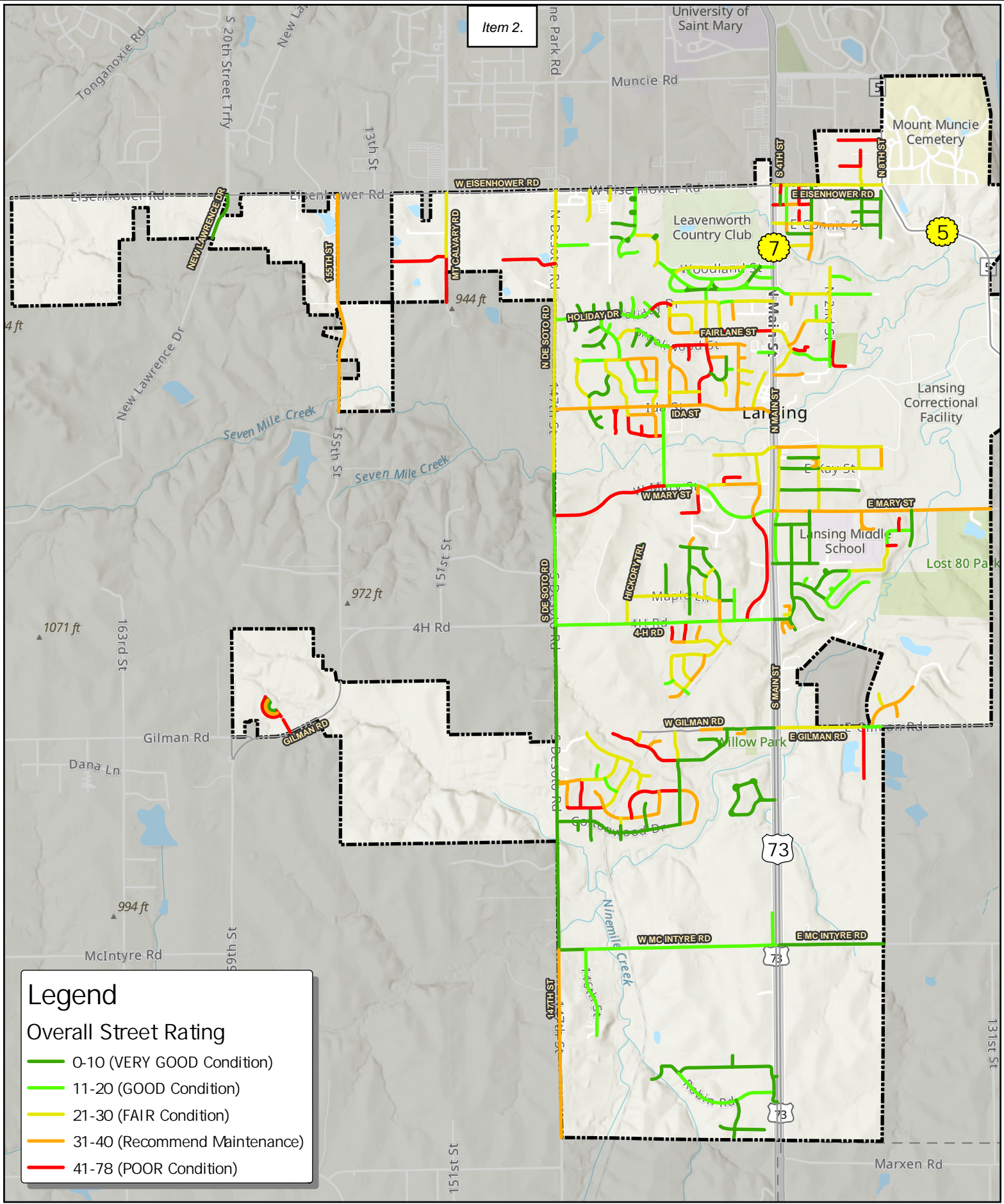
*Total LF for all: 18,993
 *Total SY for all: 59,209

M&O Prelim Selection 2025




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Item 2.

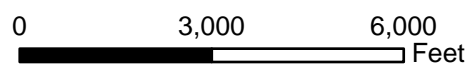


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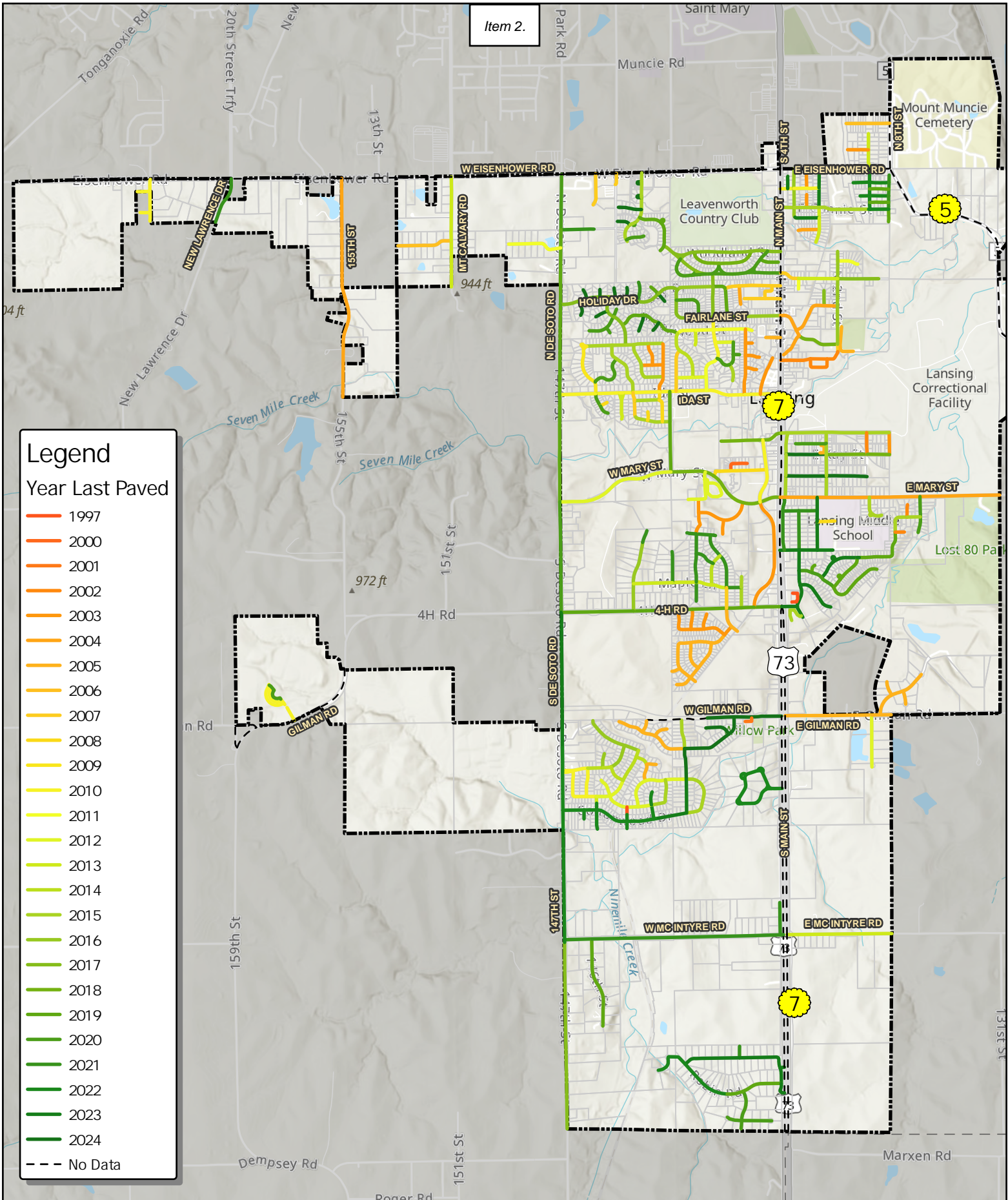
Overall Street Rating

- 0-10 (VERY GOOD Condition)
- 11-20 (GOOD Condition)
- 21-30 (FAIR Condition)
- 31-40 (Recommend Maintenance)
- 41-78 (POOR Condition)

Lansing Street Ratings - 2024



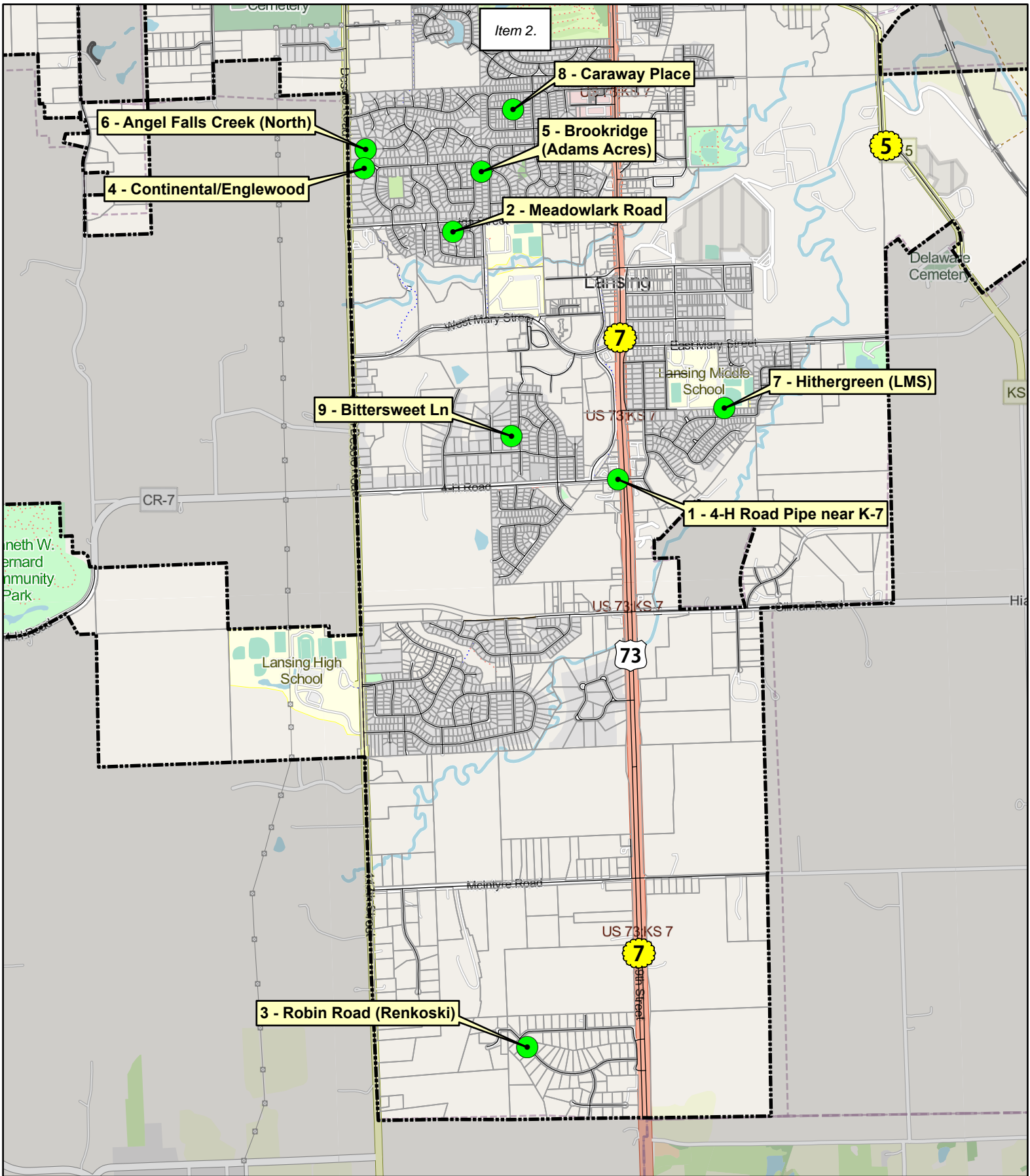
Item 2.



Legend
Year Last Paved

- 1997
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023
- 2024
- - - No Data

Streets Last Paved Date - 2024
Lansing, Kansas

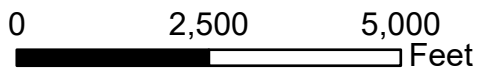


Unfunded Stormwater Projects

Legend

- Unfunded Stormwater Project Locations
- Streets
- ▭ Parcels
- ⬛ City Boundary

1 inch = 2,500 feet





Unfunded Stormwater Project and Priority List
Updated January 2025

Priority	Project	Estimate	Year	Impact	Condition	Scope
1	4H Road Pipe near K-7	\$50k	2023	●	●	Replace pipe with concrete / or pipe liner
2	Meadowlark Road	\$75k	2022	●	●	Replace pipe with concrete or plastic
3	Robin Road (Renkoski)	\$60k	2007	●	●	Storm pipe replacement / Energy Dissipation Structure / Channel Improvement
4	Continental / Englewood	\$160k	2021	●	●	Install new curb inlet and storm sewer
5	Brookridge (Adams Acres)	\$75k	2022	●	●	Failing metal pipe / replace with plastic
6	Angel Falls Creek (North)	\$150k	2018	●	●	Channel Improvements / Streambank Stabilization / Drainage Structure
7	Hithergreen (LMS)	\$125k	2020	●	●	Remove and Replace private (USD469) stormwater collection system
8	Caraway Place	\$120k	2021	●	●	Curb repairs complete in 2021, asphalt 2022 is providing adequate drainage
9	Bittersweet	TBD	2024	●	●	Drainage in rear of properties is starting to silt / potential CMP failure

LEGEND	
<u>Impact</u>	<u>Condition</u>
● Major Roadway / Significant Disruption	● Significant Deterioration / Failure
● Roadway / inconvenience	● Deterioration with functional life
● Less general public	● Fair Condition / Operation