



Friendly Hills Neighborhood Improvements

November 19th, 2024

Pavement Rehabilitation Approach

Friendly Hills Neighborhood Improvements

City Project 202407



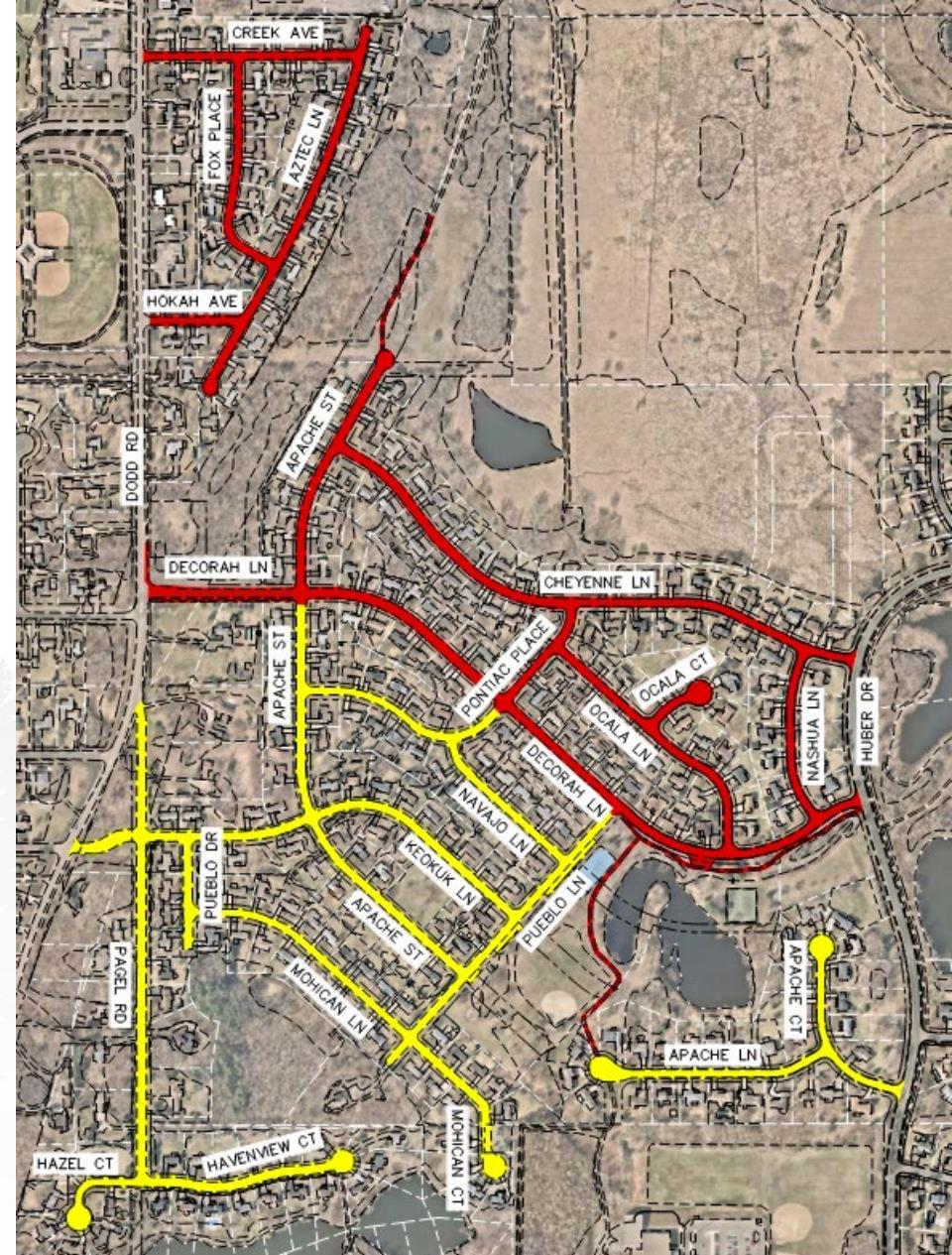
Project Area

2025 Project Area (red streets)

- Creek Avenue
- Fox Place
- Aztec Lane
- Hokah Ave
- Decorah Lane
- Apache Street (north of Decorah Lane)
- Pontiac Place (north of Decorah Lane)
- Ocala Lane
- Ocala Court
- Nashua Lane
- Cheyenne Lane
- Friendly Hills Park Trail Improvement

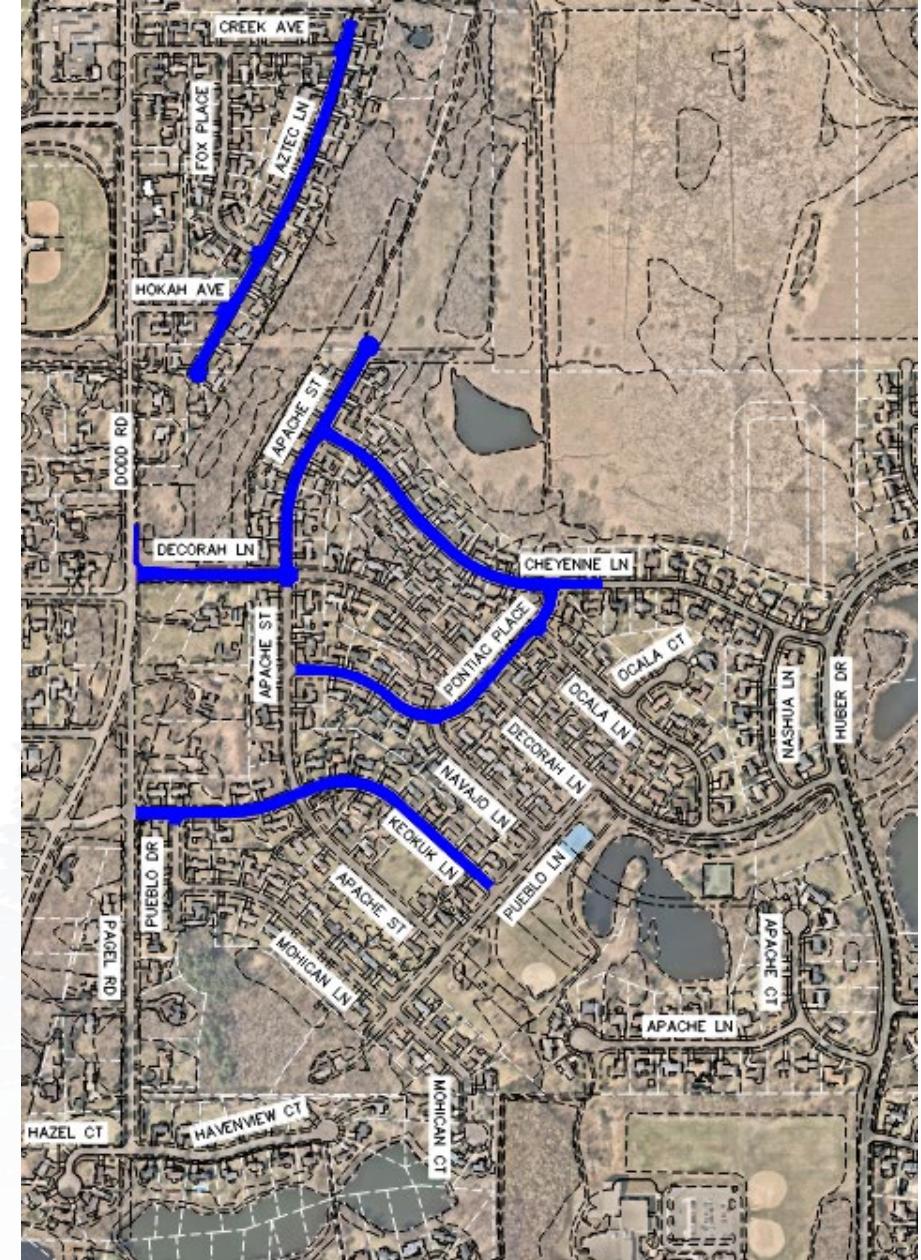
2026 Project Area (yellow streets)

- Apache Street (south of Decorah Lane)
- Pontiac Place (south of Decorah Lane)
- Navajo Lane
- Keokuk Lane
- Pueblo Lane
- Pueblo Drive
- Pagel Road
- Mohican Lane
- Hazel Court
- Havenview Court
- Mohican Court
- Apache Lane
- Apache Court



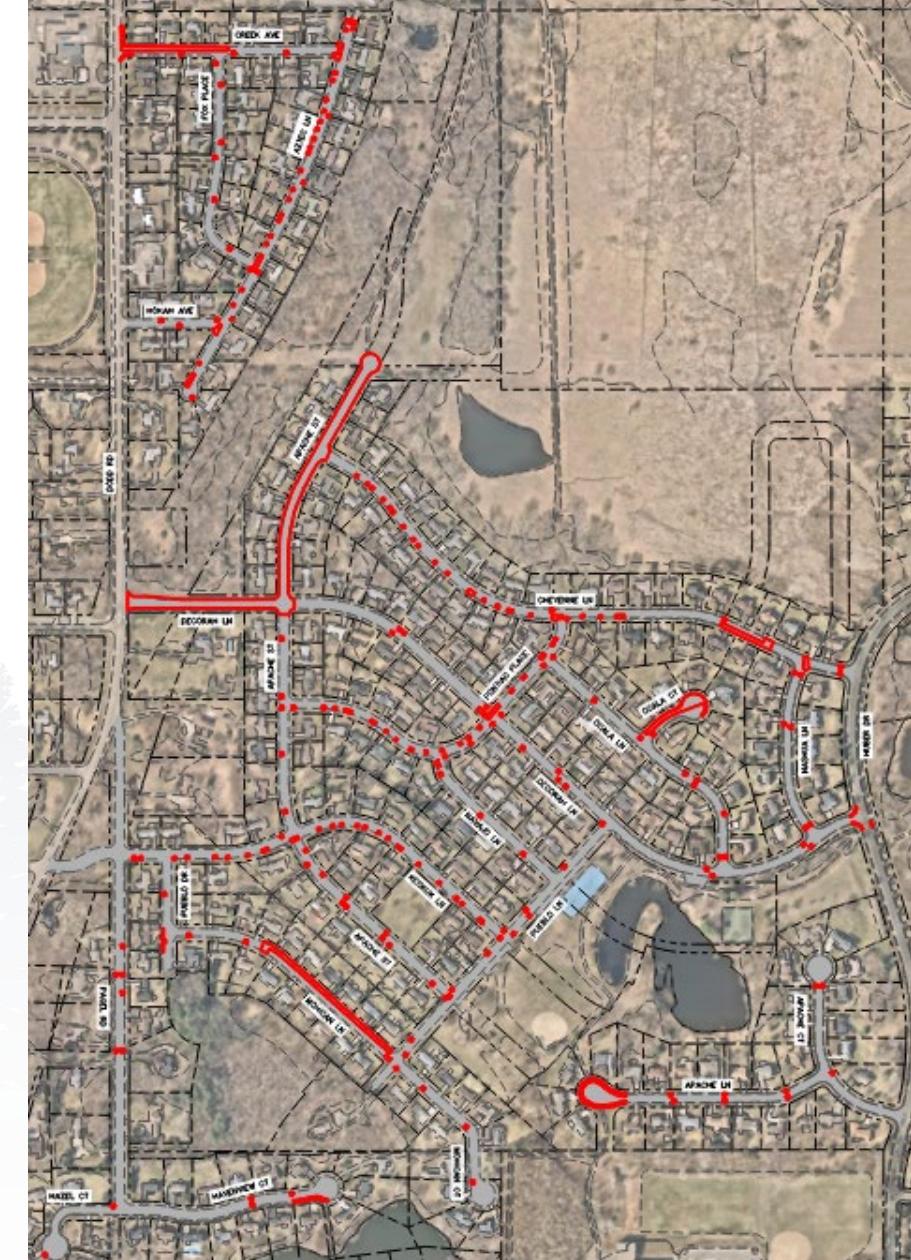
Proposed Watermain Improvements

- Existing cast-iron-pipe (CIP) and ductile iron pipe (DIP) throughout project area
- CIP replacement, hydrant, and valves (**blue streets**)
 - Sacrificial anode bag placement in pipe non-replacement areas
- CIP replacement identified by SPRWS based on pipe size, material, break history, service area, and future system risk
 - Limited by available SPRWS budget and cannot replace all CIP watermain in project area
- CIP life expectancy of 100-120 years
 - SPRWS indicated pipe is considered young in terms of its life expectancy
- Sacrificial anodes proposed to extend CIP watermain service life (expected >20-30 year service life extension)
- Improvements to extend life expectancy of Watermain:
 - Watermain service abandonment proposed at Fox Place
 - Proposed (new) connection to Dodd Road along Decorah Lane
 - Watermain abandonment between Aztec Lane and Apache Street



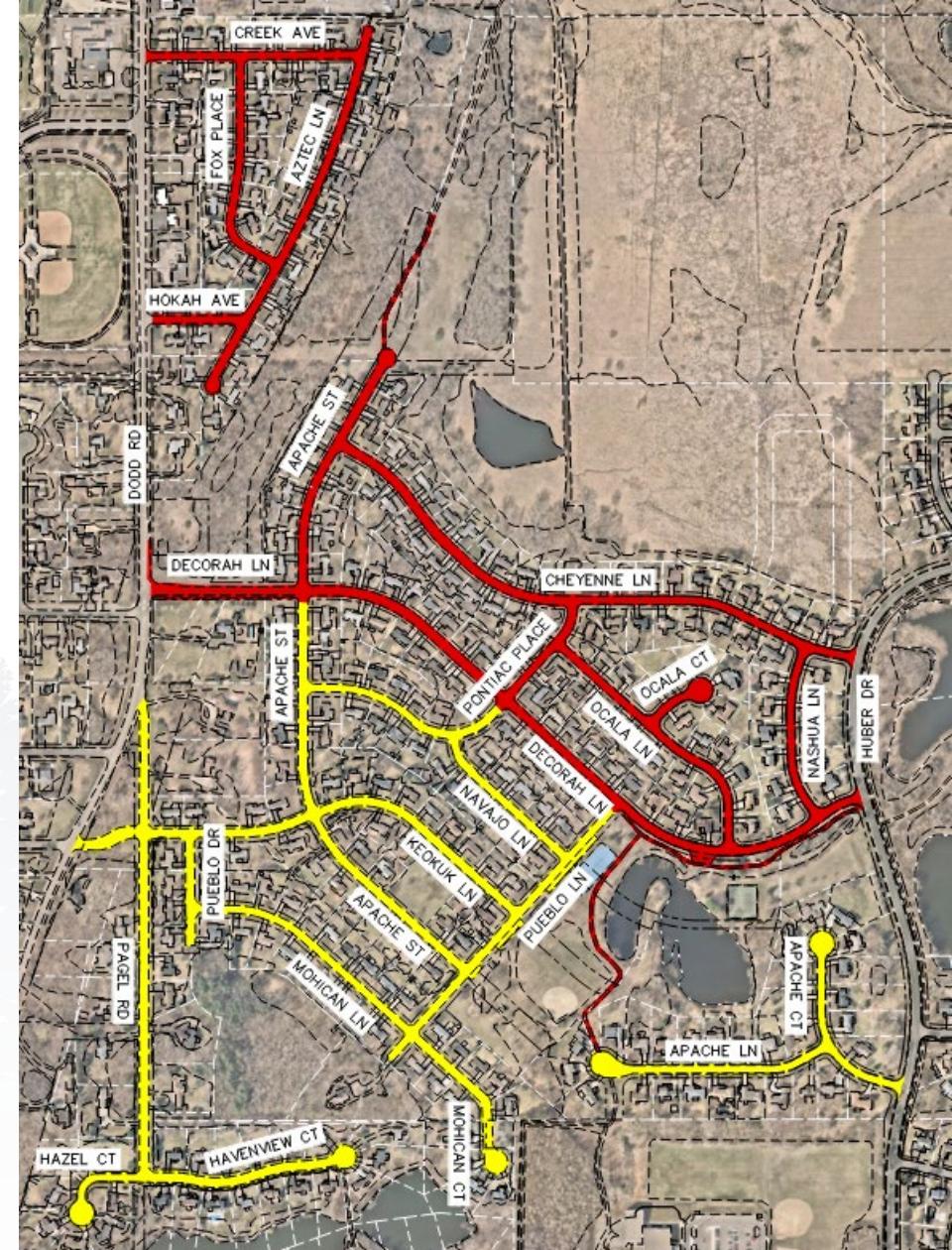
Pavement Rehabilitation Approach

- Full depth pavement reclamation (FDR) pavement rehabilitation method proposed
- Mill and overlay pavement rehabilitation not practical or recommended
 - Additional Geotechnical Evaluation by Braun Intertec
 - Support Mill & Overlay to extend road life 12-15 years
 - Require areas of full depth milling due to pavement deterioration
 - Inconsistent pavement depths within a given street (2.5 to 4")
 - Storm sewer, sanitary sewer, and watermain improvements require full pavement excavation (**areas shown in red on map to right**)
 - Reflective cracking will persist within a few years of the project



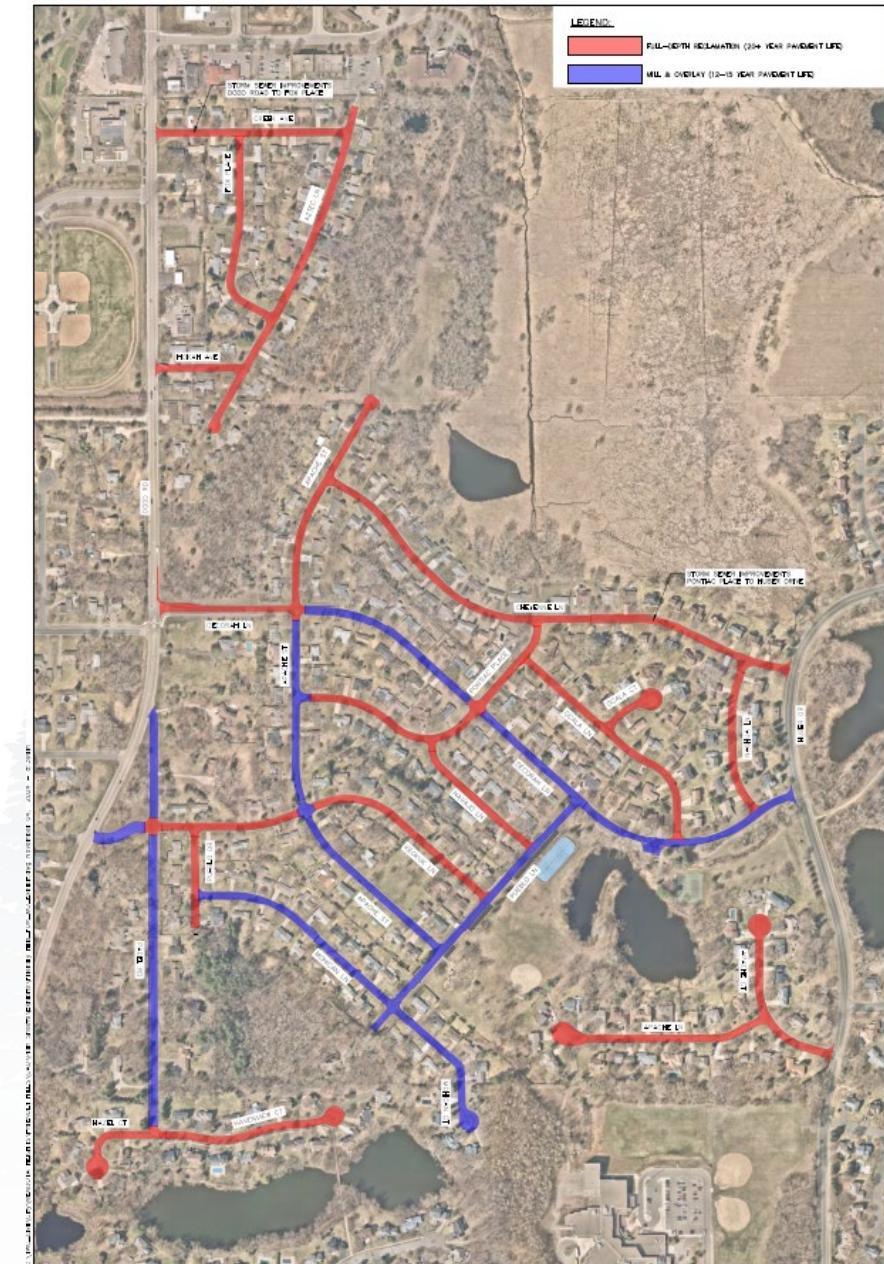
FDR Timeline

- Full depth pavement reclamation (FDR)
 - Year 2025 & 2026
 - Proposed watermain improvements
 - Assessment Amount (Est) = \$7,686
- Mill & Overlay
 - Year 2050
 - Anticipated minor watermain improvements
 - Sacrificial anode bags
 - Assessment Amount (Est) = \$4,000
- Total Assessment Amount (Est) over 50 years = **\$11,686**



M&O Timeline

- Mill & Overlay (M&O)
 - Year 2025 & 2026
 - Proposed watermain improvements
 - *Assessment Amount (Est) = \$3,385
 - *Assumed split by driveway access
- Mill & Overlay (M&O)
 - Year 2038
 - Anticipated minor watermain improvements
 - Sacrificial anode bags
 - Assessment Amount (Est) = \$4,000
- Full depth pavement reclamation (FDR)
 - Year 2050
 - Anticipated watermain replacement
 - Assessment amount (Est) = \$8,000
- Total Assessment Amount (Est) over 50 years = **\$15,385**



Preliminary Assessment Amount

- Per City street rehabilitation and reconstruction policy, benefitting properties assessed at 50% of the street reconstruction cost
- Single family residential and City owned parcels
- 343 residential and 22 city units (365 total units)
- Assessment amounts will vary based on pavement rehabilitation approach and split determination

Assessment Calculation – FDR ONLY Equal Assessments by Roadway Benefit	Total
Total Project Cost	\$ 9,372,443.97
FDR Total Assessment Amount per Parcel	\$ 7,686.91

Assessment Calculation – FDR AND M&O Equal Assessments by Roadway Benefit	Total
Total Project Cost	\$ 8,278,677.45
FDR Total Assessment Amount per Parcel	\$ 6,188.60
M&O Total Assessment Amount per Parcel	\$ 6,188.60

Assessment Calculation – FDR AND M&O Split Assessments by Driveway Access	Total
Total Project Cost	\$ 8,278,677.45
FDR Total Assessment Amount per Parcel	\$ 7,462.13
M&O Total Assessment Amount per Parcel	\$ 3,384.62

Action Request

- Staff recommend City Council provide direction to proceed with a full depth reclamation approach to the Friendly Hills Neighborhood Improvements project