



Infrastructure Master Plan Recommendations

April 3, 2023

Infrastructure Master Plan

Freese and Nichols was hired to work with the City of Levelland to understand and assess the status of existing infrastructure, including:

- Water / Wastewater Infrastructure

- Transportation Infrastructure

- Stormwater Infrastructure

- Facilities

- *particularly public safety and shared facilities





Water System Recommendations

- Projects: Capital Improvements to address system capacity and enhance operations

Project Number	Water Project Name	Cost
1	Citywide AMI Program	\$ 2,183,000
2	12-inch Hickory Street to Airport Supply Line	\$ 2,640,200
3	Proposed 1.0 MG Elevated Storage Tank	\$ 6,926,400
4	12-inch State Highway 114 Water Line	\$ 653,100
5	8-inch West Avenue Water Line	\$ 1,049,500
Grand Total		\$ 13,452,200

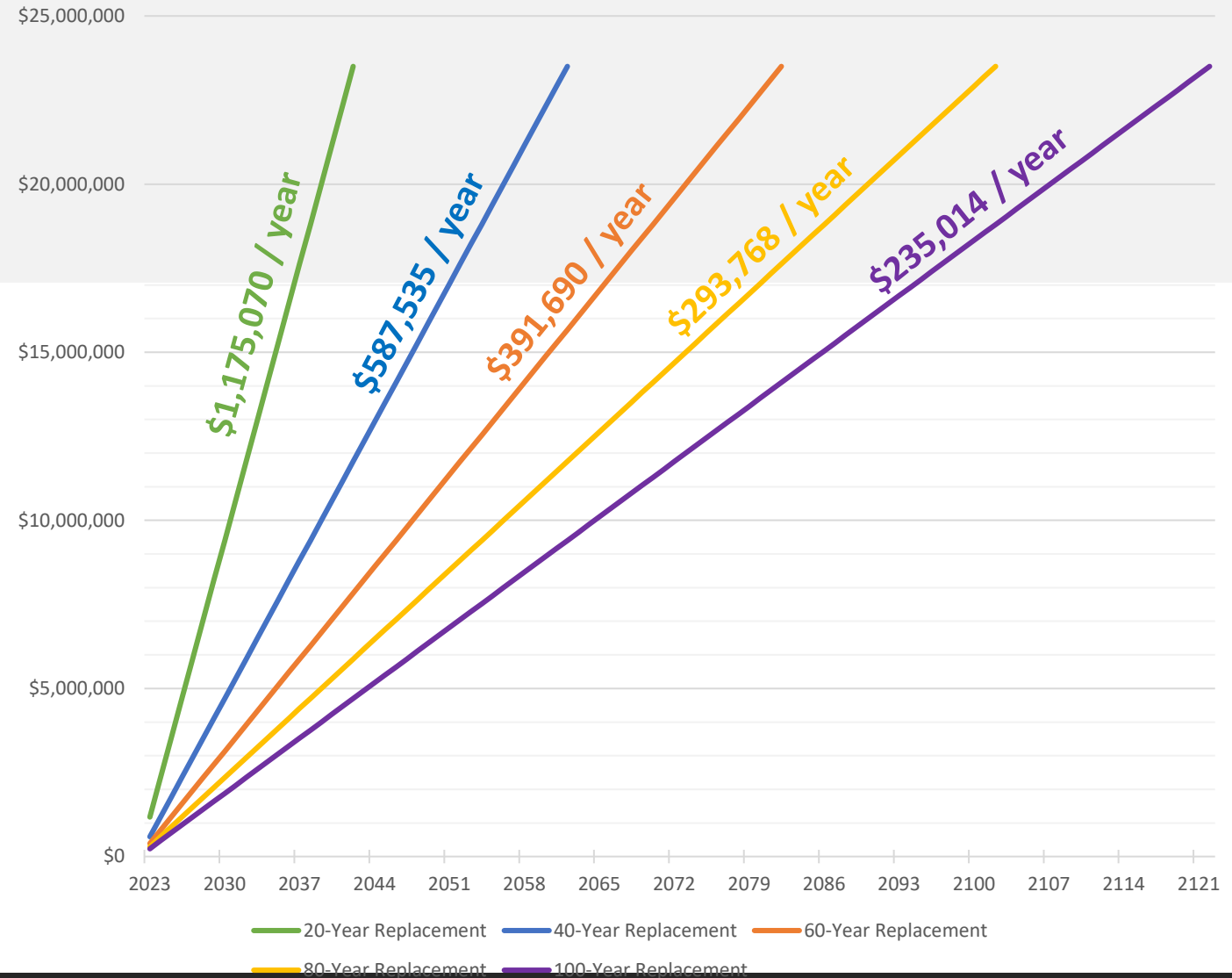
- Programs: On-going maintenance to provide for system renewal and reliability

Project Number	Water Project Name	Cost
6	Valve & Hydrant Exercising Program	\$ 109,400
7	Water Line Replacement Program	\$ 23,501,400
Grand Total		\$ 23,610,800



Water Line Replacement Programs

- Desired time to completion versus budgeted replacement activity
- 2023 Estimated cost approximately \$23,501,400
- Water Line Replacement
 - Approximately 131,000 LF (24.8 miles)
 - 20-year replacement = \$1,175,070 / year
 - 40-year replacement = \$587,535 / year
 - 60-year replacement = \$391,690 / year
 - 80-year replacement = \$293,768 / year
 - 100-year replacement = \$235,014 / year
- Industry best practices recommends replacement of 1-2% of the City's system per year





Wastewater System Recommendations

- Capital Improvement Projects address system capacity issues
- Levelland has already made a significant commitment to improving the wastewater system with the WWTP project

Project Number	Wastewater Project Name	Cost
1	WWTP Improvements/Upgrades	\$ 19,641,300
2	Expansion of Gentry Lift Station	\$ 1,118,600
3	Replacement and Upsize of A&M Lane Gravity Main	\$ 323,000
4	Routine Inspection and Cleaning of Lobo Lake Park 15-inch Gravity Main	\$ 245,700
Grand Total		\$ 21,328,600
Grand Total without WWTP Project		\$ 1,687,300

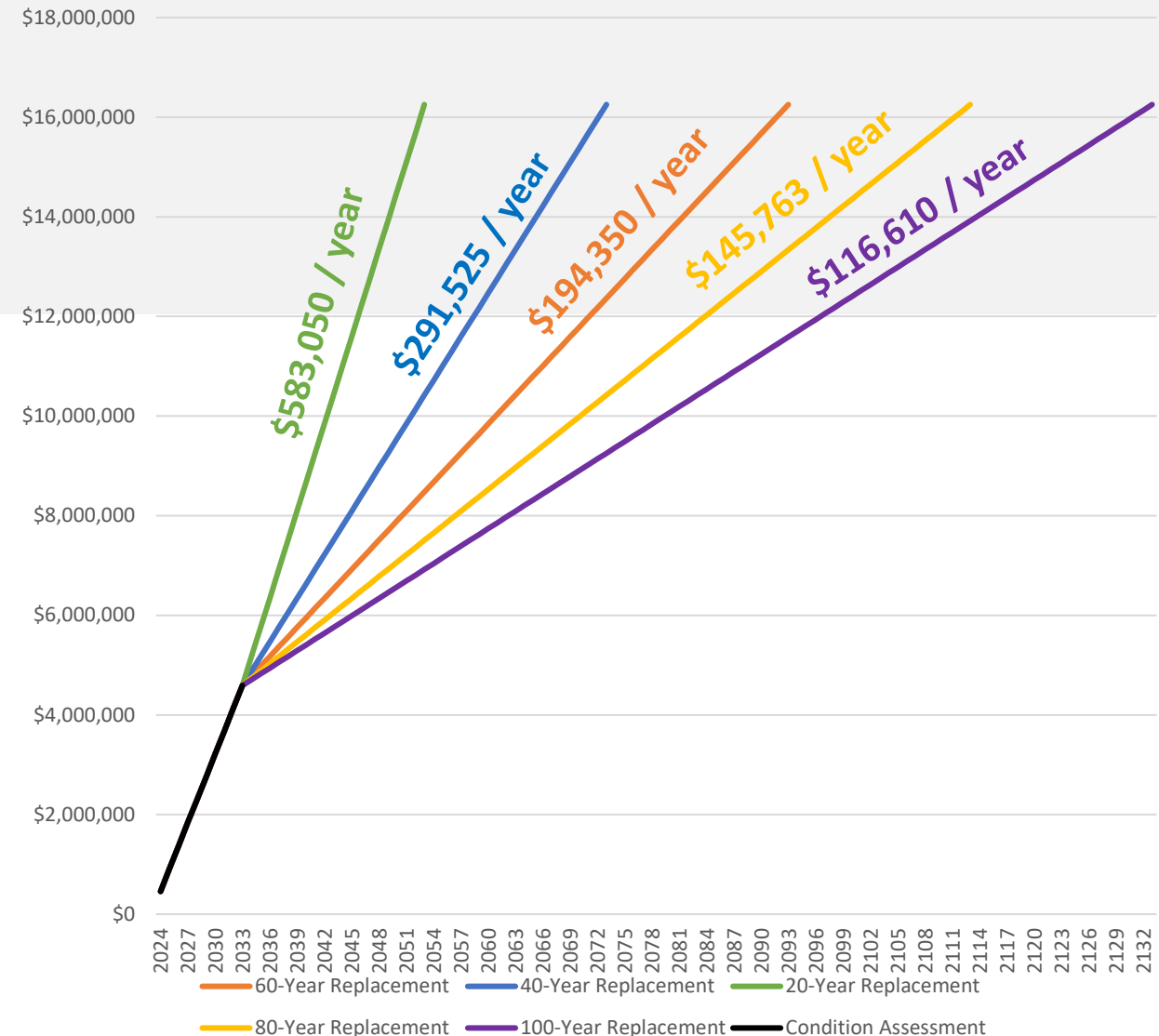
- On-going maintenance and renewal programs provide for enhanced operations and future lower maintenance

Project Number	Wastewater Project Name	Cost
5	Manhole Inspection Pilot Program	\$ 24,800
6	Sewer Line Replacement Program	\$ 16,250,100
Grand Total		\$ 16,274,900



Wastewater Condition Assessment and Replacement Programs

- Desired time to completion versus budgeted replacement activity
- 2023 Estimated cost approximately \$16,250,052
 - \$4,589,052 for Condition Assessment
 - \$11,661,000 for Sewer Line Replacement
- Condition Assessment
 - Estimated \$458,905 split over 10-year window (2024-2033)
- Sewer Line Replacement
 - Approximately 65,000 LF (12.3 miles)
 - 20-year replacement = \$583,050 / year
 - 40-year replacement = \$291,525 / year
 - 60-year replacement = \$194,350 / year
 - 80-year replacement = \$145,763 / year
 - 100-year replacement = \$116,610 / year
- Industry best practices recommends replacement of 1-2% of the City's system per year

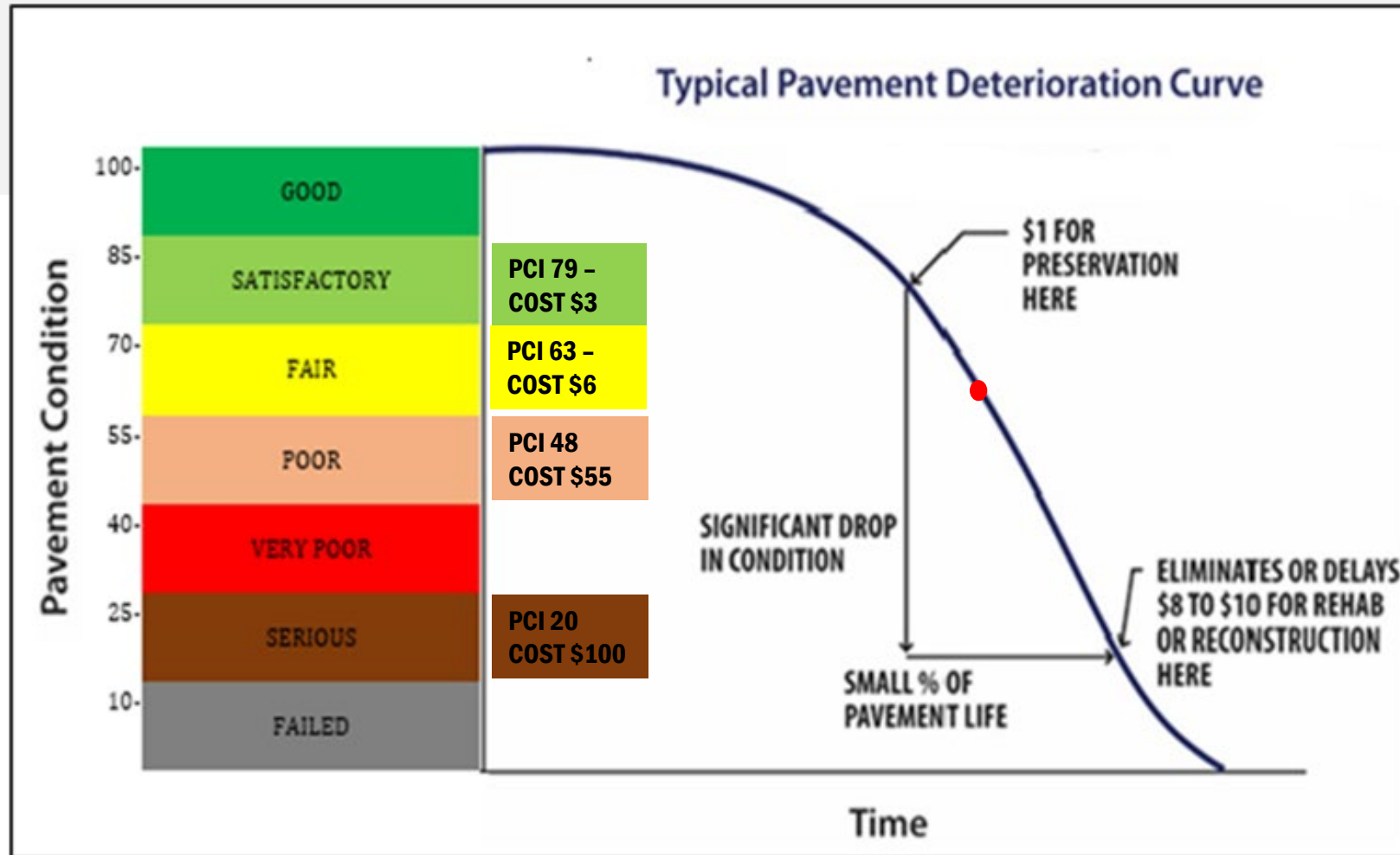


Transportation

- Pavement condition survey (truck)
- Level of service – quality vs. capacity
- Condition assessment – identify problem areas
- Prioritize list of needs
- Development of O&M funding levels
- Development of Capital Improvement Projects

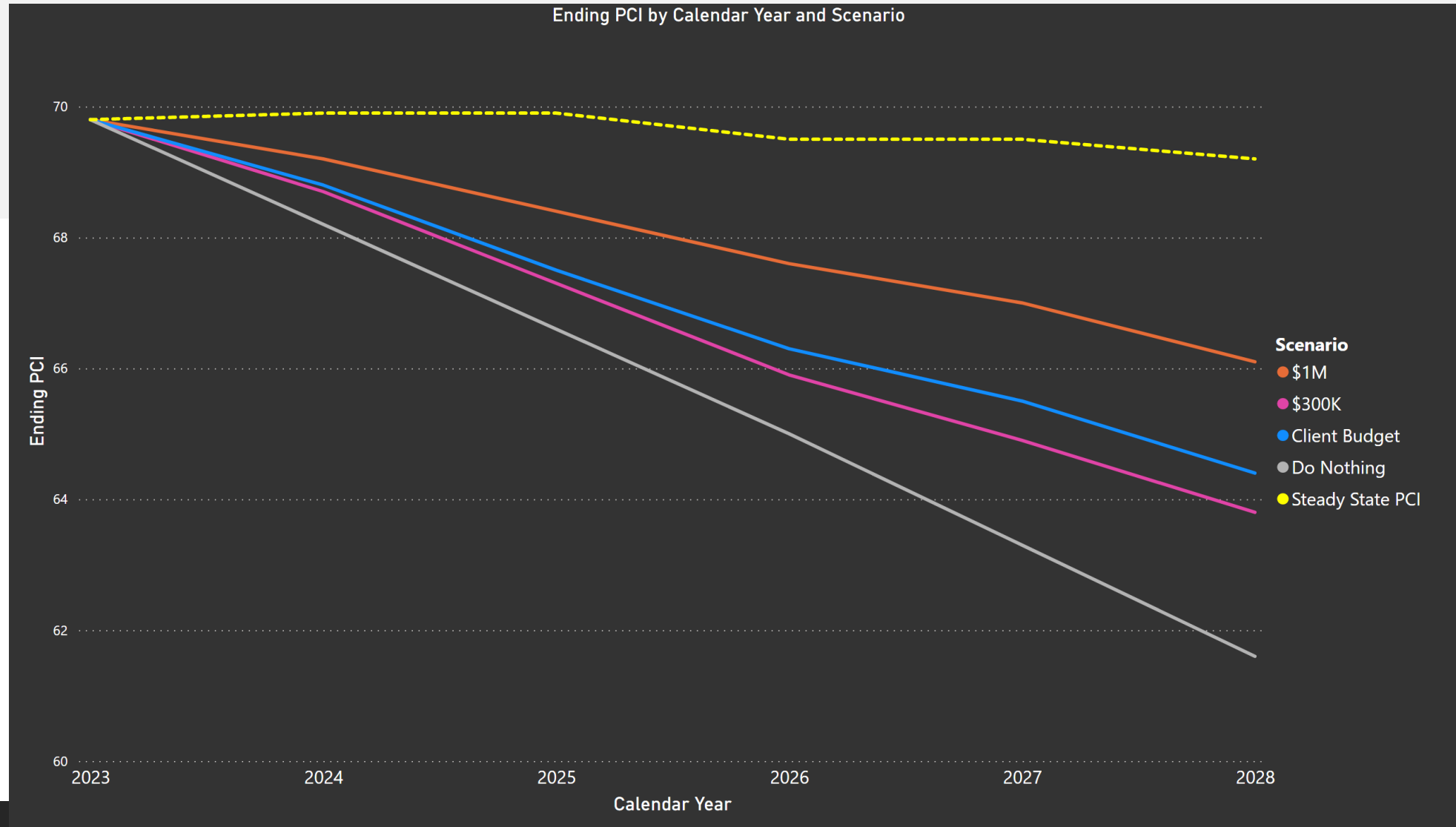


Define repair strategies and costs





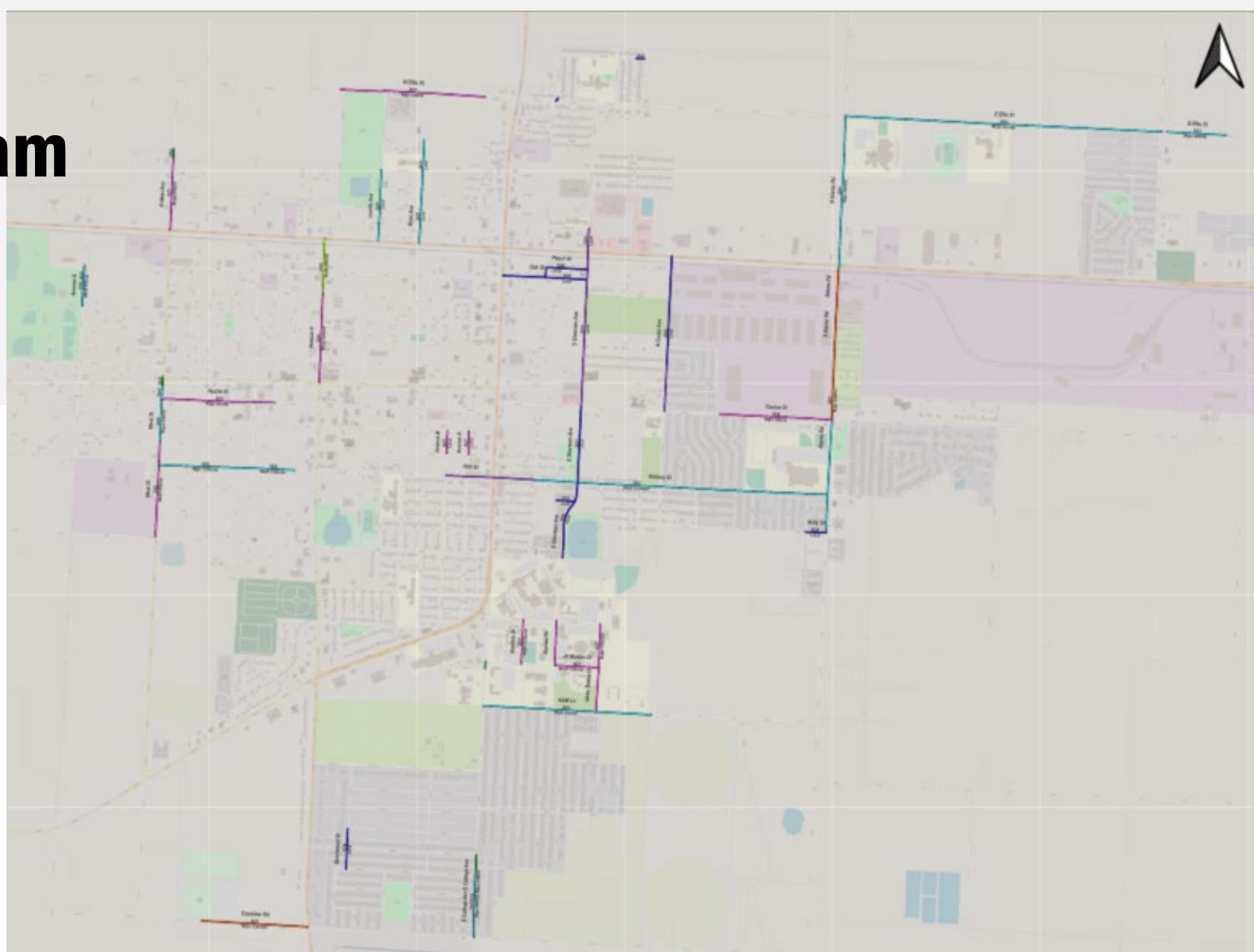
Budget Alternative Evaluation





O&M Program

- **Average Budget = \$ 470,000 annually (seal coat program)**
- **Sales tax allocation = \$ 600,000 annually**
- **Revised strategy from section by section seal coat**
- **Flexible**



Capital Project Needs

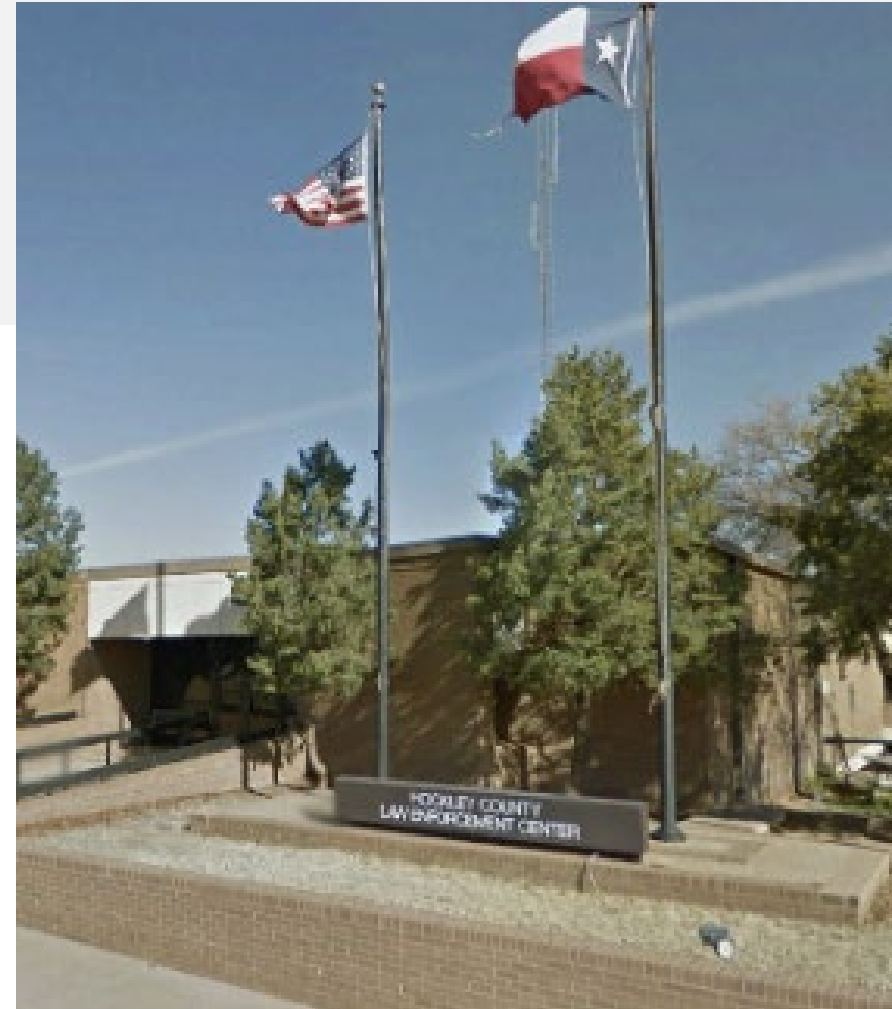
- Completed projects boost system PCI
- Project Needs
 - Very Poor condition
\$4.4 M
 - Serious/Failed condition
\$3.1 M





Facilities

- Assessment of City/County shared facility
- Discussed facilities managed by the City
- Level of service assessment – does the infrastructure meet present and future needs
- Condition assessment – does the infrastructure need repair or replacement based on condition
- System evaluation and reporting
- Development of Capital Improvement Projects
- List of needs



Core Recommendations

Detailed Assessment and Bringing Services Together

Fire Department + Communications (already in place)

- Levelland City Hall
- Levelland Law Enforcement Center
- Can be phased based on resources
- Perform Facilities Master Plan for City Hall & Law Enforcement Center

Consolidate Downtown to Support Revitalization (Long Term Effort)

- Leverage the three blocks along 5th Street
- Proximity to Street/Shop/Sanitation on Ave. G
- Proximity to Utility Department on Ave. F
- Bring all financial elements under one roof with controlled access (typical audit recommendation)
- Support cross-training for customer service, one-stop shop – all customer-facing functions in one place
- Support Main Street Program ideal location
- Increase customer base in downtown (city employees and city customers)
- Placemaking opportunity





Long Term Recommendations

Addressing Parks & Recreation Needs

- Current facilities aren't bad
- Important to not “kick the can” on maintenance, resulting in costly replacement later
- Get an updated plan in place for Parks, Recreation and Open Space
- Resist temptation to replicate other cities, and be sure to understand the operating costs involved—“add to” is better than “throw out and replace” based on our evaluation
- Levelland has multiple partner opportunities that may allow better facilities/amenities than would otherwise be financially possible
- Recognize the need to address core municipal functions first

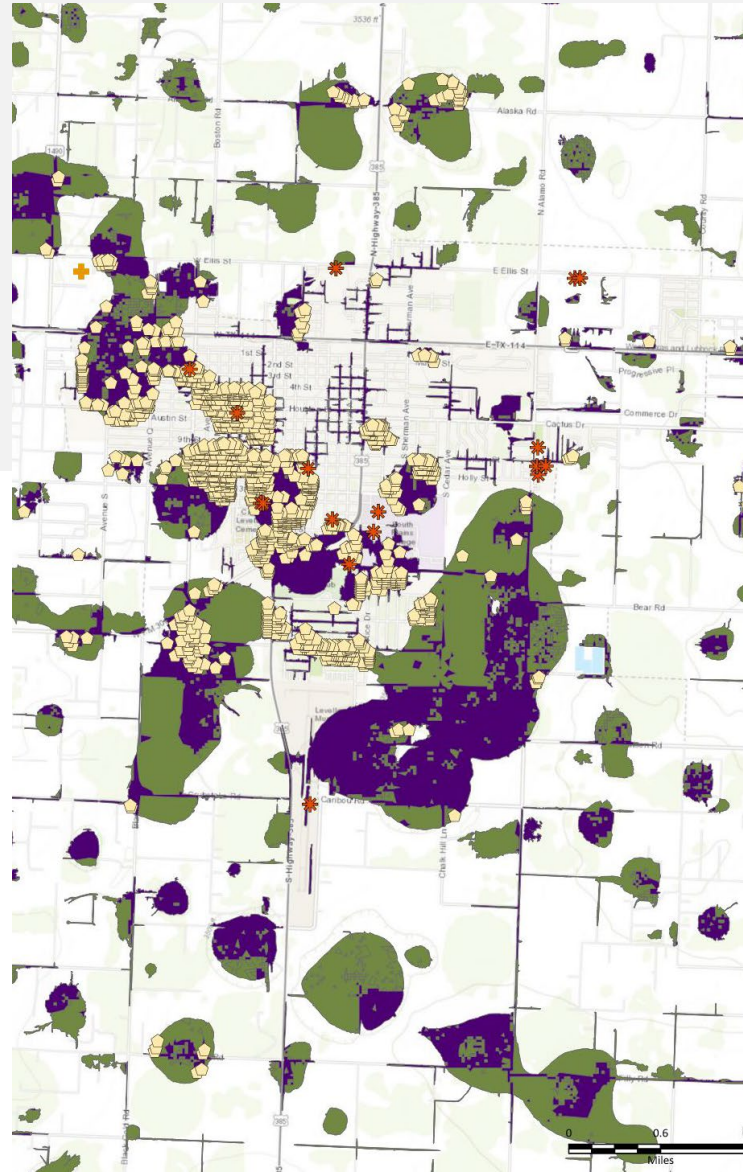
Reconstruction and Consolidation of Streets and Utility Department

- Facilities are functional, but not in great condition with deferred maintenance & need for upgrades
- Would benefit from some consolidation and reconstruction
- Aesthetics



Stormwater

- Playa level analysis
- Fully developed hydrology
- Identify areas of high flood risk
- Leverage flood quilt
- Identify improvements to mitigate flood risk





Long Term Stormwater Improvement Project List



DRAFT City of Levelland
Stormwater CIP Cost Summary



Project Number	Water Project Name	Cost
1	Lobo Lake Excavation	\$ 912,000
2	Levelland Country Club Pond Excavation	\$ 926,300
3	Brashear Lake Excavation	\$ 1,371,300
4	SE Levelland Playa Excavation	\$ 12,274,000
5	Brashear Lake to SE Levelland Playa	\$ 2,526,500
6	Country Club Playa to SE Levelland Playa	\$ 2,100,900
7	Lobo Lake to Country Club Proposed Pond	\$ 1,402,200
8	Private Lake to Lobo Lake Drainage Connection	\$ 1,035,900
9	City Lake to Private Lake	\$ 2,392,300
Grand Total		\$ 24,941,400



Thank you!

Questions?