



STAFF REPORT

Report To: Board of Supervisors

Meeting Date: November 17, 2016

Staff Contact: Darren Schulz, Public Works Director

Agenda Title: Information Only: To inform the Board on the activities of the Transportation Advisory Forum of Carson City (TRAFCC). (Patrick Pittenger, ppittenger@carson.org)

Staff Summary: Staff will provide an update to the Board of Supervisors regarding the meetings of TRAFCC. Three regular meetings of the TRAFCC have been held and another is scheduled for November 29.

Agenda Action: Other/Presentation

Time Requested: 20 minutes

Proposed Motion

Information only.

Board's Strategic Goal

Sustainable Infrastructure

Previous Action

N/A

Background/Issues & Analysis

TRAFCC is an advisory group formed by staff at the direction of the Carson City Regional Transportation Commission (RTC). The purpose of TRAFCC is to provide additional information to the public regarding street maintenance issues and to receive additional input regarding the use of available funds. TRAFCC met in June, July, and August and was invited to a public planning meeting for the South Carson Street Complete Streets Corridor Study in September. There was no meeting in October.

Staff will present information to the Board of Supervisors regarding topics discussed to date. Those topics have included the following:

- The street system of Carson City
- Existing sources of funding
- Use of existing funds including recent, ongoing, and planned projects
- Considerations for prioritizing the use of available funds
- Carson City Freeway update
- The pavement management system being utilized by the City (by Dr. Elie Hajj of University of Nevada)
- Expected street conditions in 10 years with existing funding sources
- Use of available funds this fiscal year
- Potential locations of pedestrian safety improvements
- Allocation of funds in future years

The next TRAFCC meeting is scheduled for Tuesday, November 29, at 5:30 p.m. at the Community Center. At that meeting, staff plans to seek further input from TRAFCC members regarding projects for the next fiscal year and to discuss prioritizations going forward.

Applicable Statute, Code, Policy, Rule or Regulation

N/A

Financial Information

Is there a fiscal impact? Yes No

If yes, account name/number:

Is it currently budgeted? Yes No

Explanation of Fiscal Impact:

Alternatives

Board Action Taken:

Motion: _____

- 1) _____
- 2) _____

Aye/Nay

(Vote Recorded By)

An aerial photograph of Carson City, Nevada, showing a mix of urban development and green spaces. In the background, there are rolling hills and mountains under a clear sky. The text is overlaid on the image in a large, bold, white font with a black drop shadow.

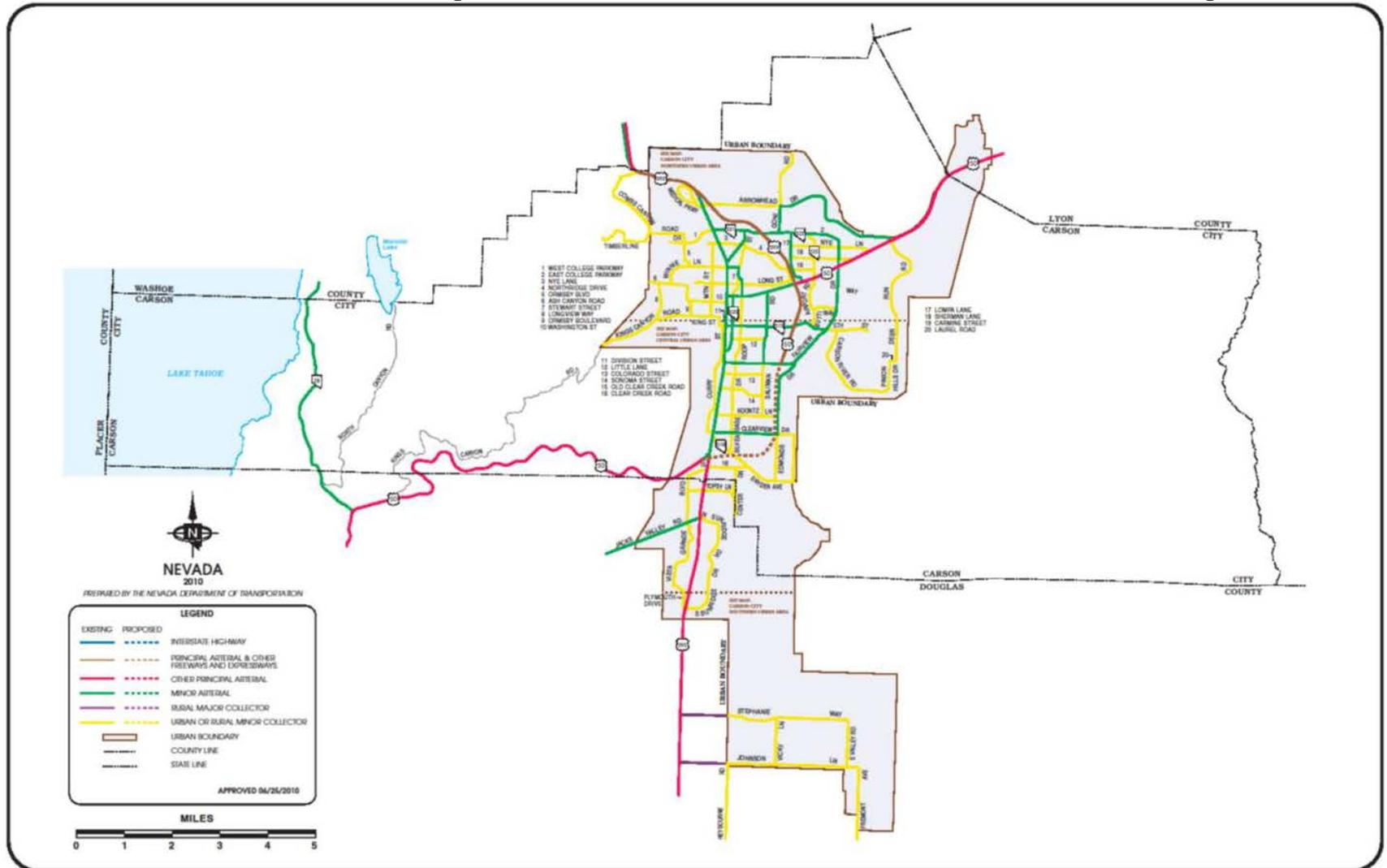
**Update to Board of
Supervisors regarding
TRAFCC
(Transportation Resource
Advisory Forum for
Carson City)**

November 17, 2016

Overview

- Issues discussed with TRAFCC
 - June 23
 - July 28
 - August 25
- Public meeting for S. Carson Street – Sept. 22
- Overview of 2016 work program
- Process moving forward
 - TRAFCC
 - Carson City RTC

Street System of Carson City

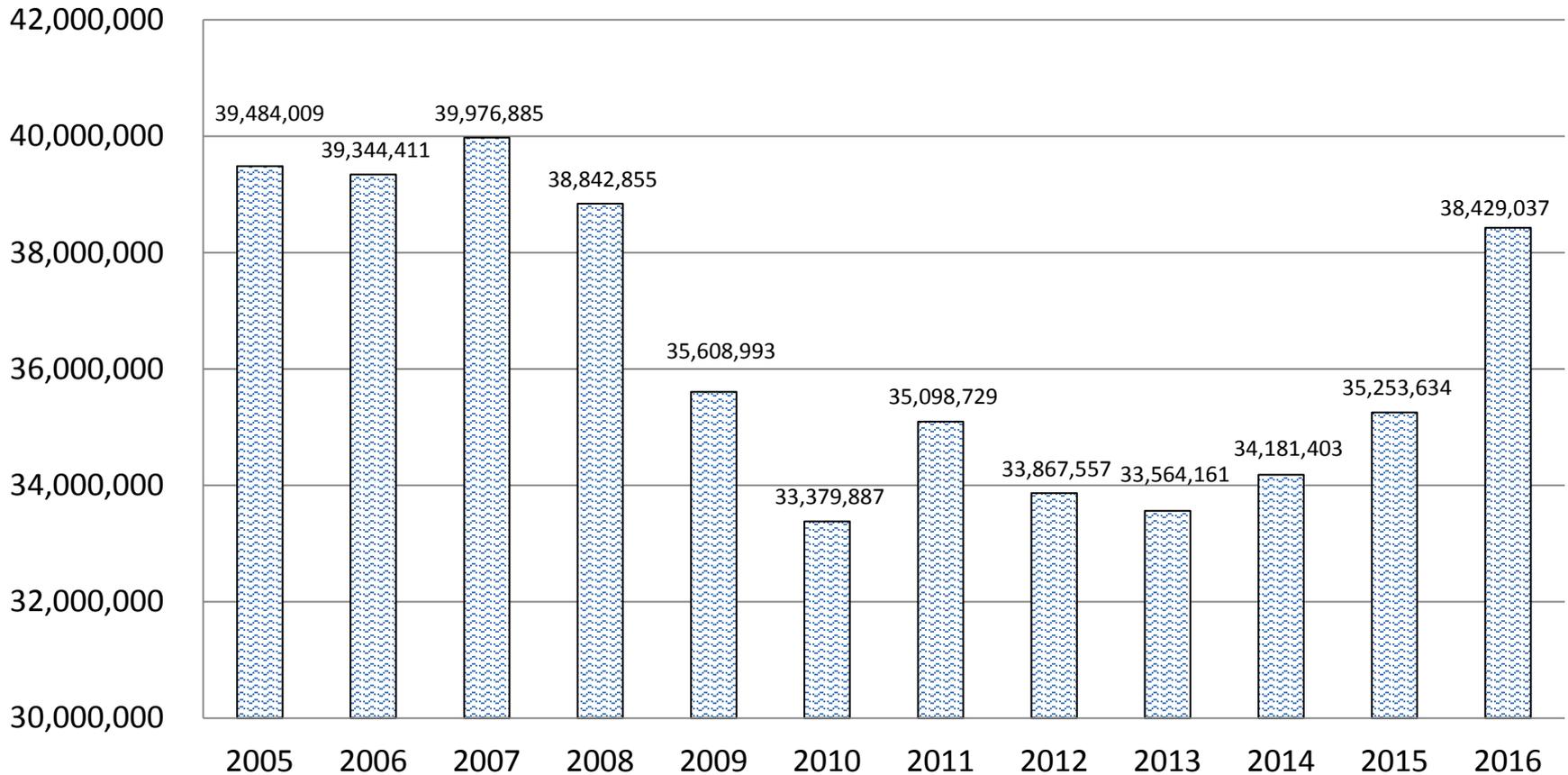


CARSON CITY
CARSON CITY, NEVADA

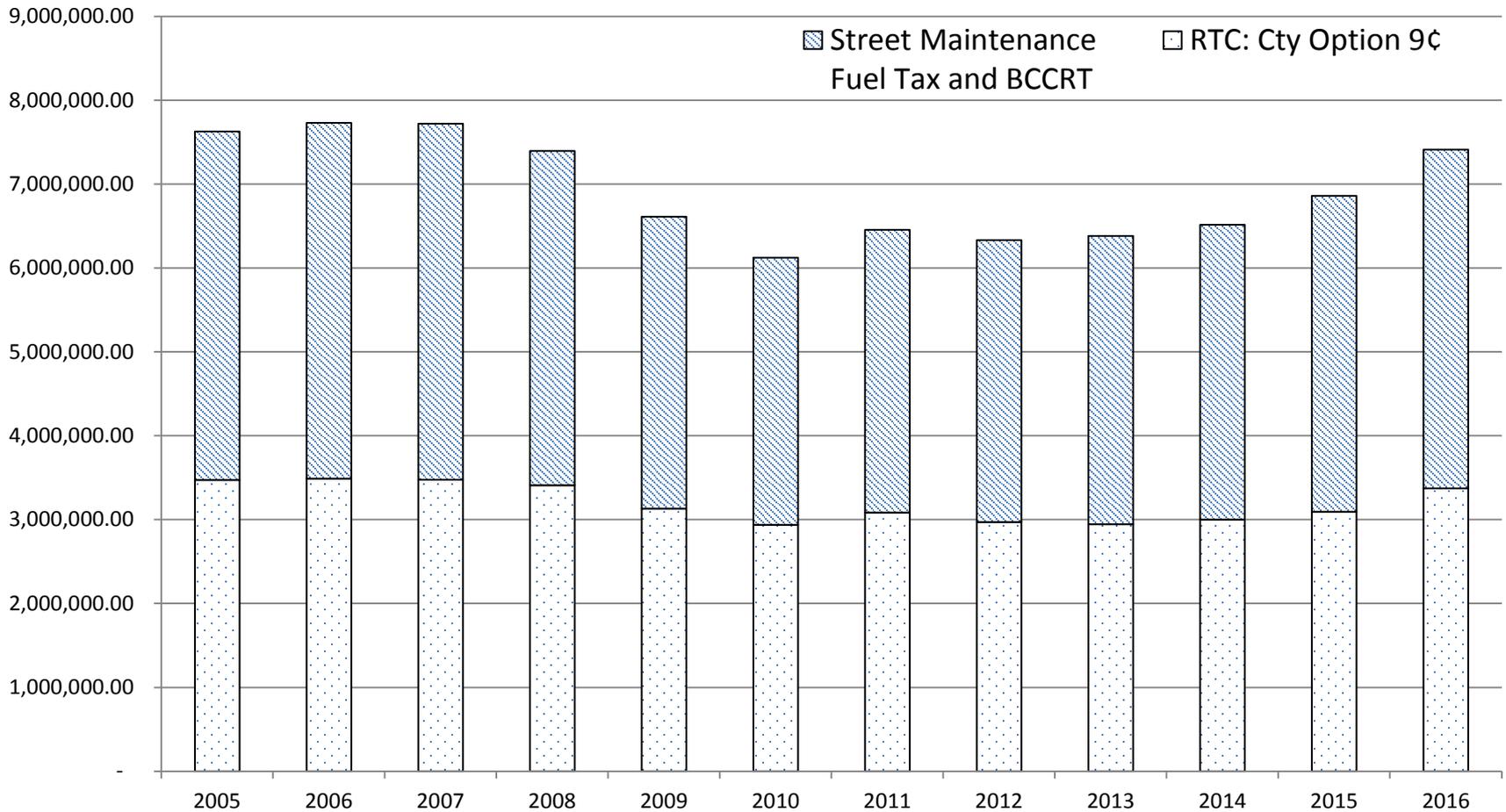
ROADWAY FUNCTIONAL CLASSIFICATION

Amount of Fuel Sold in Carson City

 Gallons of Fuel Sold



Revenues Reflect Fuel Sold and Dedicated Streets Sales Tax



Street Maintenance Projects in 2016

BASICALLY TWO YEARS OF MONEY – FY 16 AND FY 17

Reconstruction Projects

- Downtown Carson Street (Reconstruction - Complete Streets)
- Airport Road Reconstruction (~\$200k)
- Appion Way (~\$500k)
- Goni Road/Convair Drive (public/private partnership ~\$575,000)

Maintenance Projects

- Wide Crack Repair Project (~\$250k)
- Lompa Lane and Curry Street Cape and Slurry Seal (~\$175k)
- City Wide Patching Project (~\$200k)
- Fifth Street loop at Riverview Park (pavement repair~\$86k)
- Shouldering Project (~\$96k)
- Traffic Line Markings (Long Line ~\$150k)

Signal Construction/Maintenance

- College Parkway/Research Way Intersection Improvements (Public/Private Partnership ~\$500k)
- Flashing Yellow Arrow Intersection Improvement Project (~\$300k)

Active Transportation Projects

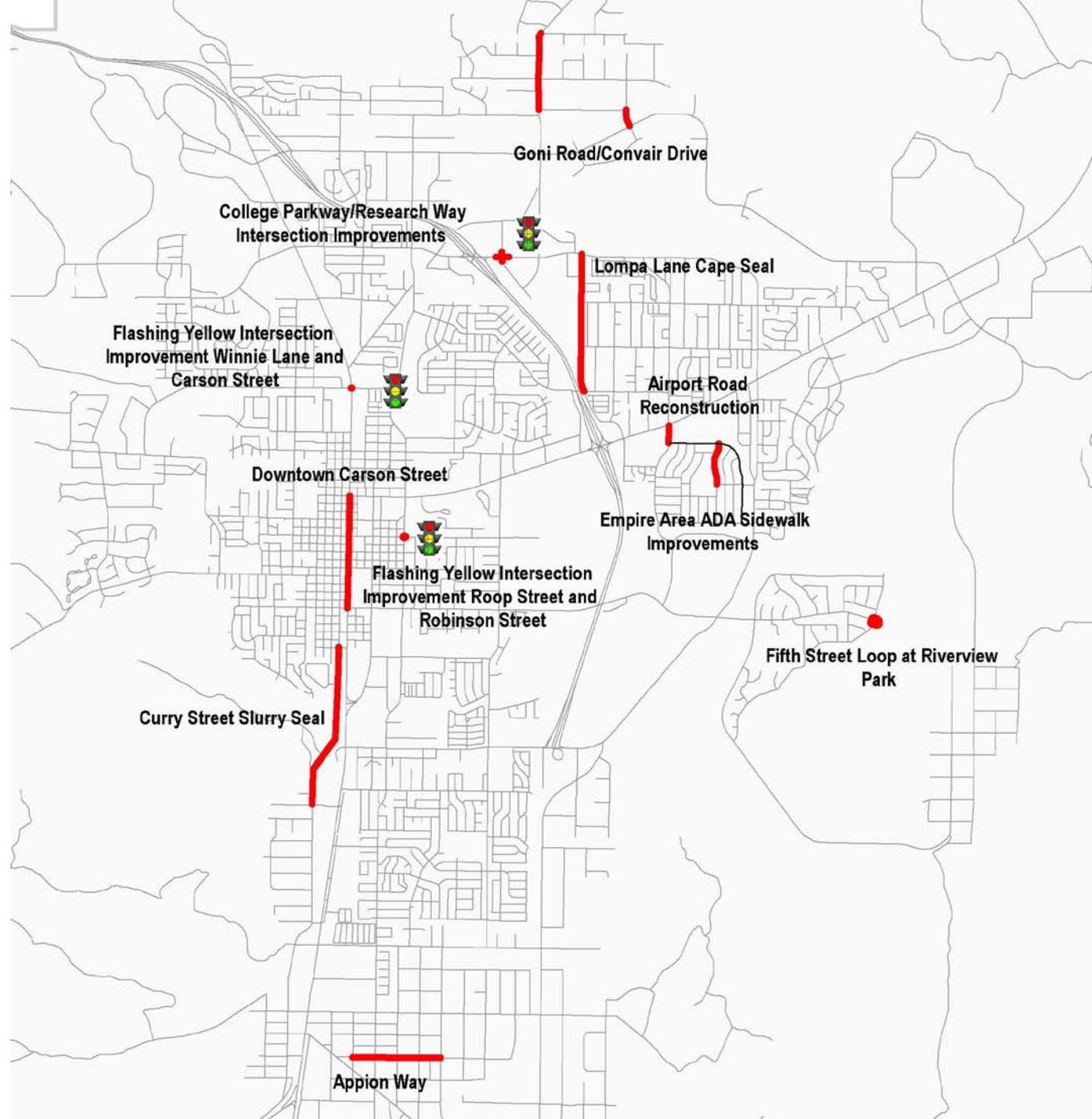
- Carson City Freeway Multi-Use Path (~\$700k)
- Empire Area ADA Sidewalk Improvements (~\$265k)



Calendar Year 2016 Projects

***Citywide projects
have not been
mapped:**

- Wide Crack Repair Project
- City Wide Patching Project
 - Shouldering Project
 - Traffic Line Markings



Goni Reconstruction Project (partnership with Cinderlite)



July 16

August 18



Convair Reconstruction Project



New Traffic Signal – College/Research (partnership with Maverik)



Project Underway

Sidewalk Repair Project – Winnie Lane



South side of Winnie Lane
east of Mountain Street
(August 18)



Project now underway

Lompa Lane – Cape Seal

Chip Seal (June 4)



Micro Seal (June 11)



Wide Crack Repair Project



Airport Road Reconstruction



Before

After



Grant-Funded Sidewalk Project (near Empire Elementary School)



Downtown Project



August 18



E. Fifth Street at Riverview Park



July

August 18



Curry Street– Slurry Seal (June 11)



Appion Way Reconstruction



July 16

October



Citywide Patching Project



Heather Circle



S. Carson Street –
South of Tenth Street



Colorado Street

Streets Employees



Crack Fill Operations
(June 6)



Patch truck at sidewalk job
(September)

Sidewalk Failure – Safety/ADA issue (June 7)



Freeway Progress – 2B-3



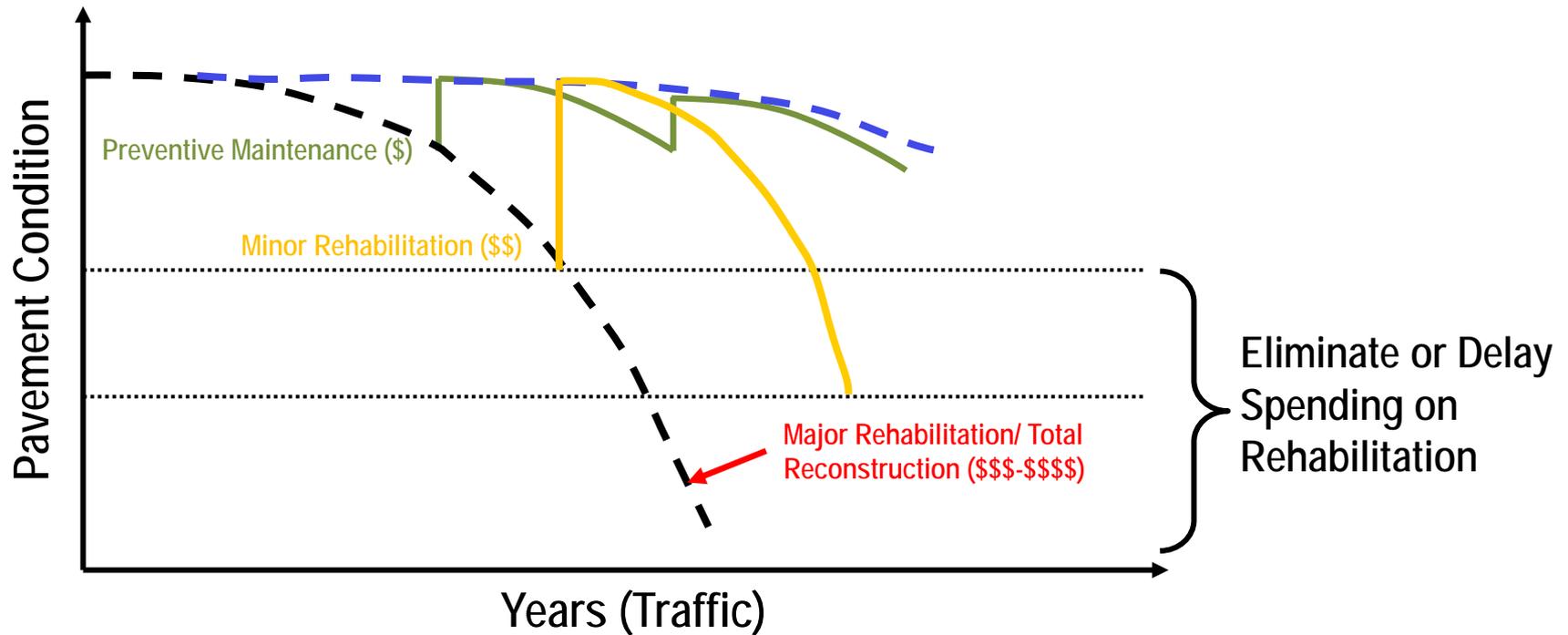
Paving North of Koontz

Looking South from Clearview



Pavement Management 101

How to Overcome Funding Challenges?



Pavement Management 101

Why can't we Reconstruct All of our Paved Roads?

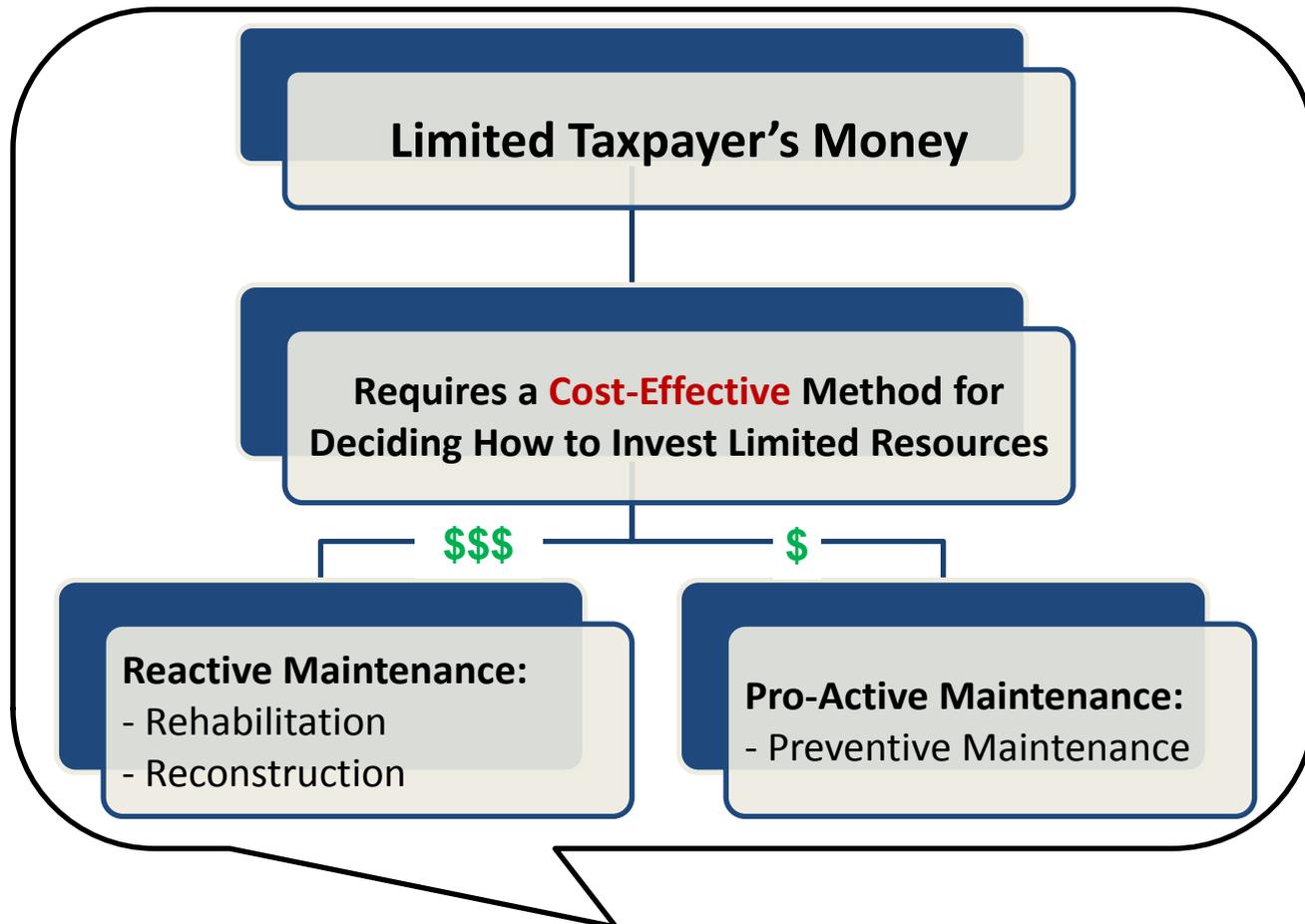
- Carson City County responsible for maintaining
 - 273 miles of paved roadways

Carson City County Paved Roadways		
Miles	Area (ft ²)	Replacement Value to Reconstruct all paved Roads @ \$5.6 per ft ²
273	51 million	!!! \$285.6 million !!!

→ Small improvements can yield big benefits!

Pavement Management 101

How to Approach?

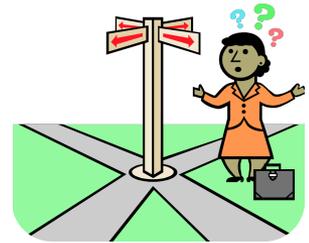


Through the full implementation of a **Pavement Management System (PMS)**

Pavement Management 101

What is a PMS Then?

- Definition:
PMS is a *decision making process* used to make *cost-effective decisions* about maintenance, rehabilitation, and construction.
 - Allows for project prioritization
 - Allows for planning and budgeting
- Example of Pavement Management Software
 - PAVER, StreetSaver, etc.



Pavement Management 101

Pavement Management Process: Pavement Condition (Cont'd)



PCI = 98
(Good)



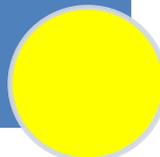
PCI = 84
(Satisfactory)



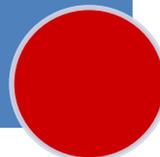
PCI = 78
(Satisfactory)



PCI = 56
(Fair)



PCI = 30
(Very Poor)



PCI < 10
(Failed)



Pavement Management 101

Pavement Management Process: Typical Activity Costs

Localized Maintenance
Case Specific

Preventive Maintenance
 $90 \leq \text{PCI} \leq 70$

Minor Rehabilitation
 $70 \leq \text{PCI} \leq 40$

Critical PCI
40

Major Rehabilitation and Reconstruction



Crack Sealing

Slurry Seal

2" AC Overlay

Surface Reconstruction

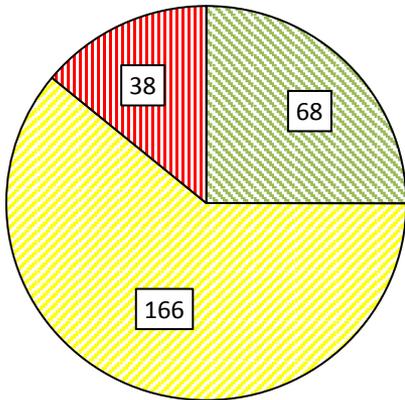
Cost:
▪ \$0.45 / ft.

Cost:
▪ \$0.25 / ft²
▪ \$37,193 / LM

Cost:
▪ \$2.00 / ft²
▪ \$297,540 / LM

Cost:
▪ \$4.00 / ft²
▪ \$595,080 / LM

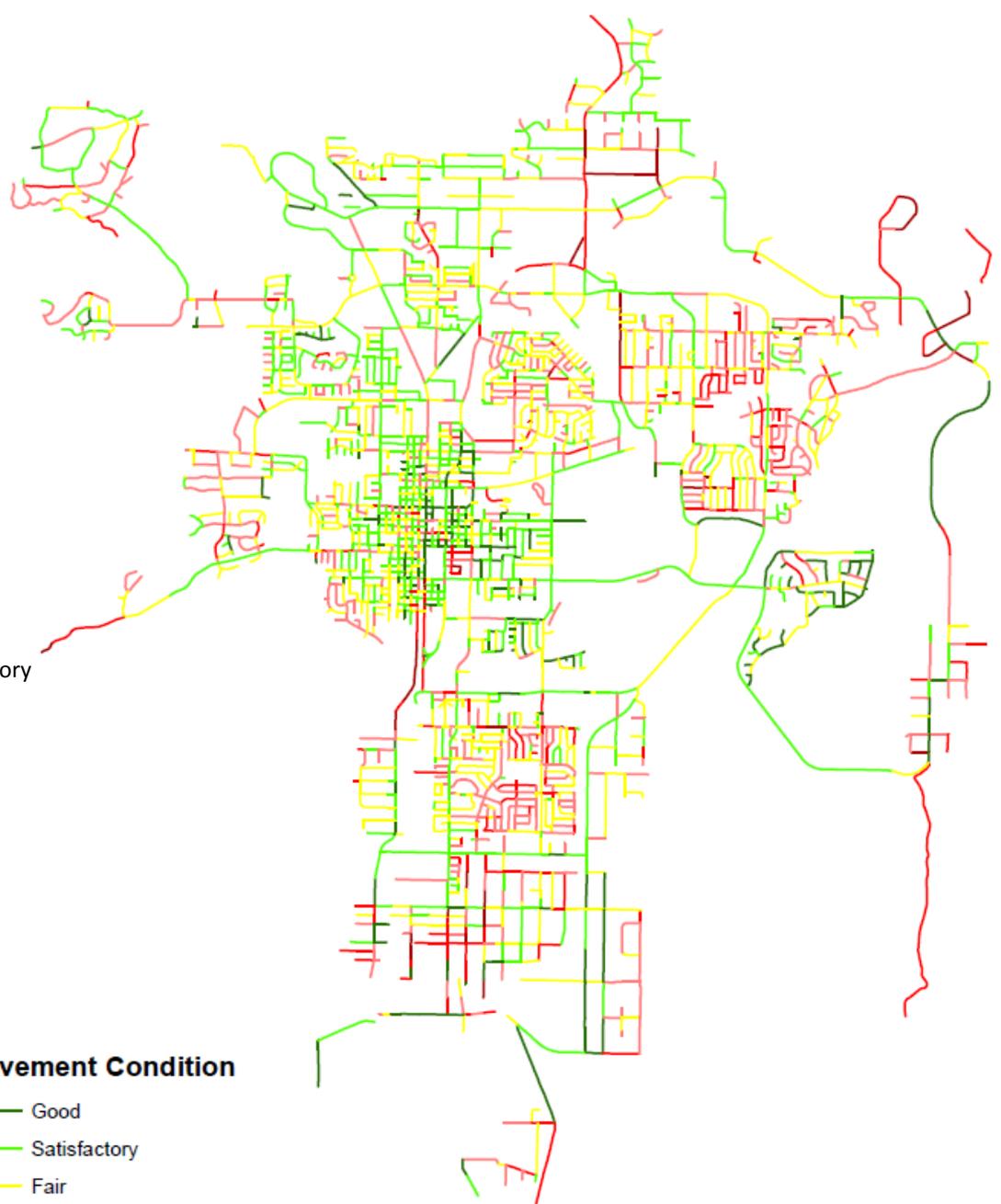
Carson City Streets - Current Conditions



- Good and Satisfactory
- Fair and Poor
- Very Poor, Serious, and Failed

Pavement Condition

- Good
- Satisfactory
- Fair
- Poor
- Very Poor
- Serious

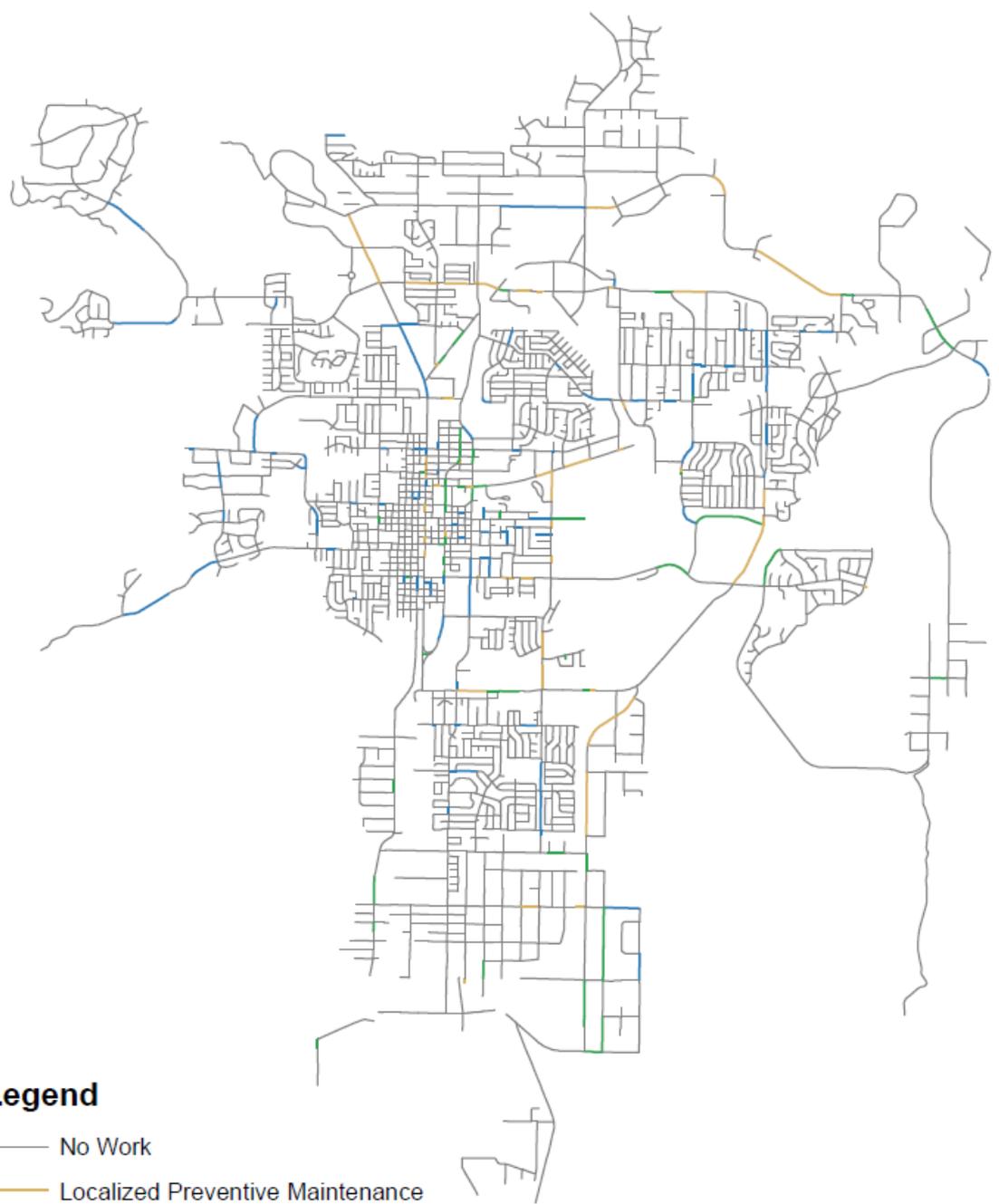


Potential Projects with Current Funding 2017-2026

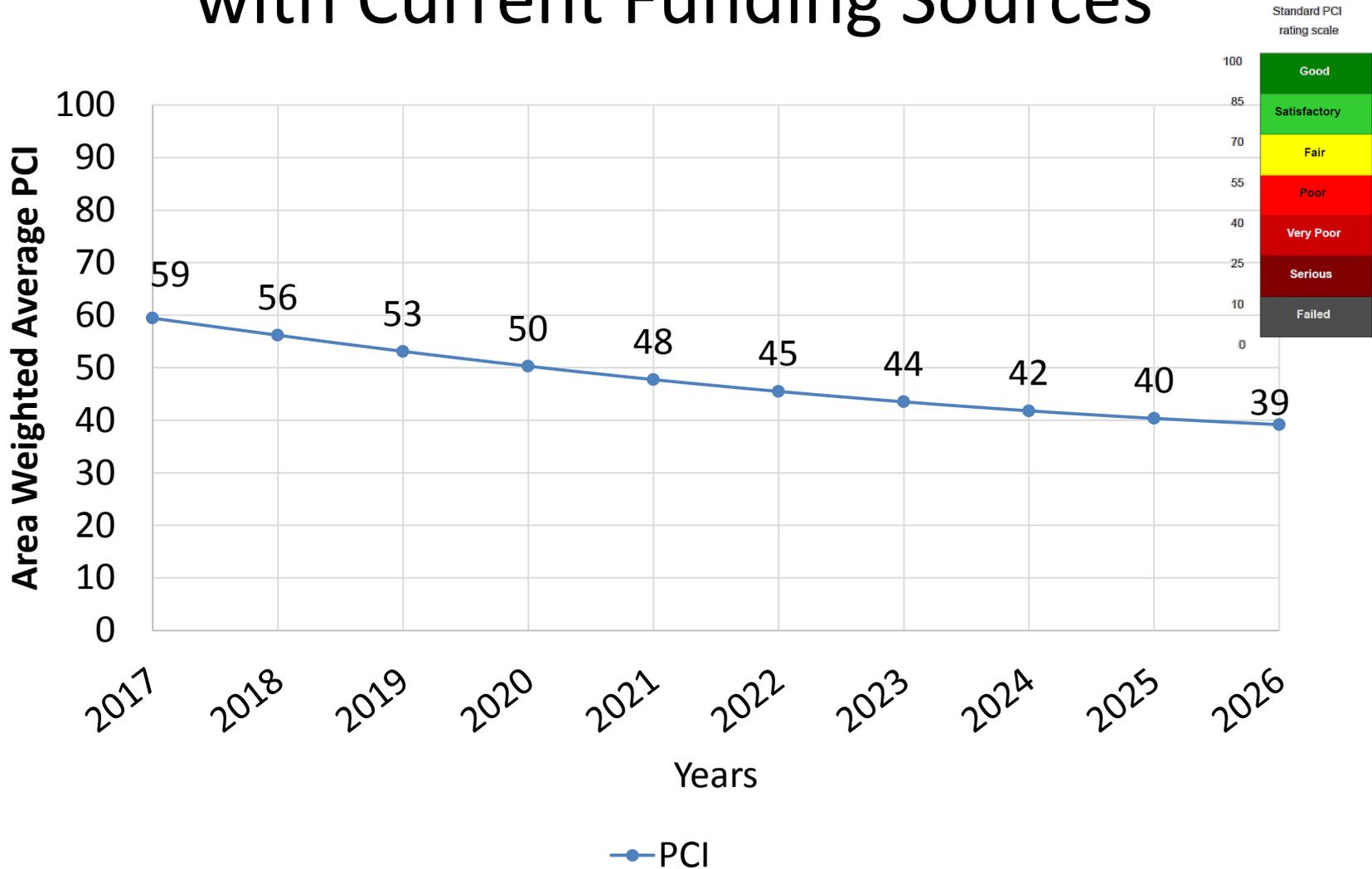
Work Type	Total Addressed Area (2017-2026)	
	Area (ft ²)	Centerline Miles
Major	2,141,942	12
Global	1,217,606	7
Localized	2,985,198	16

Legend

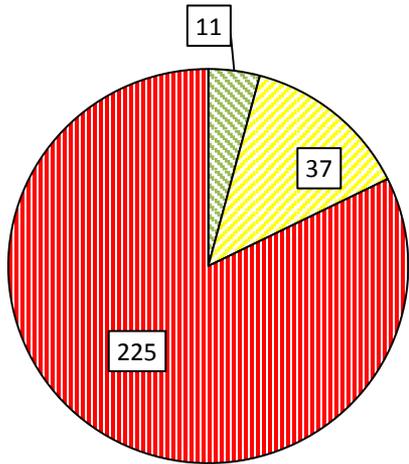
- No Work
- Localized Preventive Maintenance
- Global Maintenance
- Major Rehabilitation / Reconstruction



Expected Decline in citywide average PCI with Current Funding Sources



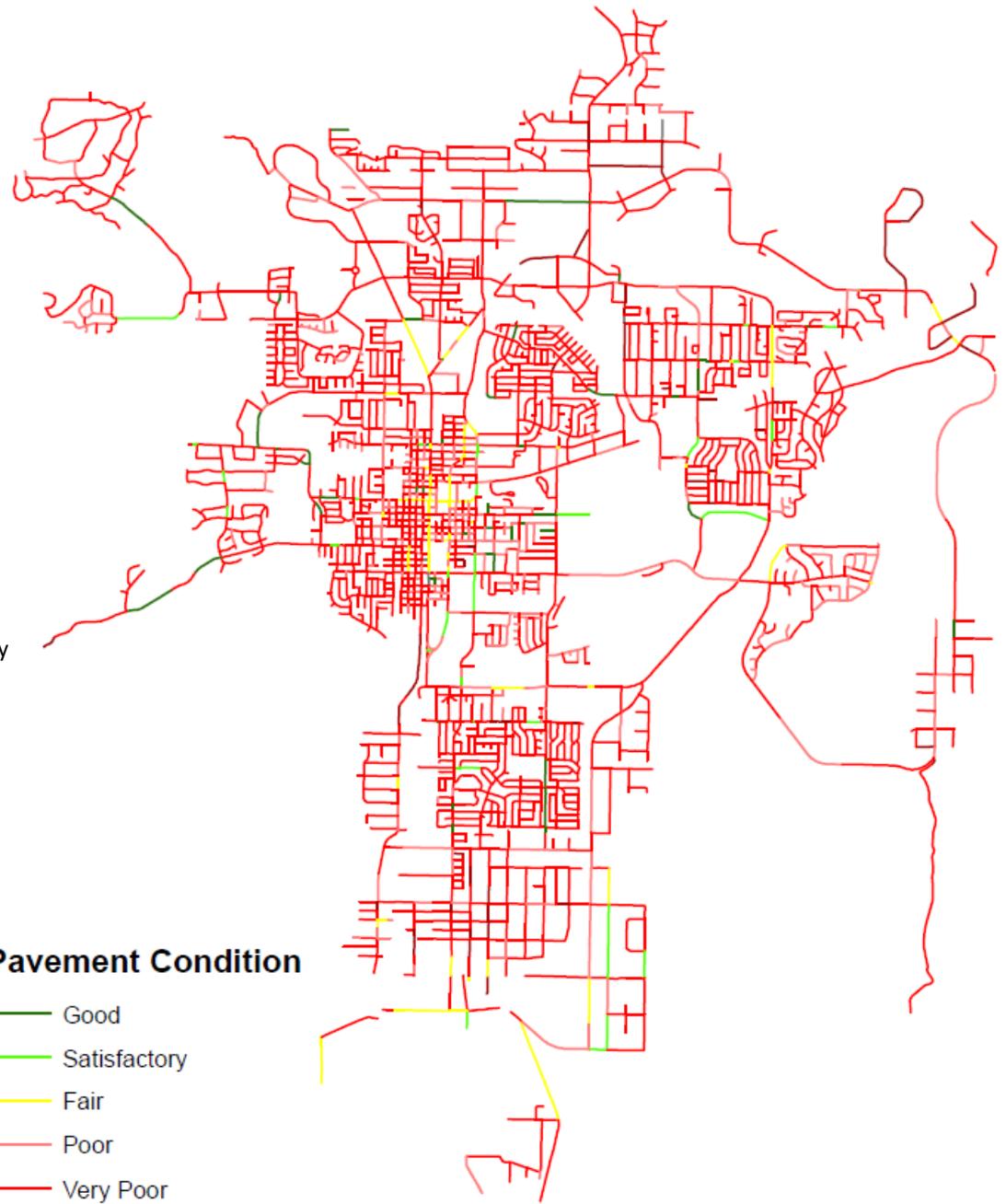
Expected Street Conditions in 2026 with Existing Funding



- Good and Satisfactory
- Fair and Poor
- Very Poor, Serious, and Failed

Pavement Condition

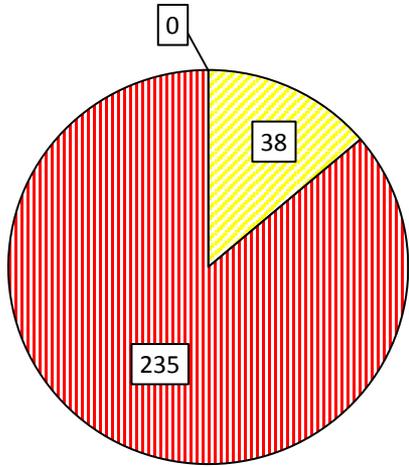
- Good
- Satisfactory
- Fair
- Poor
- Very Poor
- Serious
- Failed



Optional Scenarios for Prioritizing Projects

- PMS can generate alternate scenarios:
 - Funding based on functional classification
 - Funding based on treatment types
 - Alternatives for use of funding such as bonding
- Alternatives considered:
 - “Stopgap” – addresses “worst first”
 - Funding for arterials and collectors vs. locals based on volumes of traffic on each

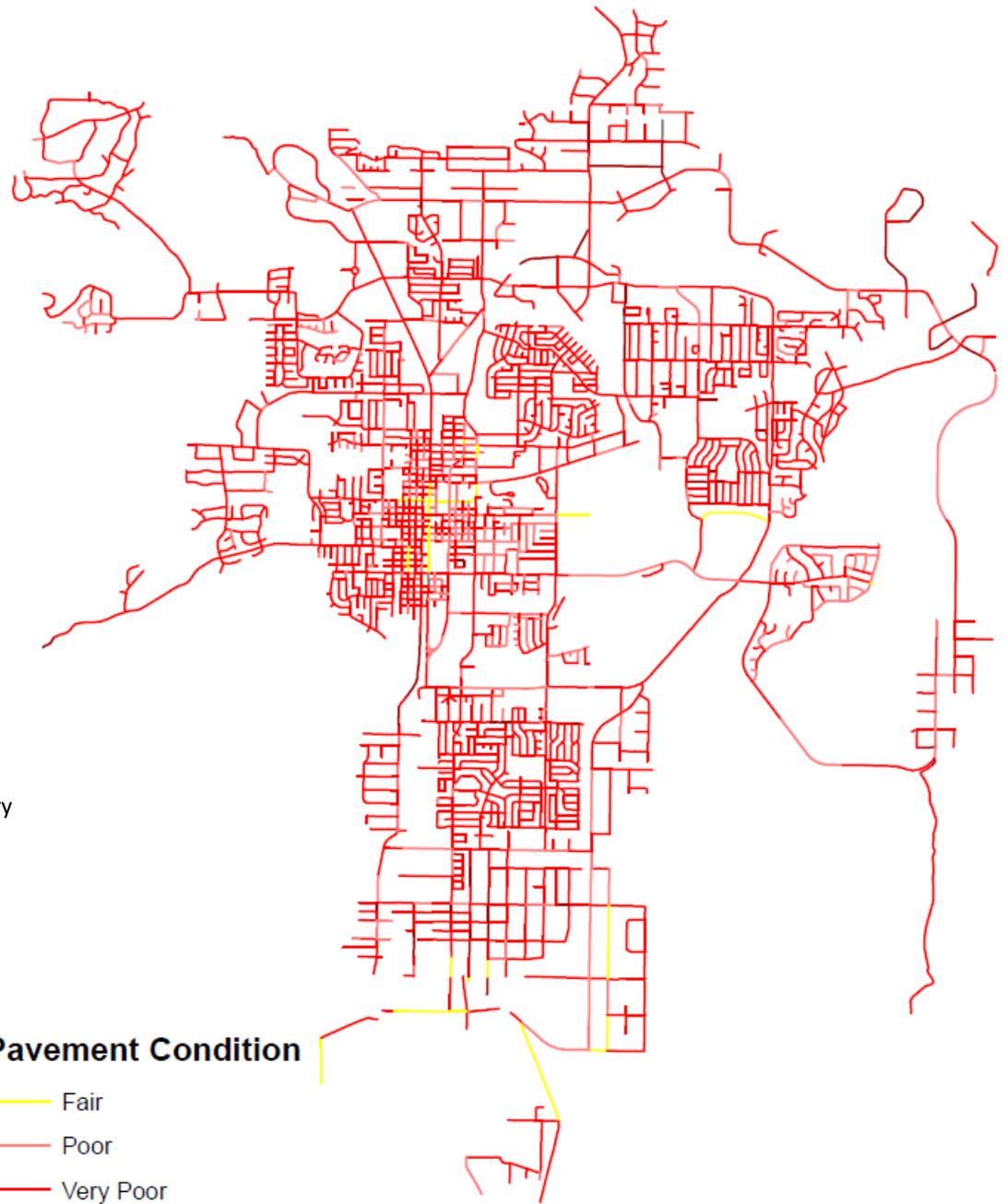
Expected Street Conditions in 2026 with Existing Funding – “Stopgap” approach



- Good and Satisfactory
- Fair and Poor
- Very Poor, Serious, and Failed

Pavement Condition

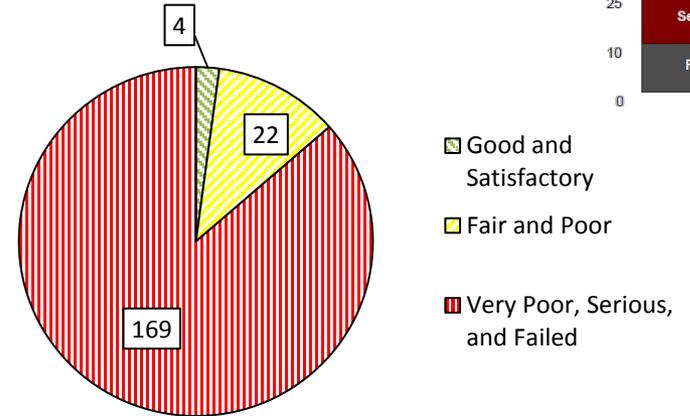
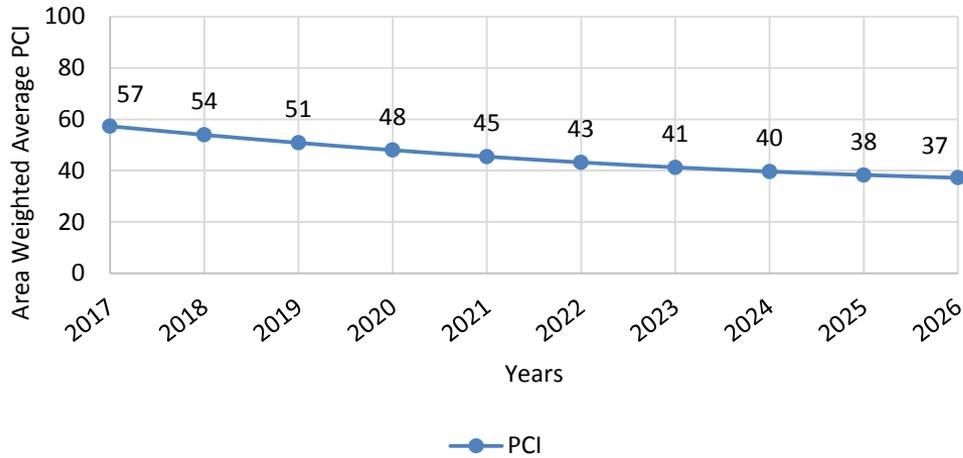
- Fair
- Poor
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- Serious
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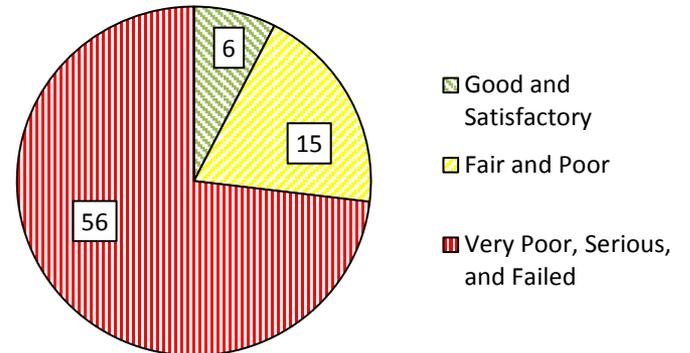
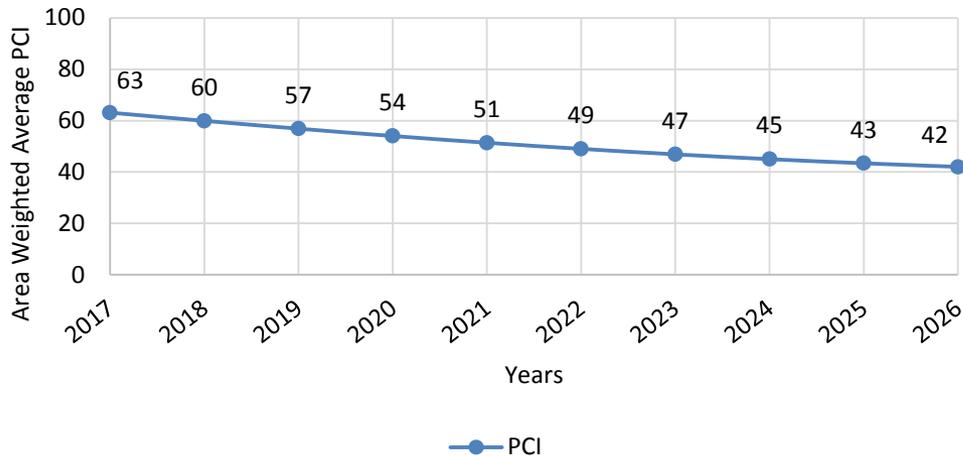
Expected Street Conditions in 2026 with Existing Funding – Funding by Traffic Volume



Local Roads
31% of Budget

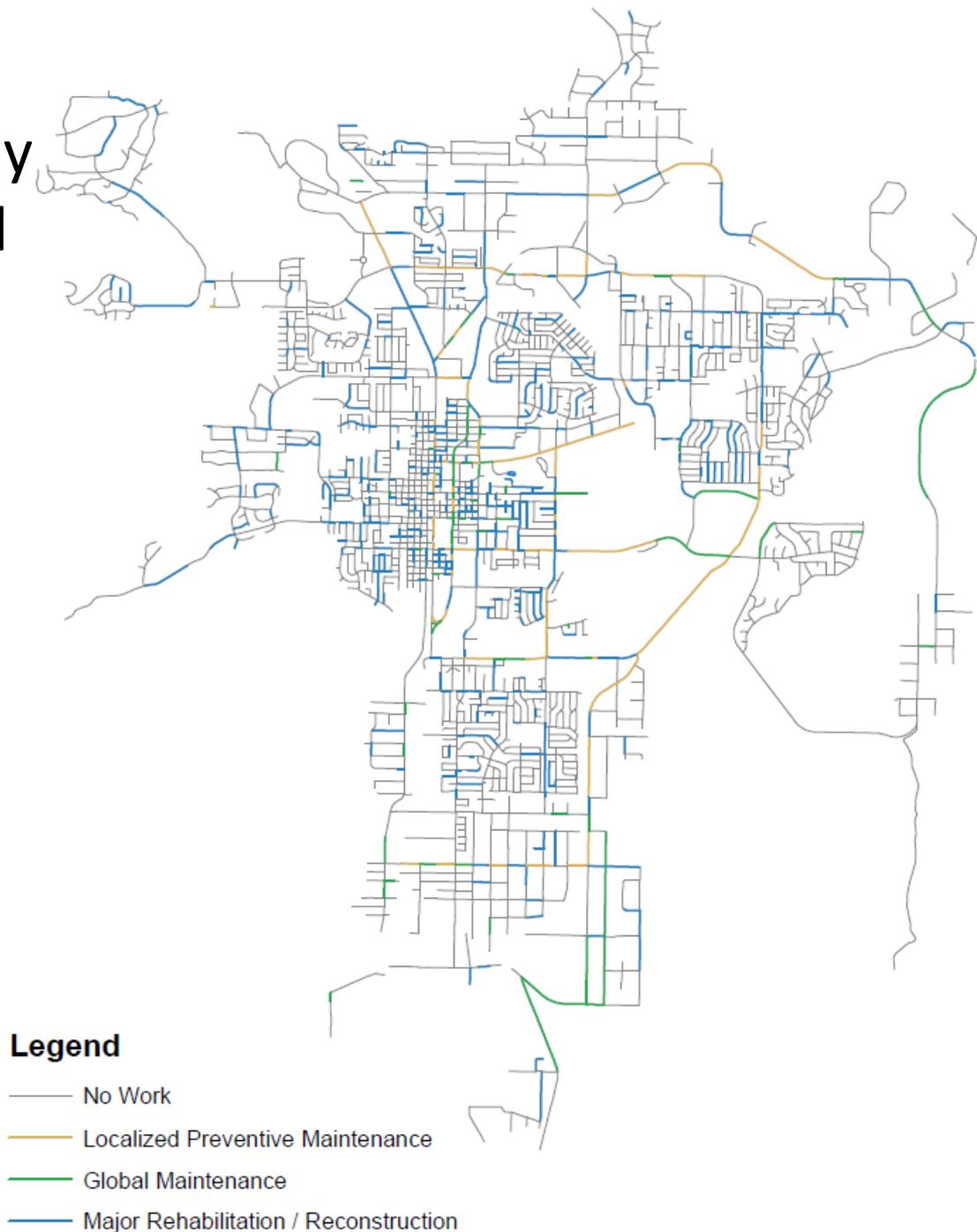


Arterials & Collectors
69% of Budget



Potential Additional Projects if Approximately \$4 million in Additional Funding Per Year is Available 2017-2026

Work Type	Total Addressed Area (2017-2026)	
	Area (ft ²)	Centerline Miles
Major	9,161,103	49 (+37)
Global	2,762,383	15 (+8)
Localized	6,668,884	36 (+20)



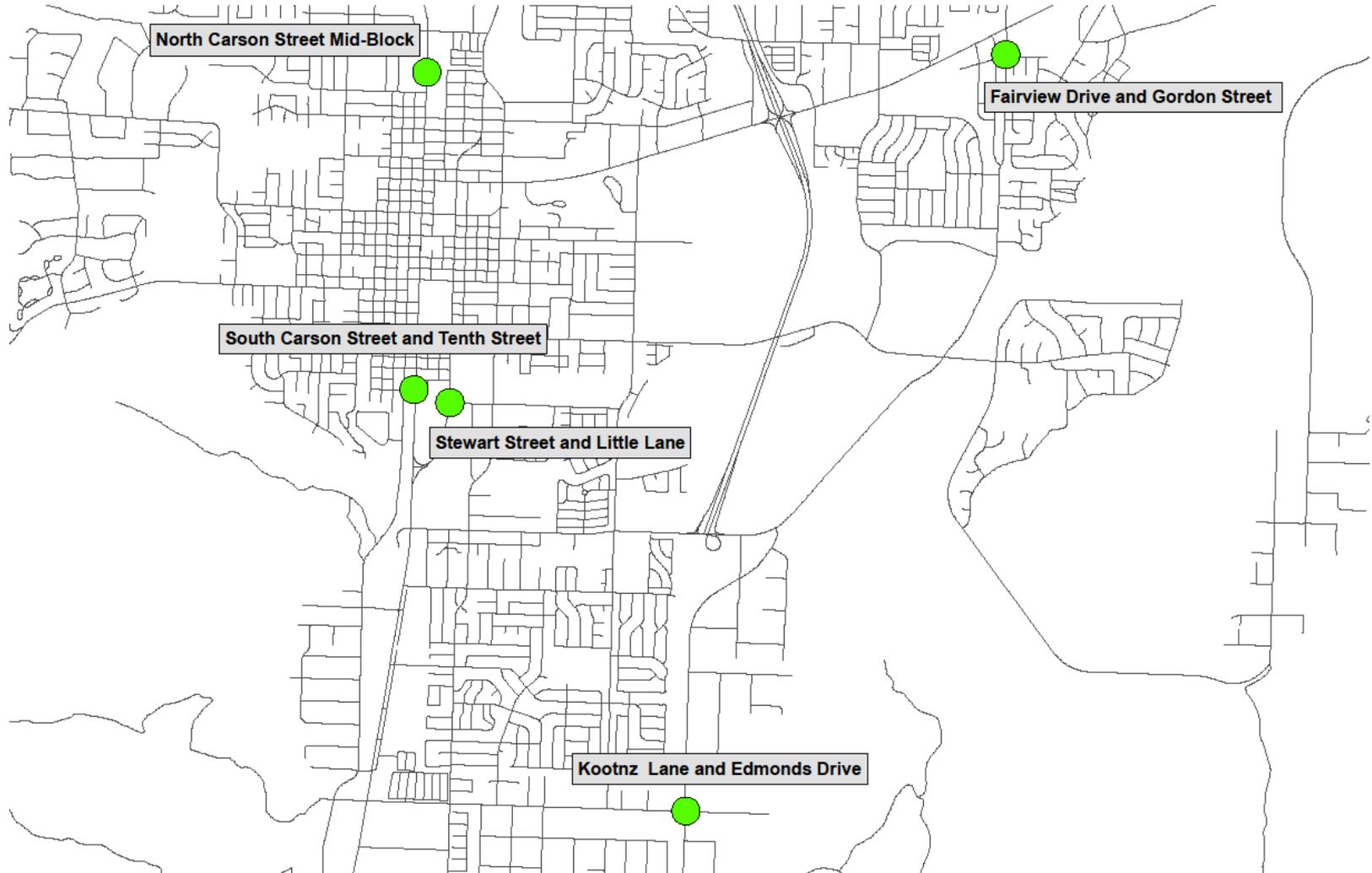
Use Available Funds This Fiscal year

- Pavement projects
 - Starting design for portion of Sonoma Street – Saliman to Halleck. Estimated cost of \$200,000.



Sonoma
Street east of
Saliman.
PCI of 35.

Potential Locations for Pedestrian Crossing Safety Improvements



Allocation of Funds in Future Years

- Numerous alternatives for use of funds within the scope of street maintenance.
- Not sufficient funds to satisfy all needs.
- Input sought on allocation of resources in future years – regardless of results of November ballot.
- Next meeting of TRAFCC November 29 at 5:30 in Sierra Room.
- Seek additional input to develop future work program for RTC action.

Allocation of Funds in Future Years- Group Activity

How Would You Spend \$100 On the Street System of Carson City?	
Improvement Types	Amount
Road Maintenance-Arterial/Collector Streets	33
Road Maintenance-Local Streets	19
Road Capacity Improvements-New Roads/Widening	11
Safety-Specific Improvements	13
Sidewalk-ADA Compliance Improvements	8
Sidewalk-Connectivity/New Segments	7
Sidewalk-Maintenance/Reconstruction	8
Total	99

Contact Information

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ppittenger@carson.org

Thank you!