

Transportation Programs and Priorities

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Outline

Goal: To develop a common understanding on the management, maintenance and rehabilitation of the transportation infrastructure in the County.

- Review construction and maintenance programs
- Overview of transportation asset management, our pavement management system, and our decision-making principles
- Program development for rehabilitation programs

Transportation Programs



Urban Maintenance Programs

The Transportation Operations team focuses on routine maintenance and small repairs including:

- Asphalt patching and pothole repair
- Small base repairs and asphalt overlays
- Asphalt trails repairs
- Concrete curbs and sidewalk replacement and trip hazard grinding
- Asphalt and gravel parking lot maintenance

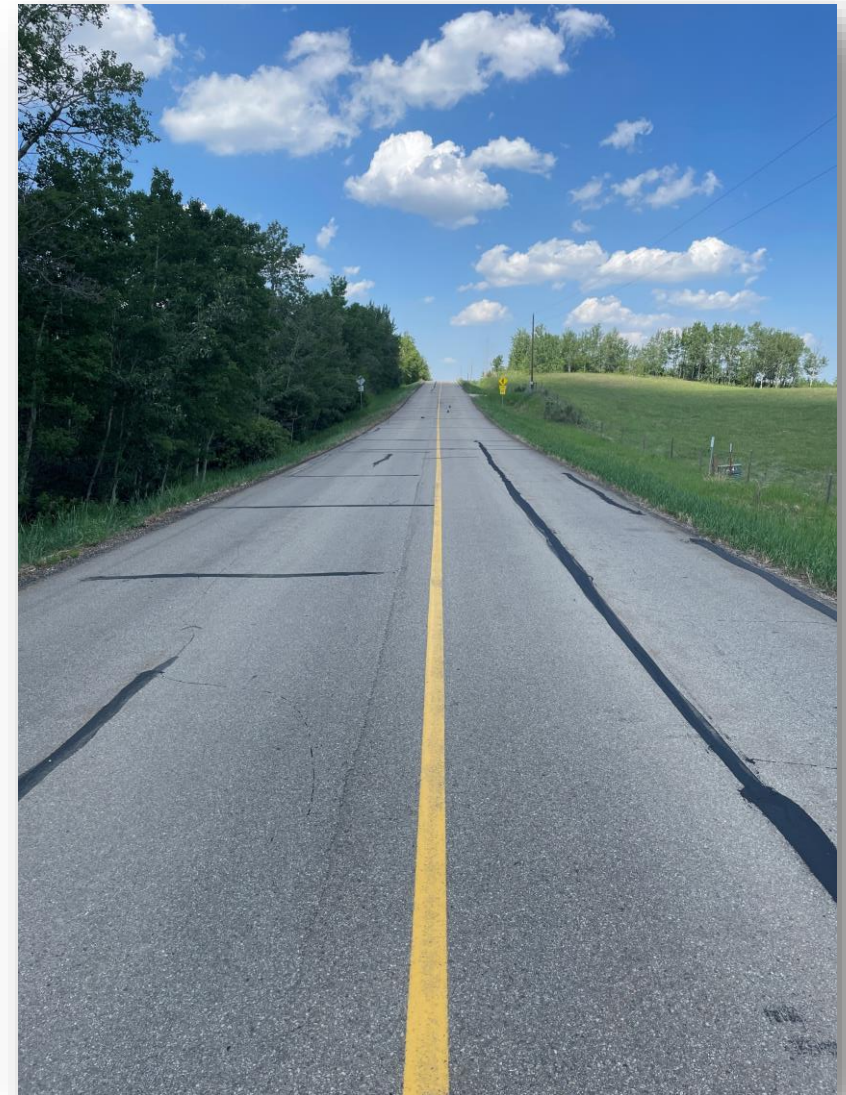


Intermediate Treatments

The County completes many intermediate treatments on roadways to preserve the useful life of the roadway and ensure the overall roadway conditions are preserved.

Treatments currently used:

- Crack sealing
- Spray patch
- Surface sealing
- Micro surfacing



Rural Maintenance Programs

The Transportation Operations team focuses on routine maintenance and intermediate treatments across the rural transportation infrastructure.

- Coldmix and asphalt repairs including pothole repairs
- Small base repairs and asphalt overlays
- Routine gravel blading and repairs
- Asphalt and gravel parking lot repairs
- Overland drainage, culverts and ditch repairs



Rural Road Gravel Maintenance

- The gravel program is split between routine maintenance treatments and the gravel rehabilitation program.
- Routine maintenance program includes:
 - regravelling and dust control,
 - spot dust control at properties
 - routine gravel blading
- Overall network conditions have improved with the focus on timely treatments and ensuring underlying structural issues are addressed.
- The gravel network continues to change with weather impacts and regional soil conditions.



Gravel Roadways

Class III (Dust controlled)



Class IV (Gravel)



Annual Rural Gravel Road Rehabilitation Program



Work will include:

- road re-shaping
- base stabilization
- aggregate overlay and fully bound oiled surface (Class III)
- culvert repairs and minor right-of-way brushing
- Asphalt paving at intersections

Annual Rural Road Rehabilitation Program



- 2023 program includes:
 - 5 km of Country Residential Subdivision Rehabilitation
 - 19.5 km of Class 2 Rehabilitation including surface upgrades from Class 3 to Class 2
- Program over two years, culverts replaced in year one.
- Work includes full base repairs, asphalt overlay, side slope grading with topsoil and seed.

Annual Residential Rehabilitation Program

- 2023 program includes ~6 km of residential streets within Sherwood Park.
- Treatment options include milling and resurfacing, full depth reclamation (FDR), and complete reconstruction.
- Full depth reclamation includes pulverizing the existing road structure to reuse as base, cement stabilizing, compacting and paving.



Annual Residential Rehabilitation Program

- Typically only damaged sections of concrete sidewalks are replaced based on liability hazards and drainage issues, as a part of our spot concrete repairs approach.
- The drop driveway program provides low profile driveway approaches. These are County funded if there is major sidewalk replacement, otherwise it is an option for residents to privately fund.
- Some roadways require full concrete replacement, due to drainage issues or no existing gutter. Examples are Glenmore Boulevard, Curlew Crescent and Crane Road.



Annual Arterial Rehabilitation Program

- 2023 program includes ~9 km of arterial streets.
- Candidates selected on overall asphalt condition.
- Work includes spot concrete replacement, asphalt mill and overlay.



Annual Bridge Rehabilitation Program

- 2023 program includes two bridge sized culvert replacements and one grade separated bridge structure.
- Bridge program works closely with Alberta Environment and Alberta Public Lands for permits and approvals for working within the creek systems.



Other Programs

Additional programs are delivered in support of the overall safety of the transportation network.

- Annual Parking Lot Rehabilitation
- Annual Asphalt Trail Rehab
- Annual Traffic & Pedestrian Safety Improvements
- Annual Traffic signal/Intersection replacements
- Capital Transportation Projects – location specific.
- Missing Links sidewalks

Program Communications

- Ensure residents/businesses understand construction impacts and satisfied with information provided
- Conduct communications assessment for projects
- Audience analysis and level of impact determines approach
 - Notice letter – direct impact / adjacent to home/business
 - Electronic message boards & signage – reaches all road users/commuters
- Continually evaluating to ensure meeting this goal



Transportation Asset Management and Pavement Management



Transportation Asset Management



Asset management is the process of making decisions to deliver services effectively and efficiently, considering current and future needs, while managing risks and resources.

Asset management principles include:

- Lifecycle approach
- Understanding the impact of growth
- Managing and predicting risks associated with asset failures
- Sustainable use of physical resources
- Continuous improvement of management practices

Pavement Management

Pavement management is a systematic approach to effectively maintaining and caring for our roads to ensure they are safe, reliable, and well-maintained, while considering cost-effectiveness and long-term sustainability.

Pavement Management Process:

- Data Collection
- Condition Assessment
- Prioritize road segments
- Maintenance and Treatment Selection
- Program Development
- Program Implementation
- Monitor effectiveness of actions

Data Collection

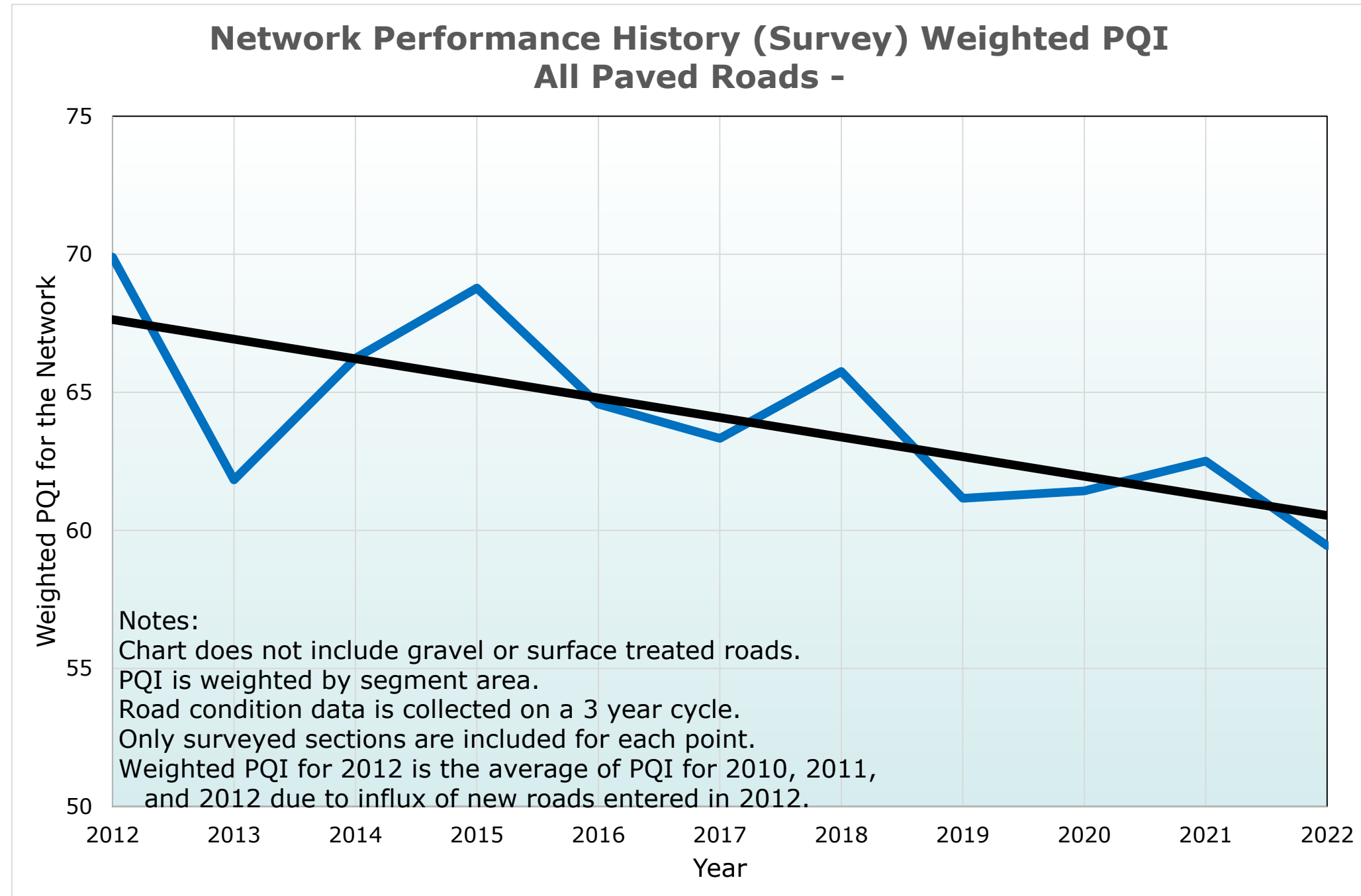
Data collection is gathering relevant information about the road network, including inventory, physical characteristics, and historical data

Data collection via specialized vehicles and manual inspections captures surface defects (types, severity & frequency), ride quality, and structural rating for paved roads.

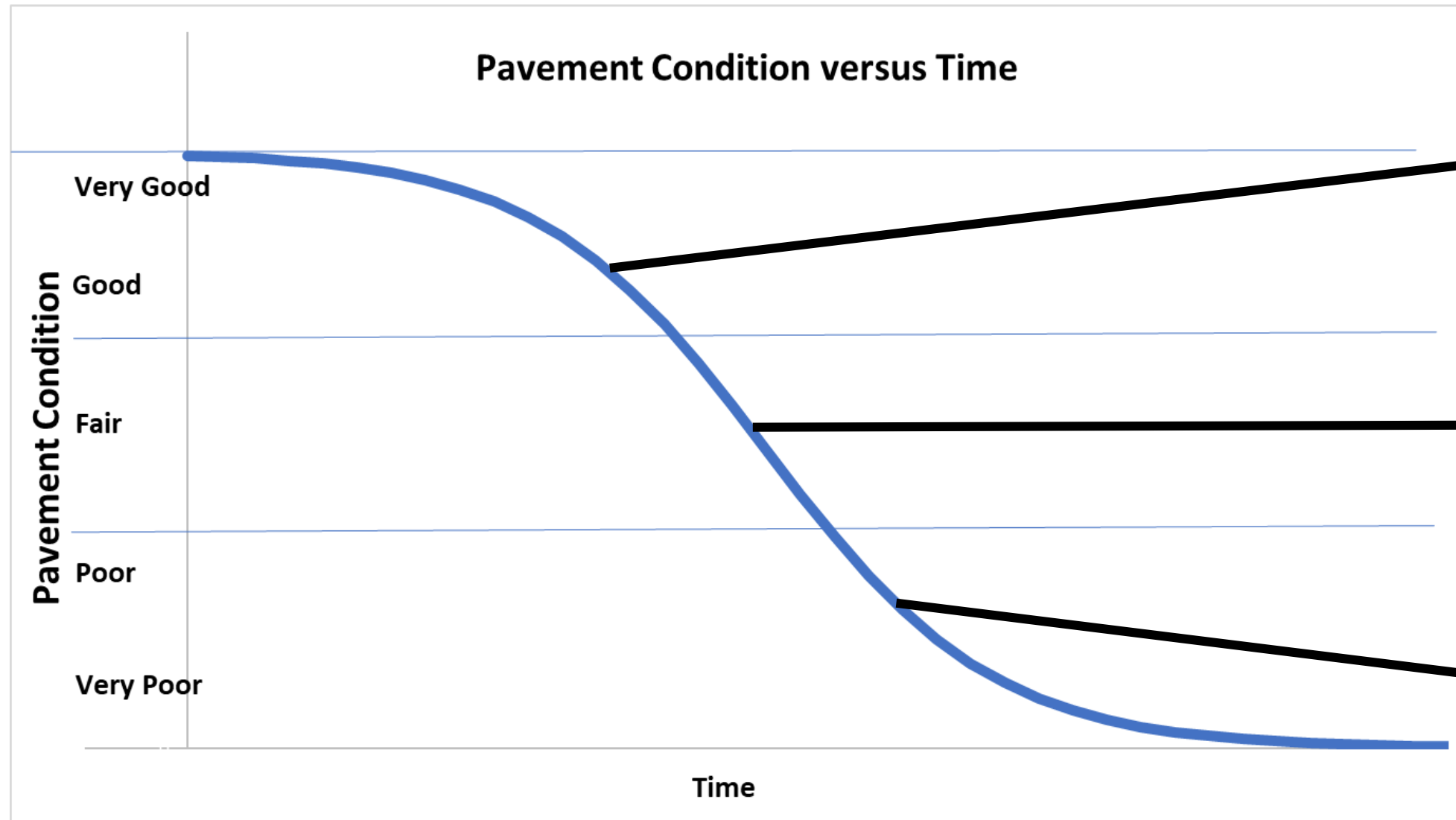


Image Source: Stantec
Accessed via: <https://www.stantec.com/en/services/pavement-engineering>

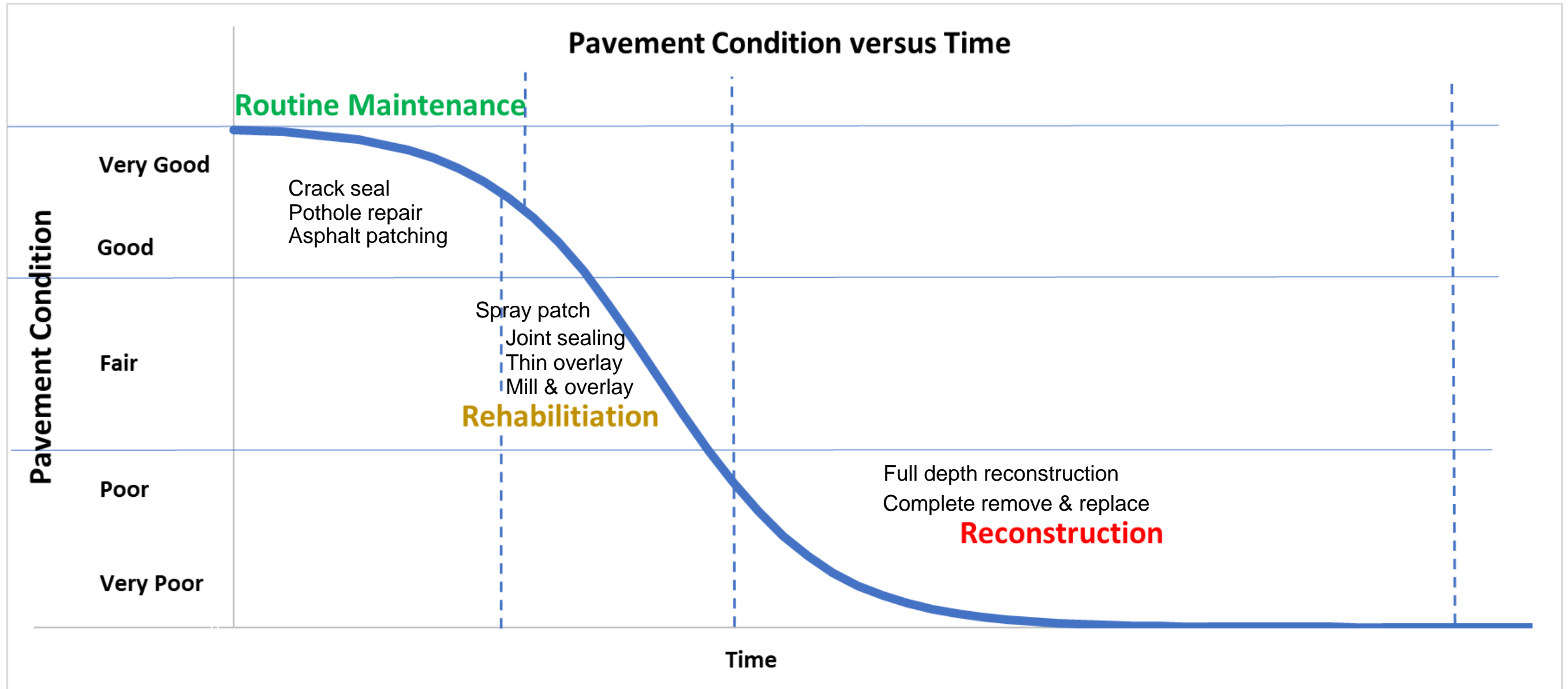
Historic to Current State



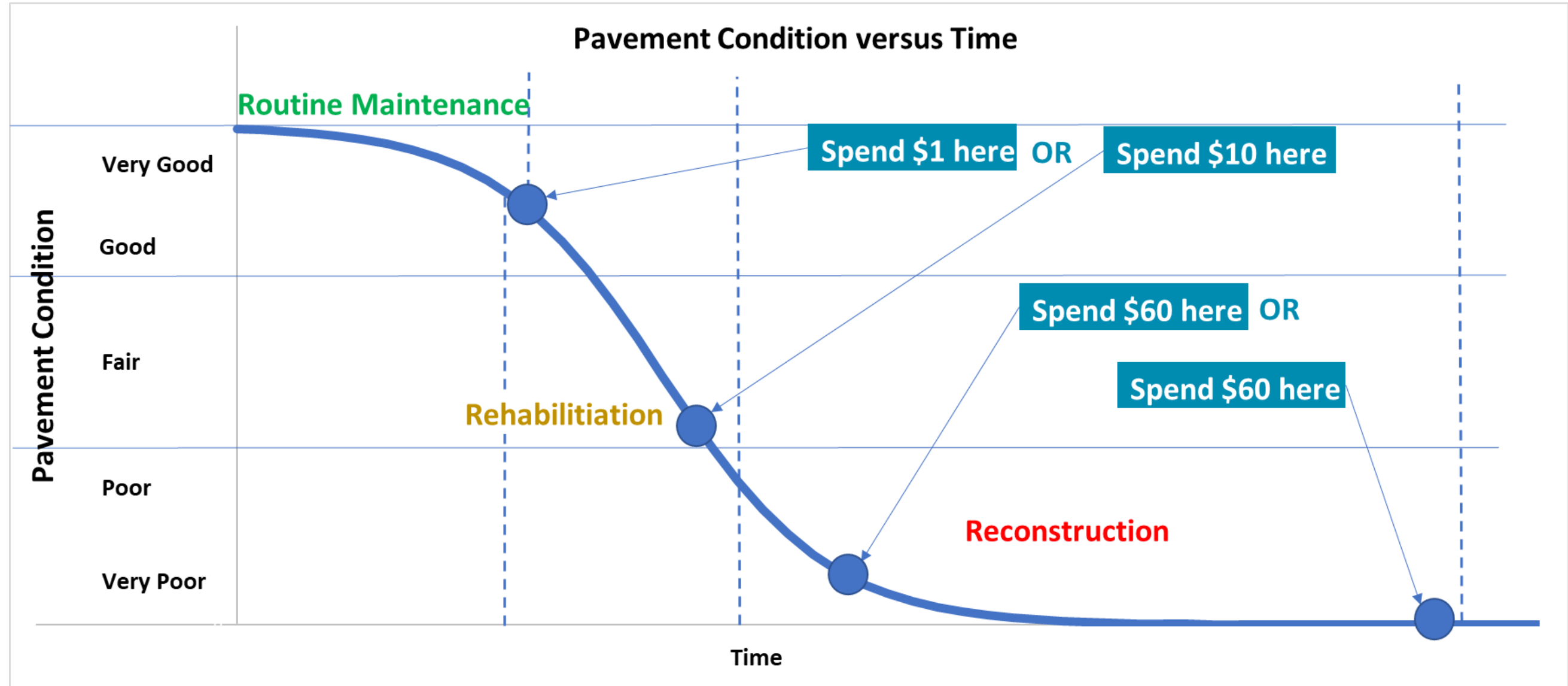
Condition Assessment & Prioritization



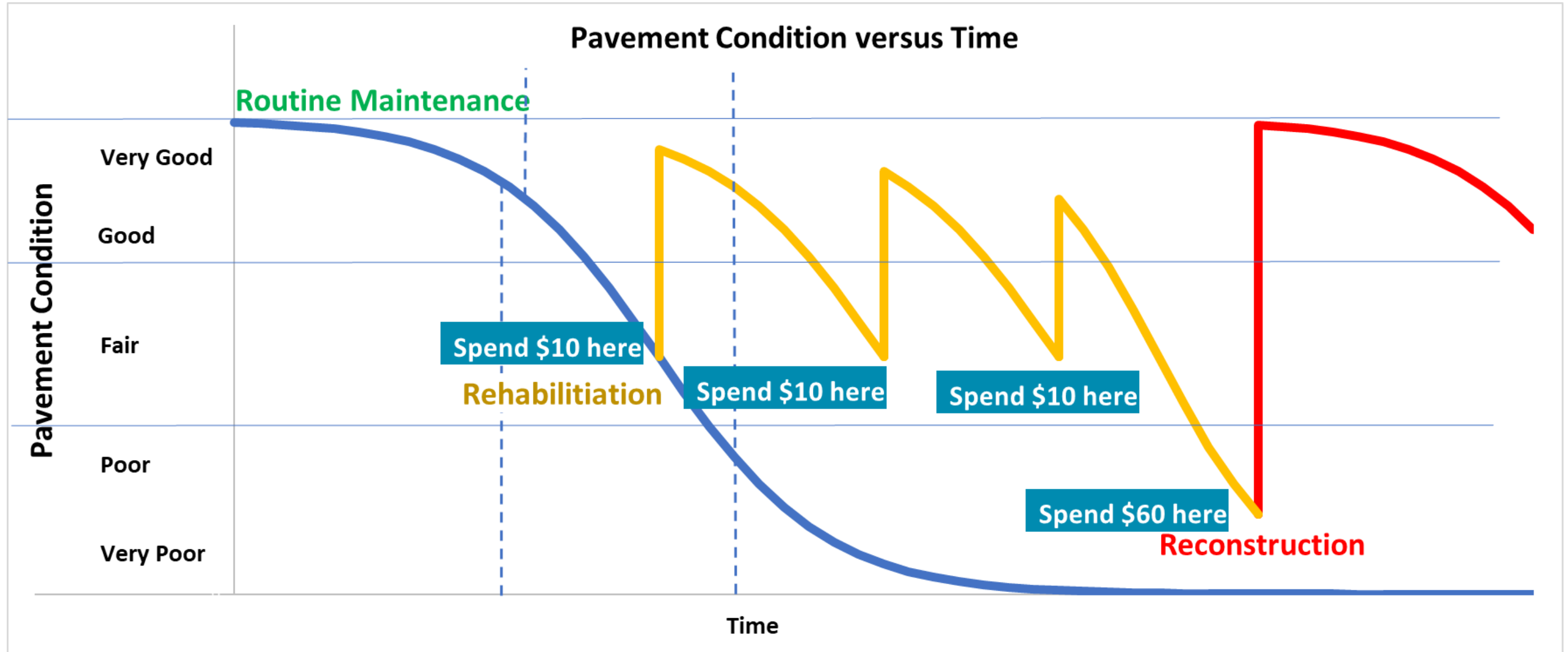
Treatment types and timing



Prioritization & Treatment Selection



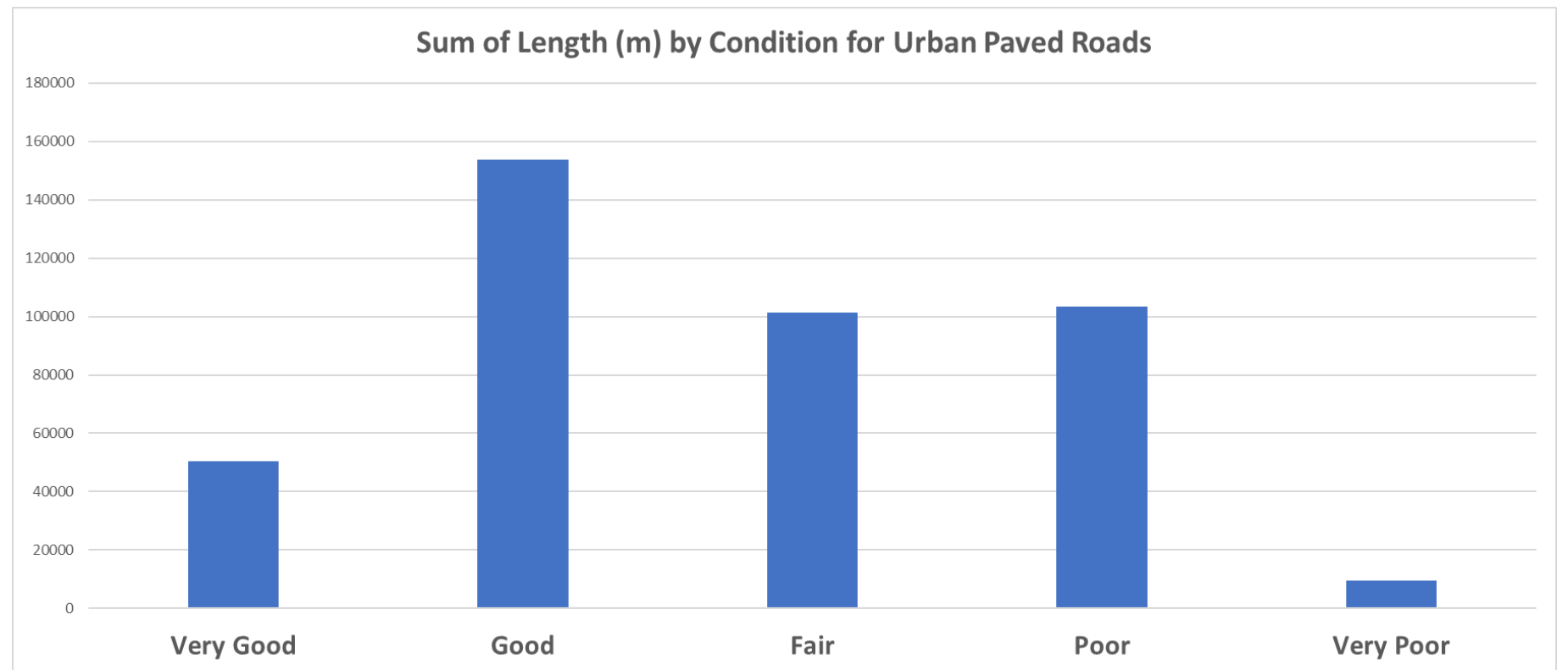
Optimizing Treatment & Timing



Maintain to Failure

Roadways in poor condition are maintained for user safety while awaiting future reconstruction.

Focus is on maintenance activities to ensure safe travelling conditions for road users.



Program Development



For each Program, top treatment candidates based on previous analytics are reviewed and assessed on:

- Budget availability
- Program project grouping by location and proposed year
- Coordination with other Transportation projects
- Coordination/alignment with other County & external projects (Developer, AT, Franchise Utility)
- Operational field data verification
- Drainage analysis review
- Aligning with approved Functional Planning Studies & SRRMP principles

Summary Closing

- Management of the Transportation Network takes significant time and effort with many staff involved
- The visual appearance of the roadway rarely tells the entire story
- If residents have concerns regarding the condition of their roadway, please let us know!

Questions?