Transportation

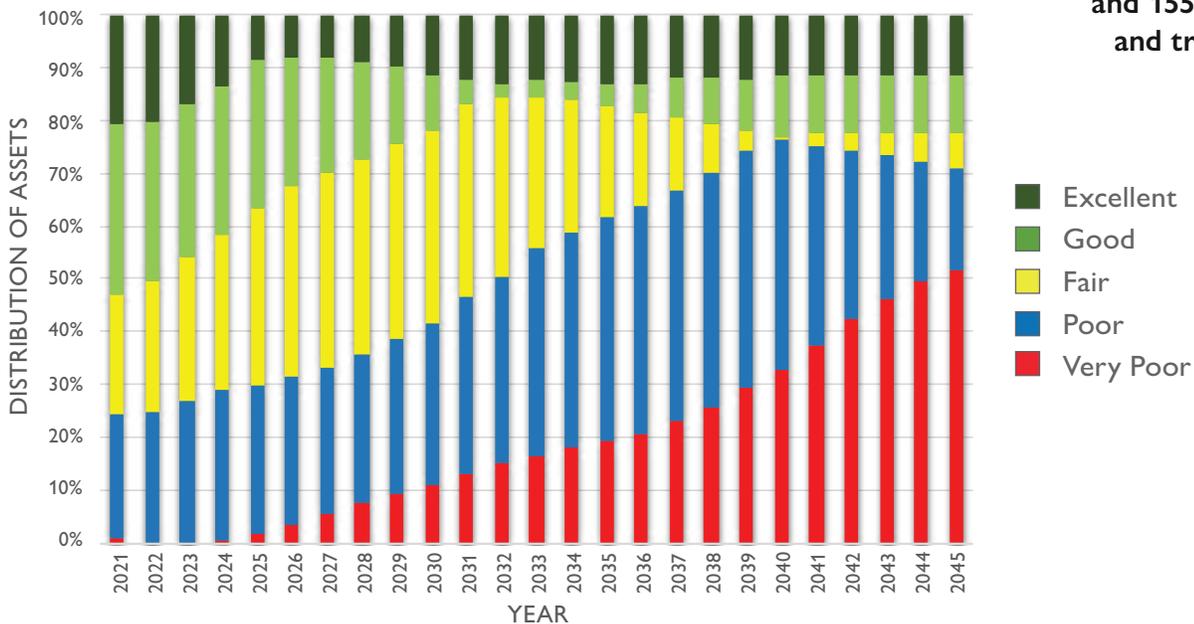|	
Total asset replacement value	**$784 million**
Current condition	**GOOD**
Projected condition in 25 years	**VERY POOR** ⬇
Annual average funding	**$6.8 million**
Annual funding needed to meet target performance	**$20 million**
Annual funding gap	**$13.2 million**
Funding Source	**Tax Base**
Data Maturity Level	**High**

ASSETS INCLUDE
844 lane km roads,

552 km sidewalks,

and 155 km trails
and trail links

Annual performance of transportation assets

Legend:
- Excellent
- Good
- Fair
- Poor
- Very Poor

Y-axis: DISTRIBUTION OF ASSETS (0% – 100%)
X-axis: YEAR (2021–2045)

CURRENT STRATEGY

The city's transportation assets are the roads (including bike lanes), sidewalks and trails (multi-use paths, community trails and trail links) that we all use to get around the city. A well-maintained transportation network helps people and goods move around our city and encourages many different ways to move. Roads are a tax base funded asset.

Roads are rehabilitated or replaced when their condition falls below the target pavement quality index (PQI) for a portion of the road. PQI is a rating from zero (very poor condition) to 100 (excellent condition), and takes into account measured variables such as surface condition, ability to support and bear weight, even how rough the road is to ride on. The target condition for each of our road segments is based on the road classification – larger volume arterial roads (like Union Street and Albert Street) and collector roads (such as William Street and Beechwood Drive) have a higher target condition than lower volume local and residential roads. The city has an overall road network target of at least 60 PQI, and currently, we have achieved this level.

Roads are replaced when we need to coordinate with other necessary work on underground infrastructure, such as watermains or sanitary/storm sewers. Roads are typically rehabilitated rather than replaced when only the road itself requires attention. We also consider the timing of proposed developments when deciding whether to replace or rehabilitate a road. For sidewalks and trails, our approach is to repair as needed, and replace once it reaches a very poor performance.

ASSET PERFORMANCE

We evaluate the performance of our assets using asset data, a combination of historical knowledge, age, observed conditions, measurements and analytical techniques. The quality and availability of this information (also known as "asset data maturity") is continuously improving. Updates to asset data and deterioration trends will change the projected performance of an asset. The higher the data maturity is, the greater confidence we have in our future performance projections for the asset. The maturity of our transportation asset data is considered high.

Over the 25 year timeline, we anticipate the percentage of our transportation network with a poor or very poor performance profile to increase from 30% in 2021 to over 70% by 2045. Based on the best available transportation asset data, deterioration rates and 2020-2029 capital funding, we estimate that transportation assets have an annual infrastructure funding gap of $13.2 million.

60

The city's overall road network target PQI

60

The city's current PQI

The information presented here is based on the best currently available data regarding asset inventory, performance and degradation curves along with funding included in the approved 2020-2022 capital budget and 2023-2029 capital forecast.

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THE CITY OF
Waterloo