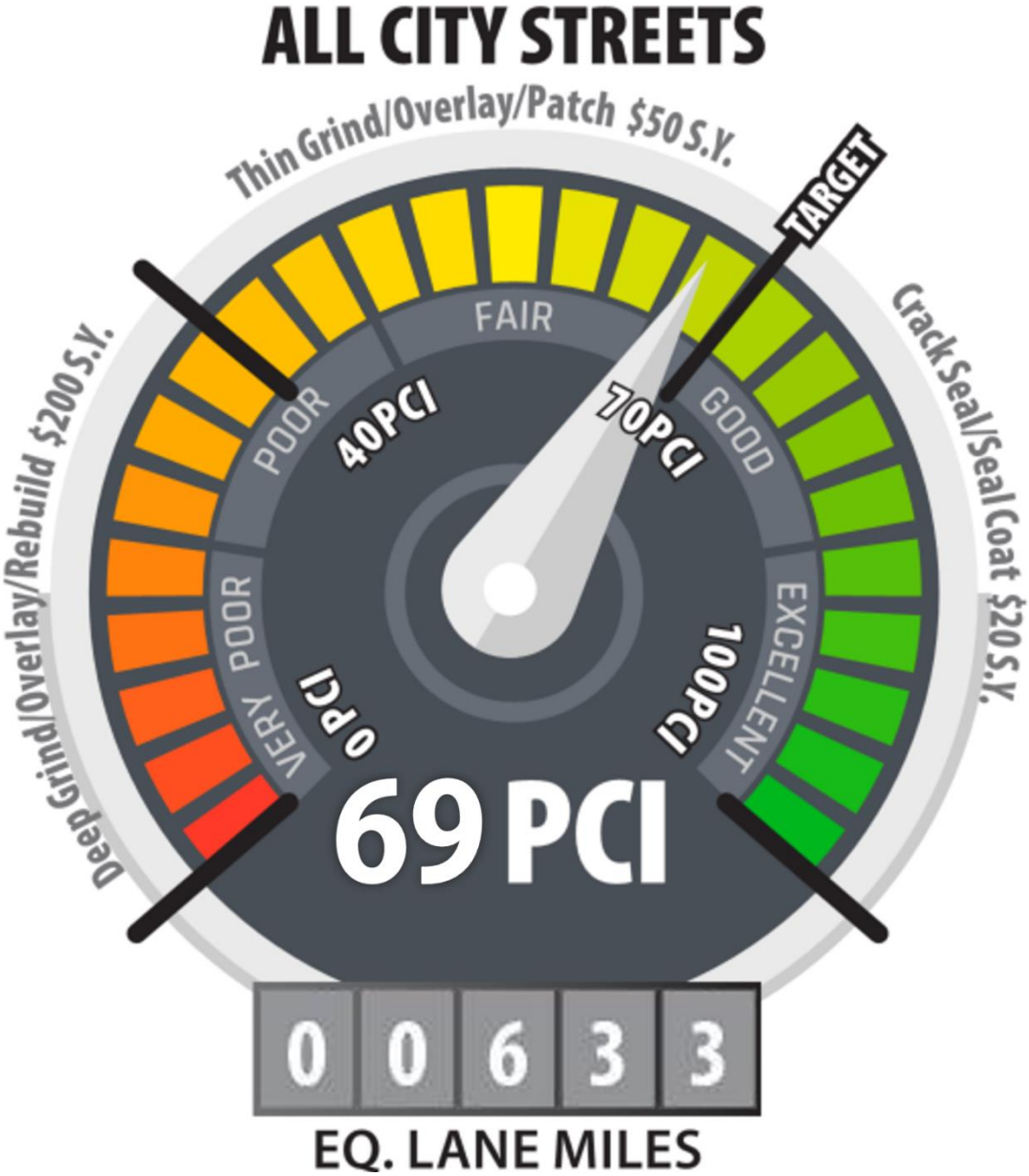
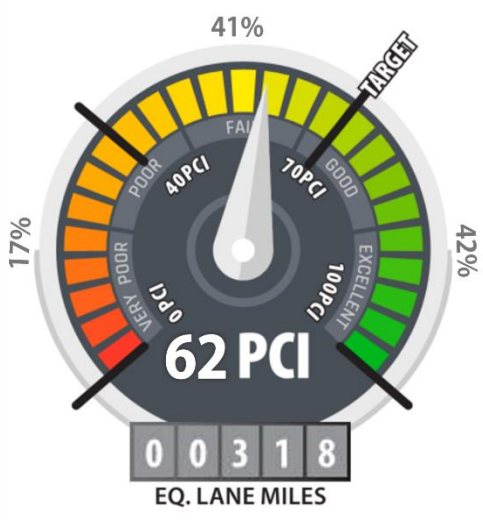
2021 STATE OF OUR STREETS DASHBOARD

Overall Assessment: The paving projects completed in 2021 improved approximately 16.5 equivalent lane miles of roadway. This resulted in an increase in the overall condition of streets in the city slightly from 2020 to 2021. Pavement projects programmed for 2022 will improve approximately 8.9 equivalent lane miles of road. Additional projects through 2024 are in varied stages of planning and design. Accounting for the predicted impact of these current and upcoming projects, modeling continues to show a slow decline of the overall average roadway PCI over the coming years at the current anticipated funding amounts. The data suggests that additional funding is needed to prevent overall roadway conditions from declining further and to get the Arterial and Collector roadways to the target PCI of 70 and keep it there.



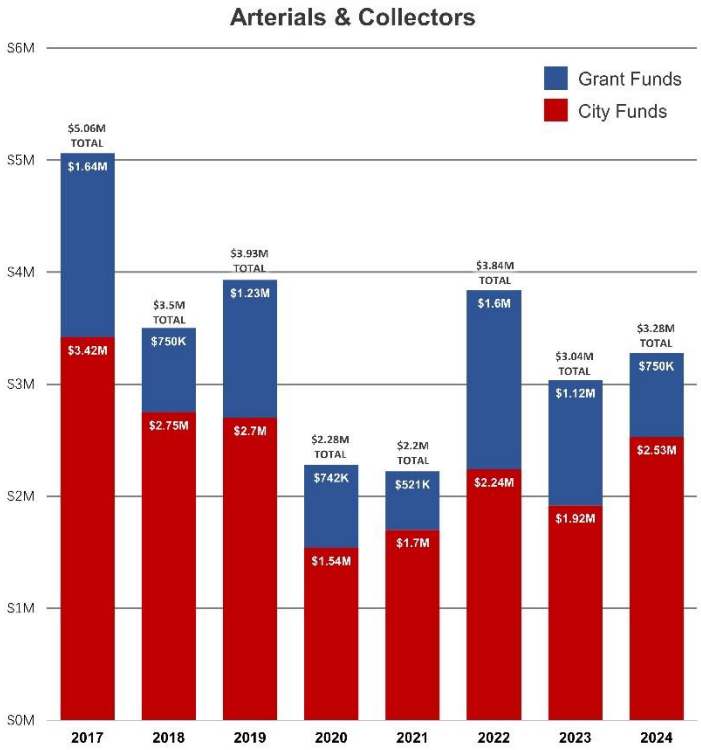
2021 STATE OF OUR STREETS DASHBOARD

Arterial and Collector Streets



Arterial and collector streets make up just over half of the total equivalent lane miles of roadways throughout the City. There are approximately 93 lane miles of collector streets and roughly 225 lane miles of arterial streets that together have an overall average PCI of 62 (compared to 61 in 2020). The average PCI for collector and arterials has been hovering around 60 since about 2015. This indicates that re-building and preservation efforts have been relatively successful at maintaining the status quo but are not yet sufficient to reach the target of 70 PCI. Over the next four years an estimated 40 lane miles of road are expected to deteriorate beyond the point where preservation treatments can restore them and they would require a more expensive full re-build. Based on the current funding levels shown in the City's Transportation Improvement Plan (TIP) and anticipated grant funding, there is only funding available to preserve approximately 12 lane miles. This leaves approximately 28 lane miles of arterial and collector road that will deteriorate past the point for preservation treatments. These roadways will eventually require reconstruction at a cost that is over 4 times higher than preservation treatments. Simulations indicate that an average funding level of approximately $5 million per year, over the next 12 years, would be required to bring the overall PCI for arterials and collectors up to an average PCI of 70.

Funding Note: The arterial and collector preservation programs rely heavily on grant funding. Currently, no grant funding has been secured beyond 2024. Additionally, arterial streets are further classified as either principal or minor arterials. Typically, principal arterials are much more competitive in grant applications than minor arterials. Many of the remaining streets that require preservation treatments are minor arterials, and therefore, the city anticipates that they will not compete well for future grant funding. It follows that over time, it is likely that it will become increasingly difficult to depend on grant funding and additional funding sources would be needed.

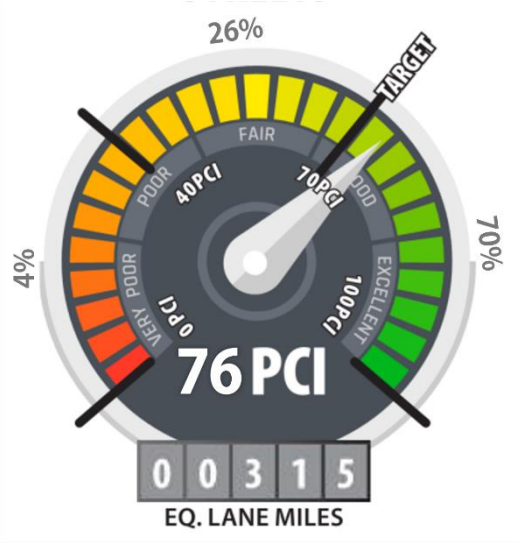


The projects underway in 2022 include the reconstruction of 4th Street SE and 2nd Street SE, which contributes to the predicted decline in the average PCI despite the funding level in 2022 being higher. This is due to the greater expense of rebuilding streets rather than preserving a greater amount of pavement for the same cost.

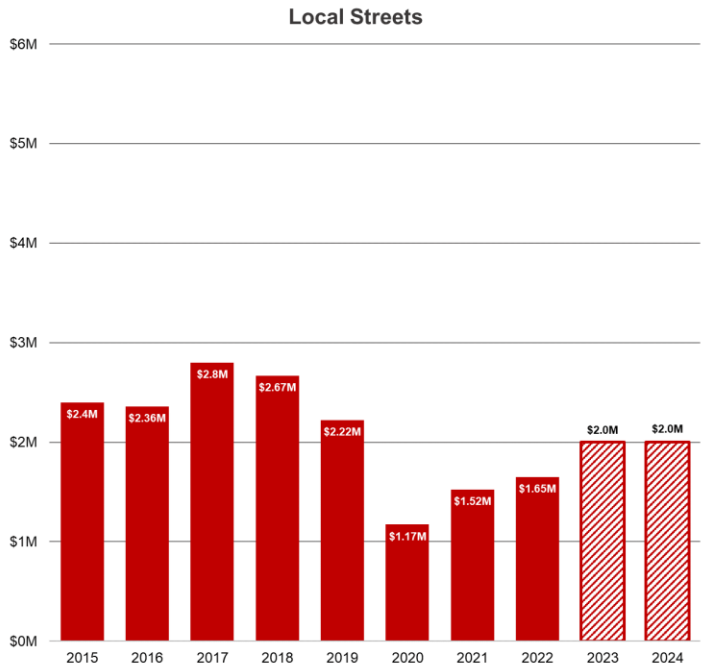
2020 STATE OF OUR STREETS DASHBOARD

Local Streets

There are currently approximately 315 equivalent lane miles of local streets in the city. Local streets have an overall average PCI of 76 (compared to 75 in 2020). Despite the City's target of 70 PCI being achieved there are still many local roads in need of repair and replacement. Roughly 70% of local roads are in good condition, 26% are in fair condition, and 4% are in need of a full re-build. Since 2015, the overall average PCI for local streets has increased from 69, due to the City's preservation and re-building projects, pavement restoration included with private and public utility projects, and the addition of new local roads from development activity.



Funding Note: From 2013 to 2019, the local streets program was funded by new construction sales tax. Since 2019 the program has been spending down the fund balance, with some supplemental funding from Real Estate Excise Tax (REET) funds. The program has been funded at $1.65M per year with the current biennial budget, but at this time no sustainable funding source has been identified beyond 2022. Simulations indicate that maintaining current funding levels results in the average PCI holding stable in the mid 70's (assuming no other changes). If a sustainable funding source is not identified for 2023 and beyond, it is predicted that the average PCI for local streets will drop below 70 by 2030. Changes that may impact the average PCI (to be higher or lower than currently forecasted) include more or less of the development and utility work that build new roadways and restore existing roadways and refinement of the parameters used to predict PCI values based on additional data being collected.



PCI Further Explained:

Pavement Condition Index (PCI) is a 0 to 100 score that reflects the overall condition of roadway pavement and what types and degrees of maintenance and repair (or preservation activities) are needed to maximize the pavement's overall service life. A PCI of 100 is brand new pavement and a PCI of 0 is a roadway where the pavement has turned into gravel and dirt. The most efficient approach towards prolonging the life of a roadway is to keep the PCI at 70 or above (considered to be "good condition") for as long as possible. This is achieved through good pavement design and periodic light maintenance activities like patching and crack sealing. Once the PCI of a roadway has dropped below 70 (or from "good condition" to "fair condition"), additional patching and replacement of the top layer of pavement (overlay or grind and overlay) is needed to bring the pavement back into "good condition" and extend the life of the pavement. Without these pavement preservation efforts, the PCI continues to decrease and the costs to bring the pavement back into "good condition" increases. Additionally, as the PCI decreases, more and more potholes form on the roadway which requires more and more temporary and permanent pothole repairs (by the City's Maintenance and Operations Street crew). Eventually, without preservation activities, the PCI will drop below 40 and the roadway is considered to be in "poor condition" and in need of a very expensive full re-build. With these considerations, the City targets an overall PCI of 70 in order to maximize pavement life and minimize maintenance and preservation costs. Periodically, the City performs citywide inspections to determine the pavement condition index (PCI) for each roadway it maintains. The PCI inspections were completed in 2013, 2017, and most recently in the summer of 2019. The PCI inspection data is used to plan pavement preservation activities and as a gauge to measure how overall roadway conditions have, and will, respond to different funding levels and other factors that impact roadway conditions such as new development, City and non-City utility work in roadways, truck traffic, pavement design (past and present), and weather conditions.