

820190 - Traffic Signal Hardware and Wiring

Originating Year:	1999	Project Type:	Traffic and Transportation	Department:	250 - Public Works
Planned Completion Year:	Ongoing	Category:	Infrastructure	Project Manager:	Gaku Watanabe

Project Description/Scope/Purpose

This project provides funding for design and construction for replacement of traffic signal underground conduits and signal pole structures at the end of their estimated life span. Underground cables and conduits have a life expectancy of approximately 35 years. Signals identified for replacement are evaluated by location specific assessments based upon an inventory of traffic signal life cycles. The City has 135 traffic signals. Out of these, 72 are beyond their design life and are due for replacement.

The traffic signal at Sunnyvale/Hendy was designed in FY 2018/19 and constructed in FY 2020/21.

For future projects, design and construction for two traffic signals will be performed in alternating years. Fair Oaks/California, and Bernardo/Heatherstone will be designed in FY 2022/23 and constructed in FY 2023/24. Fair Oaks/Olive and Maude/Pastoria will be designed in FY 2024/25 and constructed in FY 2025/26.

Project Evaluation and Analysis

Underground conduits/substructures, as they age and corrode, become filled with dirt and water and cannot be cleaned. Failure to replace systems may result in wire failure in the future with no means of quick replacement and signal shutdown for multiple days until replaced. Traffic signal poles and associated hardware are evaluated for replacement concurrently in order to consider updated design standards and condition of infrastructure. Project costs are based on bid history and construction prices received.

Fiscal Impact

This project is funded by the Gas Tax Fund. The budget provided is sufficient for two signals per two-year cycle. Project costs are based on bid history and construction prices received. Near term funding levels are calibrated to match conditions in the field.

Funding Sources

Gas Tax Fund

Plans and Goals

LT - Land Use and Transportation - LT-2: Environmentally Sustainable Land Use & Transportation Planning and Development

Project Financial Summary

	Project Costs	Revenues	Operating Costs
Prior Actual	5,969,845	4,167,494	-
2022-23	2,188,575	1,258,729	-
2023-24	1,851,645	-	-
2024-25	404,614	-	-
2025-26	1,711,570	-	-
2026-27	410,777	-	-
2027-28	1,851,235	-	-
2028-29	444,296	-	-
2029-30	2,002,295	-	-
2030-31	480,551	-	-
2031-32	2,165,683	-	-
2032-33	519,764	-	-
2033-34	2,342,403	-	-
2034-35	562,176	-	-
2035-36	2,533,543	-	-
2036-37	608,050	-	-
2037-38	2,841,275	-	-
2038-39	681,906	-	-
2039-40	3,073,123	-	-
2040-41	764,733	-	-
2041-42	3,323,890	-	-
2042-43	860,221	-	-
20 Year Total	29,433,750	-	-
Grand Total	37,592,170	5,426,223	-