



FISCAL YEAR 2020

# ADOPTED CAPITAL BUDGET



August 19, 2019

To the Honorable Mayor and City Council:  
2020 Fiscal Year Capital Budget Transmittal

Dear Mayor and Council Members:

I am pleased to present the FY 2020 Adopted Capital Budget along with the 2020-2024 Capital Improvement Program (CIP) Plan for the City of Palo Alto. This document guides the City in the planning and scheduling of infrastructure improvement projects over the next five years and it was developed in coordination with all the City departments responsible for capital projects. As required by the City Municipal Code, the Planning and Transportation Commission (PTC) reviewed the 2020-2024 CIP on May 8, 2019 to evaluate the program's compliance with the Updated Comprehensive Plan which was adopted by City Council in November 2017.

Before discussing the details of the FY 2020 Capital budget and the planning for the five-year CIP, I wanted to highlight a few accomplishments for FY 2019. At the Airport, phase two of three of the Apron Reconstruction project is complete, allowing for a better customer experience for patrons of the airport who store their planes and fly in and out of Palo Alto. The new Dewatering and Loadout Facility was opened at the Regional Water Quality Control Plant, and the sludge incinerators shut down and decommissioned to align with the City Council's 2019 Climate Change priority. The Upgrade Downtown project completed major utility infrastructure work along with upgrades for parking, pedestrians, and traffic to enhance the infrastructure for businesses along University Avenue as well as the experience of visitors walking and enjoying downtown. More information on this project can be found at <http://upgradedowntownpa.com/>.

The FY 2020 Adopted Capital Budget, which includes the Capital Improvement Funds, Enterprise Funds, and Internal Service Funds, is \$191.5 million, a decrease of \$29.7 million or 13.4%, compared to the FY 2019 Adopted Capital Budget of \$221.2 million. The overall 2020-2024 CIP is \$750.8 million, an increase of \$3.8 million or 0.5% compared to the 2019-2023 CIP of \$747.0 million. It should be noted that the City Council only approves the budget for the first year of any five-year CIP, and the remaining four years are to be used for forecasting and planning purposes. Several factors contributed to the decrease from FY 2019 to FY 2020 as well as the slight overall increase to the five-year CIP. In the Capital Improvement Fund the recommendation to move the construction of the New Public Safety Building (PE-15001) from FY 2020 to FY 2021 and the same recommendation to move the third phase of the Airport Apron Reconstruction project (AP-16000) in the Airport Fund are the main factors in reducing FY 2020. The slight overall increase in the 2020-2024 CIP is mainly attributed to Utilities staff proposing a new replacement schedule for gas, water, and wastewater main construction projects that will avoid having all three types of projects going on simultaneously. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. This has pushed some of the larger projects planned in the previous five-year CIP out beyond the 2020-2024 timeframe; however, this is offset by funding

# TRANSMITTAL LETTER

being reappropriated from FY 2019 to FY 2020 for projects that were not completed in FY 2019 and have work continuing into FY 2020.

The Enterprise Funds comprise the largest portion of the five-year CIP in budgeted project costs (\$373.2 million), but there are a fewer number of projects (96) than budgeted in the Capital Improvement Funds (105) with budgeted costs of \$348.2 million. The Internal Service Funds have 17 projects totaling \$29.4 million.

## City Council Priorities

At the start of the City's budget process, the City Council determines its priorities for the upcoming year and guides both budget development and department priority-setting. The priorities for 2019 are:

- Climate Change/Sustainability and Climate Action Plan
- Grade Separations
- Transportation and Traffic
- Fiscal Sustainability

Within the capital budget, the top priority is to fund and complete the 2014 Council Infrastructure Plan (IP) projects approved by the City Council in June 2014. This aligns with the Council's Fiscal Sustainability priority by maintaining funding for high priority projects while preserving funding for other capital needs across the City or unforeseen issues that come up and need funding immediately.

Grade separation is another City Council priority that falls squarely in the capital budget. Funding grade separation upgrades along the Caltrain corridor appears to be the single largest infrastructure project in terms of potential cost facing the City. To facilitate the selection of a preferred alternative and continue work on initial design and planning, \$1.0 million of the approximate \$1.3 million Measure B funding the City will receive annually is programmed in the Railroad Grade Separation project (PL-17001). The remaining \$0.3 million of Measure B funding is programmed in the Traffic Signal and Intelligent Transportation System Upgrades project (PL-05030) to address the Transportation and Traffic priority. Similarly, SB1 funding of approximately \$1.2 million annually is programmed to partially fund the general Street Maintenance project (PE-86070).

There are several major capital initiatives across the City that will need to be managed in a balanced and strategic manner including:

- 2014 Council Infrastructure Plan Projects: Substantial progress has been made on the set of nine projects that were approved by the Council in 2014 as the highest priority projects within the Capital Improvement Fund. As part of the FY 2020 Capital Budget, I recommended and the Council approved the addition of a tenth project to the Infrastructure Plan: Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equipment (PL-15002). Due to the City Council's decision to defer the New Downtown Parking Garage Project (PE-15007) in February 2019, this project will mitigate parking congestion in downtown while plans for the Downtown Garage are reevaluated. Funding from the University Avenue Parking Permit Fund of approximately \$1.1 million, previously planned to cover the costs for PL-15002, will now be reserved for future use towards capital needs in the University Avenue Parking District.



All ten projects are scheduled to be complete within the 2020-2024 CIP, and four of the projects are anticipated to be complete in FY 2020. The Fire Station #3 Replacement project (PE-15003) is anticipated to be completed in Summer 2019. Construction contracts for phases 1 and 2 of the Charleston/Arastradero Corridor project (PE-13011) will be substantially complete in Summer 2019, and the third and final phase is planned to be finished in Spring 2020. In addition, the California Avenue Garage (PE-18000) is currently under construction with completion estimated in Summer 2020. A construction contract for the Highway 101 Pedestrian/Bicycle Overpass (PE-11011) will be awarded in Summer 2019 with completion estimated for Fall 2020. Due to continued increases in the cost of construction, costs for the IP have increased from the 2019-2023 CIP estimate of \$249.9 to \$280.6 million. Further discussion of the IP and strategies to fund the cost increases are addressed in Attachment A. Further information about the IP can also be found here: <https://www.infrastructure.cityofpaloalto.org/>.

- Water Quality Control Plant: Management of the Plant's infrastructure is programmed in the Wastewater Treatment (WWT) Fund and costs are recovered from the City and the five partner agencies serviced by the Plant. Many of the Plant's major systems are reaching the end of their useful life and new technology for systems such as advanced water purification, and secondary treatment upgrades are available and need to be integrated into the Plant while older systems are phased out. This overhaul of the Plant will require major investment of \$133.6 million over the five-year CIP. Staff is currently exploring funding options for low interest state revolving fund loans or revenue bonds to mitigate the costs to the City and partner agencies for these large infrastructure investments.
- Storm Water Management: In April 2017, the Storm Water Management Fee ballot measure was approved by the voters to fund future improvements to the City's storm water system. There were 13 specific projects outlined in the ballot measure to be completed over 15 years, and six of these projects are programmed to be complete within the 2020-2024 CIP. A recurring project for general rehabilitation and maintenance of the system is also included.
- Airport Apron Reconstruction: City management of the Airport is still relatively new, so it is taking time to generate the revenue needed to self-sustain the operating and capital needs at the Airport. Funding the City's 10% portion of the apron reconstruction will need to be carefully managed to limit the need for additional funding from the General Fund for Airport services. During the development of the 2020-2024 CIP, staff determined that the Airport Fund could not support the 10% portion of phase 3 of the Airport Apron Reconstruction Project (AP-16000) in FY 2020, so phase 3 has been postponed to FY 2021. Staff is still in discussions with the Federal Aviation Administration (FAA) about the goal of finishing the multi phased project by FY 2023.

## Funding Challenges

During the development of the 2020-2024 CIP, I stressed the importance of examining workload capacity, existing resources, and the priorities of each capital fund to ensure that capital projects already underway or programmed were still priorities and could be completed before requests to fund new projects were made. This was to reinforce the recommendation of the Infrastructure Blue Ribbon Commission (IBRC) to focus on "catch-up" and "keep-up" projects to maintain the City's existing infrastructure. There are relatively few new projects recommended to be added to



## TRANSMITTAL LETTER

the 2020-2024 CIP and a number of projects were reprioritized and moved into outer years of the five-year period to better align capacity and funding resources. Overall there are 13 new projects added to the CIP: nine in the Capital Improvement Funds, three in the Enterprise Funds, and one in the Internal Service Funds. These projects are discussed further in Attachment A and the respective fund sections of this document.

An additional charge to staff during the development of this five-year plan was to focus on the ongoing operating and maintenance costs associated with new and upgraded capital projects. Ongoing costs for custodial services, facility maintenance, and utility connections, among other services, are sometimes overlooked when planning for capital projects. As a result, these ongoing costs are sometimes added to the workloads of existing maintenance teams already stretched or identified only after the project is already complete. To align with the Council's priority for Fiscal Sustainability, staff has quantified these ongoing costs for projects within the 2020-2024 CIP as a planning tool for project decision making and future budgets. For projects where ongoing costs could not be quantified, staff has estimated the ongoing work needed and will return with estimated costs closer to the completion of the projects.

Although the fund balances across the five-year CIP remain positive for all funds, maintaining this fiscal sustainability requires the staff and Council to focus on the CIP priorities already recommended. The Infrastructure Plan, currently estimated at \$280.6 million in costs, could continue to increase as design work progresses and more projects are awarded for construction. In addition, the Capital Improvement Fund, as currently recommended, lacks flexibility in the first few years of the five-year CIP for the City to respond to unforeseen, urgent capital needs or address known but unfunded community asset projects (i.e. Junior Museum and Zoo Phase II, Animal Shelter Reconstruction, Parks Master Plan Projects) over the next five years. In addition, execution of the five-year CIP assumes projects remain within budgeted levels and that there are no new capital projects added prior to the completion of the IP projects.

To align with the City Council's Fiscal Sustainability priority and set aside funding for known and unknown future capital needs, staff established two reserves in the Capital Improvement Fund. Starting in FY 2023, \$5.0 million is approved to be set aside in a Reserve for Debt Service in order to have available funding in case of a fiscal downturn to make annual payments towards the debt obligations incurred through the use of Certificate of Participation (COP) bond funding used to finance the California Avenue Area Garage and the Public Safety Building projects. This reserve will be increased to \$10.0 million in FY 2024, which will fund one year of assumed debt service payments for these two projects. The second reserve, a Reserve for Future Capital Needs, is approved for \$5.0 million in FY 2024 in order to start setting aside funding for the known and unknown future capital projects, before it gets programmed into existing capital projects.

As previously mentioned, generating enough revenue at the Airport to maintain and upgrade the Airport facilities without help from the General Fund continues to be a challenge, especially if the cost of apron reconstruction continues to increase. Staff will continue to work with the FAA to complete the project as quickly as possible within the limited resources available to fund the City's portion of the project costs. Work is currently being done by staff in partnership with the Palo Alto Unified School District (PAUSD) to develop the Cubberley Master Plan for the Cubberley Community Center site. Once the Master Plan is complete, additional work will be required to align the Plan's priorities with the City Council's Direction for the site and the fund-

ing available to do the work. It is important that staff and the City Council continue to work together to revise and update funding plans to address these and other issues that arise to keep critical capital and infrastructure improvements on track.

The projects recommended in the Adopted FY 2020 Capital Budget in the amount of \$191.5 million and the associated 2020-2024 CIP programmed for \$750.8 million were selected after a thorough review of priorities, anticipated future needs, and available resources. Addressing the City's infrastructure backlog continues to be a major focus for the community, the City Council, and staff, who all recognize not only the practical need of these investments but also the importance of delivering on these commitments to future generations.

### Acknowledgments

I would like to thank our dedicated City Council for its leadership and our Executive Leadership Team and the entire staff for providing outstanding services to our community. Special thanks to Kiely Nose, Administrative Services Director; Steve Guagliardo, Interim Director, Office of Management and Budget, and the entire Office of Management and Budget team – Paul Harper, Jessie Deschamps, Alexandra Harris, Chaitali Paliwal, Jamie Perez, and Kayla Shapiro; Brad Eggleston, Director of Public Works, and his team throughout the Public Works Department; and finally department staff throughout the City who contributed to this budget and worked countless hours during evenings and on weekends to develop this document.

Respectfully Submitted,

Ed Shikada



City Manager

# Attachment A:

## Capital Improvement Funds

The Capital Improvement Fund category includes two funds, the Capital Improvement Fund and the Cubberley Property Infrastructure Fund, which make up the second largest section of the 2020-2024 CIP in terms of cost at \$348.2 million, but have the largest number of projects with 105. Capital projects that do not directly benefit the Enterprise Funds, support technology improvements, or vehicle maintenance and replacement are funded in the Capital Improvement Fund and account for repairs to the City's roads, parks and open space, and most City facilities. The Cubberley Property Infrastructure Fund supports repair and renovation of facilities at the Cubberley Community Center.

### Sources of Funding

The Capital Improvement Fund has been supported primarily through a transfer from the General Fund split into two classifications, a base amount and dedicated funding from Transient Occupancy Tax (TOT) revenue. Since FY 2013, the base transfer level has increased annually by an amount equal to the consumer price index, bringing the FY 2020 base transfer to \$15.3 million. In addition to this base level of General Fund support, the City Council earmarked revenues from a total voter approved 3.5 percent TOT increase plus revenue from new hotels built after January 2015 to fund the Infrastructure Plan. The FY 2020 General Fund transfer to infrastructure includes \$11.8 million in TOT revenues; therefore, the total transfer to the Capital Improvement Fund is \$28.3 million, which includes \$1.2 million of estimated interest earnings in addition to the base and TOT amounts.

Other major sources of funding for the Capital Improvement Fund include Certificates of Participation (COP) funding, grants from Federal, State, and other local agencies, and transfers from the Stanford University Medical Center Development Agreement, the Gas Tax Fund, and various Impact Fee Funds and Parking District Funds. Further discussion of these revenue sources can be found in the Summary of CIP Program Revenue section of this document.

The Cubberley Property Infrastructure Fund is funded solely through a transfer from the General Fund based on the November 2014 change to the lease with the Palo Alto Unified School District. The revised lease reallocated an ongoing annual \$1.8 million "Covenant Not to Develop" payment that previously went to the school district to establish the Cubberley Property Infrastructure Fund and support infrastructure repair and renovation for the Cubberley Community Center.

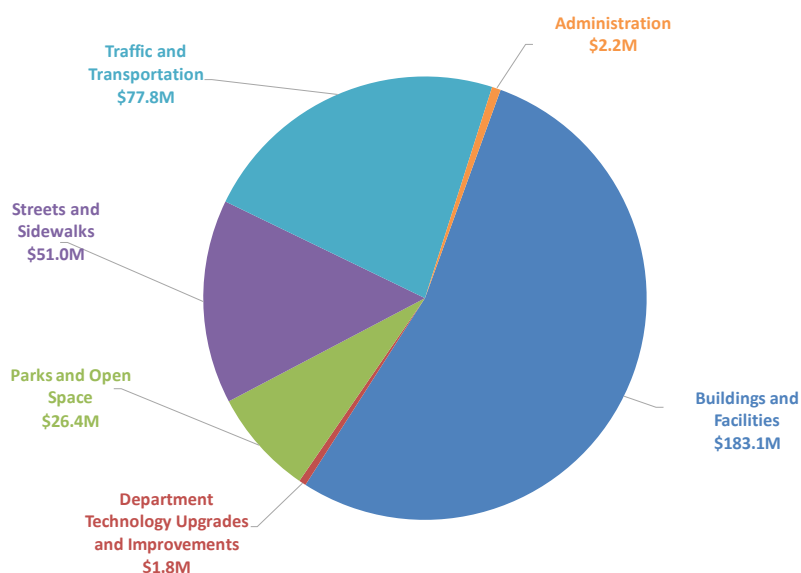
### Expenditures

The 2020-2024 CIP for the Capital Improvement Fund includes 100 projects at a cost of \$342.3 million, of which 79 projects have funding in FY 2020 at an estimated cost of \$86.1 million, with \$34.1 million being reappropriated from FY 2019 for projects continuing into FY 2020. The Capi-



tal Improvement Fund budget is divided into six categories: Buildings and Facilities, Department Technology Upgrades and Improvements, Parks and Open Space, Streets and Sidewalks, Traffic and Transportation, and Unallocated Salaries and Benefits. Additional details on each of these categories can be found in the Capital Project Fund Overview section for each of the categories.

**2020-2024 Capital Improvement Fund Expenditures by Category**  
**\$342.3 Million**



## Infrastructure Management System and Status of the “Catch-Up” Backlog

A key recommendation of the IBRC report was the establishment of an Infrastructure Management System (IMS) that will maintain an inventory of the City’s infrastructure and track and budget for “catch-up” and “keep-up” needs. The IMS has been implemented utilizing two software applications, Maintenance Connection which is the repository for the infrastructure asset inventory information, and Questica, the City’s budget system, which is used for long term capital planning. The combined use of both applications will allow the City to plan and report on long term capital funding needs and deferred maintenance, or “catch-up” balances for both operating and capital maintenance. The initial asset inventory and capital planning information has been transferred to the IMS, and reporting from the IMS began in FY 2019.

The December 2011 IBRC Report identified a backlog of “catch-up” projects totaling \$41.2 million. The 2020-2024 CIP includes a total of \$23.8 million in catch-up projects, reducing the backlog amount to \$17.4 million at the end of the five-year period as outlined in the table below.

### IBRC “Catch-Up” Backlog Status

IBRC “CATCH-UP” CATEGORY	IBRC FINAL REPORT “CATCH-UP” BACKLOG	“CATCH-UP” AMOUNT FUNDED TO DATE OR INCLUDED IN THE ADOPTED CIP	FISCAL YEAR 2020-2024 BACKLOG
Buildings	\$5.0 million	\$2.2 million	\$2.8 million
Cubberley Community Center	\$6.9 million	\$1.2 million	\$5.7 million
Parks	\$14.4 million	\$8.1 million	\$6.3 million
Surface	\$14.9 million	\$12.3 million	\$2.6 million
<b>TOTAL</b>	<b>\$41.2 million</b>	<b>\$23.8 million</b>	<b>\$17.4 million</b>

The 2020-2024 Capital Improvement Program continues significant investments in traffic and transportation initiatives. In November 2016, Santa Clara County passed Measure B, a 30-year half-cent county wide sales tax to enhance transit, highways, expressways and active transportation (bicycles, pedestrians and complete streets). Measure B revenue for Palo Alto is anticipated to be \$1.3 million annually and has been recommended to be split, with \$1.0 million for the Railroad Grade Separation project (PL-17001) and \$0.3 million for Traffic Signal and Intelligent Transportation System Upgrades project (PL-05030). Similarly, S.B. 1 funding for Road Maintenance and Rehabilitation from the State of approximately \$1.2 million annually is recommended to partially fund general Street Maintenance (PE-86070). It should be noted that in future years the addition of this funding to the City’s street maintenance program could potentially allow some funds to be reallocated to other capital projects with City Council approval.

### City Council Infrastructure Plan

In 2013 the City Council established the Council Infrastructure Committee and tasked the Committee with identifying a funding plan for infrastructure projects requiring funding above and beyond the base annual General Fund transfer to the Capital Improvement Fund. After meeting regularly for more than a year, the Committee arrived at a list of nine recommended projects and an associated funding plan, which was approved by the City Council in June 2014. At the time the plan was adopted, the total cost of Infrastructure Plan projects was estimated at \$125.8 million. It is important to note that project costs for two of the projects only included the amounts that were unfunded in June 2014. For comparison to current Council Infrastructure Plan costs the original estimate should have been \$136.6 million (rather than \$125.8 million).

Additionally, the project costs did not include staff salaries and benefits. Beginning in the 2019-2023, staff budgeted the cost of staff salaries and benefits within the individual capital projects to more accurately plan and account for the total cost of projects. These costs had previously been budgeted in a single capital project (AS-10000) that accounted for the salaries and benefits of all staff that work on capital projects and are budgeted in the capital fund. The inclusion of staff salaries and benefits in individual project budgets can appear to increase the overall cost of the projects. In reality, the apparent increase is simply a shift of budget allocation from AS-10000 to the individual projects. The primary reasons for increased project costs are the sig-

nificant construction cost escalation that has occurred in recent years and additions to the scope of certain projects.

As part of the 2020-2024 CIP, a tenth project is approved to be added to the Infrastructure Plan: the Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equipment (PL-15002). Due to the City Council's decision to defer the New Downtown Parking Garage Project (PE-15007) in February 2019, PL-15002 will mitigate parking congestion in downtown while plans for the Downtown Garage are reevaluated. Funding from the University Avenue Parking Permit Fund of approximately \$1.1 million, previously planned to cover the costs for PL-15002, will now be reserved for future use toward capital needs in the University Avenue Parking District.

Based on known estimates and including the tenth project, the total cost of the Infrastructure Plan is currently \$280.6 million with \$180.4 million (64.3%) programmed in the 2020-2024 CIP. These costs are detailed by project below:

Project Name (Number)	2020-2024 CIP Budget	Total Project Budget
Public Safety Building (PE-15007)	\$107.8M	<b>\$115.5M</b>
California Avenue Parking Garage (PE-18000)	\$1.3M	<b>\$50.1M</b>
Downtown Parking Garage (PE-15007)	\$26.6M	<b>\$29.1M</b>
Bicycle and Pedestrian Transportation Plan Implementation (PL-04010)	\$11.1M	<b>\$20.8M</b>
Charleston/Arastradero Corridor Project (PE-13011)	\$6.3M	<b>\$19.6M</b>
Highway 101 Pedestrian/Bicycle Overpass (PE-11011)	\$11.2M	<b>\$18.7M</b>
Fire Station 4 Replacement (PE-18004)	\$10.2M	<b>\$10.2M</b>
Fire Station 3 Replacement (PE-15003)	\$0.3M	<b>\$10.1M</b>
Byxbee Park Completion (PE-18006)	\$3.0M	<b>\$3.6M</b>
Downtown Automated Parking Guidance Systems (PL-15002)	\$2.6M	<b>\$2.8M</b>
<b>Total</b>	<b>\$180.4M</b>	<b>\$280.6M</b>

The IP relies on the two voter approved increases to the Transient Occupancy Tax (TOT) in November 2014 and November 2018 for a total 3.5 percent of TOT revenue which the City Council identified as a funding source to aid in infrastructure needs, including the Infrastructure Plan projects and the associated debt service payments from the COP issuances. The City Council also identified TOT funding from new hotels built after January 2015 for infrastructure needs, and the 2020-2024 CIP assumes the opening of new Marriott hotels in FY 2021. COPs were issued for the California Avenue Garage in March 2019 and a portion of the TOT revenues will be allocated to pay for the debt service, which is estimated to be \$2.4 million annually. COPs for the Public Safety Building are programmed to be issued in FY 2021 and it's estimated this will increase the annual debt service to \$9.8 million annually.



## TRANSMITTAL LETTER

In addition to the TOT funding, there are a number of other funding sources that are dedicated towards the IP projects. For more information regarding the funding sources per IP project please see the individual project pages in this document.

Funding Source	2020-2024 CIP Funding	Total Project Funding
Certificates of Participation (COP) Bond Proceeds	\$103.0M	\$145.0M
Stanford University Medical Center (SUMC) Development Agreement	\$13.0M	\$34.5M
Grant Funding from Other Local Agencies	\$9.6M	\$10.4M
Downtown Parking In-Lieu Fees	\$5.5M	\$6.8M
Parks Dedication Fees	\$2.4M	\$2.8M
SB1 Gas Tax Funding	\$0	\$1.1M
Reimbursement from Google	\$1.0M	\$1.0M
Charleston/Arastradero Impact Fees	\$0	\$0.8M
Stormwater Management Fund	\$0	\$0.7M
<b>Total</b>	<b>\$134.5M</b>	<b>\$203.1M</b>

All ten projects are scheduled to be complete within the 2020-2024 CIP, and four of the projects are anticipated to be complete in FY 2020. The Fire Station #3 Replacement project was awarded for construction in FY 2018 and is anticipated to be complete in Summer 2019. Construction on phases 1 and 2 of the Charleston/Arastradero Corridor project will be substantially complete in Summer 2019, and the third and final phase is planned to be finished in Spring 2020. In addition, the California Avenue Garage started construction in Spring 2019 and completion is estimated in Summer 2020. A construction contract for the Highway 101 Pedestrian/Bicycle Overpass (PE-11011) will be awarded in Summer 2019 with completion estimated for Fall 2020. Additional information on the status of all of the IP projects can be found on the City's website: <https://www.infrastructure.cityofpaloalto.org/>.

In addition to the Council Infrastructure Plan, there are a number of other significant potential capital projects that have been identified as needs that do not have funding identified. While successful completion of the Council Infrastructure Plan has been identified as the highest infrastructure priority, the following are some other potential competing community asset projects:

- Junior Museum and Zoo rebuild (Phase II)
- Animal Shelter replacement or renovation
- Parks Master Plan implementation

To align with the City Council's Fiscal Sustainability priority and set aside funding for community asset project like these, a Reserve for Future Capital Needs for \$5.0 million will be established starting in FY 2024. This will enable a discussion to prioritize these projects and others that may

arise in the years after the IP projects are complete before the funding is programmed into existing capital projects.

## New Projects

There are nine new projects in the Capital Improvement Fund for the 2020-2024 CIP and all but two have funding in FY 2020. Two of the projects fall under the category of Facility Upgrades and include:

- City Bridge Improvements (PE-20001): FY 2020 - \$0.02 million; 2020-2024 CIP: \$1.2 million
- City Facilities Assessment and Record Plan Management System (PE-20002) - FY 2020: \$0.3 million; 2020-2024 CIP: \$0.3 million

Six of the projects are related to Enhanced Public Safety:

- Automated External Defibrillator Replacement (FD-21000) - FY 2020: \$0.0 million; 2020-2024 CIP: \$0.2 million
- Cardiac Monitor Replacement (FD-20000): FY 2020 - \$0.9 million; 2020-2024 CIP: \$0.9 million
- Extrication Tool Replacement (FD-22000): FY 2020 - \$0.0 million; 2020-2024 CIP: \$0.2 million
- Police Video Recording Systems Replacement (PD-20000) - FY 2020: \$0.2 million; 2020-2024 CIP: \$0.3 million
- Self-Contained Breathing Apparatus (SCBA) Compressor Replacement (FD-20001) - FY 2020: \$0.1 million; 2020-2024 CIP: \$0.1 million
- Thermal Imaging Cameras (FD-20002) - FY 2020: \$0.1 million; 2020-2024 CIP: \$0.1 million

The final project is related to Transportation Safety:

- Churchill Avenue/Alma Street Railroad Crossing Safety Improvements (PL-20000) - FY 2020: \$0.5 million; 2020-2024 CIP: \$4.5 million

More information about these projects can be found on their respective project pages under the Capital Improvement Fund section in this document.

## Infrastructure Reserve

The ending fund balance in the Capital Improvement Fund is referred to as the Infrastructure Reserve (IR). The IR is used to provide cash flow for reimbursable grants, address unanticipated cost increases, and provide funding for urgent and unanticipated projects. As seen in the Source and Use chart in the Capital Improvement Fund section of this document, the projected IR balance at the end of FY 2020 is estimated to be \$15.4 million. This five year CIP assumes keeping the Infrastructure Plan COP funding at a debt to revenue ratio under 60%, which is slightly lower than the 2019-2023 CIP that kept it under 70%. Part of this reduced ratio can be attributed to the voter approved additional 1.5% increase in TOT funding that Council directed towards funding infrastructure. The IR is estimated to remain positive through all five years of the 2020-2024 CIP. This strategy has some risk and uncertainties due to the timing of the opening of the new Marriott hotels and it assumes that current projects remain within budgeted levels, no new projects are added to the CIP, and no large unforeseen urgent capital needs hap-

## TRANSMITTAL LETTER

pen prior to the completion of the IP projects. It is important to note that City Council only approves the FY 2020 portion of the five-year CIP, so these assumptions and risks will continue to be evaluated throughout FY 2020 and considered as part of the development of the 2021-2025 CIP.

### **Cubberley Property Infrastructure Fund**

The 2020-2024 CIP includes funding for infrastructure improvements at the Cubberley Community Center in accordance with the November 2014 change to the lease with the Palo Alto Unified School District, which reallocated an annual \$1.8 million “Covenant Not to Develop” payment benefiting the school district to infrastructure repair and renovation for the Cubberley Community Center. Work is currently being done by staff in partnership with the Palo Alto Unified School District (PAUSD) to develop the Cubberley Master Plan for the Cubberley Community Center site. Once the Master Plan is complete, additional work will be required to align the Plan’s priorities with the City Council’s Direction for the site and the funding available to do the work.

As a result of the recommendations from the Master Plan being unknown as of the printing of this document, the 2020-2024 CIP for the Cubberley Community Center maintains the same funding assumptions as the previous five-year CIP. This includes funding for emergency repairs at the site, scheduled roof replacements, and replacement of the deteriorated track and field. The emergency repair and roof replacement work is needed to maintain safe building conditions for current use of the site. The track and field replacement is continuing as scheduled as a result of preliminary work done through the Master Plan development process that indicates there will be no changes to the location or layout of the track and field.



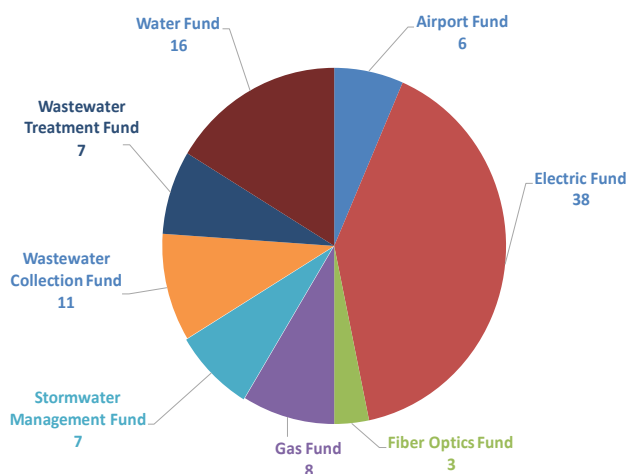
## Attachment B:

# Enterprise and Internal Service Funds

## Enterprise Fund Capital Improvement Projects

Enterprise Funds account for financial activities that are associated with a broad range of municipal services. Each year a significant investment is made from the City's Enterprise Funds (Airport, Electric, Fiber Optics, Gas, Stormwater Management, Wastewater Collection, Wastewater Treatment, and Water). In FY 2020, a total of \$82.9 million will be allocated towards the capital program for the Enterprise Funds, with \$373.2 million allocated over the five-year CIP, representing 49.7 percent of CIP expenditures for all funds. Of the \$86.9 million allocated in FY 2020, \$26.6 million is for projects previously approved by the City Council that are recommended to be reappropriated from FY 2019 for continuation of the projects in FY 2020. The Utilities Department manages the Electric, Water, Gas, Fiber Optics, and Wastewater Collection Funds, while the Public Works Department manages the Airport, Storm Drainage, and Wastewater Treatment Funds. Following is a brief discussion of the City's largest Enterprise Fund capital improvement programs. Additional information on each of these funds can be found in the fund summary sections of this document.

**2020-2024 Enterprise CIP Projects by Fund (96 Total)**



### Airport Fund

The Airport receives a majority of its funding through grants from the Federal Aviation Administration (FAA) and the City is required to match ten percent of the award. A total of \$22.8 million is allocated towards capital infrastructure over the 2020-2024 CIP, with \$0.3 million allocated in

## TRANSMITTAL LETTER

FY 2020. The third phase of the Airport Apron Reconstruction project was moved from FY 2020 to FY 2021 as part of the development of this CIP, because generating enough revenue at the Airport to maintain and upgrade the Airport facilities without help from the General Fund continues to be a challenge, especially if the cost of apron reconstruction continues to increase. Staff will continue to work with the FAA to complete the project as quickly as possible within the limited resources available to fund the City's portion of the project costs. There is one new project programmed at the Airport in the 2020-2024 CIP under the Airport Facilities category:

- Airport Facilities Electrical Improvements (AP-20000) - FY 2020: \$0.2 million; 2020-2024 CIP: \$0.2 million

### Water, Gas, and Wastewater Collection Program

Utilities staff recommends a new replacement schedule for gas, water, and wastewater main construction projects that will avoid having all three types of projects going on simultaneously. This will reduce the amount of construction occurring when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. This new schedule will also better align the capital workload with staffing resources that is typically shared among the three funds. Some of the larger projects planned in the previous five-year CIP have been pushed out beyond the 2020-2024 time-frame which should also help to smooth out rate increases affected by capital needs.

### Stormwater Management Fund

The Stormwater Management Fee ballot measure was approved by voters in April 2017, providing funding for the Storm Drain Blue Ribbon Committee's recommendations for capital projects related to maintenance and upgrades to the City's storm water management system. The 2020-2024 Capital Improvement Program includes expenditures of \$15.8 million, with \$4.5 million allocated in FY 2020. With the passage of the 2017 Storm Water Management Fee ballot measure, 13 drainage improvement projects will be recommended over the next 14 years, six of which have been programmed in the 2020-2024 CIP, and the first estimated to be completed in FY 2020. There are two new projects in the Storm Drainage Fund for the 2020-2024 CIP; both fall under the category of Capacity Improvements and include:

- Louis Road System Upgrades (SD-24000) - FY 2020: \$0.0 million; 2020-2024 CIP: \$2.4 million
- West Bayshore Road Trunk Line Improvements (SD-23000) - FY 2020: \$0.0 million; 2020-2024 CIP: \$2.1 million

### Wastewater Treatment Fund

The Wastewater Treatment Fund accounts for activities related to the replacement and rehabilitation of the Regional Water Quality Control Plant infrastructure. The 2020-2024 Capital Improvement Program includes expenditures of \$133.6 million, with \$28.3 million allocated in FY 2020. Approximately 64 percent of expenditures within this fund are reimbursed by five contributing partner agencies (Cities of Mountain View and Los Altos, Town of Los Altos Hills, Stanford University, and East Palo Alto Sanitary District). Many of the Plant's major systems are

reaching the end of their useful life and new technology for systems such as advanced water purification, and secondary treatment upgrades are available and need to be integrated into the Plant while older systems are phased out. Staff is currently exploring funding options for low interest state revolving fund loans or revenue bonds to mitigate the costs to the City and partner agencies for these large infrastructure investments.

## Internal Service Fund Capital Improvement Projects

Internal Service Funds account for activity that provides goods or services to other funds, departments, or agencies within the City. Of the City's Internal Service Funds, the Technology Fund and Vehicle Replacement and Maintenance Fund have capital projects budgeted throughout the 2020-2024 Capital Improvement Program. The Technology Fund has a total 2020-2024 budget of \$8.3 million (\$7.9 million in FY 2020), and the Vehicle Replacement Fund has a total 2020-2024 budget of \$21.1 million (\$6.7 million in FY 2020).

### Technology Fund

Technology Fund projects enhance service delivery to the community and to City staff through efficient and effective implementation of information technology solutions. Of the \$7.9 million in funding for FY 2020, \$2.3 million is recommended to be reappropriated from FY 2019 for continuation of the projects in FY 2020. The major projects for 2020-2024 are the Enterprise Resource Planning Upgrade (\$4.7 million) and City Council Chambers Upgrade (\$1.7 million), which are both currently programmed to be completed in FY 2020.

### Vehicle Replacement Fund

Vehicle Replacement and Maintenance Projects provide funding for maintaining and replacing City vehicles and heavy equipment to ensure safe, reliable, and efficient use of resources. Of the \$6.7 million in funding for FY 2020, \$2.9 million is recommended to be reappropriated from FY 2019 for continuation of the projects in FY 2020. To maintain a regular replacement schedule efficiently, staff has been standardizing the process for determining the replacement value and timing. There is one new project programmed for vehicle replacements scheduled in 2024 in the 2020-2024 CIP under the Vehicle and Equipment Replacement category:

- Scheduled Vehicle and Equipment Replacement-Fiscal Year 2024 (VR-24000) - FY 2020: \$0.0 million; 2020-2024 CIP: \$2.6 million





CITY OF  
**PALO  
ALTO**



CITY OF  
**PALO  
ALTO**

# Fiscal Year 2020 Adopted Capital Budget

## City Council

Eric Filseth, Mayor

Adrian Fine, Vice Mayor

Alison Cormack

Tom DuBois

Liz Kniss

Lydia Kou

Greg Tanaka

**Ed Shikada**, City Manager

**Kiely Nose**, Director of Administrative Services/Chief Financial Officer

**David Ramberg**, Assistant Director of Administrative Services

**Christine Paras**, Assistant Director of Administrative Services

**Steve Guagliardo**, Director (Interim), Office of Management and Budget

**Paul Harper**, Budget Manager, Office of Management and Budget

**Tom DuBois**, Finance Committee Chair

## CITY OF PALO ALTO

The government of the City of Palo Alto exists to promote and sustain a superior quality of life in Palo Alto. In partnership with our community, our goal is to deliver cost-effective services in a personal, responsive and innovative manner.

# Our Values



### Quality

Superior delivery of services

### Courtesy

Providing service with respect and concern

### Efficiency

Productive, effective use of resources

### Integrity

Straight-forward, honest and fair relations

### Innovation

Excellence in creative thought and implementation

# Table of Contents





CITY OF  
**PALO  
ALTO**



<b>I</b>	<b>Introduction.....</b>	<b>13</b>
	Budget Acknowledgments.....	15
	CIP Organizational Chart.....	15
	The Budget Process and Document .....	17
	Budget Award.....	25
<b>II</b>	<b>Financial Summary.....</b>	<b>27</b>
	Summary of CIP Program Revenue .....	29
	Summary Information .....	35
	Debt Policy and Obligations.....	43
<b>III</b>	<b>Capital Fund Projects.....</b>	<b>51</b>
	<b>Capital Improvement Fund .....</b>	<b>53</b>
	Buildings and Facilities .....	75
	Americans With Disabilities Act Compliance.....	76
	Animal Shelter Renovation.....	78
	Baylands Flood Protection Levee Improvements.....	80
	Building Systems Improvements.....	82
	City Bridge Improvements .....	86
	City Facilities Assessment and Record Plan Management System .....	88
	City Facility Parking Lot Maintenance .....	90
	City Hall Space Planning .....	92
	Civic Center Electrical Upgrade & EV Charger Installation.....	94
	Civic Center Fire Life Safety Upgrades.....	96
	Civic Center Waterproofing Study and Repairs .....	98
	Facility Interior Finishes Replacement.....	100
	Fire and Utilities Trench Training Facility .....	102
	Fire Ringdown System Replacement.....	104
	Fire Station 1 Improvements.....	106
	Fire Station 3 Replacement .....	108
	Fire Station 4 Replacement .....	110
	High and Bryant Street Garages Waterproofing and Repairs .....	112
	Internal Alarm System Replacement .....	114
	JMZ Renovation .....	116
	Municipal Service Center A, B, & C Roof Replacement .....	118
	Municipal Service Center Lighting, Mechanical, and Electrical Improvements .....	120
	New California Avenue Area Parking Garage .....	122

## TABLE OF CONTENTS

New Downtown Parking Garage.....	124
New Public Safety Building .....	126
Parking Lot J Elevator Modernization .....	128
Performing Arts Venues Seat Replacement.....	130
Roofing Replacement .....	132
Roth Building Maintenance.....	134
University Avenue Parking Improvements .....	136
Ventura Buildings Improvements .....	138
Water, Gas, Wastewater Office Remodel .....	140
Department Technology Upgrades and Improvements .....	143
Automated External Defibrillator Replacement .....	144
Cardiac Monitor Replacement .....	146
Extrication Tool Replacement .....	148
Police Video Recording Systems Replacement.....	150
Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement.....	152
Self-Contained Breathing Apparatus (SCBA) Replacement .....	154
Thermal Imaging Cameras Replacement .....	156
Parks and Open Space .....	159
Art In Public Spaces.....	160
Athletic Courts Resurfacing .....	162
Baylands Athletic Center 10.5 Acre Expansion Plan.....	164
Baylands Levee Repair for Public Safety Access .....	166
Benches, Signage, Walkways, Perimeter Landscaping .....	168
Bol Park Improvements.....	170
Boulware Park Improvements .....	172
Byxbee Park Completion.....	174
Cameron Park Improvements .....	176
Dog Park Installation and Renovation .....	178
Foothills Park Boronda Lake Dock Replacement .....	180
Foothills Park Dam Seepage Investigation and Repairs .....	182
Foothills Park Improvement Project.....	184
Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Conserva- tion Plan.....	186
Golf Course Net and Artificial Turf Replacement .....	188
Heritage Park Site Amenities Replacement .....	190
Hoover Park Improvements .....	192

## TABLE OF CONTENTS

Johnson Park Renovation . . . . .	194
Mitchell Park Improvements . . . . .	196
Off-Road Pathway Resurfacing And Repair . . . . .	198
Open Space Lakes And Pond Maintenance . . . . .	200
Open Space Trails and Amenities . . . . .	202
Park and Open Space Emergency Repairs . . . . .	204
Park Restroom Installation . . . . .	206
Pearson Arastradero Improvement Project . . . . .	208
Pearson Arastradero Preserve Parking Lot Improvement . . . . .	210
Peers Park Improvements . . . . .	212
Ramos Park Improvements . . . . .	214
Rinconada Park Improvements . . . . .	216
Robles Park Improvements . . . . .	218
Seale Park Improvements . . . . .	220
Turf Management Plan . . . . .	222
Werry Park Playground Improvements . . . . .	224
Streets and Sidewalks . . . . .	227
California Avenue District Gateway Signs . . . . .	228
Curb and Gutter Repairs . . . . .	230
El Camino Median Landscape Improvements . . . . .	232
Newell Road/San Francisquito Creek Bridge Replacement . . . . .	234
Sidewalk Repairs . . . . .	238
Sign Reflectivity Upgrade . . . . .	240
Street Lights Condition Assessment . . . . .	242
Street Lights Improvements . . . . .	244
Street Maintenance . . . . .	246
Thermoplastic Lane Marking and Striping . . . . .	250
Traffic and Transportation . . . . .	253
Bicycle and Pedestrian Transportation Plan Implementation . . . . .	254
Charleston/Arastradero Corridor Project . . . . .	256
Churchill Avenue Enhanced Bikeway . . . . .	260
Churchill Avenue/Alma Street Railroad Crossing Safety Improvements . . . . .	262
Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equip. . . . .	264
Downtown Parking Wayfinding . . . . .	266
El Camino Real Pedestrian Safety and Streetscape Project . . . . .	268
Embarcadero Road at El Camino Improvements . . . . .	270

# TABLE OF CONTENTS

Highway 101 Pedestrian/Bicycle Overpass Project . . . . .	272
Parking District Implementation . . . . .	274
Parking Management and System Implementation . . . . .	276
Quarry Road Improvements and Transit Center Access. . . . .	278
Railroad Grade Separation and Safety Improvements . . . . .	282
Safe Routes To School. . . . .	284
Traffic Signal and Intelligent Transportation Systems. . . . .	286
Transportation and Parking Improvements . . . . .	288
Unallocated Salaries and Benefits . . . . .	291
Capital Improvement Fund Administration . . . . .	292
<b>Cubberley Property Infrastructure Fund. . . . .</b>	<b>295</b>
Buildings and Facilities . . . . .	299
Cubberley Building Management Systems . . . . .	300
Cubberley Community Center Master Plan . . . . .	302
Cubberley Repairs . . . . .	304
Cubberley Roof Replacements . . . . .	306
Parks and Open Space . . . . .	309
Cubberley Field Restroom . . . . .	310
Cubberley Track and Field Replacement . . . . .	312
<b>IV Enterprise Fund Projects . . . . .</b>	<b>315</b>
<b>Airport Fund . . . . .</b>	<b>317</b>
Airport Apron, Runways, and Taxiways . . . . .	323
Airfield Electrical Improvements. . . . .	324
Airport Apron Reconstruction. . . . .	326
Runway and Taxiway Reconstruction and Drainage Improvements . . . . .	330
Airport Facilities . . . . .	333
Airport Facilities Electrical Improvements . . . . .	334
Airport Layout Plan . . . . .	336
Automated Weather Observation System (AWOS) . . . . .	338
<b>Electric Fund . . . . .</b>	<b>341</b>
Customer Connections . . . . .	351
Electric Customer Connections. . . . .	352
System Improvements . . . . .	355
230 kV Electric Intertie . . . . .	356
Capacitor Bank Installation. . . . .	358
Coleridge/Cowper/Tennyson 4/12kV Conversion . . . . .	360
Colorado Power Station Equipment Upgrades . . . . .	362

## TABLE OF CONTENTS

Colorado Substation Site Improvements .....	364
Colorado/Hopkins System Improvement .....	366
Communications System Improvements .....	368
East Meadow Circles 4/12kV Conversion .....	370
Edgewood/Wildwood 4kV Tie .....	372
Electric System Improvements .....	374
Electric Utility Geographic Information System .....	376
Facility Relocation for Caltrain Modernization Project .....	378
Hopkins Substation 4/12kV Conversion.....	380
Inter-substation Line Protection Relay .....	382
Rebuild Underground District 15 .....	384
Rebuild Underground District 16 .....	386
Rebuild Underground District 20 .....	388
Rebuild Underground District 23 .....	390
Rebuild Underground District 24 .....	392
Rebuild Underground District 25 .....	394
Rebuild Underground District 26 .....	396
Rebuild Underground District 30 .....	398
Reconfigure Quarry Feeders .....	400
Relocate Quarry/Hopkins Substation 60kV Line (A & B).....	402
SCADA System Upgrades .....	404
Smart Grid Technology Installation .....	406
Substation 60kV Breaker Replacement .....	410
Substation Facility Improvements .....	412
Substation Physical Security .....	414
Substation Protection Improvements .....	416
Underground System Rebuild .....	418
Utility Site Security Improvements.....	420
Wood Pole Replacement .....	422
Undergrounding Projects.....	425
Underground District 42 - Embarcadero Road, Emerson, Middlefield. ....	426
Underground District 43 - Alma/Embarcadero.....	428
Underground District 46 - Charleston/El Camino Real .....	430
Underground District 47-Middlefield, Homer, Webster, Addison .....	432
<b>Fiber Optics Fund.....</b>	<b>435</b>
Capacity Improvements .....	441
Fiber Optics Network System Improvements .....	442

# TABLE OF CONTENTS

Fiber Optics System Rebuild .....	444
Customer Connections .....	447
Fiber Optics Customer Connections .....	448
<b>Gas Fund .....</b>	<b>451</b>
Customer Connections .....	459
Gas System, Customer Connections .....	460
Gas Main Replacements .....	463
Gas Main Replacement - Project 23 .....	464
Gas Main Replacement - Project 24 .....	466
Gas Main Replacement - Project 25 .....	468
System Improvements .....	471
Gas ABS/Tenite Replacement Project .....	472
Gas Distribution System Improvements .....	474
Gas Distribution System Model .....	476
Gas Equipment and Tools .....	478
Gas Meters and Regulators .....	480
<b>Stormwater Management Fund .....</b>	<b>483</b>
Capacity Improvements .....	489
Corporation Way System Upgrades and Pump Station .....	490
East Meadow Drive System Upgrades .....	492
Loma Verde Avenue Trunk Line Improvements .....	494
Louis Road System Upgrades .....	496
West Bayshore Road Pump Station .....	498
West Bayshore Road Trunk Line Improvements .....	500
System Rehabilitation .....	503
Storm Drainage System Replacement And Rehabilitation .....	504
<b>Wastewater Collection Fund .....</b>	<b>507</b>
Customer Connections .....	515
Sewer System, Customer Connections .....	516
System Improvements .....	519
Sewer Lateral/Manhole Rehabilitation and Replacement .....	520
Wastewater Collection System Rehabilitation/Augmentation Project 24 ..	522
Wastewater Collection System Rehabilitation/Augmentation Project 26 ..	524
Wastewater Collection System Rehabilitation/Augmentation Project 28 ..	526
Wastewater Collection System Rehabilitation/Augmentation Project 29 ..	530
Wastewater Collection System Rehabilitation/Augmentation Project 30 ..	532
Wastewater Collection System Rehabilitation/Augmentation Project 31 ..	534



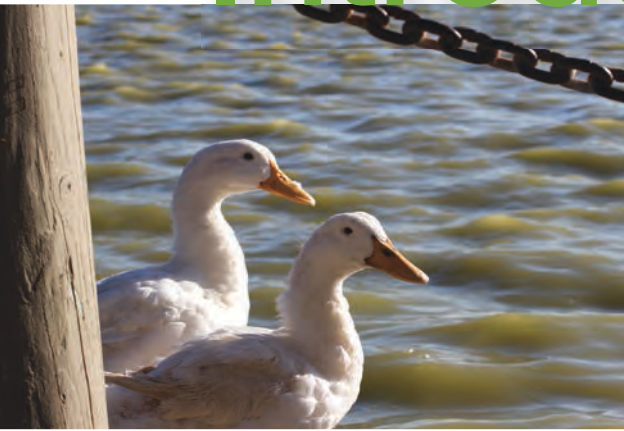
## TABLE OF CONTENTS

Wastewater Collection System Rehabilitation/Augmentation Project 32 .	536
Wastewater Collection System Rehabilitation/Augmentation Project 33 .	538
Wastewater General Equipment and Tools . . . . .	540
Wastewater System Improvements . . . . .	542
<b>Wastewater Treatment Fund . . . . .</b>	<b>545</b>
Buildings and Facilities . . . . .	551
New Laboratory And Environmental Services Building . . . . .	552
System Improvements . . . . .	555
Advanced Water Purification Facility . . . . .	556
Headworks Facility Replacement . . . . .	558
Outfall Line Construction . . . . .	560
Plant Repair, Retrofit, and Equipment Replacement . . . . .	562
Primary Sedimentation Tank Rehabilitation . . . . .	564
Secondary Treatment Upgrades . . . . .	566
<b>Water Fund . . . . .</b>	<b>569</b>
Customer Connections . . . . .	579
Water System Customer Connections . . . . .	580
System Improvements . . . . .	583
Mayfield Reservoir Subgrade and Venting Repair . . . . .	584
Water Distribution System Improvements . . . . .	586
Water General Equipment/Tools . . . . .	588
Water Meters . . . . .	590
Water Recycling Facilities . . . . .	592
Water Reservoir Coating Improvements . . . . .	594
Water Service Hydrant Replacement . . . . .	596
Water System Supply Improvements . . . . .	598
Water Tank Seismic Upgrade and Rehabilitation . . . . .	600
Water, Gas, Wastewater Utility GIS Data . . . . .	602
Water Main Replacements . . . . .	605
Water Main Replacement - Project 26 . . . . .	606
Water Main Replacement - Project 27 . . . . .	608
Water Main Replacement - Project 28 . . . . .	610
Water Main Replacement - Project 29 . . . . .	612
Water Main Replacement - Project 30 . . . . .	614
Water Main Replacement - Project 31 . . . . .	616
Water Main Replacement - Project 32 . . . . .	618
<b>V Internal Service Fund Projects . . . . .</b>	<b>621</b>

## TABLE OF CONTENTS

<b>Technology Fund</b> .....	<b>623</b>
Citywide Technology Upgrades and Improvements .....	629
City Council Chambers Upgrade .....	630
Enterprise Resource Planning Upgrade .....	634
Infrastructure Management System .....	638
IT Disaster Recovery Plan .....	640
Radio Infrastructure Replacement .....	642
Department Technology Upgrades and Improvements .....	645
Development Center Blueprint Technology Enhancements .....	646
Public Safety Computer-Aided Dispatch Replacement .....	648
Utilities Customer Bill System Improvements .....	650
<b>Vehicle Replacement Fund</b> .....	<b>653</b>
Vehicle and Equipment Replacement .....	659
Emergency Repair and Replacement .....	660
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017 .....	662
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018 .....	666
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019 .....	668
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020 .....	670
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021 .....	672
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022 .....	674
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023 .....	676
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2024 .....	678
<b>VI Supplemental Information</b> .....	<b>681</b>
Glossary .....	683
Project Name Index .....	687
Project Number Index .....	691
Americans with Disabilities Act .....	695

# Introduction





CITY OF  
**PALO  
ALTO**

# Budget Acknowledgments

## Department Budget Coordinators

### **Community Services**

Lam Do  
Jazmin LeBlanc

### **Fire**

Amber Cameron

### **Information Technology**

Sherrie Wong

### **City Manager/Office of Transportation**

Khashayar Alaei  
Chantal Gaines  
Sherry Nikzat  
Chitra Moitra (Special Assistance)  
Katie Whitley (Special Assistance)

### **Police**

Eric Jensen  
Diana Radu (Special Assistance)

### **Public Works**

Michelle Austin  
Maybo AuYeung  
Dinaa Alcocer (Special Assistance)  
Jamie Allen (Special Assistance)  
Holly Boyd (Special Assistance)  
Loretta Olmos (Special Assistance)

### **Utilities**

Anna Vuong  
Dave Yuan (Special Assistance)

### **Office of Management and Budget**

Kiely Nose  
Paul Harper  
Steve Guagliardo  
Jessie Deschamps  
Alexandra Harris  
Chaitali Paliwal  
Jamie Perez  
Kayla Shapiro

## Capital Improvement Plan Review Committee

Ed Shikada  
Brad Eggleston  
Kiely Nose  
Paul Harper

# CIP ORGANIZATIONAL CHART





# THE BUDGET PROCESS AND DOCUMENT

## Capital Budget and Five-Year Capital Improvement Plan

The annual capital budget and five-year Capital Improvement Plan (CIP) is a spending plan for the City's infrastructure needs, which is based on the City Council priorities listed below. The City Council approved multi-year funding plans, such as the infrastructure keep-up and catch-up plan recommended by the Infrastructure Blue Ribbon Commission (December 2011), as well as the City Council 2014 Infrastructure Plan (June 2014).

The review of the capital budget and five-year CIP is structured around public hearings by the Planning and Transportation Commission (PTC) and the Finance Committee. The PTC is tasked with ensuring compliance of the capital budget and five-year capital improvement plan with the City Council approved Comprehensive Plan. The Finance Committee reviews all aspects of the capital budget to ensure compliance with previous City Council direction, and further incorporates community input into the process, before recommending approval to the City Council.

## City Council Top 4 Priorities

At the start of the City's budget process, the City Council determines its main priorities for the upcoming budget period. The priorities guide both budget development and department priority-setting. The public has the opportunity to provide input into this process as well as during the budget review by the Finance Committee. The following are the City Council's Top Priorities for 2019:

- Climate Change/Sustainability and Climate Action Plan
- Grade Separations
- Transportation and Traffic
- Fiscal Sustainability

## Budget Preparation

The City's annual budget process begins in September with the development of the base budget and concludes in August with the release of the adopted budget. The operating and capital budgets are developed on behalf of the City Manager, in consultation with senior management and the Director of Administrative Services, by the Administrative Services Department's Office of Management and Budget (OMB) utilizing six main sources of information:

- Community input (e.g. Infrastructure Blue Ribbon Commission)

# THE BUDGET PROCESS AND DOCUMENT

- City Council approved 2014 Infrastructure Plan
- City Council's Top Priorities and other City Council direction
- The Budget Development Process and Guidelines
- Service level and infrastructure needs prioritization
- Comprehensive Plan, which contains the City's official policies on land use and community design; transportation; safety; natural environment; community services and facilities; and business and economics

## Capital Budget Calendar

### SEPTEMBER

The capital budget process begins with the preparation of the capital budget guidelines and calendar by the Administrative Services Department - Office of Management and Budget. The budget guidelines are then distributed to all departments.

### OCTOBER/NOVEMBER

Departments review the prior year five-year CIP. Based on the previously outlined information sources, changes to the prior year budgets are developed by the respective departments managing the City's infrastructure assets: Utilities, Information Technology, Community Services, Public Works, Office of Transportation, and Administrative Services. Changes to the CIP might include: addition of new projects, deletion of planned projects, reprioritization of planned projects, alternative funding strategies, and revision of project costs or timelines. Revisions of project costs reflect a review of potential costs variables such as, but not limited to, revised construction estimates, annual CPI increases, and known contractual increased costs.

### DECEMBER/JANUARY

Departments submit capital infrastructure funding requests to the Office of Management and Budget (OMB). For General Fund funded project requests, OMB, in conjunction with Public Works, prepares an initial prioritization of requests based on the previously outlined information sources for consideration by the General Fund CIP Review Committee consisting of senior managers in Public Works, Community Services, Administrative Services, and the Office of Transportation.

### JANUARY/FEBRUARY

The General Fund CIP Committee reviews the General Fund capital budget submissions to ensure that the proposed projects align with the City Council's Top Priorities and other City Council directives, can be funded with available resources, and are aligned in the five-year plan to maximize City resources.

### MARCH

The City Manager reviews and makes final decisions on the proposed capital budget and five-year Capital Improvement Program.

## APRIL/MAY

Staff solicits input from the Planning and Transportation Commission on the proposed CIP, which reviews the CIP as it relates to the Comprehensive Plan. Comments from the PTC and staff response to comments from the PTC are reported to the Finance Committee during the public budget hearing.

## MAY/JUNE

The City Manager formally presents the proposed CIP to the City Council, and subsequently to the Finance Committee, which conducts a series of public hearings. The Finance Committee presents its recommendation to the City Council. Final adoption occurs at a public hearing in June. All changes made during the public process are incorporated into the adopted budget document, which is distributed to City libraries and posted on the City's website.

## Capital Project Criteria

The following are criteria for qualification as a capital project:

- Must have a minimum cost of \$50,000 for each stand-alone unit or combined project.
- Must have a useful life of at least five to seven years (the purchase or project will still be functioning and not be obsolete at least five to seven years after implementation).
- Must extend the life of an existing asset or provide a new functional use for an existing asset for at least five years, for example extensive roof rehabilitations. These improvements are distinguished from ongoing maintenance work that may extend the life of the asset but is done on a routine basis.

## Project Prioritization Selection Criteria

As part of developing the capital budget, staff must prioritize how to allocate limited resources over a variety of competing needs and demands. Projects and funding levels are prioritized utilizing several criteria, including:

- City Council priorities;
- Alignment with the City's Infrastructure Blue Ribbon Commission (IBRC) report and Infrastructure Plan;
- Health and safety implications;
- Historical spending levels; and
- Certainty over the feasibility, scope, and level of resources required.

In addition to the criteria outlined above, the prioritization of Enterprise Fund CIP projects is determined by the department that manages the Enterprise Fund, and planned using several more factors such as the department's operational needs, funding availability, CIP strategic plan, oversight committee direction, and specific City Council direction.

## Continuing Projects

A change to the mechanism for previously approved projects that are continuing into the new fiscal year was approved during Fiscal Year 2015. Previously, unspent funding for capital projects carried forward automatically from one year to the next as long as funds were spent within

## THE BUDGET PROCESS AND DOCUMENT

a two-year period. In September 2014, the City Council approved an amendment to Municipal Code Section 2.28.090, eliminating the provision allowing for the “reappropriations.” Continuing with this process that became effective with the FY 2016 Capital Budget, City Council authorization is required for funds to be carried forward from one fiscal year to the next.

There are several opportunities for departments to request funds to be carried over from one fiscal year to the next. First, departments have the opportunity to request funds to be carried over from one year to the next through the budget process. By estimating lower than budgeted expenditures in the current year, funds not anticipated to be spent in the current year but still required for the completion of the project are reflected in the first year of the five-year CIP. The Fund Narrative for each fund indicates the total amount of reappropriations included in this budget. Additionally, as part of the year-end closing actions, anticipated to be brought forward for City Council approval in the Fall, all projects will be reviewed to determine if additional adjustments to reappropriations are required.

### **Operating Budget Impact**

The City uses the life cycle costing principle in planning for capital projects. All costs associated with a capital project, including operations and maintenance, will be included in the operating budget at the time of release of the applicable annual operating budget. Where applicable, the CIP budget document identifies the amount of operating expense associated with the project.

### **Changes to the Adopted Budget**

Administrative policies and the Palo Alto Municipal Code provide guidelines on budget transfers, the authorization necessary to implement transfers, and appropriations after the budget is adopted.

### **Budget Amendment**

This is an adjustment to the total project appropriated amount which was not included in the original adopted budget. These supplemental appropriations are presented to City Council in an agenda report and must be approved by the City Council.

Reasons for initiating a Budget Amendment include:

- Recognizing unanticipated revenue, which was not projected in the budget, and appropriating related expenditure in the year received (requires 2/3 City Council approval)
- Changes in scope of work
- Higher than estimated costs
- Adding new projects to the budget due to an urgent need or City Council direction

### **Budgetary Basis**

The budget is prepared in accordance with Generally Accepted Accounting Principles. The budget for governmental funds has been prepared on a modified accrual basis. The modified accrual basis recognizes expenditures when the related fund liability is incurred. Revenues are recognized when they become both measurable and available. “Measurable” means the amount of the transaction can be determined and “available” means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period.

## Fund Structure and Accounting Basis

The accounts of the City are made up of funds that help organize and account for restricted resources. A fund is defined as a fiscal and accounting entity with a self-balancing set of accounts (comprised of assets, liabilities, fund equity, revenues, and expenditures), which are segregated for the purpose of carrying out specific activities or attaining certain objectives in accordance with regulatory requirements.

The City has the following fund type categories:

### Governmental Fund Types

The Governmental Funds include the General, Special Revenue, Debt Service, and Capital Project Funds. Governmental Funds are reported using the current financial resources measurement focus and the modified accrual basis of accounting.

### Proprietary Fund Types

The Proprietary Funds, which include the Enterprise and Internal Service Funds, are used to account for the City's business-type activities. Proprietary funds are reported using the economic resources measurement focus and the full accrual basis of accounting. Revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred, regardless of when the related cash flows take place.

### Fiduciary Fund Types

The Fiduciary Funds account for assets held by the City in trust or as an agent for various assessment and community facilities districts. The City budget process does not include fiduciary funds.

### Agency Fund Types

The Agency Funds are custodial in nature and do not involve measurement of results of operations. The City maintains three agency funds. The City budget process does not include agency funds.

## Document Layout

The Capital Budget document provides readers with cost estimates, methods of financing, and project schedules for the City of Palo Alto's CIP for the next five years as well as estimates for current year activity. The document is organized by fund with each fund section containing the following elements:

Capital Projects Fund Overview: A multi-page narrative for every fund is included in this document, which includes historical expenditure levels, budget comparisons to prior years, a summary of the infrastructure related to that particular fund, and a discussion of major capital projects grouped by category. Additionally, this section includes statistical information regarding the program such as miles of gas mains or number of vehicles in the City fleet.

Project Detail Pages: After each fund summary, the reader finds information for each capital project, both recurring and non-recurring projects. The project pages include information regarding the project completion schedules (initial and revised), descriptions, justifications, a summary of significant changes to the cost or schedule of a project, revenue and expense information by fiscal year, and operating budget impacts for each project. This allows for the total

# THE BUDGET PROCESS AND DOCUMENT

cost of a project to be detailed. The information in the project detail pages is discussed further below.

**Project Maps:** For the Capital Improvement Fund and the various Enterprise Funds, a map is included which shows the location of projects, for projects that have a singular defined location. At the end of the document, the reader will find a Glossary which defines frequently used terms.

## Understanding the Details

### Project Numbering Sequence

The project number contains seven characters. The first two are letters related to the managing department or fund. The next two digits relate to the fiscal year in which the project first received funding or was identified. The final three numbers are system-generated. For example, with project PE-17006, the “PE” denotes Public Works Engineering, the “17” indicates Fiscal Year 2017 funding, and the “006” is the sequential project number. The “Managing Department or Fund” table can be used as a reference for the two-character alpha portion of the project number.

### Project Information

The project detail pages include the following information:

**Fund** – refers to the fund where the project is budgeted.

**Category** – describes the type of activity that the project aligns to within the fund. A table at the end of this section provides a summary of the categories assigned to the various funds.

**Project Location** – describes the location or area that will be improved as a result of the project.

**Managing Department** – refers to the department or office that is responsible for the delivery of the project.

**IBRC Reference** – refers to nomenclature devised by the Infrastructure Blue Ribbon Commission (IBRC) for certain General Fund projects; “keep-up” refers to projects which address the annual maintenance of existing infrastructure; “catch-up” refers to projects which address deferred maintenance needs; “new” refers to projects which address needs not identified by “keep-up” or

PROJECT CODE	MANAGING DEPARTMENT OR FUND
AC	Arts & Culture
AP	Airport Fund
AS	Administrative Services
CB	Cubberley Fund
EL	Electric Fund
FD	Fire Department
FO	Fiber Optics Fund
GS	Gas Fund
LB	Library
OS	Open Space
PD	Police Department
PE	Public Works Engineering
PF	Public Works Facilities
PG	Parks & Golf Course
PL	City Manager/Office of Transportation
PO	Public Works Operations
SD	Stormwater Management Fund
TE	Technology Fund
VR	Vehicle Fund
WC	Wastewater Collection Fund
WQ	Wastewater Treatment Fund
WS	Water Fund



“catch-up.” This category only applies to General Fund projects after the release of the Final IBRC report in 2011.

Initial/Revised Project Start/Completion – indicates what the initial schedule for the project was, as well as any subsequent changes.

Project Description – provides the scope of work for the project.

Project Justification – outlines the reasons why funding is required.

Supplemental Information – provides additional information that may enhance the project description and justification.

Significant Changes – provides an explanation of the changes to the initial schedule or budget for a project.

Funding Sources Schedule – outlines the sources of funding for the project by fiscal year. Generally projects are not funded by a particular grant, fee, or transfer, but in instances where they are, these sources are indicated. In most cases, this section indicates the amount that the fund where the project is budgeted will contribute towards the project. This table also includes prior year revenues, a current year estimate, anticipated revenue beyond the five years of the CIP, and total revenue for the project.

Expenditure Schedule – outlines the projected costs, by year for each project. Costs are broken into phases, such as design and construction, to indicate how the funds will be spent each year. Where applicable, salary and benefit estimates are included in the individual phases for a project, rather than reflected separately as in prior years. Salary and benefit costs are estimated for all five years of the CIP. In prior years, salary and benefit costs were reflected within the project for the first year of the CIP only. This table also includes prior year expenditures, a current year estimate, anticipated expenditures beyond the five years of the CIP, and the total cost of the project.

Operating Impacts – describes estimated annual maintenance and operating costs associated with the project. Efforts have been made to include the operating cost impacts wherever possible. Maintenance costs include utilities, equipment maintenance or service, facilities maintenance or service, grounds/landscape maintenance or service, custodial maintenance and others.

Relationship to Comprehensive Plan – indicates how the project furthers the implementation of the Comprehensive Plan, citing specific Comprehensive Plan policies and programs. In instances where a secondary relationship to the Comprehensive Plan exists, this is notated as well.

Potential Board/Commission Review – City Council-appointed advisory board, commission or ad hoc committee that has oversight responsibility on a project. A project may be reviewed by more than one board or commission. This body (bodies) provides the City Council input as to the merits of a project.

Environmental Impact Analysis – indicates the California Environmental Quality Act (CEQA) status of the project and LEED status, if applicable.

## THE BUDGET PROCESS AND DOCUMENT

<b>CAPITAL FUNDS</b>	
<b>Capital Improvement Fund</b> <ul style="list-style-type: none"> <li>• Buildings and Facilities</li> <li>• Department Technology Upgrades</li> <li>• Parks and Open Space</li> <li>• Streets and Sidewalks</li> <li>• Traffic and Transportation</li> <li>• Administration</li> </ul>	<b>Cubberley Property Infrastructure Fund</b> <ul style="list-style-type: none"> <li>• Buildings and Facilities</li> <li>• Parks and Open Space</li> </ul>
<b>ENTERPRISE FUNDS</b>	
<b>Airport Fund</b> <ul style="list-style-type: none"> <li>• Airport Apron, Runways, and Taxiways</li> <li>• Airport Facilities</li> </ul> <b>Electric Fund</b> <ul style="list-style-type: none"> <li>• Customer Connections</li> <li>• System Improvements</li> <li>• Undergrounding Projects</li> </ul> <b>Fiber Optics Fund</b> <ul style="list-style-type: none"> <li>• Capacity Improvements</li> <li>• Customer Connections</li> </ul> <b>Gas Fund</b> <ul style="list-style-type: none"> <li>• Customer Connections</li> <li>• Gas Main Replacements</li> <li>• System Improvements</li> </ul>	<b>Stormwater Management Fund</b> <ul style="list-style-type: none"> <li>• Capacity Improvements</li> <li>• System Rehabilitation</li> </ul> <b>Wastewater Collection Fund</b> <ul style="list-style-type: none"> <li>• Customer Connections</li> <li>• System Improvements</li> </ul> <b>Wastewater Treatment Fund</b> <ul style="list-style-type: none"> <li>• Buildings and Facilities</li> <li>• System Improvements</li> </ul> <b>Water Fund</b> <ul style="list-style-type: none"> <li>• Customer Connections</li> <li>• System Improvements</li> <li>• Water Main Replacements</li> </ul>
<b>INTERNAL SERVICE FUNDS</b>	
<b>Technology Fund</b> <ul style="list-style-type: none"> <li>• Citywide Technology Upgrades and Improvements</li> <li>• Department Technology Upgrades and Improvements</li> </ul>	<b>Vehicle Replacement Fund</b> <ul style="list-style-type: none"> <li>• Fleet Infrastructure Improvements</li> <li>• Vehicle and Equipment Replacement</li> </ul>

*California Society of  
Municipal Finance Officers*

*Certificate of Award*

***Excellence Award for  
Fiscal Year 2018-2019 Capital Budget***

*Presented to the*

***City of Palo Alto***

For meeting the criteria established to achieve the CSMFO Excellence Award for Budgeting.

***December 19, 2018***



*Margaret Moggia*

***Margaret Moggia  
CSMFO President***

*Sara J. Roush*

***Sara Roush, Chair  
Recognition Committee***

***Dedicated Excellence in Municipal Financial Reporting***

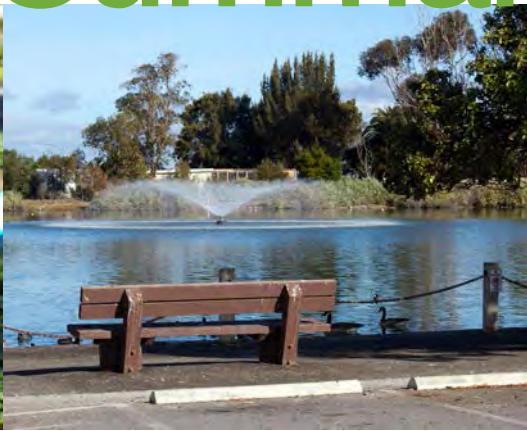


CITY OF  
**PALO  
ALTO**

# Financial Summary



A photograph of a colorful abstract sculpture made of various geometric shapes like rings and cones in bright colors like orange, yellow, green, and blue.





CITY OF  
**PALO  
ALTO**

# SUMMARY OF CIP PROGRAM REVENUE

Revenue Source (\$000's)	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Total CIP 2020-2024
<b>Capital Improvement Funds</b>						
Transfer from General Fund	\$ 30,140	\$ 34,878	\$ 35,693	\$ 36,559	\$ 37,440	\$ 174,710
Certificates of Participation	-	103,000	-	-	-	103,000
Gas Tax	2,554	2,555	2,555	2,555	2,555	12,774
Impact Fees/In-Lieu Fees	4,455	3,350	545	350	150	8,850
Federal, State, and Local Agencies	17,224	10,874	2,223	1,721	1,721	33,763
Stanford University Medical Center	1,400	2,750	10,566	-	-	14,716
Transfer from Parking Funds	1,528	225	5,656	75	65	7,549
Transfer from Other Funds	4,870	212	176	368	-	5,626
<b>TOTAL CAPITAL IMPROVEMENT FUNDS</b>	<b>\$ 62,171</b>	<b>\$ 157,844</b>	<b>\$ 57,414</b>	<b>\$ 41,628</b>	<b>\$ 41,931</b>	<b>\$ 360,988</b>
<b>Enterprise Funds</b>						
Utility User Fees and Charges	\$ 6,669	\$ 6,744	\$ 7,121	\$ 7,186	\$ 7,086	\$ 34,807
Debt Financing	27,362	42,009	25,318	9,747	12,060	116,496
Federal, State, and Local Agencies	-	15,183	74	4,059	225	19,541
Transfers from Other Funds	304	313	323	332	1,352	2,625
<b>TOTAL ENTERPRISE FUNDS</b>	<b>\$ 34,335</b>	<b>\$ 64,249</b>	<b>\$ 32,836</b>	<b>\$ 21,325</b>	<b>\$ 20,724</b>	<b>\$ 173,469</b>
<b>Internal Services Funds</b>						
Transfer from General Fund	\$ 2,138	\$ 2,074	\$ 2,074	\$ 2,074	\$ 2,074	\$ 10,434
Transfer from Other Funds	2,348	1,510	1,510	1,510	1,510	8,388
Other Agencies	86	-	-	-	-	86
<b>TOTAL INTERNAL SERVICE FUNDS</b>	<b>\$ 4,572</b>	<b>\$ 3,584</b>	<b>\$ 3,584</b>	<b>\$ 3,584</b>	<b>\$ 3,584</b>	<b>\$ 18,908</b>
<b>TOTAL CAPITAL IMPROVEMENT PROGRAM</b>	<b>\$ 101,078</b>	<b>\$ 225,677</b>	<b>\$ 93,834</b>	<b>\$ 66,537</b>	<b>\$ 66,239</b>	<b>\$ 553,366</b>

## Transfer From General Fund

The Capital Improvement Fund category includes two funds: the Capital Improvement Fund and the Cubberley Property Infrastructure Fund. These funds are primarily supported by an annual transfer from the General Fund, to support repairs to the City's roads, parks and open space, and City facilities. The Cubberley Property Infrastructure Fund is supported by an annual \$1.8 million transfer from the General Fund, approved by the City Council in 2015 as part of the Cubberley Lease Agreement. In the 2020-2024 CIP, the transfer to the Capital Improvement Fund ranges between \$28.3 million and \$35.6 million annually. This figure includes the base General Fund transfer to the Capital Improvement Fund, ranging from \$16.5 million in Fiscal Year 2020 to \$18.0 million in Fiscal Year 2024. In addition to the base transfer amount, voters approved two increases to the Transient Occupancy Tax (TOT) in November 2014 and November 2018 for a total 3.5 percent of TOT revenue which the City Council identified as a funding source to aid in infrastructure needs. Revenue from the 3.5 percent of TOT plus TOT generated from new hotels built after January 2015 ranges between \$11.8 million to \$17.6 million over the



## SUMMARY OF CIP PROGRAM REVENUE

five-year CIP. This includes additional TOT revenue from new Marriott hotels that are anticipated to open in Fiscal Year 2021. The additional TOT revenue will support budgeted Infrastructure Plan projects as well as the debt service costs beginning in Fiscal Year 2020 as a result of expected debt financing to fund two of the Infrastructure Plan projects, the California Avenue Parking Garage and the new Public Safety Building. Finally, this amount includes estimated interest earnings in the Capital Improvement Fund of \$1.1 million annually.

Transfers from the General Fund to the Internal Service Funds is comprised of funding for vehicle replacement costs in the Vehicle Replacements and Maintenance Fund (\$2.1 million annually), and funding for emergency radio replacements in the Technology Fund (\$64,000 in FY 2020).

### Certificates of Participation/Debt Financing

The Infrastructure Plan (IP), as approved by the City Council in June 2014 (CMR #4889), relied upon a borrowing mechanism known as Certificates of Participation (COPs) to fund a portion of the improvements outlined in the plan (\$63.3 million). By pledging future revenues generated by voter-approved increases to the TOT (discussed in the Transfer from General Fund section), the City can borrow funds to go towards the cost of construction of IP projects such as the New California Avenue Area Parking Garage (PE-18000) and a New Public Safety Building (PE-15001). Bond funding for the California Avenue Parking Garage was approved by the City Council in October 2018 (CMR# 9689) and the bonds were sold generating \$42.0 million in proceeds in March 2019. As part of the 2020-2024 CIP, \$103.0 million in additional COP funding is recommended in Fiscal Year 2021 to fund the new Public Safety Building project. This would bring the total COP funding for the IP projects to \$145.0 million with an estimated annual debt service cost of \$9.7 million.

In 2012, the Regional Water Quality Control Plant (RWQCP) created a Long-Range Facilities Plan to evaluate the infrastructure needs at the RWQCP with regards to future regulations, replacement and rehabilitation needed, site planning, and flow and load projections. Due to the large expense of the major projects included in the 2020-2024 CIP, the RWQCP will require debt financing. Staff has applied for state revolving fund (SRF) loans and has received approval from the City Council to pursue revenue bonds for these projects (CMR #10011). Staff will return to Council once the debt financing mechanism, SRF or revenue bonds, is determined.

### Gas Tax Fund

The Gas Tax Fund accounts for revenues received from the State gas tax and Federal and State grants earmarked for street improvements. Use of this fund is restricted to maintenance of the road network system of the City, including sidewalks. Transfers from the Gas Tax Fund supports the following CIP Projects: Street Maintenance (PE-86070) and Safe Routes to School (PL-00026). The City achieved its primary goal of reaching a citywide average Pavement Condition Index (PCI) score of 85 in 2018, three years earlier than the initial goal. Funding in the 2020-2024 CIP will be used to work towards the City's secondary street maintenance goal of having no streets under a PCI score of 60. The passage of S.B. 1 for Road Maintenance and Rehabilitation is estimated to provide an additional \$1.2 million annually for street maintenance. This funding could assist with the City's street maintenance program, possibly allowing some funds to be reallocated to other capital projects with City Council approval.

## Development Impact Fees

Development impact fees are collected from developers and provide funding for the City's infrastructure related to community centers, libraries, parks, public facilities, and transportation. The City Attorney provides guidance on whether a project qualifies for funding. In the 2020-2024 CIP, two projects are supported by Parks Impact Fees: Dog Park Installation and Renovation (PG-18001) and Park Restroom Installation (PG-19000). The utilization of Park Dedication Fees for the Byxbee Park Completion project (PE-18006) was included in the City Council approved Infrastructure Plan; however, work in this project has been moved out to Fiscal Year 2021 to coordinate with the Baylands Comprehensive Conservation Plan and the Byxbee Park Master Plan.

Community Center Impact Fees are recommended to be used to complete Phase I of the JMZ Renovation (AC-18001) and Rinconada Park Improvements (PE-08001); however, the availability of Community Center Impact Fee funding for these projects is contingent upon the City receiving the full funding from the sale of the Avenidas building Transfer Development Rights (TDRs). In October 2018, the City sold the Avenidas building TDRs (CMR #9596) with the intent that some of the proceeds would be used to reimburse the Community Center Impact Fee Fund to fund the JMZ Renovation and Rinconada Park Improvement projects. With a portion of the TDR sale currently incomplete, funding for these projects may need to come from the Capital Improvement Fund Infrastructure Reserve. Staff will continue to monitor the TDR sales revenue, and may need to adjust project timelines to align with available funding.

Traffic Impact Fees are programmed to support the Traffic Signal and Intelligent Transportation Systems project (PL-05030), which maintains traffic safety and improves roadway operations including the reduction of roadway congestion with traffic signal retiming projects. Funding from the San Antonio/West Bayshore Traffic Impact Fee Fund is also programmed in PL-05030 for traffic signal improvements at the San Antonio Road and Charleston Road intersection.

## Federal, State, & Local Agencies

The City partners with local agencies to provide support to certain capital projects. This revenue is typically provided as reimbursement grants or direct transfer payments. In Fiscal Year 2020, the City is expected to receive approximately \$17.2 million from other agencies in support of CIP projects some of which are: \$7.0 million from Santa Clara County and a One Bay Area Grant (OBAG) for the Highway 101 Pedestrian/Bicycle Overpass project (PE-11011); \$2.3 million from Caltrans for the Newell Road/San Francisquito Creek Bridge Replacement project (PE-12011); and \$1.8 million from the VTA (Valley Transit Authority) and State of California for the Charleston/Arastradero Corridor Project (PE-13011). In the remaining years of the Capital Improvement Program (Fiscal Years 2021 through 2024), it is anticipated that the City will receive an additional \$16.5 million in funds from other agencies for capital projects programmed in the Capital Improvement Fund.

This revenue category also includes Measure B funding for transportation enhancements from the VTA, which is programmed to fund costs associated with Railroad Grade Separation (PL-17001) and Traffic Signal and Intelligent Transportation Systems (PL-05030). In addition, funding from the Federal Aviation Administration to fund 90% of the upgrade projects at the Airport is recorded in the Airport Fund in this category.

### Stanford University Medical Center Development Agreement

In 2011, a development agreement was established between the City of Palo Alto and the Stanford University Medical Center Parties. The funds received by the City as a result of this development agreement represent a significant portion of the funding for the Infrastructure Plan projects. Over the course of the 2020-2024 CIP, transfers to the Capital Improvement Fund totaling \$14.7 million are anticipated. This funding will support a variety of projects including the Bicycle and Pedestrian Transportation Implementation Plan (PL-04010), the New Public Safety Building (PE-15001), the reconstruction of Fire Station #4 (PE-18004), and the New Downtown Garage (PE-15007). For additional information about the development agreement, please refer to the Special Revenue Funds section of the Fiscal Year 2020 Operating Budget document.

### Parking Funds

Over the 2020-2024 CIP, \$7.5 million is expected to be transferred from the City's parking funds for capital projects that include \$2.0 million for various parking management projects downtown and citywide: Parking Management and System Implementation (PL-16002), Downtown Parking Wayfinding (PL-15004), and University Avenue Parking Improvements (PF-14003). Funding for parking related capital investments beginning in FY 2021 and beyond is contingent upon continued availability of revenues generated from parking permits within the respective parking districts. Additionally, transfers from the Downtown Parking In-Lieu Fund to the Capital Improvement Fund, totaling \$5.5 million are anticipated in FY 2022 to support a portion of the costs associated with the construction of a new Downtown Parking Garage (PE-15007).

### Transfers From Enterprise Funds

The City of Palo Alto has nine Enterprise Funds that are managed by the Public Works Department and the Utilities Department. The Airport Fund, Refuse Fund, Stormwater Management Fund, and Wastewater Treatment Fund are collectively referred to as the "Public Works Funds," while the Electric Fund, Fiber Optics Fund, Gas Fund, Water Fund, and Wastewater Collection Fund are collectively referred to as the "Utilities Funds." For further information, please refer to The Budget Process and Document section of this book. In instances where the Enterprise Funds would benefit from a General Fund or Internal Service Fund project, the Enterprise Funds are charged for their proportional share. Several examples are included in the Fiscal Year 2020-2024 CIP; including the Municipal Services Center Building A, B, and C Roofing Replacement (PF-17000); Water, Gas, Wastewater Office Remodel (PE-19001); City Facility Parking Lot Maintenance (PE-09003); and City Council Chambers Upgrade (TE-19001) projects. A portion of the cost of these projects will be split among the various Enterprise Funds according to the proportional use by the various funds.

## Enterprise Funds Utility Rate Charges

Enterprise Funds operate on a full cost recovery basis. Accordingly, all costs related to operations and capital projects are recovered through utility rate charges. The Fiscal Year 2020 Operating Budget document contains a detailed discussion regarding the Fiscal Year 2020 utility rate increases.

## Transfers within Enterprise Funds

Most of the Enterprise Funds are supported by rates, and the revenue is used for specific services provided by each fund. When a capital project supports multiple Enterprise Funds, the fund that manages the project is reimbursed through transfers from other funds to ensure the project's costs are proportionally shared. An example of this type of project is the application of the Geographic Information System (GIS) (WS-02014) that benefits the Water, Gas and Wastewater Collection Funds. The Water Fund manages the GIS project, and the Gas and Wastewater Collection Funds reimburse the Water Fund for their share of the project cost.

Enterprise Fund	Project Name	User Fee	2020-2024 CIP Plan Revenues	Description
<b>Electric Fund</b>	Electric Customer Connections (EL-89028)	Connection Fees	\$8,500,000	Cover services for installation, transformers, meters for new customers, upgrading of existing customers and temporary service connection. For a list of other services refer to Utility Rate Schedule E-15.
<b>Fiber Optics Fund</b>	Fiber Optic Customer Connections (FO-10000)	Fiber Optic License Fees	\$1,000,000	Cover installation of fiber optic infrastructure for new service connections. For a list of other services refer to Utility Rate Schedule EDF-1.
<b>Gas Fund</b>	Gas System, Customer Connections (GS-80017)	Connection Fees	\$5,870,926	Cover services for distribution system extension, service connection, meter charges and relocation. For a list of other services refer to Utility Rate Schedule G-5.
<b>Wastewater Collection Fund</b>	Sewer System, Customer Connections (WC-80020)	Connection Fees	\$2,285,766	Cover services for collection system extension, service connection, relocation of facilities and manholes. For a list of other services refer to Utility Rate Schedule S-5.
<b>Water Fund</b>	Water System, Customer Connections (WS-80013)	Connection Fees	\$5,200,507	Cover services for distribution system extension, service connection, meter charges, capacity fees and fire hydrants. For a list of other services refer to Utility Rate Schedule W-5.

## User Fees and Charges

Certain CIP projects in the Enterprise Funds are supported by user fees. Included in this category are certain charges to telecommunication and cable television companies pertaining to undergrounding projects. The list of projects funded by user fees and the description of each user fee are summarized in the table above.

### Stormwater Management Fee

In April 2005, property owners approved an increase in the Storm Drainage Fee through a mail ballot process conducted in accordance with Proposition 218. Under the provisions of the 2005 ballot measure, the base rate of \$13.05 was scheduled to sunset on June 1, 2017, reverting to the pre-election rate of \$4.25. In an effort to reauthorize the fee through another ballot measure, staff worked with a City Manager-appointed Blue-Ribbon Committee to generate a recommendation for stormwater management funding beyond Fiscal Year 2017 and a joint committee/staff funding recommendation was presented to City Council in Spring 2016. In April 2017, the Stormwater Management Fee was approved by a majority of property owners via a ballot-by-mail process, establishing a base rate of \$13.65 per Equivalent Residential Unit (ERU) per month along with a provision that the City Council could increase the rate on an annual basis by the local inflation rate, as measured by the Consumer Price Index (CPI), or six percent, whichever is less. Under the provisions of the ballot measure, the fee is recommended to increase by 4.5 percent, based on the local CPI increase, to \$14.68 per ERU for Fiscal Year 2020.

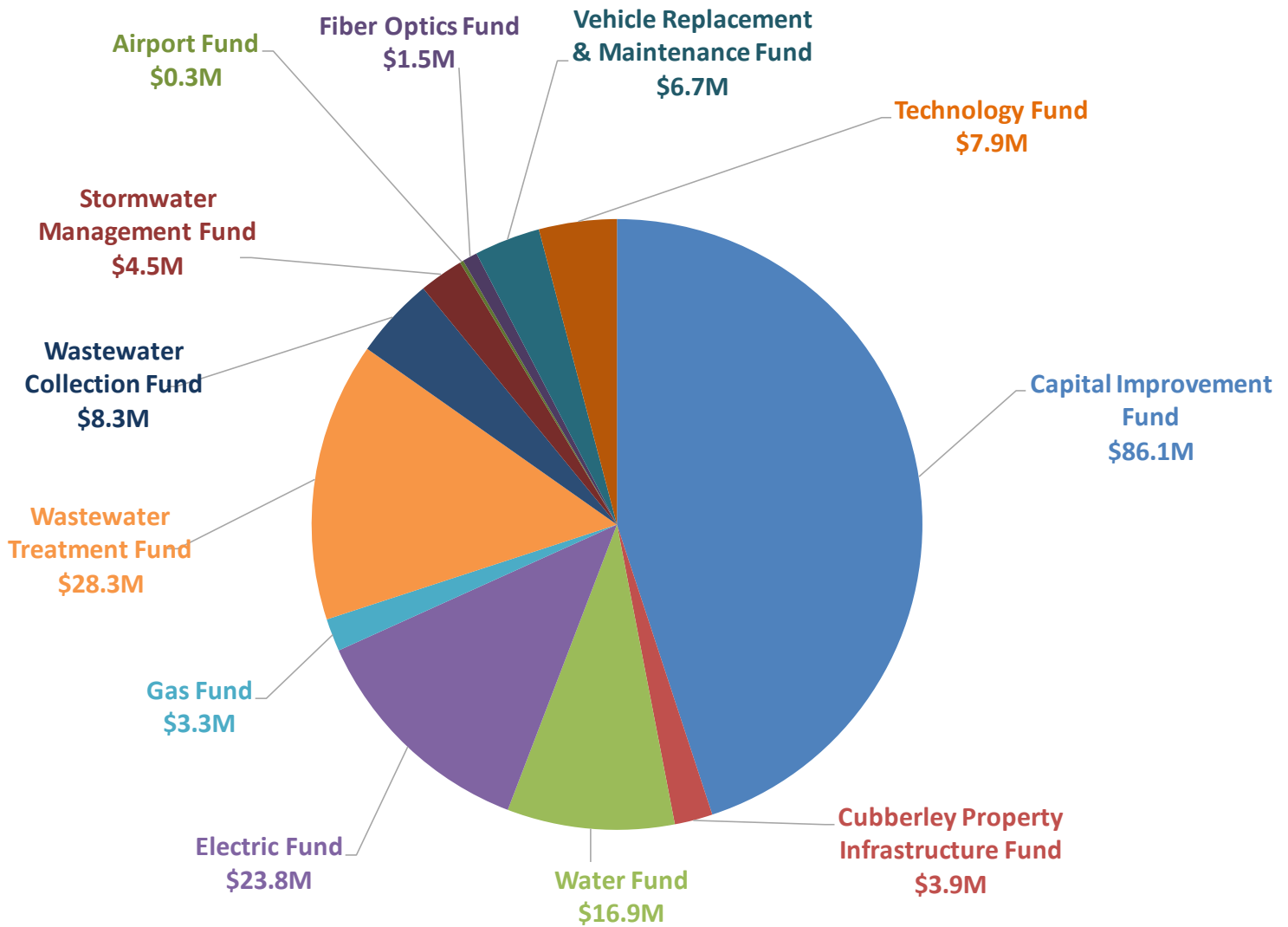
### Partner Agencies

The Cities of Palo Alto, Mountain View, and Los Altos, along with the Town of Los Altos Hills, Stanford University, and the East Palo Alto Sanitary District (the partners) participate jointly in the cost of maintaining and operating the City of Palo Alto Regional Water Quality Control Plant (RWQCP). The City of Palo Alto is the owner and the administrator of the RWQCP, and the partners reimburse the City for their share of the cost of capital projects programmed to maintain or upgrade the RWQCP facilities.

### Internal Service Funds

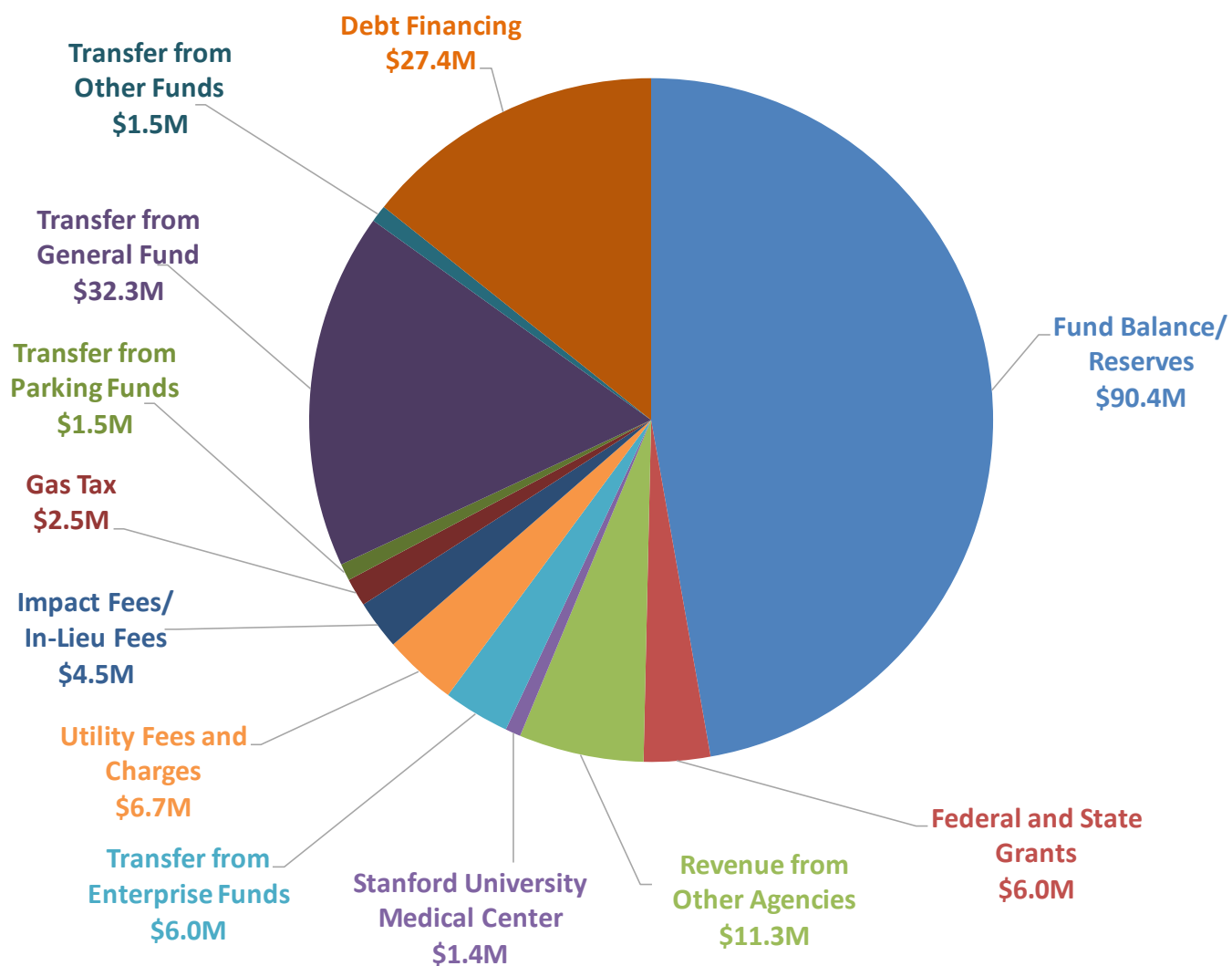
The General Fund, Capital Improvement Funds, and Enterprise Funds provide funding for their share of capital projects in the Internal Service Funds (ISF) through a cost allocation mechanism. Costs are allocated to the various funds based on proportional use of Vehicle Replacement and Technology related capital projects.

## 2020 Capital Budget Expenditures by Fund - \$191.5 Million



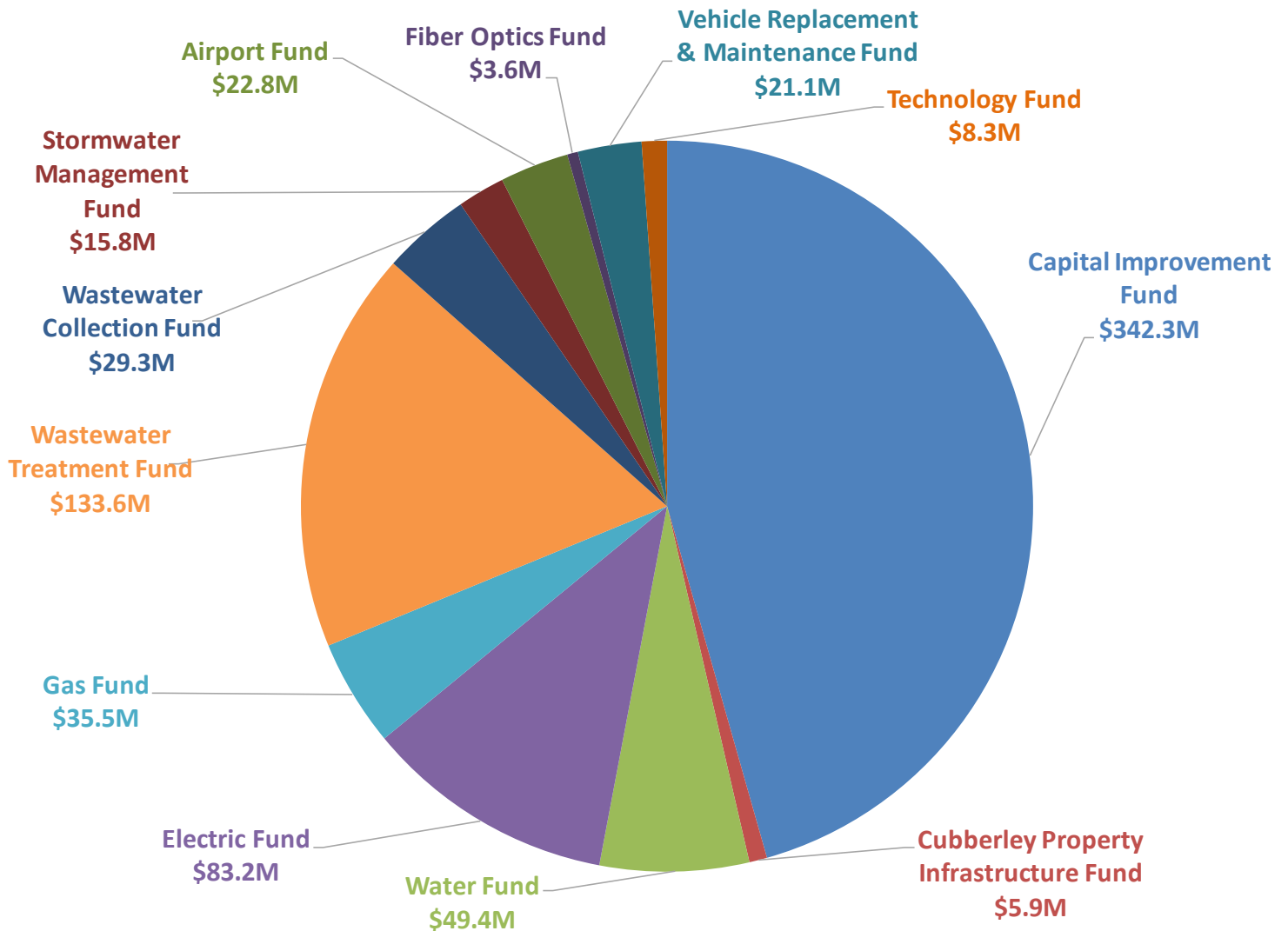
## SUMMARY INFORMATION

### 2020 Capital Budget Revenues by Source - \$191.5 Million

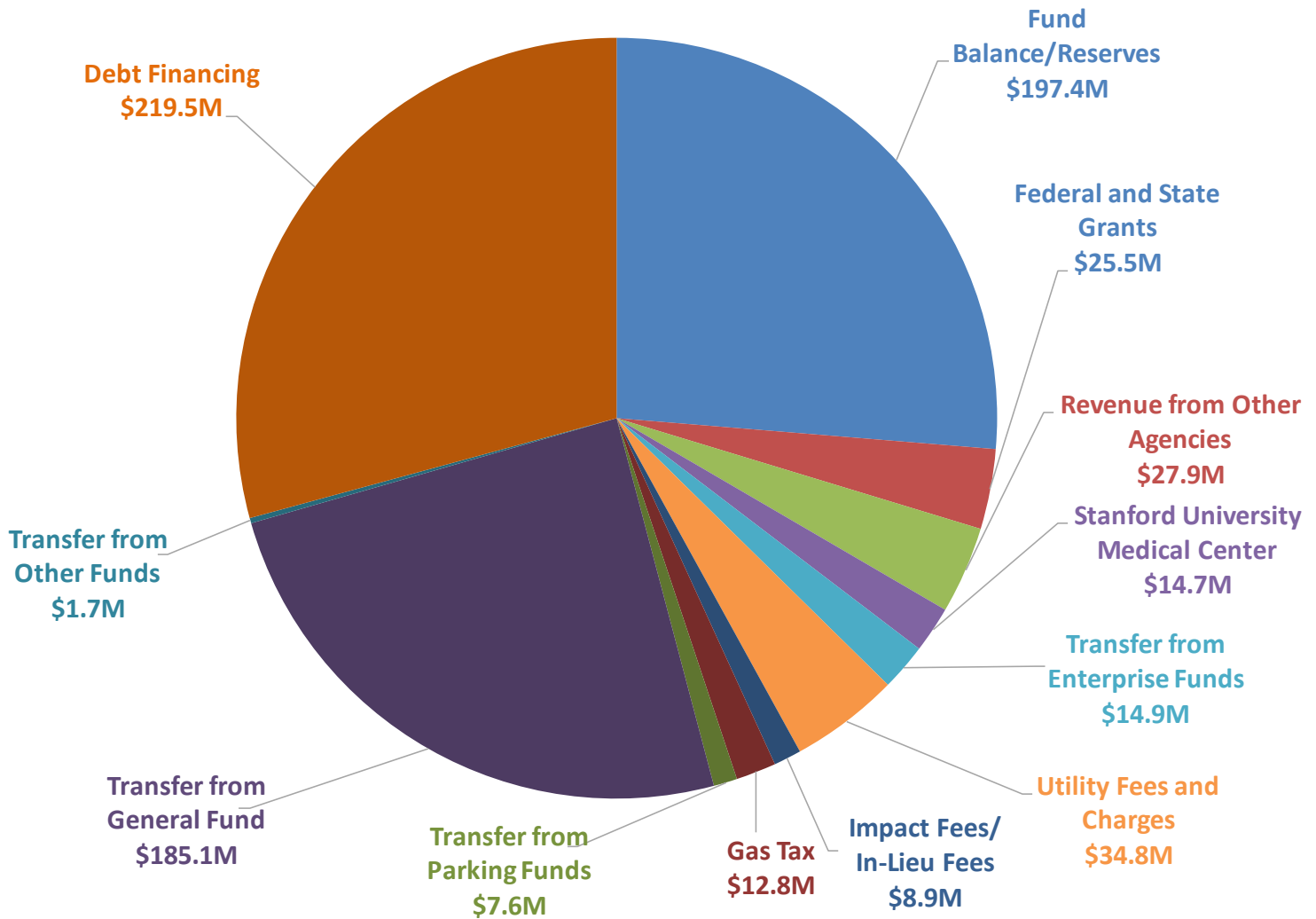




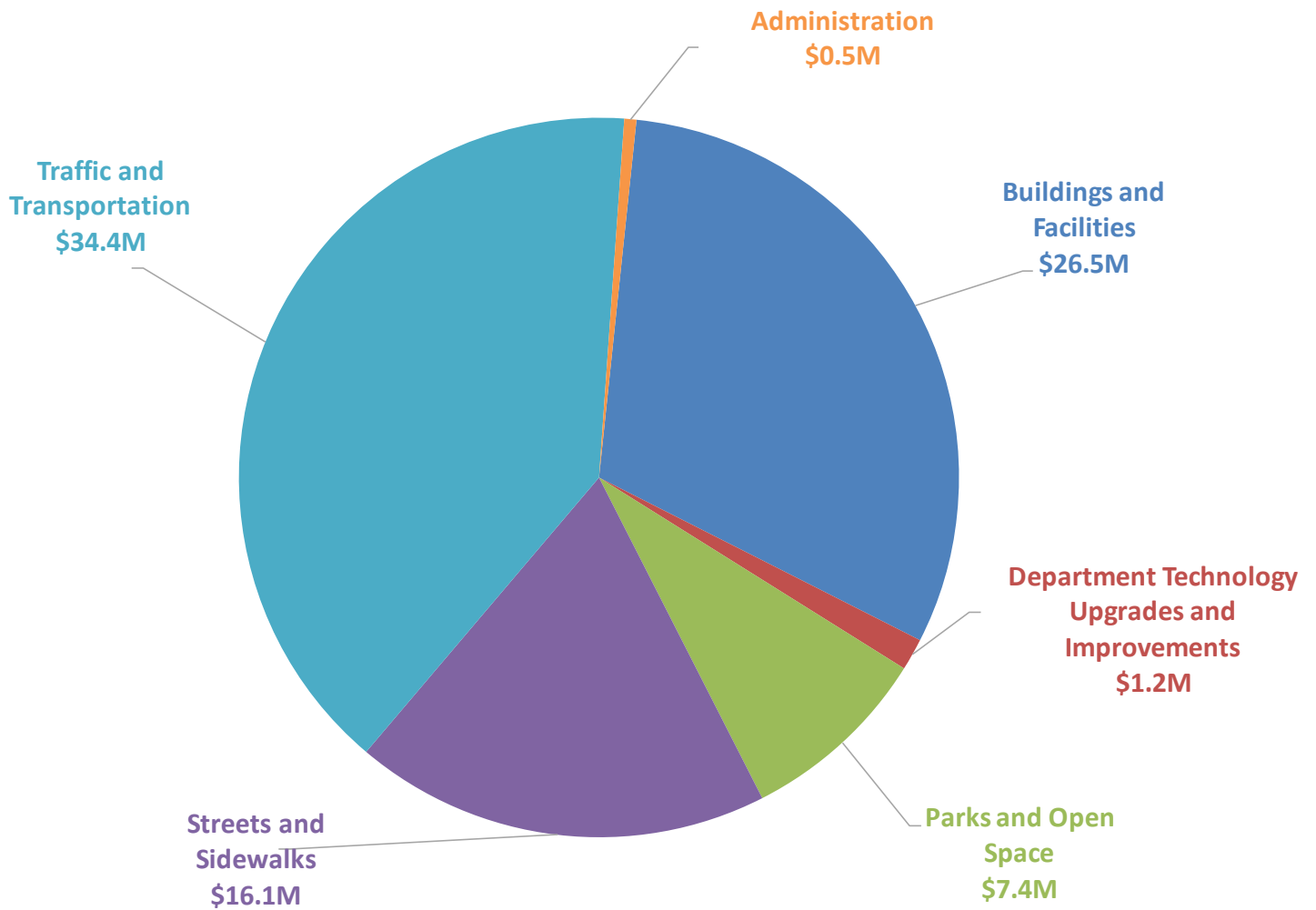
## 2020-2024 Capital Improvement Plan Expenditures by Fund \$750.8 Million



## 2020-2024 Capital Improvement Plan Revenues by Source \$750.8 Million

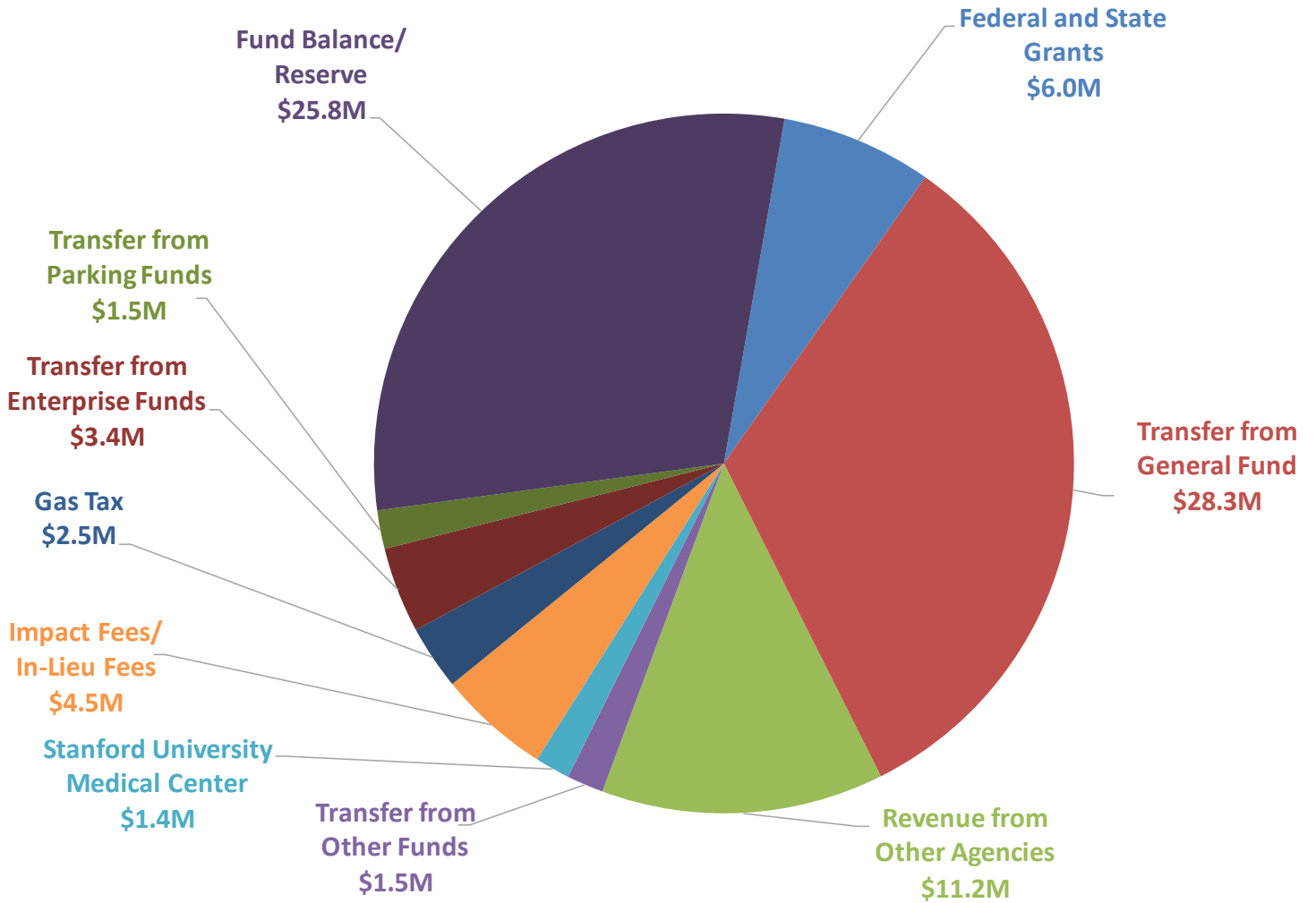


## 2020 Capital Improvement Fund Expenditures by Category \$86.1 Million

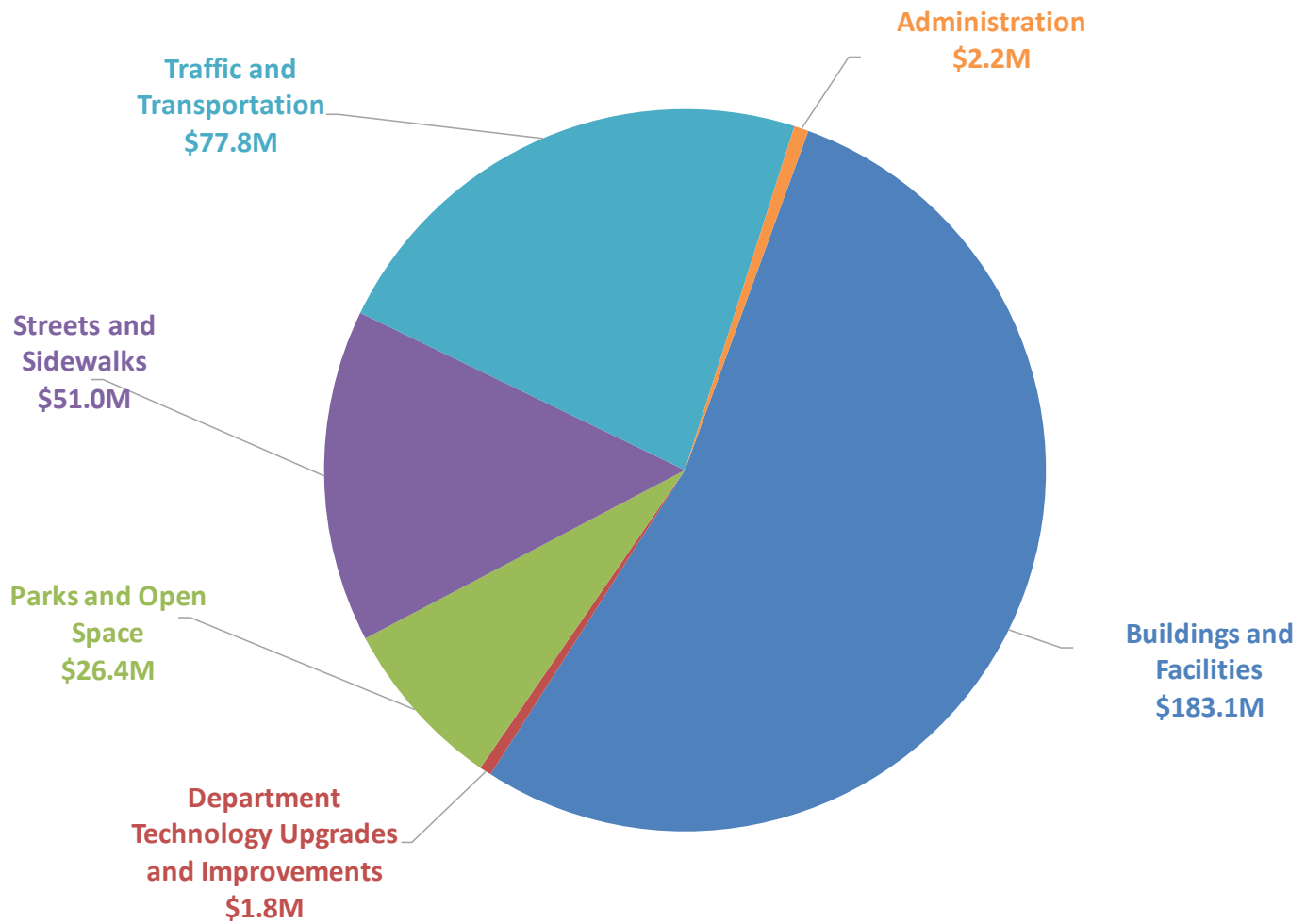


## SUMMARY INFORMATION

### 2020 Capital Improvement Fund Revenues by Source \$86.1 Million

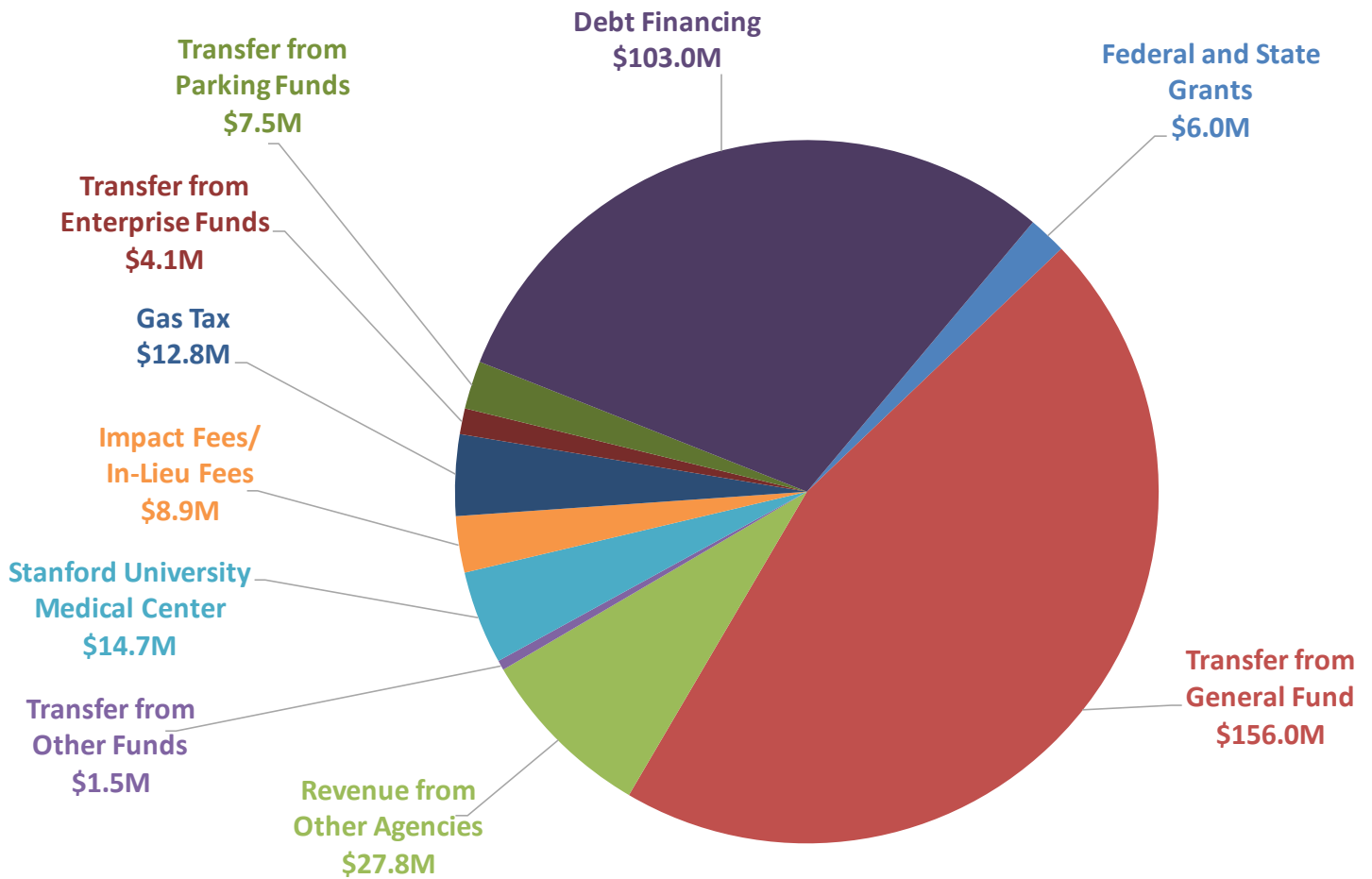


## 2020-2024 Capital Improvement Fund Expenditures by Category \$342.3 Million



## SUMMARY INFORMATION

### 2020-2024 Capital Improvement Fund Revenues by Source \$342.3 Million



# DEBT POLICY AND OBLIGATIONS

## Summary of Debt Obligations

	Original Issue Amount	Balance June 30, 2018	Additions	Retirements	Balance June 30, 2019	Current Portion
<b>Governmental Activity Debt:</b>						
<i>General Long Term Obligations:</i>						
<b>2010A General Obligation Bonds</b>						
2.00-5.00%, due 8/1/2040	55,305	45,810	-	1,225	44,585	1,290
<b>2013A General Obligation Bonds</b>						
2.00-5.00%, due 8/1/2043	20,695	16,330	-	415	15,915	435
<b>2011 Golf Course Master Lease-Purchase Agreement</b>						
2.49%, due 9/1/2018	3,222	426	-	426	-	-
<b>2018A Golf Course (Green) Certificates of Participation</b>						
2.20-4.22%, due 11/1/2047	8,375	8,375	-	35	8,340	35
<b>2018B Refinancing Downtown Parking Improvements</b>						
<b>Certificates of Participation</b>						
2.65-3.12%, due 11/1/2022	595	595	-	-	595	145
<b>Parking Garage Certificates of Participation</b>						
2.53-5.00%, due 11/1/2048	37,370	-	37,370	-	37,370	375
Add: unamortized premium	-	3,610	-	158	3,452	158
<b>Total Governmental Activity Debt</b>	<b>125,562</b>	<b>\$75,146</b>	<b>\$37,370</b>	<b>\$2,259</b>	<b>\$110,257</b>	<b>\$2,438</b>
<b>Business-type Activity Debt:</b>						
<i>Enterprise Long Term Obligations:</i>						
<b>Utility Revenue Bonds,</b>						
1995 Series A, 5.00-6.25%, due 6/1/2020	\$ 8,640	\$ 1,250	\$ -	\$ 605	\$ 645	\$ 645
1999 Refunding, 3.25-5.25%, due 6/1/2024	17,735	8,245	-	775	7,470	810
2009 Series A, 1.80 - 4.65%, due 6/2/2035	35,015	27,720	-	1,080	26,640	1,130
2011 Series A, 3.00-4.00%, due 6/1/2026	17,225	10,185	-	1,125	9,060	1,170
Add: Unamortized Premium	-	630	-	70	560	-
<b>Energy Tax Credit Bonds</b>						
2007 Series A, 0%, due 12/15/2021	1,500	400	-	100	300	100
Less: Unamortized Premium	-	(22)	-	(6)	(16)	-
<b>State Water Resources Loan</b>						
2007, 0%, due 6/30/2029	9,000	4,950	-	450	4,500	450
2009, 2.6%, due 11/30/2030	8,500	6,064	-	398	5,666	408
2017, 1.8%, due 3/30/2049	25,684	6,697	11,375	-	18,072	-
<b>Total Business-type Activity Debt</b>	<b>\$123,299</b>	<b>\$66,119</b>	<b>\$11,375</b>	<b>\$4,597</b>	<b>\$72,897</b>	<b>\$4,713</b>



### Debt Policy and Obligations

The City of Palo Alto recognizes the need for spending a prudent amount every year for ongoing capital replacement and rehabilitation needs. An ongoing capital improvement plan is vital to ensuring the future viability of services. To achieve this priority, the City funds its regular and ongoing capital needs primarily on a “pay-as-you-go” basis. However, for special or extraordinary capital improvement projects; refinancing of existing debt; and purchase of major and multiple pieces of equipment it is appropriate to consider debt financing. The City’s updated Debt Policy establishes the guidelines to support the decision-making process for issuing debt.

### Debt Policy Guidelines

The City’s Debt Policy provides guidelines for refinancing existing debt; detailing the responsibilities of City staff engaged in issuing debt; delineating the debt instruments or vehicles (e.g. General Obligation Bonds, Certificates of Participation, Utilities Revenue Bonds etc.) the City can utilize; and describing situations in which tax-exempt and taxable debt can be used. The depth and breadth of the policy serve to guide current and future staff. Below are highlights of the Debt Policy guidelines for the use of debt and other financing.

A. Debt may be judiciously used when some or all of the following conditions exist:

- Estimated future revenue is sufficient to ensure the payment of annual debt service.
- Other financing options have been explored and are not viable for the timely or economic acquisition or completion of a capital project.
- A capital project is mandated by federal or state authorities with no other viable funding option available.
- The capital project or asset lends itself to debt financing rather than pay-as-you-go funding based on the expected useful life of the project.
- Debt will not be used to fund ongoing operating expenses of the City except for situations in which cash flow problems arise and the City may need to issue short-term Tax or Revenue Anticipation Notes.
- Annual debt service shall not exceed 10 percent of annual operating expenses for the General Fund unless an exception is approved by City Council. For all other City funds annual debt service shall not exceed 15 percent of annual operating expenses unless an exception is approved by City Council.

B. Minimize borrowing costs by:

- Maximizing the use of existing resources for capital projects and equipment needs.
- Issuing tax-exempt debt except in instances where IRS regulations require taxable bonds.
- Striving to obtain the highest credit ratings possible.
- Maintaining a competitive bid process on bond sales except for situations in which negotiated or private placement sales meet City objectives. In negotiated or private

placement sales, City staff will work with its Municipal Advisor (aka Financial Advisor) to review proposed interest rates and proposed fees.

- Ensuring that the type of debt and debt structure developed result in advantageous marketing of each issue.

C. Linking debt to appropriate revenue sources and project users:

- When possible, tie project financing directly to users of a specific facility or use. Examples include renovation of the Golf Course where user fees can offset debt service or replacing gas mains where gas rates can be increased to cover debt expense.
- Debt financing in the Enterprise Funds so as to avoid significant spikes in user rates by smoothing out costs over time.

In addition to capital projects, the City can finance essential equipment and vehicles. These assets range from public safety vehicles to utility equipment. The underlying asset must have a minimum useful life of three years. Short-term financings, including loans and capital lease purchase agreements, are executed to meet such needs. It has been the City's practice to fund these purchases with existing resources; however, debt financing flexibility for future needs remains an option.

The Chief Financial Officer or Director of Administrative Services, supported by the Treasury Division, will periodically evaluate existing debt and execute refinancing when economically beneficial. Refinancing may include the issuance of bonds to refund existing bonds or the issuance of bonds in order to refund other obligations. A net present value analysis, both in dollar and percentage terms, will be conducted to determine whether refinancing is optimal. As a "rule of thumb," a minimum 3.0 percent net present value savings will be used as a basis to begin refinancing efforts; however, a higher savings level may be considered. As with new debt, all refinancing must be approved by City Council.

In September 2016, the state legislature adopted Senate Bill 1029, Hertzberg (SB 1029), amending Government Code section 8855 to place additional reporting obligations on issuers of public debt, effective January 1, 2017. The amendments require an issuer to certify that they have adopted a debt policy concerning the use of debt and that the proposed debt issuance is consistent with that policy. Though the City's Debt Policy and practice substantially complied with the new requirements prior to this legislation, minor updates to the Debt Policy were approved by the City Council in April 2017 to explicitly comply with SB 1029 requirements. This statute also added additional reporting requirement to the California Debt and Investment Advisory Commission (CDIAC), such as the submission of an annual report for any issuance of debt.

## Legal Debt Limit

Based upon the assessed valuation of \$34.4 billion for the fiscal year ending June 30, 2018, the City is limited to general obligation indebtedness of \$1.2 billion per State law. As of June 30, 2018, the amount of debt applicable to the debt limit was \$62.4 million, which is well below the City's legal debt limit. The debt limit is applicable to voter-approved general obligation (GO) bonds that have been approved in prior years to fund capital improvement projects to renovate and build out the City's libraries including the Mitchell Park Library and Community Center.

### Debt Obligation Descriptions

#### **2002B Downtown Parking Improvement Project Certificates of Participation (COPs)**

On January 16, 2002, the City issued \$3.6 million of COPs to finance the construction of certain improvements to the non-parking area contained in the City's Bryant/Florence Garage complex. Due to lower construction costs, \$0.9 million in par bonds were paid off early in January 2005.

As of June 30, 2018, these bonds were refinanced with the issuance of the AA+ rated 2018 (Golf Course Renovation) Green COP bonds. The present value savings of \$0.3 million from refinancing reduced the remaining debt service on the bonds to \$0.6 million principal and \$52,093 interest with final payment on this bond still occurring in Fiscal Year 2022.

#### **2010A and 2013A General Obligation (GO) Bonds**

On June 30, 2010, the City issued the first series of \$55.3 million and on June 26, 2013 the second series of \$20.6 million of GO bonds to finance costs for constructing a new Mitchell Park Library and Community Center, as well as substantial improvements to the Main Library and the Downtown Library. Principal payments are due annually on August 1 and interest payments semi-annually on February 1 and August 1, from 2.0 percent to 5.0 percent, and are payable from property tax revenues.

As of June 30, 2019, for the above 2010 and 2013 bonds, \$44.6 million and \$15.9 million principal and \$26.4 million and \$8.5 million interest will be the remaining debt service on the bonds with final payment occurring in Fiscal Year 2041 and Fiscal Year 2042, respectively.

#### **2011 Golf Course Master Lease-Purchase Agreement**

On August 2, 2011, the City entered into a master lease-purchase agreement with JP Morgan Chase Bank, N.A. to finance redemption of the 1998 Golf Course COPs. The lease is secured by a first priority security interest in twelve Fire Department emergency vehicles. Lease proceeds were \$3.2 million.

This bond will be fully paid off and the lien on the emergency vehicles will be removed as of June 30, 2019.

#### **2018 Capital Improvement ("Golf Course") Project and 2002B ("Civic Center Refinancing and Downtown Parking Improvements Project") Refinancing Certificates of Participation (COPs)**

On June 5, 2018, the City issued taxable (Green Bonds) COPs of \$8.4 million for the renovation of Palo Alto's Municipal Golf Course and \$0.6 million to refinance the 2002B COPs (see above for further information). Debt service payments are due semi-annually on May 1 and November 1. The 2018 Capital Improvement Project and 2002B refinancing COPs maturity dates and true

interest costs are November 2047 and 4.14 percent and November 2022 and 3.11 percent, respectively.

### **2019 California Avenue Parking Garage Certificates of Participation (COPs)**

On March 21, 2019, the City issued \$26.8 million tax-exempt and \$10.6 million taxable COPs for the construction of a six story (four above ground levels and two below ground levels) parking garage in the California Avenue Business District. The new garage will replace existing parking stalls at two locations and provide 310 additional parking spaces, totaling 636 parking spaces in the new garage.

Debt service payments on the \$37.4 million COPs are due semi-annually on May 1 and November 1, with the first payment due on November 1, 2019. The COPs mature in FY 2049 and have a combined true interest cost (TIC) of 3.75 percent with the tax-exempt bonds' TIC being 3.52 percent and taxable bonds' TIC being 4.32 percent.

### **1995 Utility Revenue Bonds, Series A**

On February 1, 1995 the City issued Utility Revenue Bonds to finance certain extensions and improvements to the City's Storm Drainage and Surface Water systems. The bonds are special obligations of the City payable solely from and secured by a pledge of and lien upon the revenues derived by the City from the funds, services, and facilities of all Enterprise Funds except the Refuse Fund and the Fiber Optics Fund. Principal payments are payable annually on June 1, and interest payments semi-annually on June 1 and December 1. A \$2.9 million 6.3 percent term bond is due June 1, 2020. In lieu of a reserve fund, the Bonds are secured by a Surety Bond issued by AMBAC Indemnity Corporation.

The pledge of future net revenues for the above funds ends upon repayment of the \$0.6 million principal and \$40,313 interest as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2020.

### **1999 Utility Revenue and Refunding Bonds, Series A**

On June 1, 1999 the City issued Utility Revenue Bonds to refund the 1990 Utility Revenue Refunding Bonds, Series A and the 1992 Utility Revenue Bonds, Series A, and to finance rehabilitation of the Wastewater Treatment System's two sludge incinerators. The 1990 Utility Revenue Refunding Bonds, Series A and the 1992 Utility Revenue Bonds, Series A, were subsequently retired. The 1999 Bonds are special obligations of the City payable solely from and secured by a pledge of, and lien upon, certain net revenues derived by the City's sewer system and its storm and surface water system, the "Stormwater Management System". As of June 30, 2001, the 1999 Bonds had been allocated to and were repayable from net revenues of the following Enterprise Funds: Wastewater Collection (10.2 percent), Wastewater Treatment (64.6 percent) and Stormwater Management (25.2 percent). Principal payments are payable annually on June 1, and interest payments semi-annually on June 1 and December 1. In lieu of a reserve fund, the bonds are secured by a Surety Bond issued by AMBAC Indemnity Corporation.

## DEBT POLICY AND OBLIGATIONS

The pledge of future net revenues for the above funds ends upon repayment of the \$7.5 million principal and \$1.3 million interest as the remaining debt service on the bonds as of June 30, 2019, with final payment occurring in Fiscal Year 2024.

### **2007 Electric System Clean Renewable Energy Tax Credit Bonds**

On November 1, 2007 the City issued \$1.5 million of Electric Utility Clean Renewable Energy Tax Credit Bonds (CREBS), 2007 Series A, to finance the City's photovoltaic solar panel project. The bonds do not bear interest. In lieu of receiving periodic interest payments, bondholders are allowed federal income tax credit in an amount equal to a credit rate for such CREBS multiplied by the outstanding principal amount of the CREBS owned by the bondholders. The bonds are payable solely from, and secured solely by, a pledge of the net revenues of the Electric system and other funds pledged therefore under the Indenture.

The pledge of future Electric Fund net revenues ends upon repayment of the \$0.3 million as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2022.

### **2009 Water Revenue Bonds, Series A**

On October 6, 2009, the City issued Water Revenue Bonds in the amount of \$35.5 million to finance certain improvements to the City's Water utility system. Principal payments are due annually on June 1, and interest payments are due semi-annually on June 1 and December 1, from 1.8 percent to 6.0 percent. The final debt service payment will be made in 2035. When these bonds were issued they were designated as 'Direct Payment Build America Bonds' under the provisions of the American Recovery and Reinvestment Act of 2009 ('Build America Bonds'). The City expected to receive a cash subsidy payment from the United States Treasury equal to 35.0 percent of the interest payable on the 2009 bonds, however, due to the United States federal government budget (sequestration) cuts in calendar year 2013, the receipts declined to 32.5 percent in 2013 and were 33.3 percent in calendar year 2018. The lien on the 1995 Bonds on the net revenues is senior to the lien on net revenues securing the 2009 Bonds and the 2002 Bonds. The City received subsidy payments amounting to \$0.5 million, which represents 33.3 percent of the two interest payments due on June 1 and December 1 annually.

The pledge of future net revenues of the above funds ends upon repayment of the \$26.6 million principal and \$14.4 million interest as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2035.

### **2011 Utility Revenue Bonds, Series A**

On September 22, 2011 the City issued Utility Revenue Bonds to refinance the 2002 Utility Revenue Bonds, which were issued for certain improvements to the City's Water and Natural Gas utility system. The refinancing resulted in net present value savings of 16.9 percent and cash savings over 15 years of \$4.0 million. Principal payments are due annually on June 1, and interest payments are due semi-annually on June 1 and December 1 from 3.0 percent to 4.0 percent. The Revenue Bonds are secured by net revenues generated by the Water and Gas Funds.

The pledge of future net revenues of the above funds ends upon repayment of the \$9.1 million principal and \$1.2 million interest as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2026.

### 2007 State Water Resources Loan

In October 2007, the City approved the \$9.0 million loan agreement with State Water Resources Control Board (SWRCB) to finance the City's Mountain View/Moffett Area Reclaimed Water Pipeline Project. Under the terms of the contract, the City agreed to repay \$9.0 million to the State in exchange for receiving \$7.5 million in proceeds to be used to fund the project. The difference between the repayment obligation and proceeds amounts to \$1.5 million and represents in-substance interest on the outstanding balance. Loan proceeds are drawn down as the project progresses and debt service payments commenced on June 30, 2010. Concurrently with the loan, the City entered into various other agreements including a cost sharing arrangement with the City of Mountain View. Pursuant to that agreement, the City of Mountain View agreed to finance a portion of the project with a \$5.0 million loan repayable to the City. This loan has been recorded as 'Due from other government agencies' in the financial statements.

The pledge of future net revenues of the above funds ends upon repayment of the \$3.8 million principal and \$0.8 million in-substance interest as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2029.

### 2009 State Water Resources Loan

In October 2009, the City approved an \$8.5 million loan agreement with the State Water Resources Control Board (SWRCB) to finance the City's Ultraviolet Disinfection Project. As of June 30, 2011, the full loan in the amount of \$8.5 million was drawn down and became outstanding. Interest in the amount of \$96,000 was accrued and added to the outstanding balance.

The pledge of future net revenues of the above funds ends upon repayment of the \$5.7 million principal and \$1.0 million interest as the remaining debt service on the bonds as of June 30, 2019 with final payment occurring in Fiscal Year 2031.

### 2017 State Water Resources Loan

In June 2017, the State Water Resources Control Board (SWRCB) and the City executed an agreement for an award up to \$30.0 million at a rate of 1.8 percent, payable over 30 years, with the first annual installment due May 31, 2020 to finance the replacement of sewage sludge "bio-solids" incinerators at the City's Regional Water Quality Control Plant (RWQCP). In September 2017, due to the projected lower project costs, the agreement was amended to reduce the SWRCB loan amount to \$29.7 million. Under the terms of the contract, a portion of the loan amount, \$4.0 million, is a federally funded grant (by the U.S. Environmental Protection Agency) and has been adjusted to reflect the correct long-term obligation balance of \$25.7 million.

The new facility will dewater the bio-solids and allow the material to be loaded onto trucks and taken to a separate facility for further treatment. The RWQCP provides treatment and disposal for wastewater for Palo Alto, Mountain View, Los Altos, Los Altos Hills, East Palo Alto Sanitary

## DEBT POLICY AND OBLIGATIONS

District, and Stanford University. Though Palo Alto is the recipient of the loan, the City's agreement with the partner agencies obliges them to pay their proportionate share of the principal and interest of this loan. Palo Alto's share of the loan payment is 38.2 percent with the partner agencies paying 61.8 percent. As of June 30, 2019, the City is anticipated to incur and draw down \$18.1 million of the project costs from the loan award.

### Credit Rating Agencies

Credit rating is a critical component of strong municipal management. According to Moody's Investors Service, reserves are an important factor in the analysis of a municipality's fiscal health and, therefore, a jurisdiction's fiscal policies should include a plan for maintaining reserves. Rating agencies view sound reserves favorably, thus improving a municipality's rating and its ability to obtain low-cost financing for important projects. The City is proud to report that both Moody's and Standard and Poor's (S&P) awarded their highest credit ratings, Triple A, to the City's General Obligation Bonds for library and community center capital improvements in 2010 and 2013 and reaffirmed these ratings a few times, the last one being in July 2018 by Moody's and February 2019 by S&P. These ratings demonstrate that Palo Alto's prudent financial management and fiscal strength are viewed favorably by credit agencies. The four Utility bonds (1995, 1999, 2009, & 2011) that are rated also received S&P's highest credit rating of Triple A. Moody's has rated these Utility bonds with their second highest (Aa1) or third highest (Aa2) ratings.



# Capital Fund Projects





CITY OF  
**PALO  
ALTO**

# CAPITAL IMPROVEMENT FUND

## Overview

The Capital Improvements Fund, supported by the General Fund and grants and reimbursements from other agencies, accounts for general capital investments such as public safety and community facilities. This fund is equivalent to the General Fund Operating Budget; however, it is focused on capital investments. Examples of projects accounted for within the Capital Improvement Fund include street maintenance, traffic signal and sidewalk modifications, park renovations, and improvements to libraries, community centers, and public safety facilities. For the entire Capital Improvement Fund, 100 projects are programmed over the 2020-2024 CIP, with a cumulative total cost of \$342.3 million. Of this amount, \$86.1 million is appropriated for Fiscal Year 2020, which includes \$34.1 million being reappropriated for the continuation of projects approved by the City Council in prior fiscal years. The budget for the Capital Improvement Fund is divided into six categories: Buildings and Facilities, Department Technology Upgrades and Improvements, Parks and Open Space, Streets and Sidewalks, Traffic and Transportation, and Administration. The primary funding source for the Capital Improvement Fund is the annual transfer from the General Fund. In Fiscal Year 2020, this transfer will be \$28.3 million, which includes the annual base transfer of \$15.3 million, the City Council approved Transient Occupancy Tax transfer of \$11.8 million to support the City Council approved Infrastructure Plan, and estimated interest earnings of \$1.2 million.

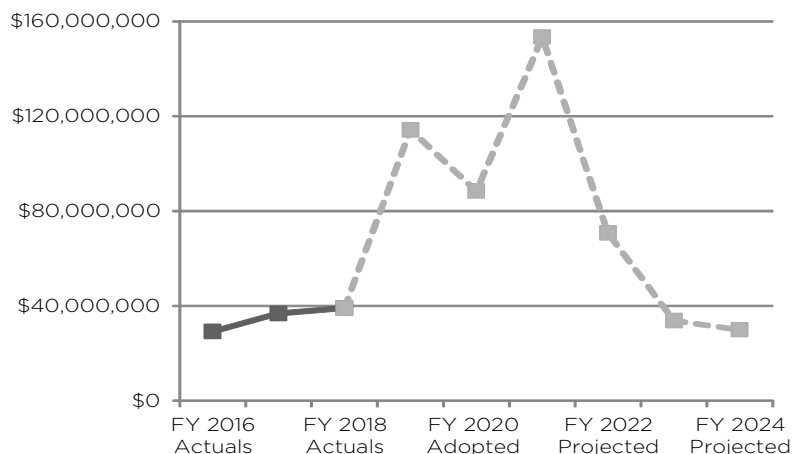
The Infrastructure Plan (IP), which consists of nine top priority capital projects recommended by the Council Infrastructure Committee and approved by the Council in June 2014 is accounted for within the Capital Improvement Fund. In the 2019-2023 CIP, the Infrastructure Plan was estimated at \$249.9 million. Costs for construction have continued to increase since the initial plan was approved and as a result of the City Council's decision to defer

the Downtown Parking Garage (PL-15007), the Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment (PL-15002) is recommended to be added as the tenth IP project to mitigate parking congestion in downtown. New cost estimates and the additional project have increased the total cost of the IP to approximately \$280.6 million, with \$169.2 million programmed over the 2020-2024 CIP.

The Infrastructure Plan includes the following projects:

- a new public safety building
- two fire station replacements

**Capital Improvement Fund Expenditures**



- the Charleston/Arastradero Corridor Improvements
- the Bicycle and Pedestrian Transportation Plan
- the Highway 101 Pedestrian/Bicycle Bridge
- a new parking garage in the downtown area
- a new garage in the California Avenue area
- the completion of Byxbee Park
- enhanced parking systems and revenue collections equipment in the Downtown area

The Fire Station #3 Replacement project was the first of the IP projects to begin construction in Fiscal Year 2018 and is anticipated to be complete in Summer 2019. The construction of the Charleston/Arastradero Corridor Project (phase 1 and 2) began in Summer 2018 and will be complete in Summer 2019. The New California Avenue Area Parking Garage project began construction in Fiscal Year 2019 and is anticipated to be complete in Summer 2020 and the Highway 101 Pedestrian/Bicycle Bridge will be awarded and begin construction in Fiscal Year 2019 and be complete by Fall 2020. At the end of Fiscal Year 2020, it is anticipated that four of the ten projects will be complete and all will be done by Fiscal Year 2023.

## Buildings and Facilities

The Buildings and Facilities category includes projects to maintain the City's existing buildings and facilities as well as projects that provide funding for new facilities. Buildings and facilities include City Hall, other City staff office locations, community centers, libraries, theaters, fire stations, park restrooms, parking garages, and City-owned facilities leased to private parties. Projects to improve the Cubberley Community Center are included separately within the Cubberley Property Infrastructure Fund and discussed elsewhere in this document. The 2020-2024 CIP includes projects totaling \$183.1 million in this category, with \$26.5 million allocated in Fiscal Year 2020. Of this amount, \$10.5 million is recommended to be reappropriated for the continuation of projects approved by the City Council in prior fiscal years. The Buildings and Facilities category includes the following Council Infrastructure Plan projects: Public Safety Building, Fire Station #3 Replacement, Fire Station #4 Replacement, Downtown Parking Garage, and California Avenue Area Parking Garage. These projects account for \$215.1 million or 77% of the total Infrastructure Plan. The total funding amount of \$183.1 million for Building and Facilities over the 2020-2024 CIP represents approximately 53% of the total Capital Improvement Fund CIP Plan.

## Infrastructure Inventory - Summary of Buildings & Facilities

CLASSIFICATION	QUANTITY	SQUARE FOOTAGE
Civic Center & Municipal Services Center	2	157,593
Community Centers	3	68,752
Libraries	5	91,916
Fire Stations	6	25,847
Parking Garages	8	982,966

# CAPITAL IMPROVEMENT FUND

## Recent Accomplishments

- Construction of the Fire Station #3 Replacement project is anticipated to be completed in Summer 2019.
- Began construction of the California Avenue Parking Garage.
- Completion of the City Hall fourth and fifth floor remodels.
- Completion of the Lucie Stern Community Center Electrical and Mechanical Upgrades project.
- Completion of the Baylands Boardwalk Improvements project in January 2019.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are seven recurring projects in the Buildings and Facilities category:

- Americans With Disabilities Act Compliance (2020: \$0.8 million, 2020-2024 CIP: \$3.0 million)
- Building Systems Improvements (2020: \$0.4 million, 2020-2024 CIP: \$1.7 million)
- City Bridge Improvements (2020: \$0.02 million, 2020-2024 CIP: \$1.2 million)
- City Facility Parking Lot Maintenance (2020: \$1.0 million, 2020-2024 CIP: \$3.6 million)
- Facility Interior Finishes Replacement (2020: \$1.2 million, 2020-2024 CIP: \$2.8 million)
- Roofing Replacement (2020: \$0.7 million, 2020-2024 CIP: \$3.7 million)
- University Avenue Parking Improvements (2020: \$0.02 million, 2020-2024 CIP: \$0.9 million)

A new project in Fiscal Year 2020 is the City Bridge Improvements project (\$0.02 million) that will begin implementing the recommendations provided in the Structural Bridge Assessment Study that was completed in 2017. Activities planned for Fiscal Year 2020 under these projects include parking lot resurfacing at the Baylands Athletic Center and Lucie Stern Drive Thru-Parking Area. Other work includes LED lighting conversion for the Rinconada and Mitchell Park tennis courts, re-roofing the Avenidas Senior Center, and interior finishes at the Children's Library and the Customer Services Area at City Hall. Finally, the Americans with Disabilities Act Compliance project will begin to implement the updates recommended in the ADA Transition Plan.

### Non-Recurring Projects

Final design work on the Public Safety Building will be a high priority in Fiscal Year 2020, and construction of the California Avenue Parking Garage project will continue. Other significant activities planned for Fiscal Year 2020 include completion of the Ventura Building Improvements project and the MSC Electrical and Mechanical Upgrade project. Additional funding provided in Fiscal Year 2020 (\$4.6 million), offset by additional reimbursement funding from Enterprise Funds, will allow the construction of the full scope for the Municipal Service Center (MSC) Electrical and Mechanical Upgrades project.

Another new project in Fiscal Year 2020 is the City Facilities Assessment and Record Plan Management System project (\$0.3 million) that will provide funding for a comprehensive City-wide assessment of all existing buildings.

## Department Technology Upgrades and Improvements

This category includes projects to replace public safety related technology equipment based on its useful life and standard replacement schedule. In the 2020-2024 CIP there are seven projects in this category, six for the Fire Department and one for the Police Department. The total funding amount of \$1.8 million for Department Technology Upgrades and Improvements over the 2020-2024 CIP represents approximately one percent of the total Capital Improvement Fund CIP Plan.

### 2020-2024 Capital Improvement Program

#### Non-Recurring Projects

All of the projects in this category are non-recurring projects, but the equipment will be programmed to be replaced on a regular schedule to ensure it is not used beyond its useful life.

Six of the projects are new for the 2020-2024 CIP including:

- Automated External Defibrillator Replacement (2020-2024 CIP: \$0.2 million)
- Cardiac Monitor Replacement (2020: \$0.9 million, 2020-2024 CIP: \$0.9 million)
- Extrication Tool Replacement (2020-2024 CIP: \$0.2 million)
- Police Video Recording Systems Replacement (2020: \$0.2 million, 2020-2024 CIP: \$0.3 million)
- Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement (2020: \$0.1 million, 2020-2024 CIP: \$0.09 million)
- Thermal Imaging Cameras Replacement (2020: \$0.1 million, 2020-2024 CIP: \$0.1 million)

## Parks and Open Space

Maintenance, repair, and replacement of parks and open space amenities are managed jointly by the Community Services and Public Works Departments. Generally, Community Services oversees smaller projects as well as recurring projects while Public Works Engineering Services facilitates major one-time projects. The 2020-2024 CIP includes funding totaling \$26.4 million in this category, with \$7.4 million allocated in Fiscal Year 2020. Of this amount, \$2.3 million is recommended to be reappropriated for the continuation of projects approved by the City Council in prior fiscal years. The Parks and Open Space category includes the Council Infrastructure Plan project for Byxbee Park Completion. This project accounts for \$3.6 million or one percent of the total Infrastructure Plan. The total funding amount of \$26.4 million for Parks and Open Space over the 2020-2024 CIP represents approximately eight percent of the total Capital Improvement Fund CIP Plan.

## Infrastructure Inventory - Summary of Parks & Open Space

CLASSIFICATION	QUANTITY
Parks	33
City Open Space/Conservation Lands	4
Parks, Preserves, and Open Space Acreage	4,385
Picnic Areas	39
Athletic Fields	33

### Recent Accomplishments

- In February 2019 the City was recognized with an award of excellence from the California Park and Recreation Society for the Baylands Golf Links. This award recognizes contributions towards environmental sustainability, accommodation of flood protection needs, and reservation of land for future recreation use.
- Brick pathway and landscape improvements at the Lucie Stern Community Center.
- Repaired and opened two closed sections of Los Trancos and Coastanoan Trails in Foothills Park.
- Dock repairs to Sailing Station in Baylands.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are seven recurring projects in the Parks and Open Space category:

- Art in Public Spaces (2020: \$1.1 million, 2020-2024 CIP: \$2.7 million)
- Athletic Courts Resurfacing (2020: \$0.3 million, 2020-2024 CIP: \$1.4 million)
- Benches, Signage, Fencing, Walkways, and Perimeter Landscaping (2020: \$0.2 million, 2020-2024 CIP: \$1.1 million)
- Off Road Pathway Resurfacing and Repair (2020: \$0.5 million, 2020-2024 CIP: \$1.0 million)
- Open Space Lakes and Ponds (2020: \$0.05 million, 2020-2024 CIP: \$0.3 million)
- Open Space Trails and Amenities (2020: \$0.2 million, 2020-2024 CIP: \$1.2 million)
- Parks and Open Space Emergency Repairs (2020: \$0.1 million, 2020-2024 CIP: \$1.1 million)

### Non-Recurring Projects

Significant projects in this category during the 2020-2024 CIP include improvements at various parks (Boulware, Byxbee, Cameron, Ramos, and Rinconada). Other investments in open space areas are also included in the CIP plan, such as Golf Course Driving Range Net and Artificial Turf Replacement, a Baylands Comprehensive Conservation Plan, and a Byxbee Park Completion project. The Baylands Comprehensive Conservation Plan will examine native vegetation, wildlife habitat resources, and wildlife-appropriate public access for the entire Baylands, including Byxbee Park. The preparation of this plan will provide needed information on the best areas to maintain as wildlife habitat and appropriate areas to develop trails or other recreation amenities. The project now also includes design for interpretive messaging and design for placement of



public art. Funding in the 2020-2024 CIP plan includes \$3.0 million for a Byxbee Park Completion project, which is part of the Infrastructure Plan and mostly offset with funds from park dedication impact fees, to complete improvements to Byxbee Park since the landfill capping work is finished.

## Streets and Sidewalks

The Streets and Sidewalks category includes projects to maintain and repair the City's streets, sidewalks, bridges, streetlights, and other related infrastructure such as curb and gutter, medians, and thermoplastic lane markings. This category has seen significant funding increases in recent years in response to City Council goals and recommendations of the Infrastructure Blue Ribbon Commission (IBRC). The 2020-2024 CIP includes funding totaling \$51.0 million in this category, with \$16.1 million allocated in Fiscal Year 2020. Of this amount, \$5.6 million is recommended to be reappropriated for the continuation of projects approved by the City Council in prior fiscal years. In 2011, the City Council increased funding for the Street Maintenance program and set a goal of raising the citywide average Pavement Condition Index (PCI) score from 72 to 85 by 2021. A PCI score of 85 represents "very good" to "excellent" pavement conditions and the goal was reached in 2018, three years earlier than the initial goal. The funding level for Sidewalk Repairs was also increased to allow the Sidewalks program to eliminate its accumulation of deferred maintenance or "catch-up" work and to achieve its 1986 goal of completing work in all 23 sidewalk "districts" by 2016. An assessment study for sidewalk repairs was completed in early 2019 and offers suggestions for establishing goals and priorities for the sidewalk repair project moving forward. The total funding amount of \$51.0 million for Streets and Sidewalks represents approximately 15 percent of the total Capital Improvement Fund CIP Plan.

### Infrastructure Inventory - Summary of Streets and Sidewalks

CLASSIFICATION	QUANTITY
Streets maintained	471 lane miles
Sidewalks maintained	7.5 million square feet
Streetlights maintained	6,500
Bridges maintained	74

### Recent Accomplishments

- Increased the citywide average Pavement Condition Index score to 85 at the end of calendar year 2018.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are six recurring projects in the Streets and Sidewalks category:

- Curb and Gutter Repairs (2020: \$0.7 million, 2020-2024 CIP: \$1.2 million)
- Sidewalk Repairs (2020: \$1.5 million, 2020-2024 CIP: \$8.4 million)

## CAPITAL IMPROVEMENT FUND

- Sign Reflectivity Upgrade (2020: \$0.2 million, 2020-2024 CIP: \$0.5 million)
- Street Lights Improvements (2020: \$0.4 million, 2020-2024 CIP: \$1.3 million)
- Street Maintenance (2020: \$9.9 million, 2020-2024 CIP: \$34.8 million)
- Thermoplastic Lane Marking and Striping (2020: \$0.2 million, 2020-2024 CIP: \$0.7 million)

Activities for Fiscal Year 2020 under these projects consist of ongoing planned repair activities, as well as providing funding for unplanned needs that may arise. The Street Maintenance project will continue to implement its five-year plan in close coordination with Utilities and Transportation projects. With the Pavement Condition Index (PCI) goal met in 2018, the annual Street Maintenance project budget will be reassessed to be funded at a level sufficient to maintain the new street conditions while continuing to focus on streets that have a PCI score of less than 60. The passage of SB1 for Road Maintenance and Rehabilitation is estimated to provide an additional \$1.2 million annually starting in Fiscal Year 2019. This funding could supplement and enhance the City's street maintenance program, possibly allowing some funds to be reallocated to other capital projects with Council approval.

### Non-Recurring Projects

While most Streets and Sidewalks work is completed through recurring projects, there are a few non-recurring projects with activities planned for Fiscal Year 2020. Completion of the California Avenue District Gateway Signs project that will update the two gateway monument signs in the California Avenue District. This also includes the Street Lights Condition Assessment project, which will continue to compile an inventory of the City's entire lighting system to determine the best approach to prolong the life of the system.

## Traffic and Transportation

Projects in this category support the development and implementation of a sustainable transportation system, including walking, biking, ridesharing, transit, and other methods of non-single occupancy vehicle (SOV). Planning, design, and construction of Traffic and Transportation projects are managed jointly by the Office of Transportation and the Public Works Department. The 2020-2024 CIP includes funding totaling \$77.8 million in this category, with \$34.4 million allocated in Fiscal Year 2020. Of this amount, \$15.7 million is recommended to be reappropriated from Fiscal Year 2019 for projects that are continuing into Fiscal Year 2020. The Traffic and Transportation category includes the following Council Infrastructure Plan projects: Bicycle and Pedestrian Transportation Plan Implementation, Charleston/Arastradero Corridor, the Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment, and the Highway 101 Pedestrian/Bicycle Overpass. These projects account for \$61.9 million or 22% of the total Infrastructure Plan. The overall funding level of \$77.8 million for programmed projects represents 23% of the total Capital Improvement Fund CIP Plan.

### Recent Accomplishments

- Completed Phases 1 and 2 of the Charleston/Arastradero Corridor Improvements project.
- Completed design, access, easement, and maintenance agreements for the Highway 101 Pedestrian/Bicycle Overpass project.

- Constructed major portions of Phase 1 of the Neighborhood Traffic Safety and Bicycle Boulevard Project.
- Installed a new high visibility crosswalk, bulb-out, and ADA ramps at Colorado Ave/Sandra Place.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are four recurring projects within the Traffic and Transportation category.

- Bicycle and Pedestrian Transportation Plan Implementation (2020: \$2.1 million, 2020-2024 CIP: \$11.1 million)
- Parking District Implementation (2020: \$0.2 million, 2020-2024 CIP: \$1.0 million)
- Safe Routes to Schools (2020: \$0.2 million, 2020-2024 CIP: \$1.9 million)
- Traffic Signal and Intelligent Transportation Systems (2020: \$2.4 million, 2020-2024 CIP: \$5.8 million)
- Transportation and Parking Improvements (2020: \$0.3 million, 2020-2024 CIP: \$2.3 million)

Together, these projects improve transportation and safety and implement the Palo Alto Bicycle and Pedestrian Plan, which represents the majority of funding within this category. This project provides funding for the design and construction of bicycle boulevards, enhanced bikeways, shared-use paths, bicycle parking, and a citywide bicycle sharing system. This project is part of the Infrastructure Plan, and partially funded through transfers from the Stanford University Medical Center Development Agreement Fund.

### Non-Recurring Projects

Non-recurring projects within this category include parking, intersection, and street projects. These projects are for discrete activities such as parking signage, parking wayfinding, intersection improvements, railroad grade separation, or projects not included within the Bicycle and Pedestrian Transportation Plan. There is one new project in Fiscal Year 2020 in this category, Churchill Avenue/Alma Street Railroad Safety Improvement, which will provide safety improvements around the railroad tracks at the Alma and Churchill intersection. In addition, there are several significant projects that fall within this category:

- Charleston/Arastradero Corridor Improvements (2020: \$6.3 million, 2020-2024 CIP: \$6.3 million)
- El Camino Real Pedestrian Safety and Streetscape (2020: \$0.8 million, 2020-2024 CIP: \$6.3 million)
- Embarcadero Road at El Camino Improvements (2020-2024 CIP: \$6.5 million)
- Quarry Road Improvements and Transit Center Access (2020: \$0.5 million, 2020-2024 CIP: \$3.8 million)
- Railroad Grade Separation (2020: \$4.1 million, 2020-2024 \$9.5 million)

# CAPITAL IMPROVEMENT FUND

## Summary of Capital Activity

### CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Beginning Fund Balance</b>									
	Infrastructure Reserve - Beginning Fund Balance	46,800,273	51,519,893	42,345,288	15,413,296	17,793,952	2,837,899	3,800,944	42,345,288
	Reserve: Debt Service	0	0	0	0	0	0	5,000,000	0
	Reserve: Infrastructure Plan	24,012,048	25,537,577	1,160,631	0	216,606	0	0	1,160,631
	Reserve: Library Bond Proceeds	716,000	638,000	581,000	581,000	581,000	581,000	581,000	581,000
	Reserve: Roth Building & Sea Scout Building TDRs	4,680,258	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468
	<b>Total Beginning Fund Balance</b>	<b>76,208,579</b>	<b>82,382,938</b>	<b>48,774,387</b>	<b>20,681,764</b>	<b>23,279,026</b>	<b>8,106,367</b>	<b>14,069,412</b>	<b>48,774,387</b>
<b>General Fund Contributions</b>									
	Annual General Fund Capital Transfer	14,602,321	16,958,000	15,323,000	15,697,000	16,081,000	16,473,000	16,875,000	80,449,000
	Transfer from General Fund - TOT Funding	8,240,184	9,068,000	11,774,476	16,217,000	16,647,631	17,121,660	17,600,954	79,361,721
	Interest Income	1,105,828	1,000,000	1,178,500	1,100,000	1,100,000	1,100,000	1,100,000	5,578,500
PG-06003	Benches, Signage, Walkways, Perimeter Landscaping	94,200	0	0	0	0	0	0	0
	<b>Total General Fund Contributions</b>	<b>24,042,533</b>	<b>27,026,000</b>	<b>28,275,976</b>	<b>33,014,000</b>	<b>33,828,631</b>	<b>34,694,660</b>	<b>35,575,954</b>	<b>165,389,221</b>
<b>Project Reimbursements &amp; Fund Transfers</b>									
<b>Transfer from California Avenue Parking District Fund</b>									
PE-17004	California Avenue District Gateway Signs	150,000	0	0	0	0	0	0	0
PL-16002	Parking Management and System Implementation	0	0	138,000	0	0	0	0	138,000
	<b>Total Transfer</b>	<b>150,000</b>	<b>0</b>	<b>138,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138,000</b>
<b>Transfer from Charleston/Arastradero Fund</b>									
PE-13011	Charleston/Arastradero Corridor Project	12,000	0	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>12,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfer from Community Center Impact Fee Fund</b>									
AC-18001	JMZ Renovation	0	1,025,717	671,860	125,498	0	0	0	797,358
PE-08001	Rinconada Park Improvements	0	0	1,999,529	75,000	0	0	0	2,074,529
	<b>Total Transfer</b>	<b>0</b>	<b>1,025,717</b>	<b>2,671,389</b>	<b>200,498</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,871,887</b>

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Transfer from Fiber Optics Fund</b>									
AC-86017	Art in Public Spaces	5,700	0	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>5,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfer from Gas Fund</b>									
AC-86017	Art in Public Spaces	5,700	0	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>5,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfer from Gas Tax Fund</b>									
PE-13011	Charleston/Arastradero Corridor Project	0	1,105,567	0	0	0	0	0	0
PL-00026	Safe Routes To School	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000
PE-86070	Street Maintenance	1,702,499	1,300,000	2,453,997	2,455,000	2,455,000	2,455,000	2,455,000	12,273,997
	<b>Total Transfer</b>	<b>1,802,499</b>	<b>2,505,567</b>	<b>2,553,997</b>	<b>2,555,000</b>	<b>2,555,000</b>	<b>2,555,000</b>	<b>2,555,000</b>	<b>12,773,997</b>
<b>Transfer from Parks Dedication Fee Fund</b>									
PE-14018	Baylands Boardwalk Improvements	0	470,000	0	0	0	0	0	0
PE-18006	Byxbee Park Completion	400,000	0	0	2,400,000	0	0	0	2,400,000
	<b>Total Transfer</b>	<b>400,000</b>	<b>470,000</b>	<b>0</b>	<b>2,400,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,400,000</b>
<b>Transfer from Parks Development Impact Fee Fund</b>									
PG-19001	Baylands Athletic Center 10.5 Acre Expansion Plan	0	100,000	0	0	0	0	0	0
PG-18001	Dog Park Installation and Renovation	150,000	0	150,000	0	150,000	0	150,000	450,000
PG-19000	Park Restroom Installation	0	0	350,000	350,000	0	350,000	0	1,050,000
PG-18002	Turf Management Plan	100,000	0	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>250,000</b>	<b>100,000</b>	<b>500,000</b>	<b>350,000</b>	<b>150,000</b>	<b>350,000</b>	<b>150,000</b>	<b>1,500,000</b>
<b>Transfer from Refuse Fund</b>									
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	19,000	750	0	0	0	19,750
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	0	54,000	0	0	0	0	54,000
	<b>Total Transfer</b>	<b>0</b>	<b>0</b>	<b>73,000</b>	<b>750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73,750</b>
<b>Transfer from Residential Parking Permits Program Fund</b>									
PL-16002	Parking Management and System Implementation	0	0	255,000	0	0	0	0	255,000
	<b>Total Transfer</b>	<b>0</b>	<b>0</b>	<b>255,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255,000</b>

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Transfer from San Antonio/West Bayshore Fund</b>									
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades	0	0	900,000	0	0	0	0	900,000
	<b>Total Transfer</b>	<b>0</b>	<b>0</b>	<b>900,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>900,000</b>
<b>Transfer from Stanford University Medical Center Development Agreement Fund</b>									
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	5,200,000	0	1,200,000	1,200,000	0	0	0	2,400,000
PE-18004	Fire Station 4 Replacement	0	0	0	750,000	0	0	0	750,000
PE-15007	New Downtown Parking Garage	0	0	0	0	9,072,000	0	0	9,072,000
PE-15001	New Public Safety Building	0	0	0	800,000	0	0	0	800,000
PL-16000	Quarry Road Improvements	550,000	0	200,000	0	1,493,513	0	0	1,693,513
PL-19000	Traffic Signal Emergency Vehicle Preemption	0	11,200	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>5,750,000</b>	<b>11,200</b>	<b>1,400,000</b>	<b>2,750,000</b>	<b>10,565,513</b>	<b>0</b>	<b>0</b>	<b>14,715,513</b>
<b>Transfer from Stormwater Management Fund</b>									
PE-13011	Charleston/Arastradero Corridor Project	330,000	330,000	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>330,000</b>	<b>330,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfer from Traffic Impact Fee Fund</b>									
PL-14000	El Camino Real & Churchill Intersection Improvements-Design	1,000,000	0	0	0	0	0	0	0
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades	378,361	506,475	383,362	400,000	395,000	0	0	1,178,362
	<b>Total Transfer</b>	<b>1,378,361</b>	<b>506,475</b>	<b>383,362</b>	<b>400,000</b>	<b>395,000</b>	<b>0</b>	<b>0</b>	<b>1,178,362</b>
<b>Transfer from University Avenue Parking District Fund</b>									
PL-15004	Downtown Parking Wayfinding	61,325	280,015	40,000	0	0	0	0	40,000
PE-18002	High Street Parking Garage Waterproofing Study	50,000	300,000	0	0	0	0	0	0
PF-18000	Parking Lot J Elevator Modernization	700,000	50,000	0	0	0	0	0	0
PL-16002	Parking Management & System Implementation	0	0	752,220	0	0	0	0	752,220
PF-14003	University Avenue Parking Improvements	141,759	63,517	343,000	225,000	115,000	75,000	65,000	823,000
	<b>Total Transfer</b>	<b>953,084</b>	<b>693,532</b>	<b>1,135,220</b>	<b>225,000</b>	<b>115,000</b>	<b>75,000</b>	<b>65,000</b>	<b>1,615,220</b>
<b>Transfer from University Avenue Parking In Lieu Fund</b>									
PE-15007	New Downtown Parking Garage	0	0	0	0	5,541,000	0	0	5,541,000
	<b>Total Transfer</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,541,000</b>	<b>0</b>	<b>0</b>	<b>5,541,000</b>
<b>Transfer from Utilities Administration Fund</b>									
PE-09003	City Facility Parking Lot Maintenance	0	0	0	0	0	300,000	0	300,000

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
FD-19000	Fire and Utilities Trench Training Facility	0	0	55,000	0	0	0	0	55,000
PF-02022	Facility Interior Finishes Replacement	0	370,000	0	169,000	176,000	0	0	345,000
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	684,000	27,000	0	0	0	711,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	0	1,944,000	0	0	0	0	1,944,000
PE-19001	Water, Gas, Wastewater Office Remodel	0	70,000	654,000	0	0	0	0	654,000
	<b>Total Transfer</b>	<b>0</b>	<b>440,000</b>	<b>3,337,000</b>	<b>196,000</b>	<b>176,000</b>	<b>300,000</b>	<b>0</b>	<b>4,009,000</b>

## Transfer from Vehicle Maintenance Fund

PF-02022	Facility Interior Finishes Replacement	0	0	0	0	0	68,000	0	68,000
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	0	380,000	15,000	0	0	0	395,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	0	1,080,000	0	0	0	0	1,080,000
	<b>Total Transfer</b>	<b>0</b>	<b>0</b>	<b>1,460,000</b>	<b>15,000</b>	<b>0</b>	<b>68,000</b>	<b>0</b>	<b>1,543,000</b>

## Transfer from Water Fund

AC-86017	Art in Public Spaces	5,700	0	0	0	0	0	0	0
	<b>Total Transfer</b>	<b>5,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## Grants/Other Revenue

AC-86017	Art in Public Spaces: Federal Grant and Private Donations	30,000	175,000	0	0	0	0	0	0
FD-21000	Automated External Defibrillator Replacement: Stanford	0	0	0	38,000	0	0	0	38,000
FD-20000	Cardiac Monitor Replacement: Stanford	0	0	161,500	0	0	0	0	161,500
PE-13011	Charleston/Arastradero Corridor Project: VTA Grant	0	1,585	1,824,319	0	0	0	0	1,824,319
PL-20000	Churchill Avenue/Alma Street Railroad Crossing Safety Improvements: CalTrans Section 130	0	0	500,000	4,000,000	0	0	0	4,500,000
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation: BAAQMD Grant	17,000	203,000	40,000	0	0	0	0	40,000
PL-18000	El Camino Real Pedestrian Safety and Streetscape Project: VTA Grant	0	0	0	4,655,000	0	0	0	4,655,000
FD-22000	Extraction Tool Replacement: Stanford	0	0	0	0	42,700	0	0	42,700
FD-19000	Fire and Utilities Trench Training Facility: Stanford	0	0	10,400	0	0	0	0	10,400
FD-14002	Fire Ringdown System Replacement: Stanford	0	0	45,000	0	0	0	0	45,000
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements: SF Creek Joint Powers and Certificates of Participation	9,125,000	2,250,000	0	0	0	0	0	0
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project: Santa Clara County & OBAG Grants and Google Reimbursement	0	650,000	8,700,000	0	0	0	0	8,700,000
AC-18001	JMZ Renovation: IMLS Grant	10,937	259,187	0	0	0	0	0	0
PE-18000	New California Avenue Area Parking Garage: Certificates of Participation	0	41,995,000	0	0	0	0	0	0

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
PE-15001	New Public Safety Building: Certificates of Participation	0	0	0	103,000,000	0	0	0	103,000,000
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement: Caltrans & Silicon Valley Water	152,616	150,600	2,349,400	0	0	0	0	2,349,400
PF-16003	Parking Lot Q Elevator Modernization: Homeowners Association Reimbursement	0	25,591	0	0	0	0	0	0
PL-17001	Railroad Grade Separation: Measure B	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
PL-00026	Safe Routes To School: VTA Grant	0	0	0	459,677	459,677	0	0	919,354
FD-20001	Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement: Stanford	0	0	16,300	0	0	0	0	16,300
FD-18000	Self-Contained Breathing Apparatus (SCBA) Replacement: Stanford	160,720	8,800	10,100	0	0	0	0	10,100
PO-89003	Sidewalk Repairs: Local Community Reimbursement	50,000	0	0	0	0	0	0	0
PE-86070	Street Maintenance: State Grant	553,501	429,419	2,248,220	421,000	421,000	421,000	421,000	3,932,220
FD-20002	Thermal Imaging Cameras Replacement: Stanford	0	0	18,800	0	0	0	0	18,800
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades: Measure B	0	400,000	300,000	300,000	300,000	300,000	300,000	1,500,000
	<b>Total Grants/Other Revenue</b>	<b>10,099,774</b>	<b>47,548,182</b>	<b>17,224,039</b>	<b>113,873,677</b>	<b>2,223,377</b>	<b>1,721,000</b>	<b>1,721,000</b>	<b>136,763,093</b>
	<b>Total Revenue</b>	<b>45,185,351</b>	<b>80,656,673</b>	<b>60,306,983</b>	<b>155,979,925</b>	<b>55,549,521</b>	<b>39,763,660</b>	<b>40,066,954</b>	<b>351,667,043</b>
	<b>Total Sources</b>	<b>121,393,930</b>	<b>163,039,611</b>	<b>109,081,370</b>	<b>176,661,689</b>	<b>78,828,547</b>	<b>47,870,027</b>	<b>54,136,366</b>	<b>400,441,430</b>
<b>Use of Funds</b>									
<b>Buildings &amp; Facilities</b>									
PF-93009	Americans With Disabilities Act Compliance	20,248	330,565	827,020	269,000	536,000	502,000	837,000	2,971,020
PE-19002	Animal Shelter Renovation	0	813,179	2,928,100	0	0	0	0	2,928,100
PE-14018	Baylands Boardwalk Improvements	440,915	1,682,766	0	0	0	0	0	0
PE-17006	Baylands Flood Protection Levee Improvements	133,333	172,432	1,048,000	0	0	0	0	1,048,000
AC-14001	Baylands Nature Interpretive Center Exhibit Improvements	16,038	15,200	0	0	0	0	0	0
PE-15029	Baylands Nature Interpretive Center Facility Improvements	3,019	2,008	0	0	0	0	0	0
PF-01003	Building Systems Improvements	234,058	242,760	419,991	184,854	321,000	301,000	502,000	1,728,845
PF-14004	California Avenue Parking District Parking Improvements	225,465	0	0	0	0	0	0	0
PE-20001	City Bridge Improvements	0	0	16,000	43,000	214,000	562,000	335,000	1,170,000
PE-20002	City Facilities Assessment and Record Plan Management System	0	0	314,000	0	0	0	0	314,000
PE-09003	City Facility Parking Lot Maintenance	602,517	168,598	1,014,511	590,000	0	2,008,000	0	3,612,511
PE-12017	City Hall First Floor Renovations	29,647	203,338	0	0	0	0	0	0
PE-17002	City Hall Floor 3 Remodel	221,259	21,998	0	0	0	0	0	0
PE-17008	City Hall Floor 4 Remodel	47,549	427,451	0	0	0	0	0	0



# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
PE-17009	City Hall Floor 5 Remodel	106,030	418,970	0	0	0	0	0	0
PE-19000	City Hall Space Planning	0	2,932	79,000	0	0	0	0	79,000
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation	35,645	133,334	746,948	0	0	0	0	746,948
PE-18016	Civic Center Fire Life Safety and Electrical Upgrades	2,536	22,482	602,000	0	0	0	0	602,000
PE-15020	Civic Center Waterproofing Study and Repairs	14,416	53,879	585,753	0	0	0	0	585,753
PF-15005	Emergency Facilities Improvement	1,130	14,370	0	0	0	0	0	0
PF-02022	Facility Interior Finishes Replacement	64,705	102,413	1,176,856	298,658	376,931	513,814	450,446	2,816,705
FD-19000	Fire and Utilities Trench Training Facility	0	0	110,000	0	0	0	0	110,000
FD-14002	Fire Ringdown System Replacement	0	326,000	74,000	0	0	0	0	74,000
PF-14002	Fire Station 1 Improvements	9,769	55,000	45,000	0	0	0	0	45,000
PE-15003	Fire Station 3 Replacement	2,991,440	6,021,322	280,000	0	0	0	0	280,000
PE-18004	Fire Station 4 Replacement	0	0	850,000	9,350,000	0	0	0	10,200,000
PE-18002	High and Bryant Street Garages Waterproofing and Repairs	5,256	226,474	130,000	0	0	0	0	130,000
PD-14000	Internal Alarm System Replacement	0	50,769	26,800	0	0	0	0	26,800
AC-18001	JMZ Renovation	567,146	841,252	1,775,160	134,498	0	0	0	1,909,658
PE-14015	Lucie Stern Buildings Mechanical and Electrical Upgrades	538,225	2,753,531	0	0	0	0	0	0
PE-09006	Mitchell Park Library and Community Center	55,128	0	0	0	0	0	0	0
PF-17000	Municipal Service Center A, B, & C Roof Replacement	0	74,289	1,991,000	81,000	0	0	0	2,072,000
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	679,305	91,991	6,265,223	0	0	0	0	6,265,223
PE-18000	New California Avenue Area Parking Garage	1,151,014	47,381,808	1,280,000	0	0	0	0	1,280,000
PE-15007	New Downtown Parking Garage	586,377	1,600,000	0	0	26,600,000	0	0	26,600,000
PE-15001	New Public Safety Building	1,686,435	4,922,899	0	103,910,000	3,850,000	0	0	107,760,000
PF-18000	Parking Lot J Elevator Modernization	0	729,324	52,000	0	0	0	0	52,000
PF-16003	Parking Lot Q Elevator Modernization	16,970	0	0	0	0	0	0	0
AC-18000	Performing Arts Venue Seat Replacement	0	0	419,000	0	0	0	0	419,000
AC-17000	Performing Arts Venues Soft Goods Replacement	41,912	0	0	0	0	0	0	0
PE-11000	Rinconada Library New Construction and Improvements	279	0	0	0	0	0	0	0
PF-00006	Roofing Replacement	225,664	986,196	675,914	387,000	296,229	986,476	1,335,986	3,681,605
PF-07011	Roth Building Maintenance	1,329	2,567	41,073	0	0	0	0	41,073
PE-13012	Structural Assessment of City Bridges	28,595	0	0	0	0	0	0	0
PF-14003	University Avenue Parking Improvements	42,096	63,517	16,000	242,000	246,000	151,000	218,000	873,000
PE-15011	Ventura Buildings Improvements	227,554	141,835	1,968,597	0	0	0	0	1,968,597
PE-19001	Water, Gas, Wastewater Office Remodel	0	2,737	755,000	0	0	0	0	755,000
	<b>Total Building &amp; Facilities</b>	<b>11,053,004</b>	<b>71,100,186</b>	<b>26,512,946</b>	<b>115,490,010</b>	<b>32,440,160</b>	<b>5,024,290</b>	<b>3,678,432</b>	<b>183,145,838</b>

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Department Technology Upgrades and Improvements</b>									
FD-21000	Automated External Defibrillator Replacement	0	0	0	200,000	0	0	0	200,000
FD-20000	Cardiac Monitor Replacement	0	0	850,000	0	0	0	0	850,000
FD-22000	Extrication Tool Replacement	0	0	0	0	225,000	0	0	225,000
PD-20000	Police Video Recording Systems Replacement	0	0	150,000	150,000	0	0	0	300,000
FD-20001	Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement	0	0	86,000	0	0	0	0	86,000
FD-18000	Self-Contained Breathing Apparatus (SCBA) Replacement	698,783	48,217	53,000	0	0	0	0	53,000
FD-20002	Thermal Imaging Cameras Replacement	0	0	99,000	0	0	0	0	99,000
	<b>Total Department Technology Upgrades and Improvements</b>	<b>698,783</b>	<b>48,217</b>	<b>1,238,000</b>	<b>350,000</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>1,813,000</b>
<b>Parks &amp; Open Space</b>									
AC-86017	Art In Public Spaces	194,373	745,992	1,102,443	1,305,649	183,300	63,800	66,272	2,721,464
PG-06001	Athletic Courts Resurfacing	20,141	759,297	254,000	260,000	276,000	310,000	302,000	1,402,000
PG-19001	Baylands Athletic Center 10.5 Acre Expansion Plan	0	15,032	106,000	0	0	0	0	106,000
PG-17000	Baylands Comprehensive Conservation Plan	117,131	307,398	0	0	0	0	0	0
PE-15028	Baylands Levee Improvements Feasibility	157,000	500	0	0	0	0	0	0
OS-09002	Baylands Levee Repair for Public Safety Access	0	0	0	0	0	0	373,602	373,602
PG-06003	Benches, Signage, Walkways, Perimeter Landscaping	177,176	392,204	207,000	212,000	225,000	252,000	246,000	1,142,000
PE-16000	Bol Park Improvements	0	0	0	0	0	0	295,000	295,000
PE-17005	Boulware Park Improvements	76,633	1,173	473,000	0	0	0	0	473,000
PE-13008	Bowden Park Improvements	27,156	0	0	0	0	0	0	0
PG-15000	Buckeye Creek Hydrology Study	50,852	17,270	0	0	0	0	0	0
PE-18006	Byxbee Park Completion	155,574	401,806	382,620	2,660,000	0	0	0	3,042,620
PE-13020	Byxbee Park Trails	12,454	0	0	0	0	0	0	0
PG-14002	Cameron Park Improvements	0	0	237,000	0	0	0	0	237,000
PG-18001	Dog Park Installation and Renovation	178,283	13,978	177,000	0	193,000	0	211,000	581,000
OS-18000	Foothills Park Boronda Lake Dock Replacement	0	0	0	163,000	0	0	0	163,000
PE-20000	Foothills Park Dam Seepage Investigation & Repairs	0	0	36,000	0	0	0	0	36,000
PE-21000	Foothills Park Improvement Project	0	0	0	424,000	0	0	0	424,000
PG-17001	Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan	0	15,096	355,000	0	116,000	0	0	471,000
PG-18000	Golf Course Net and Artificial Turf Replacement	0	0	0	0	988,000	0	0	988,000
PG-13003	Golf Course Reconfiguration & Baylands Athletic Center Improvements	3,547,574	411,224	0	0	0	0	0	0
PG-21000	Heritage Park Site Amenities Replacement	0	0	0	0	128,000	0	0	128,000
PE-18012	Hoover Park Improvements	0	0	0	0	0	707,000	0	707,000
PE-21002	Johnson Park Renovation	0	0	0	103,000	1,091,000	0	0	1,194,000

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
PE-17000	Mitchell Park Adobe Creek Bridge Replacement	95,142	180,706	0	0	0	0	0	0
PE-18010	Mitchell Park Improvements	0	0	0	0	0	288,000	1,590,200	1,878,200
OS-09001	Off-Road Pathway Resurfacing And Repair	133,334	46,753	455,000	121,000	128,000	144,000	141,000	989,000
OS-00002	Open Space Lakes And Pond Maintenance	14,406	105,689	54,000	54,000	58,000	66,000	63,000	295,000
OS-00001	Open Space Trails and Amenities	247,976	272,611	248,000	212,000	225,000	252,000	246,000	1,183,000
PG-09002	Parks and Open Space Emergency Repairs	89,612	148,673	142,000	151,000	193,000	288,000	316,000	1,090,000
PG-19000	Park Restroom Installation	0	0	414,000	424,000	0	505,000	0	1,343,000
PE-13003	Parks, Trails, Open Space, & Recreation Master Plan	82,975	209	0	0	0	0	0	0
PE-21001	Pearson Arastradero Improvement Project	0	0	0	0	32,000	360,000	0	392,000
OS-18001	Pearson Arastradero Preserve Parking Lot Improvement	0	0	0	188,000	0	0	0	188,000
PG-14001	Peers Park Improvements	0	0	0	0	0	296,000	0	296,000
PG-14000	Ramos Park Improvements	0	0	271,000	0	0	0	0	271,000
PE-08001	Rinconada Park Improvements	2,037,419	177,772	2,364,529	91,000	0	0	0	2,455,529
PE-12003	Rinconada Park Master Plan and Design	112,718	8,938	0	0	0	0	0	0
PE-18015	Robles Park Improvements	0	0	0	0	866,000	0	0	866,000
PG-14003	Seale Park Improvements	0	0	0	400,000	0	0	0	400,000
PG-18002	Turf Management Plan	0	0	118,000	0	0	0	0	118,000
PG-22000	Werry Park Playground Improvements	0	0	0	0	128,000	0	0	128,000
	<b>Total Parks &amp; Open Space</b>	<b>7,527,929</b>	<b>4,022,321</b>	<b>7,396,592</b>	<b>6,768,649</b>	<b>4,830,300</b>	<b>3,531,800</b>	<b>3,850,074</b>	<b>26,377,415</b>
<b>Streets and Sidewalks</b>									
PE-17004	California Ave District Gateway Signs	6,875	239	169,886	0	0	0	0	169,886
PE-18001	CalTrain Corridor Video Management System Installation	727,812	848,321	0	0	0	0	0	0
PO-12001	Curb and Gutter Repairs	0	666,741	665,123	136,000	143,000	144,000	144,000	1,232,123
PE-13017	El Camino Median Landscape Improvements	0	0	83,000	963,000	0	0	0	1,046,000
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement	207,311	869,848	2,712,069	0	0	0	0	2,712,069
PO-89003	Sidewalk Repairs	2,183,689	1,891,442	1,533,576	1,650,000	1,725,000	1,741,000	1,740,000	8,389,576
PO-11000	Sign Reflectivity Upgrade	0	121,454	189,463	68,000	71,000	72,000	72,000	472,463
PE-13014	Street Lights Condition Assessment	0	8,605	224,078	0	0	0	0	224,078
PO-05054	Street Lights Improvements	58,759	70,623	404,152	205,000	214,000	216,000	216,000	1,255,152
PE-86070	Street Maintenance	7,329,378	8,875,700	9,864,243	5,981,000	6,212,000	6,266,000	6,473,000	34,796,243
PO-11001	Thermoplastic Lane Marking and Striping	42,346	28,832	231,455	102,000	107,000	108,000	108,000	656,455
	<b>Total Streets and Sidewalks</b>	<b>10,556,170</b>	<b>13,381,805</b>	<b>16,077,045</b>	<b>9,105,000</b>	<b>8,472,000</b>	<b>8,547,000</b>	<b>8,753,000</b>	<b>50,954,045</b>
<b>Traffic and Transportation</b>									
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	3,814,002	3,000,000	2,090,000	3,150,000	2,950,000	2,950,000	0	11,140,000
PL-11002	California Avenue Transit Hub Corridor Project	3,436	0	0	0	0	0	0	0

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
PE-13011	Charleston/Arastradero Corridor Project	932,814	10,630,123	6,305,200	0	0	0	0	6,305,200
PL-20000	Churchill Avenue/Alma Street Railroad Crossing Safety Improvements	0	0	513,000	4,301,000	0	0	0	4,814,000
PL-14000	Churchill Avenue Enhanced Bikeway	34,799	57,492	3,075,000	0	0	0	0	3,075,000
PL-15002	Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment	14,436	132,734	1,189,000	1,398,000	0	0	0	2,587,000
PL-16001	Downtown Mobility and Safety Improvements	49,183	2,235,388	0	0	0	0	0	0
PL-15004	Downtown Parking Wayfinding	5,047	791,187	272,000	0	0	0	0	272,000
PL-18000	El Camino Real Pedestrian Safety and Streetscape Project	4,828	126,975	823,000	5,526,750	0	0	0	6,349,750
PL-15001	Embarcadero Road at El Camino Real Improvements	125,727	200,000	0	1,076,000	5,412,000	0	0	6,488,000
PL-19000	Emergency Vehicle Traffic Signal Preemption System Pilot	0	597,125	0	0	0	0	0	0
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project	1,324,563	3,436,406	11,250,000	0	0	0	0	11,250,000
PL-14001	Midtown Connector	0	53,120	0	0	0	0	0	0
PL-15003	Parking District Implementation	254,646	204,588	154,000	161,000	167,000	233,000	241,000	956,000
PL-16002	Parking Management & System Implementation	0	116,123	1,171,000	0	0	0	0	1,171,000
PL-16000	Quarry Road Improvements	284,238	572,757	513,000	323,000	3,013,000	0	0	3,849,000
PL-17001	Railroad Grade Separation	552,824	2,004,237	4,108,000	1,076,000	1,116,000	1,553,000	1,605,000	9,458,000
PL-00026	Safe Routes To School	377,828	146,835	214,200	639,677	663,677	210,000	217,000	1,944,554
PL-05030	Traffic Signal and Intelligent Transportation System	353,926	710,993	2,356,500	753,000	775,000	909,000	979,000	5,772,500
PL-12000	Transportation and Parking Improvements	632,352	369,083	337,000	403,000	418,000	582,000	602,000	2,342,000
	<b>Total Traffic and Transportation</b>	<b>8,764,649</b>	<b>25,385,166</b>	<b>34,370,900</b>	<b>18,807,427</b>	<b>14,514,677</b>	<b>6,437,000</b>	<b>3,644,000</b>	<b>77,774,004</b>
<b>Administration</b>									
AS-10000	Capital Improvement Fund Administration	103,338	309,529	469,123	481,577	502,043	522,525	251,021	2,226,289
	<b>Total Administration</b>	<b>103,338</b>	<b>309,529</b>	<b>469,123</b>	<b>481,577</b>	<b>502,043</b>	<b>522,525</b>	<b>251,021</b>	<b>2,226,289</b>
	<b>Total Project Expenses</b>	<b>38,703,873</b>	<b>114,247,224</b>	<b>86,064,606</b>	<b>151,002,663</b>	<b>60,984,180</b>	<b>24,062,615</b>	<b>20,176,527</b>	<b>342,290,591</b>
<b>Transfers to Other Funds</b>									
	General Fund	7,500	0	0	0	0	0	0	0
	General Benefits Funds	108,006	0	0	0	0	0	0	0
	<b>Total Transfers to Other Funds</b>	<b>115,506</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Debt Service</b>									
	Certificates of Participation Debt Repayment (New California Avenue Area Parking Garage)	0	0	2,335,000	2,380,000	2,380,000	2,380,000	2,380,000	11,855,000
	Certificates of Participation Debt Repayment (New Public Safety Building)	0	0	0	0	7,358,000	7,358,000	7,358,000	22,074,000

# CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
	Golf Course Certificates of Participation Bond Issuance	191,613	18,000	0	0	0	0	0	0
	<b>Total Debt Service</b>	<b>191,613</b>	<b>18,000</b>	<b>2,335,000</b>	<b>2,380,000</b>	<b>9,738,000</b>	<b>9,738,000</b>	<b>9,738,000</b>	<b>33,929,000</b>
	<b>Total Expenses</b>	<b>39,010,992</b>	<b>114,265,224</b>	<b>88,399,606</b>	<b>153,382,663</b>	<b>70,722,180</b>	<b>33,800,615</b>	<b>29,914,527</b>	<b>376,219,591</b>
<b>Reserves</b>									
	Reserve for Roth Building & Sea Scout Building TDRs	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468	4,687,468
	Library Bond Proceeds	638,000	581,000	581,000	581,000	581,000	581,000	581,000	581,000
	Reserve for Infrastructure Plan	25,537,577	1,160,631	0	216,606	0	0	0	0
	Reserve for Debt Service	0	0	0	0	0	5,000,000	10,000,000	10,000,000
	Reserve for Future Capital Needs	0	0	0	0	0	0	5,000,000	5,000,000
	<b>Total Reserves</b>	<b>30,863,045</b>	<b>6,429,099</b>	<b>5,268,468</b>	<b>5,485,074</b>	<b>5,268,468</b>	<b>10,268,468</b>	<b>20,268,468</b>	<b>20,268,468</b>
	<b>Total Ending Fund Balance (Infrastructure Reserve)</b>	<b>51,519,893</b>	<b>42,345,288</b>	<b>15,413,296</b>	<b>17,793,952</b>	<b>2,837,899</b>	<b>3,800,944</b>	<b>3,953,371</b>	<b>3,953,371</b>
	<b>Total Uses</b>	<b>121,393,930</b>	<b>163,039,611</b>	<b>109,081,370</b>	<b>176,661,689</b>	<b>78,828,547</b>	<b>47,870,027</b>	<b>54,136,366</b>	<b>400,441,430</b>



CITY OF  
**PALO  
ALTO**

City of Palo Alto

2020-2024 Adopted Capital Improvement Program, General Fund

- 1

AC-18000

Performing Arts Venues Seat Replacement

2

AC-18001

JMZ Renovation

3

FD-19000

Fire and Utilities Trench Training Facility

4

PE-15001

New Public Safety Building

5

PE-15003

Fire Station 3 Replacement

6

PE-15007

New Downtown Parking Garage

7

PE-15011

Ventura Buildings Improvements

8

PE-15020

Civic Center Waterproofing Study and Repairs

9

PE-17006

Baylands Flood Protection Levee Improvements

10

PE-17010

Civic Center Electrical Upgrade & EV Charger Installation

11

PE-18000

New California Avenue Area Parking Garage

12

PE-18004

Fire Station 4 Replacement

13

PE-18016

Civic Center Fire Life Safety Upgrades

14

PE-19000

City Hall Space Planning

15

PE-19001

Water, Gas, Wastewater Office Remodel

16

PE-19002

Animal Shelter Renovation

17

PF-07011

Roth Building Maintenance

18

PF-16006

Municipal Service Center Lighting, Mechanical, and Electrical Improvements

19

PF-17000

Municipal Service Center A, B, & C Roof Replacement

20

PF-18000

Parking Lot J Elevator Modernization
- BUILDINGS AND FACILITIES
- 1

OS-00002

Open Space Lakes And Pond Maintenance

2

OS-09002

Baylands Levee Repair for Public Safety Access

3

OS-18000

Foothills Park Boronda Lake Dock Replacement

4

OS-18001

Pearson Arastradero Preserve Parking Lot Improvement

5

PE-08001

Rinconada Park Improvements

6

PE-16000

Bol Park Improvements

7

PE-17005

Boulware Park Improvements

8

PE-18006

Byxbee Park Completion

9

PE-18010

Mitchell Park Improvements

10

PE-18012

Hoover Park Improvements

11

PE-18015

Robles Park Improvements

12

PE-20000

Foothills Park Dam Seepage Investigation and Repairs

13

PE-21000

Foothills Park Improvement Project

14

PE-21001

Pearson Arastradero Improvement Project

15

PE-21002

Johnson Park Renovation

16

PG-14000

Ramos Park Improvements

17

PG-14001

Peers Park Improvements

18

PG-14002

Cameron Park Improvements

19

PG-14003

Seale Park Improvements

20

PG-17001

Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Conservation Plan

21

PG-18000

Golf Course Net and Artificial Turf Replacement

22

PG-19001

Baylands Athletic Center 10.5 Acre Expansion Plan

23

PG-21000

Heritage Park Site Amenities Replacement

24

PG-22000

Werry Park Playground Improvements

PARKS AND OPEN SPACE

1

PE-12011

Newell Road/San Francisquito Creek Bridge Replacement

2

PE-17004

California Avenue District Gateway Signs

STREETS AND SIDEWALKS

1

PE-11011

Highway 101 Pedestrian/Bicycle Overpass Project

2

PE-13011

Charleston/Arastradero Corridor Project

3

PL-14000

Churchill Avenue Enhanced Bikeway

4

PL-15001

Embarcadero Road at El Camino Improvements

5

PL-15002

Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equip.

6

PL-15004

Downtown Parking Wayfinding

7

PL-16000

Quarry Road Improvements and Transit Center Access

8

PL-16002

Downtown Parking Management and System Implementation

9

PL-18000

El Camino Real Pedestrian Safety and Streetscape Project

10

PL-20000

Churchill Avenue/Alma Street Railroad Crossing Safety Improvements

TRAFFIC AND TRANSPORTATION

Note: Project Locations are Approximate

PROJECTS IN VARIOUS LOCATIONS NOT SHOWN ON MAP

21

FD-14002

Fire Ringdown System Replacement

22

PE-20001

City Bridge Improvements

23

PE-20002

City Facilities Assessment and Record Plan Management System

24

PE-09003

City Facility Parking Lot Maintenance

25

PF-00006

Roofing Replacement

26

PF-01003

Building Systems Improvements

27

PF-02022

Facility Interior Finishes Replacement

28

PF-14003

University Avenue Parking Improvements

29

PF-93009

Americans With Disabilities Act Compliance

25

AC-86017

Art In Public Spaces

26

OS-00001

Open Space Trails and Amenities

27

OS-09001

Off-Road Pathway Resurfacing And Repair

28

PG-06001

Tennis and Basketball Court Resurfacing

29

PG-06003

Benches, Signage, Walkways, Perimeter Landscaping

30

PG-09002

Park and Open Space Emergency Repairs

31

PG-18001

Dog Park Installation and Renovation

32

PG-18002

Turf Management Plan

33

PG-19000

Park Restroom Installation

3

PE-13014

Street Lights Condition Assessment

4

PE-13017

El Camino Median Landscape Improvements

5

PE-86070

Street Maintenance

6

PO-05054

Street Lights Improvements

7

PO-11000

Sign Reflectivity Upgrade

8

PO-11001

Thermoplastic Lane Marking and Striping

9

PO-12001

Curb and Gutter Repairs

10

PO-89003

Sidewalk Repairs

11

PL-04010

Bicycle and Pedestrian Transportation Plan Implementation

12

PL-05030

Traffic Signal and Intelligent Transportation Systems

13

PL-12000

Transportation and Parking Improvements

14

PL-15003

Parking District Implementation

15

PL-17001

Railroad Grade Separation and Safety Improvements

16

PL-19000

Emergency Vehicle Traffic Signal Preemption System Pilot

17

PL-00026

Safe Routes To School

CAPITAL IMPROVEMENT FUND • CITY OF PALO ALTO FISCAL YEAR 2020 ADOPTED CAPITAL BUDGET 73



CITY OF  
**PALO  
ALTO**



## Buildings and Facilities



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PF-93009

Palo Alto Airport Terminal, January 2015

# Americans With Disabilities Act Compliance

## Description

This project provides funding for accessibility upgrades to City facilities and equipment. It includes continued funding for improvements such as path of travel, restroom upgrades, drinking fountains, and counters. This funding will also be utilized for other CIP project design or construction phases where accessibility improvements are identified.

## Justification

In order to comply with the Americans with Disabilities Act (ADA) of 1990 and related regulations, the City prepared a Transition Plan and Self-Evaluation Final Study that identified physical obstacles and described improvements to make facilities, programs, and services accessible. Implementation of this program is ongoing.

## Supplemental Information

The ADA Transition Plan, updated in early 2019, established a schedule for accessibility upgrades to City facilities.

## Significant Changes

**2020-2024 CIP:** Funding added to begin implementation of updated ADA Transition Plan that identified additional needs for City facilities.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	669,585	330,565	827,020	269,000	536,000	502,000	837,000	2,971,020	0	N/A
<b>Total</b>	<b>N/A</b>	<b>669,585</b>	<b>330,565</b>	<b>827,020</b>	<b>269,000</b>	<b>536,000</b>	<b>502,000</b>	<b>837,000</b>	<b>2,971,020</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	647,769	330,565	827,020	269,000	536,000	502,000	837,000	2,971,020	0	N/A
<b>Design</b>	N/A	21,816	0	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>669,585</b>	<b>330,565</b>	<b>827,020</b>	<b>269,000</b>	<b>536,000</b>	<b>502,000</b>	<b>837,000</b>	<b>2,971,020</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.8

### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3281 East Bayshore Road  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Winter 2018  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2020  
**Project Number:** PE-19002

City of Palo Alto Animal Shelter

# Animal Shelter Renovation

## Description

This project provides funding for interim facility improvements to the Animal Shelter that accompany operation of the shelter by a contractor. The improvements include expanding and remodeling the medical suite, providing a new 900 square foot modular building for office space, public educational programs, and expanded kennels.

## Justification

The Animal Shelter, built in 1972, is outdated and does not meet modern standards for medical care. Fundraising for construction of a new, modern animal shelter will be needed but interim improvements to the current shelter are needed for Pets In Need to successfully operate the facility.

## Significant Changes

**2020-2024 CIP:** The agreement with Pets In Need was approved by Council in November 2018 and included an increase of \$2.8 million in this project. This project was originally intended to fund works by Pets In Need but the work will now be managed by Public Works.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	1,631,279	813,179	2,928,100	0	0	0	0	2,928,100	0	3,741,279
<b>Total</b>	<b>0</b>	<b>1,631,279</b>	<b>813,179</b>	<b>2,928,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,928,100</b>	<b>0</b>	<b>3,741,279</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,631,279	813,179	2,928,100	0	0	0	0	2,928,100	0	3,741,279
<b>Total</b>	<b>0</b>	<b>1,631,279</b>	<b>813,179</b>	<b>2,928,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,928,100</b>	<b>0</b>	<b>3,741,279</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Maintenance costs at the facility will be covered by Pets In Need as stipulated in the agreement with the City.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Baylands Nature Preserve (2500 Embarcadero Road)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Fall 2017  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Fall 2021  
**Project Number:** PE-17006

Baylands Levee, 2016

# Baylands Flood Protection Levee Improvements

## Description

This project provides funding for the design and environmental review of improvements to the existing network of flood protection levees in the Palo Alto Baylands between the San Francisco Creek and Mountain View. The project will be designed to provide one percent (100-year) protection from tidal flooding, including the impacts of 50 years of future sea level rise.

## Justification

Approximately 2,700 properties in Palo Alto are subject to tidal flooding and are thereby required to purchase flood insurance and face restrictions on construction of new or remodeled buildings. Future construction of this project would provide flood protection, as well as relief to residents and businesses from flood insurance costs and building restrictions.

## Supplemental Information

This project will be implemented as an element of the San Francisco Creek Joint Powers Authority (JPA) SAFER Bay Project, which is designing improvements to the Bayfront levees between Mountain View and Redwood City. The project will also be coordinated with the Santa Clara Valley Water District and the City of Mountain View, who are pursuing independent studies of potential levee improvements. Construction funding will likely be sought through a regional ballot measure for a special tax or assessment in the affected communities.

## Significant Changes

**2020-2024 CIP:** The project has been delayed due to staffing constraints and required coordination with other agencies.

**2018-2022 CIP:** The project start and completion dates have been extended due to staff workload constraints.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	133,333	1,172,432	172,432	1,048,000	0	0	0	0	1,048,000	0	1,353,765
<b>Total</b>	<b>133,333</b>	<b>1,172,432</b>	<b>172,432</b>	<b>1,048,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,048,000</b>	<b>0</b>	<b>1,353,765</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,133,333	172,432	1,048,000	0	0	0	0	1,048,000	0	1,220,432
Design	133,333	39,099	0	0	0	0	0	0	0	0	133,333
<b>Total</b>	<b>133,333</b>	<b>1,172,432</b>	<b>172,432</b>	<b>1,048,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,048,000</b>	<b>0</b>	<b>1,353,765</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Safety  
Section: Natural Hazards  
Goal: S-2  
Policy: S-2.12  
Program: S2.12.2

### Potential Board/Commission Review:

Architectural Review Board  
Parks and Recreation Commission  
Planning and Transportation Commission  
San Francisquito Creek Joint Powers Authority

### Environmental Impact Analysis:

This project will require an environmental assessment in accordance with CEQA guidelines.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PF-01003

AC gas package unit Municipal Services Center Building C, January 2015

# Building Systems Improvements

## Description

This project provides funding for electrical, mechanical, plumbing, structural, and security upgrades as required at various City facilities. Upgrades may include main and emergency power sources, light fixtures, fire alarm systems, heating and ventilation equipment, Building Management System (BMS) controls, structural reinforcements or repair, security card access, and camera systems.

## Justification

This project provides funding for system upgrades in facilities with systems that are overloaded or are no longer efficient. Heating and air-conditioning units in many older buildings are at the end of their useful life and require replacement. BMS control systems in some facilities are outdated and have limited or no vendor support. Structural systems have become damaged or fatigued due to heavier equipment requirements or increased loading. Increased security requirements for facilities and IT network systems require the need for the installation of card access and camera systems. This project also provides funding for replacement of unforeseen equipment failures. While upgrading equipment, staff selects the most energy efficient equipment, including premium efficiency motors, and incorporates the use of energy saving technologies such as variable frequency drives whenever possible.

## Supplemental Information

The Department of Public Works uses a computerized asset management tracking software to assist in identifying the maintenance and replacement needs addressed through this CIP. Projects identified for upcoming work include:



**Fiscal Year 2020:** Convert Rinconada and Mitchell Park tennis court lights to LED. Also new lighting controls for Rinconada and Mitchell Park tennis courts and new cooling tower fill media for City Hall.

**Fiscal Year 2021:** Replace electrical panels at Fire Station #5 and replace domestic water control system at City Hall.

**Fiscal Year 2022:** Install HVAC equipment in the Art Center basement. Replace BMS controls for the Lucie Stern Community Theater.

**Fiscal Year 2023:** Upgrade LED lighting in City parks. New Children's Pool boilers (4ea), roof top furnaces, exhaust fans, and dehumidifiers.

**Fiscal Year 2024:** Replace electrical panel at the Golf Club House and Café.

## Significant Changes

**2020-2024 CIP:** All programmed projects were pushed out a year since FY 2019 funding was needed for a new chiller located at City Hall.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	242,751	242,760	419,991	184,854	321,000	301,000	502,000	1,728,845	0	N/A
<b>Total</b>	<b>N/A</b>	<b>242,751</b>	<b>242,760</b>	<b>419,991</b>	<b>184,854</b>	<b>321,000</b>	<b>301,000</b>	<b>502,000</b>	<b>1,728,845</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	242,751	242,760	419,991	184,854	321,000	301,000	502,000	1,728,845	0	N/A
<b>Total</b>	<b>N/A</b>	<b>242,751</b>	<b>242,760</b>	<b>419,991</b>	<b>184,854</b>	<b>321,000</b>	<b>301,000</b>	<b>502,000</b>	<b>1,728,845</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward as part of the next budget cycle.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Planning and Transportation Commission

## CAPITAL IMPROVEMENT FUND

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PE-20001

Laguna Avenue Bridge

# City Bridge Improvements

## Description

A Structural Bridge Assessment Study was completed in 2017, as part of the study, fifty City-owned bridges were inspected by a structural consulting firm. A recurring inspection and repair program defined a bridge maintenance, repair, and improvement program over the next 5 years. This program will include on-going inspections to report physical changes to the structures, recommendations for work to be done, and additional information to meet functional and structural standards in accordance with industry standards. Recurring inspections may vary from 2 to 5 years depending on the age and structural conditions.

## Justification

There are 110 bridges maintained by the City of Palo Alto and by local agencies, of these, 80 are City-owned. There are 50 City-owned culvert and bridge structures that are inspected by the City and 30 City-owned structures inspected by Caltrans. The remaining 30 of 110 bridges are private (3) or owned by local agencies. Estimates were developed at a conceptual level and will be adjusted in the design phase.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	0	0	16,000	43,000	214,000	562,000	335,000	1,170,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>0</b>	<b>0</b>	<b>16,000</b>	<b>43,000</b>	<b>214,000</b>	<b>562,000</b>	<b>335,000</b>	<b>1,170,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	0	0	1,000	43,000	114,000	562,000	285,000	1,005,000	0	N/A
<b>Design</b>	N/A	0	0	15,000	0	100,000	0	50,000	165,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>0</b>	<b>0</b>	<b>16,000</b>	<b>43,000</b>	<b>214,000</b>	<b>562,000</b>	<b>335,000</b>	<b>1,170,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project may impact operating expenses in the future as the bridges are assessed and maintenance costs are determined. As these costs are quantified, adjustments will be brought forward in future budgets as necessary.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various City Facilities  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PE-20002

Current Record Plan Management at Municipal Services Center

# City Facilities Assessment and Record Plan Management System

## Description

The last City-wide facility condition assessment was performed in 2008. This condition assessment is known as the Kitchell Report. Since that assessment was performed, building codes have changed dramatically. A new condition assessment is warranted. It is also an ideal opportunity to develop a new electronic system for managing the record plans of all City facilities. Currently, older record plans are managed through a Microsoft Access Database. Some record plans are still only available as hardcopy sheets. The project will include scanning older hardcopy sets and compiling all records into a new indexed system that will be easily accessible to all City staff.

## Justification

This project provides funding for a comprehensive City-wide condition assessment of existing buildings. All City-owned buildings will be evaluated to determine the existing condition of mechanical systems, electrical systems, plumbing systems, conveyance systems, exterior envelope, interior finishes, roofing, structural systems, and fire/life safety systems. The project also provides funding for a new electronic data management system to hold record plans and related information on each facility.

## Supplemental Information

The Facility Record Plan Management System will save many hours of staff time. Currently, facility record plan data is scattered between multiple different electronic systems and sometimes only contained in hardcopy format. The project will scan (if necessary), catalog, and archive the

documents in an open-format electronic database system that will allow staff to easily search, access, and retrieve record plans.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	314,000	0	0	0	0	314,000	0	314,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>314,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>314,000</b>	<b>0</b>	<b>314,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	314,000	0	0	0	0	314,000	0	314,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>314,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>314,000</b>	<b>0</b>	<b>314,000</b>

## Operating Impact

This project will require ongoing maintenance costs that will be reassessed once the full scope of the project is determined.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under section 15301.



**Fund:** Capital Improvement Fund

**Category:** Buildings and Facilities

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PE-09003

Lucie Stern Parking Lot, February 2015

# City Facility Parking Lot Maintenance

## Description

This project provides funding for the repair, resurfacing, or reconstruction of parking lots and walkways at various City facilities, including restriping and signage.

## Justification

Uneven paved surfaces are a safety hazard and shorten the useful life of walkways and parking lots. Repairing the paved walkways and parking lots at various City facilities will eliminate these safety hazards and extend useful life.

## Supplemental Information

Work programmed for this project includes parking lot resurfacing for the following locations:

**Fiscal Year 2020:** Baylands Athletic Center and Lucie Stern Drive-Thru Parking Area

**Fiscal Year 2021:** Fire Station #8, Foothills Park Parking Lot, and College Terrace Library pathways.

**Fiscal Year 2022:** No work planned.

**Fiscal Year 2023:** Municipal Service Center, Municipal Service Center North Employee Lot.

**Fiscal Year 2024:** No work planned.

Funding will be offset by \$0.3 million from the Utilities Enterprise Funds for the work in Fiscal Year 2023 at the Municipal Service Center (MSC).



## Significant Changes

**2020-2022 CIP:** Parking lots were inspected in October 2018 and cost estimates were updated based on current pavement conditions.

**2018-2022 CIP:** A \$215,000 increase in FY 2018 funding is for the Midtown Shopping Center.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	387,109	168,598	1,014,511	590,000	0	1,708,000	0	3,312,511	0	N/A
<b>Transfer from Utilities Administration Fund</b>	N/A	0	0	0	0	0	300,000	0	300,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>387,109</b>	<b>168,598</b>	<b>1,014,511</b>	<b>590,000</b>	<b>0</b>	<b>2,008,000</b>	<b>0</b>	<b>3,612,511</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	383,946	168,598	1,003,263	578,303	0	2,008,000	0	3,589,566	0	N/A
<b>Design</b>	N/A	3,163	0	11,248	11,697	0	0	0	22,945	0	N/A
<b>Total</b>	<b>N/A</b>	<b>387,109</b>	<b>168,598</b>	<b>1,014,511</b>	<b>590,000</b>	<b>0</b>	<b>2,008,000</b>	<b>0</b>	<b>3,612,511</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

Work performed under this project is typically categorically exempt from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Palo Alto City Hall (250 Hamilton Avenue)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Fall 2019  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Spring 2020  
**Project Number:** PE-19000

City Hall A Level Lobby

# City Hall Space Planning

## Description

This project provides funding for space planning to determine future workgroup space needs and programming for the City Hall office building.

## Justification

Upon completion of the new Public Safety Building in 2022, the Police wing of City Hall and the Fire Administration group on the 6th floor will move into the new building. The departure of these workgroups provides an opportunity to plan for the best use of the newly available City Hall space and to consider other potential improvements such as remodeling the A level cafeteria space. Additionally, a potential opportunity has been identified to reduce the size of the Information Technology Department's 2nd floor data center and make the space available for other uses.

## Supplemental Information

The scope of this project is limited to initial space planning. Following completion of space planning, additional funding will be required to design and construct renovations to the affected areas.

## Significant Changes

**2020-2024 CIP:** Project completion has been extended to reflect staffing constraints.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	77,932	2,932	79,000	0	0	0	0	79,000	0	81,932
<b>Total</b>	<b>0</b>	<b>77,932</b>	<b>2,932</b>	<b>79,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79,000</b>	<b>0</b>	<b>81,932</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	77,932	2,932	79,000	0	0	0	0	79,000	0	81,932
<b>Total</b>	<b>0</b>	<b>77,932</b>	<b>2,932</b>	<b>79,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79,000</b>	<b>0</b>	<b>81,932</b>

## Operating Impact

Operating impacts of potential space uses will be assessed as part of the planning process.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Palo Alto City Hall (250 Hamilton Avenue), Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Fall 2017  
**Revised Project Start:** Spring 2017  
**Revised Project Completion:** Fall 2020  
**Project Number:** PE-17010

Electrical System Access Door at City Hall

# Civic Center Electrical Upgrade & EV Charger Installation

## Description

This project provides funding to replace the aging Civic Center electrical switchgear and motor control centers and to purchase and install approximately 43 new Level 2 Electric Vehicle (EV) charging stations at City parking garages, including the Civic Center garage.

## Justification

The main electrical switch gear is over 40 years old and must be replaced and upgraded to ensure the reliability of electrical power at City Hall. Other parts of the electrical system have been recently upgraded, leaving this as one of the last remaining items. With increased ownership of electric vehicles, additional public spaces with EV chargers are needed. Funding in this project allows the City to leverage grants that substantially cover the costs of EV charger purchases and installation on a reimbursement basis.

## Supplemental Information

The funding for the electrical upgrade work (\$0.35 million) has been moved from PE-18016, Civic Center Fire Life Safety Upgrades, to this new project, while approximately 90 percent of the EV charger costs are expected to be reimbursed by Bay Area Air Quality Management District grants. A portion of the grant reimbursement is deferred for three years to allow demonstration of compliance with grant usage criteria.

## Significant Changes

**2020-2024 CIP:** In Fiscal Year 2018, an invitation for Design-Build proposals received no response. Staff began the process for a traditional Design-Build approach. Timing of the project was extended to accommodate this approach and allow for a new window of opportunity to perform construction when City Hall can be closed for a brief time duration. Funding added to account for the complexity of construction and replacement of both motor control centers (MCC) on Levels A and 8.

**2019-2023 CIP:** Anticipated project completion date adjusted to reflect delays due to staff workload and available options for scheduling a full shutdown of City Hall for construction work.

**2018-2022 CIP:** Project start was delayed due to staff workload. Staff plans to use Design-Build project delivery method for Civic Center switchgear and motor control center replacements.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	52,499	391,282	(69,666)	706,948	0	0	0	0	706,948	0	689,781
Revenue from Other Agencies	17,000	203,000	203,000	40,000	0	0	0	0	40,000	0	260,000
<b>Total</b>	<b>69,499</b>	<b>594,282</b>	<b>133,334</b>	<b>746,948</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>746,948</b>	<b>0</b>	<b>949,781</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	29,172	553,907	133,334	746,948	0	0	0	0	746,948	0	909,454
Design	40,324	40,375	0	0	0	0	0	0	0	0	40,324
<b>Total</b>	<b>69,496</b>	<b>594,282</b>	<b>133,334</b>	<b>746,948</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>746,948</b>	<b>0</b>	<b>949,778</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in the next budget cycle.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Palo Alto City Hall (250 Hamilton Avenue)  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:** Fall 2018  
**Revised Project Completion:** Summer 2019  
**Project Number:** PE-18016

Civic Center Fire Life Safety and Electrical Upgrades

# Civic Center Fire Life Safety Upgrades

## Description

This project provides funding for an assessment and upgrade of the fire life safety systems in City Hall.

## Justification

The fire life safety system is approaching the end of its useful life. The fire alarm panels and associated equipment are in need of upgrade in order to meet current code requirements. City Hall is a vital facility for all functions and departments.

## Supplemental Information

The fire life safety system is approaching the end of its useful life. The fire alarm panels and associated equipment needed to meet current codes will be upgraded.

The cost estimate for this project will likely need to be reevaluated and adjusted to account for escalation.

## Significant Changes

**2019-2023 CIP:** Project schedule and scope revised to reflect staff workload.

**2017-2021 CIP:** The scope and budget (\$0.35 million) for the City Hall electrical upgrade portion of this project have been moved to a new project, PE-17010, Civic Center Electrical Upgrade & EV Charger Installation.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	2,536	597,482	22,482	602,000	0	0	0	0	602,000	0	627,018
<b>Total</b>	<b>2,536</b>	<b>597,482</b>	<b>22,482</b>	<b>602,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>602,000</b>	<b>0</b>	<b>627,018</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	560	522,482	22,482	602,000	0	0	0	0	602,000	0	625,042
Design	1,975	75,000	0	0	0	0	0	0	0	0	1,975
<b>Total</b>	<b>2,535</b>	<b>597,482</b>	<b>22,482</b>	<b>602,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>602,000</b>	<b>0</b>	<b>627,017</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Palo Alto City Hall (250 Hamilton Avenue)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Summer 2017  
**Revised Project Start:** Summer 2016  
**Revised Project Completion:** Fall 2019  
**Project Number:** PE-15020

Civic Center Parking Garage, February 2015

# Civic Center Waterproofing Study and Repairs

## Description

This project provides funding to address the condition assessment of the Civic Center plaza deck waterproofing deficiencies. The completed assessment evaluated the main expansion joint waterproof seal on the plaza in front of the main City Hall entrance. The assessment report recommended repairs to the expansion joint that are anticipated to be complete in Fiscal Year 2020.

## Justification

Previous studies concluded that the Civic Center plaza deck waterproofing membrane underneath the red and white decorative concrete needs to be replaced due to the age of the material. However, investigations in 1999 revealed the membrane still possessed good elasticity. The plaza planter waterproofing was found to be in poor condition. The expansion joint requires immediate replacement.

## Significant Changes

**2020-2024 CIP:** Additional funding and time added to restore waterproofing membrane within planter boxes along the Civic Center plaza perimeter.

**2019-2023 CIP:** Anticipated completion date adjusted to reflect delays due to staff workload.

**2018-2022 CIP:** Additional funding added for implementation of the repairs.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	53,523	462,632	53,879	585,753	0	0	0	0	585,753	0	693,155
<b>Total</b>	<b>53,523</b>	<b>462,632</b>	<b>53,879</b>	<b>585,753</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>585,753</b>	<b>0</b>	<b>693,155</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,684	459,132	53,879	585,753	0	0	0	0	585,753	0	642,316
<b>Design</b>	50,839	3,500	0	0	0	0	0	0	0	0	50,839
<b>Total</b>	<b>53,523</b>	<b>462,632</b>	<b>53,879</b>	<b>585,753</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>585,753</b>	<b>0</b>	<b>693,155</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PF-02022

Lucie Stern Community Center Ballroom

# Facility Interior Finishes Replacement

## Description

This project provides funding for replacement or improvements to interior finishes such as flooring, walls, cabinets, paint, lighting, ceiling tiles, soundproofing, fixed office furniture, doors, windows, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements at various City facilities.

## Justification

Interior finishes throughout City facilities are designated for replacement as part of an ongoing capital maintenance plan. Finishes are typically coordinated and upgraded as other renovation projects are undertaken. This project provides resources for facilities that will not be renovated for several years.

## Supplemental Information

Planned carpet replacement and other interior finishes projects include:

**Fiscal Year 2020:** Children's Library and City Hall Customer Services

**Fiscal Year 2021:** Municipal Service Center (MSC) Building C Lunchrooms and Hallways

**Fiscal Year 2022:** MSC Building C Water, Gas, and Wastewater Locker Room Improvements

**Fiscal Year 2023:** MSC Building B Shower and Locker Room

**Fiscal Year 2024:** Lucie Stern Community Theater Kitchen and Restroom Improvements

## Significant Changes

**2020-2024 CIP:** MSC Building C Lunchrooms and Hallways was moved to FY 2021 from FY 2022. The Golf Course Club House Restrooms, previously programmed in FY 2021, were completed as part of the Golf Course Reconfiguration project (PG-13003).

**2019-2023 CIP:** Elwell Court has moved from FY 2022 to FY 2019, Children's Library will be added for FY 2020, and MSC Building C will be moved to FY 2022.

**2018-2022 CIP:** MSC Building C Water-Gas-Wastewater, Lucie Stern Community Theatre will be replacing Municipal Services Center Building A, Parks Department and Stores in FY 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	682,269	(267,587)	1,176,856	129,658	200,931	445,814	450,446	2,403,705	0	N/A
Transfer from Utilities Administration Fund	N/A	370,000	370,000	0	169,000	176,000	0	0	345,000	0	N/A
Transfer from Vehicle Replacement and Maintenance	N/A	0	0	0	0	0	68,000	0	68,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,052,269</b>	<b>102,413</b>	<b>1,176,856</b>	<b>298,658</b>	<b>376,931</b>	<b>513,814</b>	<b>450,446</b>	<b>2,816,705</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,032,454	102,413	1,176,856	298,658	376,931	513,814	450,446	2,816,705	0	N/A
Design	N/A	19,815	0	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,052,269</b>	<b>102,413</b>	<b>1,176,856</b>	<b>298,658</b>	<b>376,931</b>	<b>513,814</b>	<b>450,446</b>	<b>2,816,705</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3201 East Bayshore Road  
**Managing Department:** Fire  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-19000

Trench Training Facility Rendering

# Fire and Utilities Trench Training Facility

## Description

The Fire and Utilities Departments will collaborate on building a State Certified Trench and Confined Space Training Facility at the Municipal Services Center. The facility will be used by each department to expand training and safety programs.

## Justification

The project will include a T-shape vault, approximately 10 feet deep with built-in utility pipes, and two cargo containers to house fire rescue equipment and supplies. The vault will be used by various employees for training in: firefighting, rescue and extraction, vehicle and pump operations, Gas Operator Qualification (OQ) training, confined space entry, pipe installation and repair, welding, gas and water leak testing, and other necessary skills training.

Currently, the training is done in the field under the supervision of a qualified trainer. The field training has the potential for exposing the public to unforeseen hazardous condition, such as purged gas during a test. The project will meet employees training needs under a safer and controlled environment.

## Supplemental Information

The Utilities Department Enterprise Fund will reimburse half of the project cost, minimizing the impact on the General Fund for this project. The Palo Alto Fire Department (PAFD) Training Division will also be able to offer neighboring jurisdictions the ability to attend PAFD led courses or use of the training facility.

## Significant Changes

**2020-2024 CIP:** The City received an official architectural plan that requires additional structural design work than originally expected in order to meet codes for such a facility. The costs to complete construction will be impacted and require additional funding. The Department is working on securing quotes to assess the full costs and determine if this project is still a good investment.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	0	55,000	0	44,600	0	0	0	0	44,600	0	44,600
<b>Revenue from Other Agencies</b>	0	0	0	10,400	0	0	0	0	10,400	0	10,400
<b>Transfer from Utilities Administration Fund</b>	0	55,000	0	55,000	0	0	0	0	55,000	0	55,000
<b>Total</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>110,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	100,000	0	100,000	0	0	0	0	100,000	0	100,000
<b>Design</b>	0	10,000	0	10,000	0	0	0	0	10,000	0	10,000
<b>Total</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>110,000</b>	<b>0</b>	<b>110,000</b>

## Operating Impact

This project will require ongoing maintenance costs that will be reassessed once the full scope of the project is determined.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Safety  
Section: Natural Hazards  
Goal: S-2  
Policy: S-2.1  
Program: S2.13.1

### Potential Board/Commission Review:

Architectural Review Board  
Planning and Transportation Commission  
Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund

**Category:** Buildings and Facilities

**Project Location:** Various

**Managing Department:** Fire

**IBRC Reference:** New

**Initial Project Start:** Winter 2013

**Initial Project Completion:** Summer 2015

**Revised Project Start:** Winter 2014

**Revised Project Completion:** Winter 2019

**Project Number:** FD-14002

Ringdown System

# Fire Ringdown System Replacement

## Description

This project funds the replacement of the current Fire Department Ringdown System. Ring-down systems provide an audible alert of a call for service in the fire stations. This new system has the latest technology and allows for the direct dispatch of resources from mutual aid partners, reducing call processing time.

## Justification

The existing ringdown system, which is used to dispatch emergency personnel, is over 10 years old. The new ringdown system would be purchased in partnership with Mountain View Fire and provide the capability for either dispatch center to ringdown all of the apparatus and stations in both cities. The advantages of such a system are twofold: the new Tri-Cities Computer Aided Dispatch (CAD) system gives the cities the opportunity to view all the fire resources status in real time and dispatch auto-aid and joint responses more efficiently. Providing the cities with the ability to ringdown all apparatus is essential to leverage these enhanced capabilities and reduce response time.

Operating on a combined system provides redundancy for both fire agencies in the event one of the dispatch centers is inoperable.

## Significant Changes

**2020-2024 CIP:** Fire Station 3 is the last station to receive the new system, which will be completed as part of the fire station replacement project. It is expected the system will be installed in all stations by the end of 2019.

## CAPITAL IMPROVEMENT FUND

**2018-2022 CIP:** The update to the Computer Aided Dispatch system had to precede the new Ringdown system in order for the Department and regional partners to identify a Ringdown system to integrate seamlessly with the dispatching system. A system has been identified through a collaborative purchase process and the Department plans to use the Mountain View RFP process for quick implementation in FY18.

**2017-2021 CIP:** Schedule revised to reflect delays in this project resulting from staffing resource issues caused by other public safety technology projects.

**2016-2020 CIP:** Schedule revised to reflect delays in this project resulting from staffing resource issues caused by other public safety technology projects.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	400,000	326,000	29,000	0	0	0	0	29,000	0	355,000
Revenue from Other Agencies	0	0	0	45,000	0	0	0	0	45,000	0	45,000
<b>Total</b>	<b>0</b>	<b>400,000</b>	<b>326,000</b>	<b>74,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74,000</b>	<b>0</b>	<b>400,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	400,000	326,000	74,000	0	0	0	0	74,000	0	400,000
<b>Total</b>	<b>0</b>	<b>400,000</b>	<b>326,000</b>	<b>74,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74,000</b>	<b>0</b>	<b>400,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Safety  
Section: Natural Hazards  
Goal: S-2  
Policy: S-2.1  
Program: S2.13.2

#### Potential Board/Commission Review:

Architectural Review Board  
Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





Fire Station 1, January 2015

**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 301 Alma Street  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2013  
**Initial Project Completion:** Spring 2014  
**Revised Project Start:** Winter 2016  
**Revised Project Completion:** Spring 2020  
**Project Number:** PF-14002

# Fire Station 1 Improvements

## Description

This project provides funding for individual sleeping quarters in the firehouse to address gender issues and privacy concerns.

## Justification

Fire Station #1 is the only fire station in the City that does not have separate bedrooms to accommodate male and female firefighters. Shared sleeping quarters create a poor sleeping environment, gender issues, and privacy concerns. The living space in a firehouse should be comfortable and offer privacy.

## Supplemental Information

This project is currently on hold. The scope of the project is under review and may be redefined due to the potential incompatibility of the proposed dorm room configuration with the building structural system.

## Significant Changes

**2020-2024 CIP:** Project extended due to staffing constraints.

**2017-2021 CIP:** The schedule was extended and the budget increased by \$165,000 due to the building code requirement for dorm room windows identified during the building permit plan check. The addition of dorm room windows in concrete walls required a study of the building's structural system. Additionally, the need for temporary trailer space during construction was not previously budgeted.

**2016-2020 CIP:** Project schedule revised to reflect the delay due to staffing resources.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	56,590	100,000	55,000	45,000	0	0	0	0	45,000	0	156,590
<b>Revenue from Other Agencies</b>	1,677	0	0	0	0	0	0	0	0	0	1,677
<b>Total</b>	<b>58,267</b>	<b>100,000</b>	<b>55,000</b>	<b>45,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45,000</b>	<b>0</b>	<b>158,267</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	21,012	100,000	55,000	45,000	0	0	0	0	45,000	0	121,012
<b>Design</b>	37,252	0	0	0	0	0	0	0	0	0	37,252
<b>Total</b>	<b>58,264</b>	<b>100,000</b>	<b>55,000</b>	<b>45,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45,000</b>	<b>0</b>	<b>158,264</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 799 Embarcadero Road  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2015  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:** Fall 2015  
**Revised Project Completion:** Summer 2019  
**Project Number:** PE-15003

New Fire Station #3 Rendering

# Fire Station 3 Replacement

## Description

This project provides funding to replace Fire Station #3 at the corner of Newell and Embarcadero Roads. The replacement facility will be based on the prior Replacement Study and Needs Assessment prepared in 2005.

## Justification

The current Fire Station #3 facility is operationally and technologically deficient. This project will provide a new facility built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

## Supplemental Information

The Fire Station #3 Replacement project is included in the Council Infrastructure Plan.

## Significant Changes

**2019-2023 CIP:** Anticipated completion date adjusted to reflect delays experienced during design and bidding phases. Project increased by \$2.6 million to fund full project cost of \$9.9 million.

**2018-2022 CIP:** Timeline adjusted to reflect delayed start due to workloads and the Architectural Review Board (ARB) review and approval process.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(2,221,026)	6,021,322	6,021,322	280,000	0	0	0	0	280,000	0	4,080,296
<b>Transfer from Stanford University Medical Ctr Fund</b>	6,000,000	0	0	0	0	0	0	0	0	0	6,000,000
<b>Total</b>	<b>3,778,974</b>	<b>6,021,322</b>	<b>6,021,322</b>	<b>280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280,000</b>	<b>0</b>	<b>10,080,296</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,157,666	5,796,334	5,796,322	280,000	0	0	0	0	280,000	0	8,233,988
<b>Design</b>	1,621,293	224,988	225,000	0	0	0	0	0	0	0	1,846,293
<b>Total</b>	<b>3,778,959</b>	<b>6,021,322</b>	<b>6,021,322</b>	<b>280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280,000</b>	<b>0</b>	<b>10,080,281</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>General Fund-Operating</b>	7,450	7,673	7,904	8,140	8,385

### Operating Impact

This project is anticipated to impact operating expenses in the future. Maintenance is estimated to increase by \$7,450 in FY 2020 and increase by 3% annually thereafter.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Planning for Parks and Community Facilities

Goal: C-4

Policy: C-4.2

#### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is exempt from CEQA in accordance with Section 15302.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3600 Middlefield Road  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Winter 2020  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Fall 2021  
**Project Number:** PE-18004

Fire Station #4, April 2015

# Fire Station 4 Replacement

## Description

This project provides funding to replace Fire Station #4 at the corner of Middlefield Road and East Meadow Drive. The replacement facility will be based on the prior Replacement Study and Needs Assessment prepared in 2005.

## Justification

The current Fire Station #4 facility is operationally and technologically deficient. This project will provide a new facility built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

## Supplemental Information

The Fire Station #4 Replacement project is included in the Council Infrastructure Plan.

The cost estimate for this project has been adjusted from the amount derived during the Council Infrastructure Plan's development because older estimates were not escalated to the current year or to future years when construction would actually occur.

## Significant Changes

**2020-2024 CIP:** Project end date adjusted to reflect expected construction timeline based on construction starting in the beginning of FY 2021.

**2019-2023 CIP:** Project increased by \$0.3 million and the timeline was pushed out to begin construction in FY 2021.

**2018-2022 CIP:** Timeline adjusted to reflect initial funding availability.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	850,000	8,600,000	0	0	0	9,450,000	0	9,450,000
Transfer from Stanford University Medical Ctr Fund	0	0	0	0	750,000	0	0	0	750,000	0	750,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>9,350,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,200,000</b>	<b>0</b>	<b>10,200,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	9,350,000	0	0	0	9,350,000	0	9,350,000
Design	0	0	0	850,000	0	0	0	0	850,000	0	850,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>9,350,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,200,000</b>	<b>0</b>	<b>10,200,000</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General Fund-Operating	0	0	8,700	8,961	9,230

### Operating Impact

This project is anticipated to impact operating expenses in the future. Maintenance is estimated to increase by \$8,700 in FY 2022 and increase by 3% annually thereafter.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is exempt from CEQA in accordance with Section 15302.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 511 High Street & 445 Bryant Street  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2017  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2020  
**Project Number:** PE-18002

High Street Parking Garage

# High and Bryant Street Garages Waterproofing and Repairs

## Description

This project provides funding to investigate and repair observed water damage along the southeast wall of the Lot R and Lot S/L parking garage. In addition, this project will research waterproofing methods and, if feasible, implement waterproofing on the southeast wall to prevent further problems.

## Justification

The Lot R parking garage was constructed in 2003. Recently, water has been observed dripping into the ground floor maintenance room. Spalling concrete was also observed above the ramps on each level over the maintenance room. The cause appears to be water intrusion along the southeast wall.

Weatherproofing behind the concrete is compromised and water is seeping through the wall. Injecting epoxy to fill the cracks.

## Supplemental Information

Lot R/Bryant Street is complete.

## Significant Changes

**2020-2024 CIP:** Bid protests were received for the High Street Garage (S/L) Waterproofing project and ultimately rejected. The project timeline has been extended to reflect the rebidding process.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** FY 2018 Adopted Budget title was "High Street Garage Waterproofing Study and Repair." The scope of work needed at the High Street garage is not as much as initially estimated. Adding scope for waterproofing and repairs at the Bryant Street garage.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(44,744)	56,474	(73,526)	130,000	0	0	0	0	130,000	0	11,730
<b>Transfer from University Ave Parking Permit Fund</b>	50,000	300,000	300,000	0	0	0	0	0	0	0	350,000
<b>Total</b>	<b>5,256</b>	<b>356,474</b>	<b>226,474</b>	<b>130,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>130,000</b>	<b>0</b>	<b>361,730</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	5,255	356,474	226,474	130,000	0	0	0	0	130,000	0	361,729
<b>Total</b>	<b>5,255</b>	<b>356,474</b>	<b>226,474</b>	<b>130,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>130,000</b>	<b>0</b>	<b>361,729</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Palo Alto City Hall (250 Hamilton Avenue)  
**Managing Department:** Police  
**IBRC Reference:** New  
**Initial Project Start:** Winter 2013  
**Initial Project Completion:** Summer 2014  
**Revised Project Start:** Spring 2018  
**Revised Project Completion:** Fall 2020  
**Project Number:** PD-14000

Current Internal Alarm System Control Panel

# Internal Alarm System Replacement

## Description

This project provides funding for the replacement of the citywide Internal Alarm System.

## Justification

The City's alarm system, which includes panic alarms from various departments and the City Council chambers, is antiquated and replacement parts are no longer available. The system provides very limited information and is subject to failure at any time. This project replaces the outdated system with a modern, reliable alarm system.

## Significant Changes

**2020-2024 CIP:** The project is in the final stages of implementation with configurations for locations outside City Hall and integrations with the Computer Aided Dispatch (CAD) system being finalized.

**2018-2022 CIP:** RFP and procurement process initiated in Spring 2017. Vendor selected March 2018. Project estimated completion Summer 2018.

**2017-2021 CIP:** Project schedule extended by one year due to staffing resources prioritization.

**2016-2020 CIP:** Project schedule revised to reflect delays resulting from resource allocation issues caused by other high priority public safety technology projects.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	77,569	50,769	26,800	0	0	0	0	26,800	0	77,569
<b>Total</b>	<b>0</b>	<b>77,569</b>	<b>50,769</b>	<b>26,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,800</b>	<b>0</b>	<b>77,569</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	77,569	50,769	26,800	0	0	0	0	26,800	0	77,569
<b>Total</b>	<b>0</b>	<b>77,569</b>	<b>50,769</b>	<b>26,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,800</b>	<b>0</b>	<b>77,569</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety

Section: Human -Caused Threats

Goal: S-1

Policy: S-1.9

**Potential Board/Commission Review:**

Planning and Transportation  
Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 1451 Middlefield Road  
**Managing Department:** Community Services  
**IBRC Reference:** N/A  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:** Summer 2018  
**Revised Project Completion:** Summer 2020  
**Project Number:** AC-18001

Junior Museum Exhibit, March 2017

# JMZ Renovation

## Description

This project provides funding to relocate the Palo Alto Junior Museum & Zoo (JMZ) for two years to the Cubberley Community Center to facilitate construction of a new JMZ at the current site. This project also includes funding for permit and inspection fees related to the JMZ rebuild project, new exhibitions (including temporary staffing to design and prototyping), deck construction costs (partial), park signage (partial), furniture and equipment costs, payment and performance bonds, re-opening marketing and outreach expenses.

## Justification

The Cubberley campus provides a suitable temporary location for JMZ operations to remain open to the public. Classrooms will be used for programing, exhibits, education, and summer camps. The Auditorium provides space for staff, teachers, administration, collections, and indoor animals. The nearby parking lot would be converted to an animal compound to house outdoor animals unable to be placed at another zoo or facility.

## Supplemental Information

An agreement between the City of Palo Alto and the Friends of the Palo Alto Junior Museum and Zoo to replace the existing JMZ with a new building and facilities requires City contributions.

## Significant Changes

**2019-2023 CIP:** The budget for this project increased by \$2.8 million, with the majority of funding for new educational exhibits. Other costs associated with this increase include the tempo-

## CAPITAL IMPROVEMENT FUND

rary relocation of the JMZ to the Cubberley Community Center, permit costs, and electrical and plumbing work.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	556,209	627,648	(443,652)	1,103,300	9,000	0	0	0	1,112,300	0	1,224,857
<b>Revenue from the Federal Government</b>	10,937	259,187	259,187	0	0	0	0	0	0	0	270,124
<b>Transfer from Community Center Impact Fee Fund</b>	0	1,025,717	1,025,717	671,860	125,498	0	0	0	797,358	0	1,823,075
<b>Total</b>	<b>567,146</b>	<b>1,912,552</b>	<b>841,252</b>	<b>1,775,160</b>	<b>134,498</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,909,658</b>	<b>0</b>	<b>3,318,056</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	513,613	1,907,771	841,252	1,775,160	134,498	0	0	0	1,909,658	0	3,264,523
<b>Design</b>	53,529	4,781	0	0	0	0	0	0	0	0	53,529
<b>Total</b>	<b>567,142</b>	<b>1,912,552</b>	<b>841,252</b>	<b>1,775,160</b>	<b>134,498</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,909,658</b>	<b>0</b>	<b>3,318,052</b>

### Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>General Fund-Operating</b>	0	128,000	131,840	135,795	139,869

### Operating Impact

This project is anticipated to impact operating expenses in the future. Additional staffing, exhibit, maintenance, and custodial costs are expected to have a net impact of approximately \$128,000 in FY 2021. Additional costs will be partially offset by increased revenues at the newly rebuilt facility. Costs are expected to rise annually at least 3% due to increasing costs of goods and services each year.

#### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

Relocation portion of this project is CEQA Exempt under 15301 and 15303. A separate Initial Study/Mitigated Negative Declaration is being prepared for the renovation portion of this project.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3201 East Bayshore Road  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Fall 2019  
**Project Number:** PF-17000

Municipal Service Center Building C Roof, January 2015

# Municipal Service Center A, B, & C Roof Replacement

## Description

This project provides funding for a fluid, reinforced waterproofing application over the existing roof. The existing asphalt and gravel roof is nearing the end of its useful life and needs to be rehabilitated. If the existing roof is allowed to deteriorate beyond a certain point, the fluid applied system cannot be used and a full replacement of the roofing system would be required. The application will meet current cool roofing codes to optimize energy efficiency.

## Justification

This project provides the means to rehabilitate the existing roof to avoid further deterioration of the roofing system, which would cause failure and structural damage to the building. Compared to rehabilitation costs, structural repairs and a full roof replacement would be more expensive.

## Supplemental Information

Transfers from various funding sources will support this project. The various transfers were calculated based on the anticipated benefit to each fund, according to square footage.

## Significant Changes

**2020-2024 CIP:** Project dates adjusted to coordinate with the Municipal Service Center Lighting, Mechanical, and Electrical Improvements project (PF-16006). Roof replacement will be done before the installation of new rooftop equipment due to the condition of the roofs. Funding added to account for cost escalation.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** Project start adjusted to reflect current schedule of the Municipal Service Center Lighting, Mechanical, and Electrical Improvements project (PF-16006).

**2018-2022 CIP:** Project start adjusted to immediately follow the “Municipal Service Center Lighting, Mechanical, and Electrical Improvements” project (PF-16006) so roof replacement will follow installation of new rooftop equipment.

**2017-2021 CIP:** Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	891,289	74,289	908,000	38,250	0	0	0	946,250	0	1,020,539
Transfer from Refuse Fund	0	19,000	0	19,000	750	0	0	0	19,750	0	19,750
Transfer from Utilities Administration Fund	0	684,000	0	684,000	27,000	0	0	0	711,000	0	711,000
Transfer from Vehicle Replacement and Maintenance	0	380,000	0	380,000	15,000	0	0	0	395,000	0	395,000
<b>Total</b>	<b>0</b>	<b>1,974,289</b>	<b>74,289</b>	<b>1,991,000</b>	<b>81,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,072,000</b>	<b>0</b>	<b>2,146,289</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,974,289	74,289	1,991,000	81,000	0	0	0	2,072,000	0	2,146,289
<b>Total</b>	<b>0</b>	<b>1,974,289</b>	<b>74,289</b>	<b>1,991,000</b>	<b>81,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,072,000</b>	<b>0</b>	<b>2,146,289</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3201 East Bayshore Road  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2020  
**Project Number:** PF-16006

Municipal Services Center Building C, March 2015

# Municipal Service Center Lighting, Mechanical, and Electrical Improvements

## Description

This project provides funding for the replacement of original mechanical and electrical systems and lighting installed in 1966 in the Municipal Service Center's (MSC) Buildings A, B, and C. The project also includes the renovation of office space and shop areas in Building C.

## Justification

Lighting, mechanical, and electrical equipment at the MSC is outdated and inefficient. Various remodels have occurred in the administrative and shop areas adding load to the mechanical and electrical systems. The use of many areas has changed over the years without adequate upgrades to the building systems. The systems no longer support the current operation of this site.

## Supplemental Information

The Refuse Fund, Vehicle Replacement and Maintenance Fund, and Utilities Administration Fund will reimburse the Capital Improvement Fund for a portion of this project, as fund-related operations benefit from the building improvements.

## Significant Changes

**2020-2024 CIP:** Bids received were rejected due to budget exceedance. Funding added to account for severe construction cost escalation and partial redesign to provide additional infra-

## CAPITAL IMPROVEMENT FUND

structure for future electrification of vehicle fleet. Project end date adjusted due to the redesign and rebidding required.

**2019-2023 CIP:** Project cost estimates indicate mechanical and electrical work in Building B require additional funding of \$0.8 million.

**2017-2021 CIP:** Additional funding of \$0.4 million added for Building C office space renovation.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	7,747	1,017,214	91,991	3,187,223	0	0	0	0	3,187,223	0	3,286,961
Transfer from Refuse Fund	28,070	8,000	0	54,000	0	0	0	0	54,000	0	82,070
Transfer from Utilities Administration Fund	530,835	288,000	0	1,944,000	0	0	0	0	1,944,000	0	2,474,835
Transfer from Vehicle Replacement and Maintenance	294,909	160,000	0	1,080,000	0	0	0	0	1,080,000	0	1,374,909
<b>Total</b>	<b>861,561</b>	<b>1,473,214</b>	<b>91,991</b>	<b>6,265,223</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,265,223</b>	<b>0</b>	<b>7,218,775</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	410,011	1,450,844	91,991	6,265,223	0	0	0	0	6,265,223	0	6,767,225
Design	451,538	22,370	0	0	0	0	0	0	0	0	451,538
<b>Total</b>	<b>861,549</b>	<b>1,473,214</b>	<b>91,991</b>	<b>6,265,223</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,265,223</b>	<b>0</b>	<b>7,218,763</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

##### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

#### Potential Board/Commission Review:

Planning and Transportation Commission





**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 350 Sherman Avenue  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Fall 2020  
**Revised Project Start:** Fall 2016  
**Revised Project Completion:** Summer 2020  
**Project Number:** PE-18000

New California Avenue Area Garage Design Option Rendering

# New California Avenue Area Parking Garage

## Description

This project provides funding for the design and construction of a new public parking garage on the existing Lot C-7 in the California Avenue commercial area. The project will include approximately 636 parking stalls and will have two below-ground and four above-ground levels.

## Justification

A new parking garage is needed in the California Avenue commercial area. A new garage will increase parking supply and reduce parking spillover into nearby residential neighborhoods. Additionally, the new garage will replace the parking spaces that will be lost when the new Public Safety Building is constructed on the adjacent Lot C-6. Construction of the new garage must be completed before construction of the Public Safety Building can begin.

## Supplemental Information

The New California Avenue Area Parking Garage project is included in the Council Infrastructure Plan and is supported through planned debt financing.

## Significant Changes

**2020-2024 CIP:** Project completion revised to reflect additional design and construction time for groundwater exclusionary techniques (i.e. installation of cut-off walls).

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$47.9 million. Anticipated completion date adjusted due to design delays resulting from the Architectural Review Board (ARB) and Environmental Impact Report (EIR) processes.



## CAPITAL IMPROVEMENT FUND

**2017-2021 CIP:** Project schedule adjusted to begin and end earlier, reflecting need for phasing of garage and Public Safety Building projects.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Bond Proceeds</b>	0	41,937,000	41,995,000	0	0	0	0	0	0	0	41,995,000
<b>Capital Improvement Fund</b>	1,488,138	5,644,808	5,386,808	1,280,000	0	0	0	0	1,280,000	0	8,154,946
<b>Total</b>	<b>1,488,138</b>	<b>47,581,808</b>	<b>47,381,808</b>	<b>1,280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,280,000</b>	<b>0</b>	<b>50,149,946</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	14,640	46,913,618	46,713,618	1,280,000	0	0	0	0	1,280,000	0	48,008,258
<b>Design</b>	1,473,495	668,190	668,190	0	0	0	0	0	0	0	2,141,685
<b>Total</b>	<b>1,488,135</b>	<b>47,581,808</b>	<b>47,381,808</b>	<b>1,280,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,280,000</b>	<b>0</b>	<b>50,149,943</b>

### Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>California Avenue Parking Permits</b>	0	113,300	116,699	120,200	123,806

### Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$113,300 in FY 2021 and increase by 3% annually thereafter.

#### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Parking

Goal: T-5

Policy: T-5.6

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

#### Environmental Impact Analysis:

This project will require an environmental impact report, combined with the Public Safety Building Project, in accordance with CEQA guidelines.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Parking Lot D (Hamilton Avenue/  
Waverley Street)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2015  
**Initial Project Completion:** Fall 2018  
**Revised Project Start:** Winter 2017  
**Revised Project Completion:** Summer 2022  
**Project Number:** PE-15007

Hamilton Avenue/Waverley Street, March 2015

# New Downtown Parking Garage

## Description

This project provides funding for a new public parking garage in the University Avenue commercial area at existing Parking Lot D at the corner of Hamilton Avenue and Waverley Street. The project will evaluate the feasibility of including retail and stacked parking as part of the new structure. Design and environmental consultant services will be needed, including the development of preliminary plans and cost estimates, and completion of the project's environmental review.

## Justification

A new parking garage is part of a multi-pronged strategy to address excessive spillover parking from the University Avenue commercial area into nearby residential neighborhoods.

## Supplemental Information

The New Downtown Parking Garage project is included in the City Council Infrastructure Plan. In Fiscal Year 2022, a transfer of \$5.5 million from the University In-Lieu Parking Fund is scheduled to fund a portion of the construction of the new garage. The cost estimate for this project will likely need to be adjusted based on estimated construction costs in future years.

## Significant Changes

**2020-2024 CIP:** Funding for this project has been moved out per City Council direction in February 2019 to postpone the project until downtown parking initiatives are determined.

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$29.1 million.

## CAPITAL IMPROVEMENT FUND

**2018-2022 CIP:** In December 2016, a design contract was awarded to Watry Design, Inc. Funding was included in FY 2017 for Phase I of the design work, including environmental review and design through design development. Additional funding is required in FY 2018 to complete the design and construction documents and in FY 2019 for construction administration and project close out.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(402,618)	12,956,571	1,600,000	0	0	11,987,000	0	0	11,987,000	0	13,184,382
<b>Transfer from Stanford University Medical Ctr Fund</b>	0	9,072,000	0	0	0	9,072,000	0	0	9,072,000	0	9,072,000
<b>Transfer from University Ave Parking In Lieu Fund</b>	1,300,000	5,541,000	0	0	0	5,541,000	0	0	5,541,000	0	6,841,000
<b>Total</b>	<b>897,382</b>	<b>27,569,571</b>	<b>1,600,000</b>	<b>0</b>	<b>0</b>	<b>26,600,000</b>	<b>0</b>	<b>0</b>	<b>26,600,000</b>	<b>0</b>	<b>29,097,382</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	200,160	26,075,000	0	0	0	0	0	0	600,000	0	800,160
<b>Design</b>	697,215	1,494,571	1,600,000	0	0	26,600,000	0	0	26,000,000	0	28,297,215
<b>Total</b>	<b>897,375</b>	<b>27,569,571</b>	<b>1,600,000</b>	<b>0</b>	<b>0</b>	<b>26,600,000</b>	<b>0</b>	<b>0</b>	<b>26,600,000</b>	<b>0</b>	<b>29,097,375</b>

### Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>University Avenue Parking Permits</b>	0	0	0	88,700	91,361

### Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$88,700 in FY 2023 and increase 3% annually thereafter.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Planning for Parks and Community Facilities

Goal: C-4

Policy: C-4.2

#### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to require a CEQA Environmental Impact Report.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Parking Lot C-6 (250 Sherman Avenue)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2015  
**Initial Project Completion:** Fall 2020  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2022  
**Project Number:** PE-15001

New Public Safety Building Rendering

# New Public Safety Building

## Description

This project provides funding for the design and construction of a new Public Safety Building on Lot C-6 in the California Avenue commercial area. Design and environmental consultant services will be needed, including the development of preliminary plans, cost estimates and special studies as part of an Environmental Impact Report (EIR), and site evaluation for the approximately 44,500 square foot facility. The size and programming of the new facility were developed by the 2006 Blue Ribbon Task Force.

## Justification

The current Police Department facility is structurally, operationally, and technologically deficient. This project will provide a new facility for the Police Department, Office of Emergency Services, the Emergency Operations Center, emergency dispatch, and Fire Department Administration. It will be built to essential services standards with a high likelihood of being fully operational after a major disaster such as a significant earthquake.

## Supplemental Information

The new Public Safety Building has been identified as the top priority project in the City Council Infrastructure Plan. The majority of the expenses will be financed using Certificates of Participation with Transient Occupancy Tax (TOT) used to fund the debt service.

## Significant Changes

**2020-2024 CIP:** Project construction will begin after the new California Avenue Area Parking Garage is complete. Anticipated completion of the Public Safety Building is revised to Fall 2022.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$92.2 million. Construction funding and expenditures moved to FY 2020 due to design delays relating the Architectural Review Board (ARB) and EIR processes. Anticipated project completion also revised to summer 2021.

**2018-2022 CIP:** Timeline adjusted to reflect sequential construction to follow the California Avenue Area Parking Garage (CIP PE-18000).

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Bond Proceeds	0	0	0	0	103,000,000	0	0	0	103,000,000	0	103,000,000
Capital Improvement Fund	(1,056,178)	1,922,899	4,922,899	0	110,000	3,850,000	0	0	3,960,000	0	7,826,721
Transfer from Stanford University Medical Ctr Fund	3,900,000	0	0	0	800,000	0	0	0	800,000	0	4,700,000
<b>Total</b>	<b>2,843,822</b>	<b>1,922,899</b>	<b>4,922,899</b>	<b>0</b>	<b>103,910,000</b>	<b>3,850,000</b>	<b>0</b>	<b>0</b>	<b>107,760,000</b>	<b>0</b>	<b>115,526,721</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	100,000	0	103,910,000	3,850,000	0	0	107,760,000	0	107,860,000
Design	2,843,815	1,922,899	4,822,899	0	0	0	0	0	0	0	7,666,714
<b>Total</b>	<b>2,843,815</b>	<b>1,922,899</b>	<b>4,922,899</b>	<b>0</b>	<b>103,910,000</b>	<b>3,850,000</b>	<b>0</b>	<b>0</b>	<b>107,760,000</b>	<b>0</b>	<b>115,526,714</b>

### Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General Fund-Operating	0	0	335,000	345,050	355,400

### Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$335,000 in FY 2022 and increase by 3% annually thereafter.

#### Relationship to Comprehensive Plan

#### Primary Connection

Element: Safety

Section: Community Safety

Goal: S-1

Policy: S-1.7

Program: S1.7.2

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

#### Environmental Impact Analysis:

This project will require an environmental impact report, combined with the California Avenue Area Parking Garage Project, in accordance with CEQA guidelines.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Cowper & Webster  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2018  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2019  
**Project Number:** PF-18000

Elevator Control, 2017

# Parking Lot J Elevator Modernization

## Description

This project provides funding to modernize the existing two elevators in Parking Lot J. The modernization consists of upgrading the interior of the elevators, elevator control interface, call buttons, and meeting current ADA standards.

## Justification

The Parking Lot J elevators are experiencing maintenance issues and do not conform to ADA standards.

## Supplemental Information

It is anticipated that the cost of this project will be reimbursed by the Parking District and is consistent with the agreement between the City and the Parking District.

## Significant Changes

**2020-2024 CIP:** Start date was pushed out to April 2019 resulting in a revised completion date.

**2019-2023 CIP:** Bids came in higher than expected resulting in an increase to the original amount by \$50,000.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(700,000)	729,324	679,324	52,000	0	0	0	0	52,000	0	31,324
Transfer from University Ave Parking Permit Fund	700,000	50,000	50,000	0	0	0	0	0	0	0	750,000
<b>Total</b>	<b>0</b>	<b>779,324</b>	<b>729,324</b>	<b>52,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,000</b>	<b>0</b>	<b>781,324</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	779,324	729,324	52,000	0	0	0	0	52,000	0	781,324
<b>Total</b>	<b>0</b>	<b>779,324</b>	<b>729,324</b>	<b>52,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,000</b>	<b>0</b>	<b>781,324</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Children's Theatre, Community Theatre, and Cubberley Theatre  
**Managing Department:** Community Services  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Fall 2019  
**Project Number:** AC-18000

Children's Theatre, January 2016

# Performing Arts Venues Seat Replacement

## Description

This project provides funding for the replacement of damaged or non-functioning seats at the City's three performing arts venues: Children's Theater, Community Theater, and Cubberley Theater.

## Justification

The seats at the City's three theater sites are beyond their useful life and due for replacement based on their age and condition.

## Supplemental Information

Beginning July 1, 2019, the Resident Theater Companies that use the Lucie Stern Community Theater (West Bay Opera, Palo Alto Players, and Theaterworks), signed a contract with the City to collect a fee of \$2.00 for each ticket sold for events with paid admission. This fee will be used to offset the costs of enhancements, upgrades, improvements, repairs, preservation, and new equipment and furnishings for the Lucie Stern Community Theater. This seating upgrade project qualifies for use of this funding source and could be used to partially reimburse the costs for project.

## Significant Changes

**2020-2024 CIP:** Project scope changed from replacing damaged and non-functioning seats to replacing all seats and funding increased by \$0.3 million.

**2017-2021 CIP:** Project established.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	78,774	0	419,000	0	0	0	0	419,000	0	419,000
<b>Total</b>	<b>0</b>	<b>78,774</b>	<b>0</b>	<b>419,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>419,000</b>	<b>0</b>	<b>419,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	78,774	0	419,000	0	0	0	0	419,000	0	419,000
<b>Total</b>	<b>0</b>	<b>78,774</b>	<b>0</b>	<b>419,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>419,000</b>	<b>0</b>	<b>419,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PF-00006

Fire Station 2, January 2015

# Roofing Replacement

## Description

This project provides funding for ongoing roofing maintenance at various City facilities including major repairs, rehabilitation, replacement, roof deck, drainage systems, and sheet metal repair/replacement. Roofs scheduled for replacement are based on an annual evaluation of their condition.

## Justification

The life expectancy of most roofs at City facilities is 20 to 25 years. There are facilities in the inventory with roof systems that are beyond or near their useful life.

## Supplemental Information

Facilities scheduled for re-roofing are as follows:

**Fiscal Year 2020:** Avenidas Senior Center

**Fiscal Year 2021:** Lucie Stern Community Center

**Fiscal Year 2022:** Peers Park Club House and Lucie Stern Community Theater Flat Roof

**Fiscal Year 2023:** Baylands Interpretive Center and Police Department Lower Roof

**Fiscal Year 2024:** Foothills Equipment and Storage Building

## Significant Changes

**2020-2024 CIP:** Avenidas Senior Center moved to FY 2020 from FY 2021 and Lucie Stern Community Center moved from FY 2020 to FY 2021. Lucie Stern Community Theater Flat Roof added to FY 2022 and Foothills Equipment and Storage Building added for FY 2024.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** Mitchell Park Storage Pool Filter Facility and Arastradero Gate Way will replace the animal shelter in FY 2019.

**2018-2022 CIP:** Funding for Ventura Unit 3 has been moved from FY 2021 to 2018 due to its condition and the scheduled work on other Ventura units. The Avenidas Senior Center has been added to FY 2021.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	1,188,976	986,196	675,914	387,000	296,229	986,476	1,335,986	3,681,605	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,188,976</b>	<b>986,196</b>	<b>675,914</b>	<b>387,000</b>	<b>296,229</b>	<b>986,476</b>	<b>1,335,986</b>	<b>3,681,605</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,188,976	986,196	675,914	387,000	296,229	986,476	1,335,986	3,681,605	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,188,976</b>	<b>986,196</b>	<b>675,914</b>	<b>387,000</b>	<b>296,229</b>	<b>986,476</b>	<b>1,335,986</b>	<b>3,681,605</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301 except for historic buildings.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 300 Homer Avenue  
**Managing Department:** Public Works  
**IBRC Reference:** N/A  
**Initial Project Start:** Summer 2006  
**Initial Project Completion:** Spring 2007  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2021  
**Project Number:** PF-07011

Roth Building, January 2015

# Roth Building Maintenance

## Description

This project provides funding for window repairs, waterproofing of foundation walls, installation of electrical service, and a new ventilation system at the Roth building. In addition, roofing repairs will be done on an as needed basis until such time that the building is leased and occupied.

## Justification

In Fiscal Year 2004, the City removed the non-historic wings and secured the building. Currently, the building is empty waiting for the Palo Alto History Museum to take possession. Funding was provided on a one-time basis for roofing repair and the installation of downspouts. The building's roof will require on-going maintenance and repair to prevent further leaking. Water is also entering the building through the basement walls. In order to prevent mildew and further deterioration of the building, roof repair, waterproofing, perimeter drainage, and installation of a ventilation/dehumidification system are necessary.

## Supplemental Information

Funding was provided as a one-time addition and will be continued until all funding is used or Palo Alto History Museum takes possession. Small repairs are needed on a continual basis.

## Significant Changes

**2017-2021 CIP:** Project completion extended to reflect continuing vacancy of the building.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	24,477	41,640	2,567	41,073	0	0	0	0	41,073	0	68,117
<b>Total</b>	<b>24,477</b>	<b>41,640</b>	<b>2,567</b>	<b>41,073</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41,073</b>	<b>0</b>	<b>68,117</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	24,477	41,640	2,567	41,073	0	0	0	0	41,073	0	68,117
<b>Total</b>	<b>24,477</b>	<b>41,640</b>	<b>2,567</b>	<b>41,073</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41,073</b>	<b>0</b>	<b>68,117</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Historic Resources Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund

**Category:** Buildings and Facilities

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** N/A

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PF-14003

Lot N, January 2015

# University Avenue Parking Improvements

## Description

This project provides funding for improvements in the University Avenue parking district including parking lot resurfacing; striping and signing; parking structure painting or staining; electrical system upgrades needed to support improved lighting; and security systems and/or other systems.

## Justification

This project is intended to maintain the existing parking lots and garages in the University Avenue parking district to extend the useful life of the pavement surfaces and buildings.

## Supplemental Information

This project is dependent on the availability of funding in the University Avenue Parking Permit Fund.

**Fiscal Year 2020:** No work planned; however, work performed on Lot C (Ramona/Lytton) in FY 2019 is anticipated to be carried over into FY 2020.

**Fiscal Year 2021:** Resurface and restripe Lot A (Emerson/Lytton), Lot H (Cowper/Hamilton), and Lot P (High/Hamilton).

**Fiscal Year 2022:** Resurface and restripe Lot E (Gilman/Bryant), Lot G (Waverley/Gilman), Lot N (Emerson/Hamilton), and Lot T (Lytton/Kipling).

**Fiscal Year 2023:** Resurface and restripe Lot F (Florence/Lytton) and Lot O (Emerson/High).



## CAPITAL IMPROVEMENT FUND

**Fiscal Year 2024:** Resurface and restripe Lot K (Lytton/Waverley).

### Significant Changes

**2019-2023 CIP:** Parking Lot C resurfacing will be coordinated with the Avenidas project. With the exception of Lot C, all University Avenue parking district lots were resurfaced and no additional work is needed at this time.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	406,517	0	(327,000)	17,000	131,000	76,000	153,000	50,000	0	N/A
<b>Transfer from University Ave Parking Permit Fund</b>	N/A	0	63,517	343,000	225,000	115,000	75,000	65,000	823,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>406,517</b>	<b>63,517</b>	<b>16,000</b>	<b>242,000</b>	<b>246,000</b>	<b>151,000</b>	<b>218,000</b>	<b>873,000</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	406,517	63,517	16,000	242,000	246,000	151,000	218,000	873,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>406,517</b>	<b>63,517</b>	<b>16,000</b>	<b>242,000</b>	<b>246,000</b>	<b>151,000</b>	<b>218,000</b>	<b>873,000</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in the next budget cycle.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Transportation

Section: Parking

Goal: T-5

Policy: T-5.9

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Buildings and Facilities  
**Project Location:** 3990 Ventura Court  
**Managing Department:** Public Works  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:** Fall 2016  
**Revised Project Completion:** Spring 2020  
**Project Number:** PE-15011

Ventura Community Center, February 2015

# Ventura Buildings Improvements

## Description

This project provides funding to replace or upgrade the mechanical and electrical systems and provide accessibility improvements to the Ventura Community Center facility. To comply with the Americans with Disabilities Act, accessibility improvements are included; these needs are typically addressed concurrently with City-planned projects.

## Justification

Mechanical and electrical systems are original and have reached the end of their useful lives. To meet current code requirements and increase efficiency and reliability, these systems need to be replaced. Under the lease agreement with Palo Alto Community Child Care (PACCC), the City is responsible for capital maintenance.

## Significant Changes

**2020-2024 CIP:** Project deferred from FY 2019 to FY 2020 due to excessive bid pricing and low contractor interest. Budget adjusted to current market rates.

**2019-2023 CIP:** Anticipated completion date adjusted due to delays in design and obtaining building permit approval.

**2018-2022 CIP:** Project deferred by an additional half year due to workload of other projects in progress.

**2017-2021 CIP:** Project deferred by half a year due to workload of other projects in progress.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	416,988	420,432	141,835	1,968,597	0	0	0	0	1,968,597	0	2,527,420
<b>Total</b>	<b>416,988</b>	<b>420,432</b>	<b>141,835</b>	<b>1,968,597</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,968,597</b>	<b>0</b>	<b>2,527,420</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,939	405,823	141,835	1,968,597	0	0	0	0	1,968,597	0	2,112,371
<b>Design</b>	415,047	14,609	0	0	0	0	0	0	0	0	415,047
<b>Total</b>	<b>416,986</b>	<b>420,432</b>	<b>141,835</b>	<b>1,968,597</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,968,597</b>	<b>0</b>	<b>2,527,418</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund

**Category:** Buildings and Facilities

**Project Location:** MSC Building C

**Managing Department:** Public Works

**IBRC Reference:** N/A

**Initial Project Start:** Fall 2018

**Initial Project Completion:** Fall 2019

**Revised Project Start:** Spring 2019

**Revised Project Completion:** Fall 2019

**Project Number:** PE-19001

Entryway to the Water, Gas, Wastewater Offices

# Water, Gas, Wastewater Office Remodel

## Description

This project provides funding for minor renovations to the Utilities Water Gas Wastewater (WGW) office space at the Municipal Service Center (MSC). The current space no longer meets the operational needs of the department. This project will reconfigure the space so it is more efficient for department operations and replace aging furniture and finishes such as cubicle furniture, carpet, paint, and lighting. Enclosed offices may be demolished and relocated. Additionally, electrical, mechanical (HVAC), and fire systems work will be required.

## Justification

The current office space configuration and furnishing have been in place for about 20 years. Reconfiguring the space will allow staff from the same work groups to be located together and next to their supervisors/managers and create additional space and offices for new staff. The WGW kitchen/lunchroom size will be reduced to further allow for more office space. The project will also add a small reception/waiting area for visitors.

## Significant Changes

**2020-2024 CIP:** Project timeline extended due to staffing constraints.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	0	2,737	(67,263)	101,000	0	0	0	0	101,000	0	33,737
<b>Transfer from Utilities Administration Fund</b>	0	70,000	70,000	654,000	0	0	0	0	654,000	0	724,000
<b>Total</b>	<b>0</b>	<b>72,737</b>	<b>2,737</b>	<b>755,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>755,000</b>	<b>0</b>	<b>757,737</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	724,000	0	0	0	0	724,000	0	724,000
<b>Design</b>	0	72,737	2,737	31,000	0	0	0	0	31,000	0	33,737
<b>Total</b>	<b>0</b>	<b>72,737</b>	<b>2,737</b>	<b>755,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>755,000</b>	<b>0</b>	<b>757,737</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

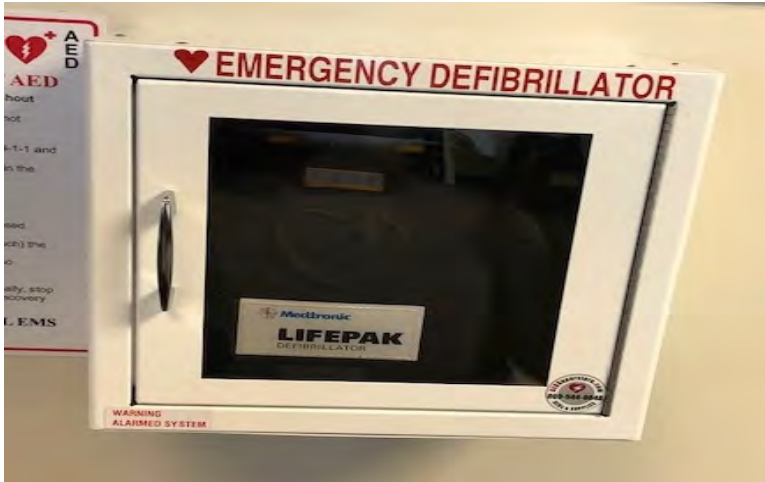
This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Department Technology Upgrades and Improvements

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2020  
**Initial Project Completion:** Summer 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-21000

Automated External Defibrillator at City Hall

# Automated External Defibrillator Replacement

## Description

This project provides funding for the replacement of the entire compliment of Automated External Defibrillators (AEDs) throughout City facilities and emergency response vehicles, which currently totals 93 AEDs.

## Justification

The Fire Department maintains the Automated External Defibrillators (AEDs) throughout City facilities and emergency response vehicles. These devices allow for intervention during a cardiac arrest while awaiting first responders. The current AEDs were purchased in 2013, and the recommended replacement cycle is between 5-8 years. This project will replace all AEDs throughout City facilities.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	162,000	0	0	0	162,000	0	162,000
Revenue from Other Agencies	0	0	0	0	38,000	0	0	0	38,000	0	38,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>200,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	200,000	0	0	0	200,000	0	200,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>200,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 5-8 years.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-1.13

Program: S2.13.1

**Potential Board/Commission Review:**Planning and Transportation  
Commission**Environmental Impact Analysis:**

None Required



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2020  
**Initial Project Completion:** Summer 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-20000

Cardiac Monitor in an ambulance

# Cardiac Monitor Replacement

## Description

This project provides funding for the replacement of the entire complement of 20 cardiac monitors in the Department. Along with other tools needed for patient assessment and airway verification, cardiac monitors assess cardiac activity in patients and provide defibrillation and pacing. These are required by State and County Emergency Medical Services (EMS) laws for all Advanced Life Support (ALS) units. All Fire Department engines, trucks, ambulances and other apparatus are designated as ALS units and require cardiac monitors as standard equipment.

## Justification

Electro cardiac machines are essential equipment on all ALS units and are required to be calibrated and checked annually. They allow for cardiac assessment, defibrillation, and pacing, along with other tools needed for patient assessment and airway verification. The most current and appropriate cardiac monitors also transmit essential patient information to the hospital and forward data to the City for retrospective quality assurance.

The current cardiac monitors were purchased in Fiscal Year 2012 and the Department is no longer able to continue operating the old models, as they are beyond their allowable usage under County regulations and the manufacturer no longer offers warranty or parts replacement.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	688,500	0	0	0	0	688,500	0	688,500
Revenue from Other Agencies	0	0	0	161,500	0	0	0	0	161,500	0	161,500
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>850,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	850,000	0	0	0	0	850,000	0	850,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>850,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 5-8 years.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety  
 Section: Natural Hazards  
 Goal: S-2  
 Policy: S-1.13  
 Program: S2.13.1

**Potential Board/Commission Review:**

Planning and Transportation  
 Commission

**Environmental Impact Analysis:**

None Required

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2021  
**Initial Project Completion:** Summer 2022  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-22000

Extrication tools stored on the fire engine

# Extrication Tool Replacement

## Description

This project provides funding for the replacement of all extrication tools for the Fire Department. Extrication tools, also known as “Jaws of Life”, are used to rescue victims of car accidents and other emergencies where the victims are trapped in confined spaces.

## Justification

Extrication tools are used for large scale rescue incidents, such as car accidents. These tools allow first responders to cut through most materials in order to rescue patients. These tools require replacement every 8-10 years. The current fleet was purchased in 2012.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	182,300	0	0	182,300	0	182,300
Revenue from Other Agencies	0	0	0	0	0	42,700	0	0	42,700	0	42,700
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>225,000</b>	<b>0</b>	<b>225,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	225,000	0	0	225,000	0	225,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>225,000</b>	<b>0</b>	<b>0</b>	<b>225,000</b>	<b>0</b>	<b>225,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 8-10 years.

**Relationship to Comprehensive Plan**
**Primary Connection**

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-1.13

**Potential Board/Commission Review:**

Planning and Transportation  
Commission

**Environmental Impact Analysis:**

None Required



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Palo Alto Police Department (275 Forest Ave)  
**Managing Department:** Police  
**IBRC Reference:** N/A  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Winter 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PD-20000

Police In-Car Video System

# Police Video Recording Systems Replacement

## Description

This project provides funding for the replacement of Palo Alto Police Department video recording systems used to record events in the field with in-car cameras as well as body-worn cameras (BWC). The in-car camera technology was introduced in 2013 while BWCs were implemented in Fiscal Year 2019 after a one-year pilot program. In-car systems are fixed in the vehicles and BWCs operate on rechargeable batteries for up to 8 hours, secured to the officer's uniform. Images captured by in-car systems and BWCs are stored both locally and in the cloud on a secure platform.

## Justification

The useful life is approximately 5 years for in-car systems and 4 years for BWCs. Public requests for more access to police video, particularly of "critical incidents" (yet to be legally defined), has increased over the last year with the passage of two state laws that hold agencies accountable for a higher level of transparency. The adoption of these technologies, along with the desire of the public for more accountability, prioritizes the need for police departments to maintain video recording systems. While video does not replace a written report, video can be helpful for reconstructing an incident for both criminal investigations and use of force incidents.

## Supplemental Information

There are two components impacting the timeline of this project:

- Coordinating efforts of Information Technology and the Police Department for the replacement of the servers and subsequent utilization of cloud storage.
- Syncing up the camera replacements with the vehicle replacement cycle will mitigate installing new camera system equipment in soon-to-be replaced vehicles.

Funding is specifically for the replacement of the in-car cameras and system as well as the replacement of a server used for video data storage, due to the in-car system being at the end of its useful life. The BWC equipment will be at the end of its useful life in FY 2022, and funding for replacement will be recommended in this project as part of the next budget cycle.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	0	0	0	150,000	150,000	0	0	0	300,000	0	300,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150,000</b>	<b>150,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300,000</b>	<b>0</b>	<b>300,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Other</b>	0	0	0	150,000	150,000	0	0	0	300,000	0	300,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150,000</b>	<b>150,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300,000</b>	<b>0</b>	<b>300,000</b>

## Operating Impact

Software licensing costs of approximately \$23,000 are already budgeted in the Police Department's operating budget. There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 5 years for in-car systems and 4 years for body worn cameras.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Safety

Section: Community Safety

Goal: S-1

Policy: S-1.6

Program: S1.6.2

#### Environmental Impact Analysis:

Not Applicable

### Potential Board/Commission Review:

Planning and Transportation Commission

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Fire Station 2  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2020  
**Initial Project Completion:** Summer 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-20001

Firefighter filling an SCBA tank with air

# Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement

## Description

This project provides funding for the replacement of the central air compressor that provides air for Self-Contained Breathing Apparatus (SCBA) tanks to ensure firefighter safety when entering environments with hazardous air quality.

## Justification

The Fire Department has one central air compressor at Fire Station 2 that is used to fill air tanks. The current compressor is over 20 years old, requires extensive repairs, and is due for replacement.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	69,700	0	0	0	0	69,700	0	69,700
Revenue from Other Agencies	0	0	0	16,300	0	0	0	0	16,300	0	16,300
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,000</b>	<b>0</b>	<b>86,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	86,000	0	0	0	0	86,000	0	86,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,000</b>	<b>0</b>	<b>86,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 15-20 years.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-2.13

Program: S2.13.1

**Potential Board/Commission Review:**Planning and Transportation  
Commission**Environmental Impact Analysis:**

N/A





**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Spring 2017  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2019  
**Project Number:** FD-18000

Used Self Contained Breathing Apparatus

# Self-Contained Breathing Apparatus (SCBA) Replacement

## Description

This project provides funding for the replacement of Self Contained Breathing Apparatus (SCBA) used by firefighters when entering hazardous conditions when responding to fire and hazardous materials incidents. These apparatus provide breathable air for firefighters when entering environments where the atmosphere is immediately dangerous to life or health.

## Justification

The expected service life for SCBAs is 15 years. When this project was funded in Fiscal Year 2018, 26 percent of the Palo Alto Fire Department (PAFD) SCBAs were past their useful life and 41 percent were approaching the end of their useful life. In addition, the National Fire Protection Agency (NFPA) standards require that all SCBAs in use pass regular testing and have repair parts available. Many of the current SCBAs in use no longer pass test standards and repair parts are no longer available from the manufacturer.

## Supplemental Information

The Department has replaced the main SCBA components and is now working on final purchases of compatible accessories, such as Bluetooth enabled microphones and hose couplings.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	538,062	101,217	39,417	42,900	0	0	0	0	42,900	0	620,379
<b>Revenue from Other Agencies</b>	160,720	0	8,800	10,100	0	0	0	0	10,100	0	179,620
<b>Total</b>	<b>698,782</b>	<b>101,217</b>	<b>48,217</b>	<b>53,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53,000</b>	<b>0</b>	<b>799,999</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	698,782	101,217	48,217	53,000	0	0	0	0	53,000	0	799,999
<b>Total</b>	<b>698,782</b>	<b>101,217</b>	<b>48,217</b>	<b>53,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53,000</b>	<b>0</b>	<b>799,999</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of 10-15 years.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Safety  
Section: Natural Hazards  
Goal: S-2  
Policy: S-2.1  
Program: S2.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

None Required

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Fire  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** FD-20002

Crews using Thermal Imaging Camera during a training event

# Thermal Imaging Cameras Replacement

## Description

This project provides funding for the replacement of Thermal Imaging Cameras (TICs) on all fire and response vehicles used to help identify the location of victims; assess the source of fires, smoke, and heat; and create a plan of action. Two thermal imaging cameras were approved for purchase as part of the Fiscal Year 2019 Mid-Year Review and the remaining nine will be replaced with this project.

## Justification

The Department has a Thermal Imaging Camera on all fire response vehicles for a total of 11. The TICs are past their useful life of 7-10 years and two of the current cameras are broken, which will be replaced in Fiscal Year 2019.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	80,200	0	0	0	0	80,200	0	80,200
Revenue from Other Agencies	0	0	0	18,800	0	0	0	0	18,800	0	18,800
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99,000</b>	<b>0</b>	<b>99,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	99,000	0	0	0	0	99,000	0	99,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99,000</b>	<b>0</b>	<b>99,000</b>

**Operating Impact**

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget. Costs for future replacements will be budgeted according to a replacement cycle of seven to ten years.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety  
 Section: Natural Hazards  
 Goal: S-2  
 Policy: S-1.13  
 Program: S2.13.1

**Potential Board/Commission Review:**

Planning and Transportation  
 Commission

**Environmental Impact Analysis:**

None Required



CITY OF  
**PALO  
ALTO**

## Parks and Open Space



**Fund:** Capital Improvement Fund

**Category:** Parks and Open Space

**Project Location:** Various

**Managing Department:** Community Services

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** AC-86017

**Brilliance**, by Joe O'Connell and Blessing Hancock

## Art In Public Spaces

### Description

This project provides funding for innovative public art for both interior and exterior public spaces in accordance with the City Council-approved Art in City Capital Improvement Projects ordinance.

### Justification

This project places art in public buildings, plazas, gateways, parks, and other sites frequented by residents and visitors alike. It is expected that public art will enhance community pride and ownership in the City of Palo Alto. Public Art preserves the long-term viability of the built environment and helps set a standard for aesthetic variety and creativity in the community.

### Supplemental Information

The Art in City Capital Improvement Projects ordinance states that the City will budget one percent of its CIP budget for public art, with certain exceptions. A base level of funding in the amount of \$50,000 is included each year.

Prior to Fiscal Year 2015, one percent for public art was included in the budget for each applicable project. Beginning in Fiscal Year 2015, public art funding is accounted for within this project. This change provides a clearer picture of how much funding is available for public art, allows for the pooling of funds for more impactful projects, and ensures that the funds are preserved for public art.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	1,420,992	570,992	1,102,443	1,305,649	183,300	63,800	66,272	2,721,464	0	N/A
<b>Revenue from Other Agencies</b>	N/A	175,000	175,000	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,595,992</b>	<b>745,992</b>	<b>1,102,443</b>	<b>1,305,649</b>	<b>183,300</b>	<b>63,800</b>	<b>66,272</b>	<b>2,721,464</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,595,992	745,992	1,102,443	1,305,649	183,300	63,800	66,272	2,721,464	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,595,992</b>	<b>745,992</b>	<b>1,102,443</b>	<b>1,305,649</b>	<b>183,300</b>	<b>63,800</b>	<b>66,272</b>	<b>2,721,464</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

Annual funding in the amount of \$30,000 for public art maintenance is allocated to the Community Services Department in the General Fund.

## Relationship to Comprehensive Plan

## Primary Connection

Element: Land Use and Community Design

Section: Parks and Gathering Places

Goal: L-8

Policy: L-8-5

## Relationship to Comprehensive Plan

## Secondary Connection

Element: Land Use and Community Design

Section: Commercial Centers

Goal: L-4

Policy: L-4.4

## Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

## Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PG-06001

Rinconada Tennis Courts, February 2015

# Athletic Courts Resurfacing

## Description

This project provides funding for repair and resurfacing of various athletic courts such as tennis, pickleball, and basketball courts and gathering bowls in Palo Alto parks.

## Justification

Athletic courts and gathering bowls in Palo Alto parks require ongoing repairs and resurfacing due to wear and tear. Resurfacing of courts will enhance the safety, quality, and condition of these athletic facilities.

## Supplemental Information

Work to be completed under this project is scheduled as follows:

**Fiscal Year 2020:** Rinconada Park tennis courts (1-6), Peers Park tennis courts, and Peers Park basketball courts resurfacing or reconstruction.

**Fiscal Year 2021:** Briones Park, Greer Park, Hoover Park, Johnson Park, Ramos Park, Robles Park, Seale Park, and Scott Park basketball courts resurfacing or reconstruction.

**Fiscal Year 2022:** Terman Park and Weisshaar Park tennis courts resurfacing or reconstruction.

**Fiscal Year 2023:** Terman Park basketball courts resurfacing or reconstruction.

**Fiscal Year 2024:** Hopkins Park tennis courts resurfacing or reconstruction.



## Significant Changes

**2020-2024 CIP:** The project name was changed from Tennis and Basketball Court Resurfacing to broaden the scope of the project and include more types of athletic courts such as tennis, basketball, pickleball, and gathering bowls in Palo Alto parks.

**2017-2021 CIP:** Tennis courts at Cubberley Community Center have been removed from this project and now are covered in a separate project within the Cubberley Infrastructure Fund.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	759,297	759,297	254,000	260,000	276,000	310,000	302,000	1,402,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>759,297</b>	<b>759,297</b>	<b>254,000</b>	<b>260,000</b>	<b>276,000</b>	<b>310,000</b>	<b>302,000</b>	<b>1,402,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	578,509	578,509	254,000	260,000	276,000	310,000	302,000	1,402,000	0	N/A
<b>Design</b>	N/A	180,788	180,788	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>759,297</b>	<b>759,297</b>	<b>254,000</b>	<b>260,000</b>	<b>276,000</b>	<b>310,000</b>	<b>302,000</b>	<b>1,402,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	<b>Potential Board/Commission Review:</b> Parks and Recreation Commission Planning and Transportation Commission
<b>Environmental Impact Analysis:</b> This project is expected to have a possible exemption from CEQA under Section 15301.		

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Adjacent to Baylands Athletic Center (1900 Geng Road)  
**Managing Department:** Community Services  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PG-19001

Baylands, March 2017

# Baylands Athletic Center 10.5 Acre Expansion Plan

## Description

This project provides funding for conceptual plans and public outreach for future use of an additional 10.5 acre expansion of the Baylands Athletic Center from land previously part of the golf course.

## Justification

During the golf course reconstruction, 10.5 acres were set aside for future park use and incorporation into the adjacent Baylands Athletic Center. The Parks, Trails, Open Space, and Recreation Master Plan calls for evaluating optimal usage including open space for the 10.5 acre land bank.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	5,032	(84,968)	106,000	0	0	0	0	106,000	0	21,032
Transfer from Parks Development Impact Fee Fund	0	100,000	100,000	0	0	0	0	0	0	0	100,000
<b>Total</b>	<b>0</b>	<b>105,032</b>	<b>15,032</b>	<b>106,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106,000</b>	<b>0</b>	<b>121,032</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	105,032	15,032	106,000	0	0	0	0	106,000	0	121,032
<b>Total</b>	<b>0</b>	<b>105,032</b>	<b>15,032</b>	<b>106,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106,000</b>	<b>0</b>	<b>121,032</b>

## Operating Impact

The conceptual plans funded in this project do not have operating budget impacts, but once a conceptual plan is adopted and built, there will be operating budget impact that will be brought forward as part of future budget cycles.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Environmental Impact Analysis:**

Environmental Review Required

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Harbor Road near Baylands Nature Interpretive Center (2775 Embarcadero Road)  
**Managing Department:** Community Services  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2012  
**Initial Project Completion:** Summer 2014  
**Revised Project Start:** Summer 2024  
**Revised Project Completion:** Summer 2026  
**Project Number:** OS-09002

Baylands Levee, January 2015

# Baylands Levee Repair for Public Safety Access

## Description

This project provides funding to restore the width and height of the earthen flood levee between Harbor Road near the Baylands Interpretive Center and the perimeter levee of the airport to six inches above its original height.

## Justification

This section of City-maintained levee has significantly subsided since it was built in the early 1960s. High winter tides now overflow the top of the levee, causing significant erosion along both edges of the levee. This levee is important not only for flood control of the Baylands, but also for emergency response by fire and paramedic vehicles for fires, plane crashes and rescue of injured trail users. The section of levee between the road and the Nature Center is essential for public access.

## Supplemental Information

Information from the Bay Conservation and Development Commission on sea level rise projections will be incorporated into the design of the restoration of the levee in order for the structure to function against increasing tide levels. This project is pending a cost estimate update as regulatory agencies have informed staff this project will require mitigation.

## Significant Changes

**2020-2024 CIP:** Project funding has been pushed out to FY 2024 and is pending an updated cost estimate.

**2019-2023 CIP:** Project funding has been pushed out to FY 2021 and is pending an updated cost estimate.

**2018-2022 CIP:** Securing the regulatory permits remain delayed and now may require mitigation.

**2016-2020 CIP:** Project completion has been extended by 2 1/2 years due to delays in securing the regulatory permits needed to construct the project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	54,298	0	0	0	0	0	0	373,602	373,602	0	427,900
<b>Total</b>	<b>54,298</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>373,602</b>	<b>373,602</b>	<b>0</b>	<b>427,900</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	54,298	0	0	0	0	0	0	108,000	108,000	0	162,298
Design	0	0	0	0	0	0	0	265,602	265,602	0	265,602
<b>Total</b>	<b>54,298</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>373,602</b>	<b>373,602</b>	<b>0</b>	<b>427,900</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1.5

Program: N1.5.1

### Potential Board/Commission Review:

Planning and Transportation Commission

San Francisquito Creek Joint Powers Authority

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring 1997  
**Initial Project Completion:** Recurring  
**Project Number:** PG-06003

Greer Park, January 2015

# Benches, Signage, Walkways, Perimeter Landscaping

## Description

This project provides funding for the restoration and replacement of existing benches, signage, fencing, walkways, and landscaping at various City facilities.

## Justification

Benches, signage, fencing, walkways, and perimeter landscaping at various sites are due for replacement or upgrade based on their age and/or condition.

## Supplemental Information

Replacements will be evaluated and recommended by the Community Services Department on a per park basis with actual work dependent upon bid results.

## Significant Changes

**2020-2024 CIP:** On-going project budget increased by \$25,000 annually to a total of \$0.2 million per year.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	392,204	392,204	207,000	212,000	225,000	252,000	246,000	1,142,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>392,204</b>	<b>392,204</b>	<b>207,000</b>	<b>212,000</b>	<b>225,000</b>	<b>252,000</b>	<b>246,000</b>	<b>1,142,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	294,101	294,101	207,000	212,000	225,000	252,000	246,000	1,142,000	0	N/A
<b>Design</b>	N/A	98,103	98,103	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>392,204</b>	<b>392,204</b>	<b>207,000</b>	<b>212,000</b>	<b>225,000</b>	<b>252,000</b>	<b>246,000</b>	<b>1,142,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 3590 Laguna Avenue  
**Managing Department:** Public Works  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:** Summer 2023  
**Revised Project Completion:** Summer 2024  
**Project Number:** PE-16000

Bol Park, February 2015

# Bol Park Improvements

## Description

This project provides funding for safety renovations and accessibility improvements, including repairs to the decomposed granite pathways, park lighting, and fencing at Bol Park. Irrigation renovations and turf restoration are also included in this project, as well as the replacement of two drinking fountains and other site amenities.

## Justification

The concrete walkway and decomposed granite pathway are cracked and/or uneven, creating safety hazards. The brick wall at the playground and other site amenities, including the playing-field backstops, are old or damaged. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs in addition to safety issues.

## Significant Changes

**2020-2024 CIP:** Project moved from Fiscal Year 2020 to Fiscal Year 2024 due to some interim improvements that were made, prolonging the remaining park structures to last until Fiscal Year 2024. This allows for work at other projects with more immediate needs.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	0	295,000	295,000	0	295,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>295,000</b>	<b>295,000</b>	<b>0</b>	<b>295,000</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	0	270,708	270,708	0	270,708
<b>Design</b>	0	0	0	0	0	0	0	24,292	24,292	0	24,292
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>295,000</b>	<b>295,000</b>	<b>0</b>	<b>295,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 410 Fernando Avenue  
**Managing Department:** Public Works  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Fall 2017  
**Initial Project Completion:** Fall 2018  
**Revised Project Start:** Fall 2019  
**Revised Project Completion:** Fall 2020  
**Project Number:** PE-17005

Boulware Park, February 2015

# Boulware Park Improvements

## Description

This project provides funding for improvements to the existing children's playground, lighting and site amenities, and accessibility upgrades at Boulware Park. Playground improvements include the installation of a new play structure and replacement of existing light pole fixtures, drinking fountains, benches, and trash receptacles. Rubberized surfacing will also be replaced and expanded to increase accessibility.

## Justification

The existing playground equipment, installed in 1993, is approaching the end of its useful life and needs to be replaced. In addition, light poles and site amenities, including drinking fountains, benches and trash/recycle receptacles are aged and need replacing.

## Significant Changes

**2019-2023 CIP:** Project construction funding moved to Fiscal Year 2020 to address workload plus project priorities.

**2018-2022 CIP:** Project shifted back to Fiscal Year 2018 following consideration of staff workload and park priorities.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	76,632	1,173	1,173	473,000	0	0	0	0	473,000	0	550,805
<b>Total</b>	<b>76,632</b>	<b>1,173</b>	<b>1,173</b>	<b>473,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>473,000</b>	<b>0</b>	<b>550,805</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	468,912	0	0	0	0	468,912	0	468,912
<b>Design</b>	76,631	1,173	1,173	4,088	0	0	0	0	4,088	0	81,892
<b>Total</b>	<b>76,631</b>	<b>1,173</b>	<b>1,173</b>	<b>473,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>473,000</b>	<b>0</b>	<b>550,804</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 2500 Embarcadero Road  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Fall 2019  
**Revised Project Start:** Fall 2019  
**Revised Project Completion:** Spring 2021  
**Project Number:** PE-18006

Byxbee Park , March 2015

# Byxbee Park Completion

## Description

This project provides funding for the remaining improvements to Byxbee Park following the completion of the remaining landfill capping work. As envisioned by the original artist and landscape architect, the completion of Byxbee Park would occur following capping of the remainder of the landfill and would consist of a network of white oyster shell-lined trails with wooden viewing platforms. The hilltops would also be accented with small soil mounds called “hillocks” to be used for planting wildflowers. Additionally, the parking lot for the park would be expanded.

## Justification

While some improvements and amenities have already been provided through the Byxbee Park Trails Project, this project will revisit the vision for the entire park, and develop and implement the plan for the final park. Design of the project will incorporate recommendations from the Baylands Comprehensive Conservation Plan Project.

## Supplemental Information

The Byxbee Park Completion Project is included in the Council Infrastructure Plan. Funds for the project are provided by the Parks Development Impact Fee Fund. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and IBRC needs.

## Significant Changes

**2020-2024 CIP:** A majority of the funding, including the transfer from the Parks Dedication Fund, has been moved to Fiscal Year 2021 to coordinate with the Baylands Comprehensive Conservation Plan and the Byxbee Park Master Plan.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$3.6 million.

**2018-2022 CIP:** Funding has been moved to Fiscal Year 2019 to coordinate with the findings from the Baylands Comprehensive Conservation Plan project.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(244,425)	(1,675,574)	401,806	382,620	260,000	0	0	0	642,620	0	800,001
<b>Transfer from Parks Dedication Fund</b>	0	2,400,000	0	0	2,400,000	0	0	0	2,400,000	0	2,400,000
<b>Transfer from Parks Development Impact Fee Fund</b>	400,000	0	0	0	0	0	0	0	0	0	400,000
<b>Total</b>	<b>155,575</b>	<b>724,426</b>	<b>401,806</b>	<b>382,620</b>	<b>2,660,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,042,620</b>	<b>0</b>	<b>3,600,001</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	155,573	244,426	0	0	2,660,000	0	0	0	2,660,000	0	2,815,573
<b>Design</b>	0	480,000	401,806	382,620	0	0	0	0	382,620	0	784,426
<b>Total</b>	<b>155,573</b>	<b>724,426</b>	<b>401,806</b>	<b>382,620</b>	<b>2,660,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,042,620</b>	<b>0</b>	<b>3,599,999</b>

### Operating Impact

This project is anticipated to impact operating expenses in the future. Byxbee Park is maintained under a large parks maintenance contract which will be bid out for services during FY 2019. As these costs are quantified, adjustments will be brought forward in future cycles.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

#### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is anticipated to require an environmental assessment in accordance with CEQA guidelines.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 2101 Wellesley Street between College and Stanford Avenues  
**Managing Department:** Community Services  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Winter 2019  
**Project Number:** PG-14002

Cameron Park, January 2015

# Cameron Park Improvements

## Description

This project provides funding to upgrade and renovate safety and accessibility features at Cameron Park with a primary focus on the park playground.

## Justification

As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

## Significant Changes

**2020-2024 CIP:** Project shifted from Fiscal Year 2022 to Fiscal Year 2020 due to acceleration of playground damage, aging, and replacements needs. Also, funding increased by \$95,000 to account for construction cost increases.

**2018-2022 CIP:** Project shifted from Fiscal Year 2020 to Fiscal Year 2022 due to a reprioritization of parks projects.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	237,000	0	0	0	0	237,000	0	237,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237,000</b>	<b>0</b>	<b>237,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	237,000	0	0	0	0	237,000	0	237,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237,000</b>	<b>0</b>	<b>237,000</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** New  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PG-18001

Mitchell Park Dog Run, March 2017

# Dog Park Installation and Renovation

## Description

This project provides funding for building dog parks at various City parks and facilities that currently do not have dog parks, as well as renovating existing dog parks.

## Justification

Palo Alto has three dog parks, located at Mitchell Park, Hoover Park, and Greer Park. The dog parks at both Hoover and Greer are undersized and should be relocated within the park and expanded. All of the existing dog parks are located in South Palo Alto.

The Parks, Trails, Natural Open Space, and Recreation Master Plan provides guidance on dog parks. The policy states that Palo Alto should actively pursue adding dedicated, fenced, dog parks in multiple neighborhoods, equitably distributed between North and South Palo Alto. The size of the dog parks will vary, but should strive to be at least .25 acres and each new dog park installation will require a Park Improvement Ordinance.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	13,978	13,978	27,000	0	43,000	0	61,000	131,000	0	N/A
<b>Transfer from Parks Development Impact Fee Fund</b>	N/A	0	0	150,000	0	150,000	0	150,000	450,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>13,978</b>	<b>13,978</b>	<b>177,000</b>	<b>0</b>	<b>193,000</b>	<b>0</b>	<b>211,000</b>	<b>581,000</b>	<b>0</b>	<b>N/A</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	13,978	13,978	167,000	0	183,000	0	201,000	551,000	0	N/A
<b>Design</b>	N/A	0	0	10,000	0	10,000	0	10,000	30,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>13,978</b>	<b>13,978</b>	<b>177,000</b>	<b>0</b>	<b>193,000</b>	<b>0</b>	<b>211,000</b>	<b>581,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

Cleaning costs are approximately \$2,000 per year per dog park, which are currently in the operating budget; however, the addition of more dog parks may cause this amount to increase. Additional funding needs will be brought forward as part of future budget cycles.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have possible exemption from CEQA under Section 15301

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Foothills Park Boronda Lake (3300 Page Mill Road between Central and Moody)  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2017  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:** Fall 2020  
**Revised Project Completion:** Spring 2021  
**Project Number:** OS-18000

Boronda Lake Dock, February 2017

# Foothills Park Boronda Lake Dock Replacement

## Description

This project provides funding for the replacement of an aged and deteriorating Boronda Lake Dock.

## Justification

The dock was originally built in 1965 and was last refurbished in 2010 with repairs to the wood decking. The current condition of the dock is declining and now requires a complete replacement of the dock with new decking, ramp, floats, and pilings.

## Significant Changes

**2019-2023 CIP:** Project funding has been pushed out to FY 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	163,000	0	0	0	163,000	0	163,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,000</b>	<b>0</b>	<b>163,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	150,346	0	0	0	150,346	0	150,346
<b>Design</b>	0	0	0	0	12,654	0	0	0	12,654	0	12,654
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,000</b>	<b>0</b>	<b>163,000</b>

**Operating Impact**

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

Possible exemption from CEQA under Section 15302

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Foothills Park (3300 Page Mill Road between Central and Moody)  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Spring 2020  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PE-20000

Foothills Park

# Foothills Park Dam Seepage Investigation and Repairs

## Description

This project provides funding to study a location of historic seepage from the Foothills Park Dam at the sharp bend in the road on the face of the dam. The seepage is very minor, but it appears to be slowly worsening. The source of the seepage is suspected to be the trench backfill around the pipe that returns shallow groundwater to Boronda Lake. This project will locate and investigate the pipe and trench backfill material. If an engineered solution can be found, this project will also fund construction to slow or stop the seepage as part of a future 5 year CIP plan. The anticipated solution is excavation of a portion of the pipe and backfill with material that is more impervious to water transmissivity.

## Justification

Foothills Park Dam is the key to maintaining the Boronda Lake recreational facility. It is a cherished gateway feature of the park.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	36,000	0	0	0	0	36,000	0	36,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>36,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	36,000	0	0	0	0	36,000	0	36,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>36,000</b>

## Operating Impact

This project is not anticipated to impact operating expenses as it is only to study seepage from the dam. Once a solution is determined, additional maintenance expenses may be incurred and will be brought forward as part of a future budget cycle.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Foothills Park (3300 Page Mill Road between Central and Moody)  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2021  
**Initial Project Completion:** Fall 2022  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PE-21000

Foothills Park Orchard Glen picnic area, January 2016

# Foothills Park Improvement Project

## Description

This project provides funding to replace the bridge to Sunfish Island, design and permitting to replace the footbridge in Los Trancos Valley, and to replace the grade control structures along Buckeye Creek.

## Justification

The Sunfish Island Bridge (located at Boronda Lake) is in disrepair and needs to be replaced. The footbridge in Los Trancos Valley and grade control structures along Buckeye Creek are deteriorating and approaching the end of their useful life. If no action is taken, the footbridge and grade control structures will likely fail in the next 5-10 years. This would lead to severe erosion in several areas of Foothills Park, especially Wild Horse Valley where the existing utility corridors would be threatened.

## Supplemental Information

Sunfish Island Bridge was built in the early 1960's and significant exterior wear and erosion have deteriorated the condition of this bridge as well as the Los Trancos Valley footbridge. The City recently completed a hydrology study of Buckeye Creek to provide recommendations to reduce erosion, sediment deposition, and flooding conditions in Foothills Park. The study recommended options to resolve the current erosion issues and to restore the creek channel, including replacement of the footbridge and grade control structures along Buckeye Creek.

## Significant Changes

**2019-2023 CIP:** The Los Trancos Valley footbridge and Buckeye Creek grade control structures replacement has been added to the scope of this project. Funding has been increased by \$150,000 to address added scope.

**2018-2022 CIP:** Funding has been moved from Fiscal Year 2020 to Fiscal Year 2021 to coordinate with the findings from the Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	424,000	0	0	0	424,000	0	424,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>424,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>424,000</b>	<b>0</b>	<b>424,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	377,970	0	0	0	377,970	0	377,970
Design	0	0	0	0	46,030	0	0	0	46,030	0	46,030
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>424,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>424,000</b>	<b>0</b>	<b>424,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301





**Fund:** Capital Improvement Fund

**Category:** Parks and Open Space

**Project Location:** Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park

**Managing Department:** Community Services

**IBRC Reference:** Keep-up

**Initial Project Start:** Summer 2020

**Initial Project Completion:** Summer 2022

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** PG-17001

Pearson-Arastradero Preserve, January 2016

# Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Conservation Plan

## Description

This project provides funding to create a comprehensive conservation plan for Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park. The plan will provide guidance on wildlife and habitat management, public access and recreation, trails, and interpretive messaging.

## Justification

Staff needs a guiding plan to provide insight on best management practices for wildlife, habitat, vegetation, and recreation management. The plan will also provide priorities, which will help staff and volunteers guide resources to the most important projects.

## Significant Changes

**2020-2024 CIP:** Added \$0.1 million for CEQA and project shifted to Fiscal Year 2022 due to a reprioritization of parks projects.

**2018-2022 CIP:** Project shifted from Fiscal Year 2021 to Fiscal Year 2019 due to a reprioritization of parks projects.

**2017-2021 CIP:** Project established.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	315,096	15,096	355,000	0	116,000	0	0	471,000	0	486,096
<b>Total</b>	<b>0</b>	<b>315,096</b>	<b>15,096</b>	<b>355,000</b>	<b>0</b>	<b>116,000</b>	<b>0</b>	<b>0</b>	<b>471,000</b>	<b>0</b>	<b>486,096</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	315,096	15,096	355,000	0	116,000	0	0	471,000	0	486,096
<b>Total</b>	<b>0</b>	<b>315,096</b>	<b>15,096</b>	<b>355,000</b>	<b>0</b>	<b>116,000</b>	<b>0</b>	<b>0</b>	<b>471,000</b>	<b>0</b>	<b>486,096</b>

## Operating Impact

As this project is only to develop a conservation plan, it may result in increased operating expenses that will be brought forward as part of future budget recommendations.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Open Space

Goal: N-3

Policy: N-3.4

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project may be subject to CEQA review.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Palo Alto Municipal Golf Course  
(1875 Embarcadero Road)  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Spring 2018  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Winter 2022  
**Revised Project Completion:** Spring 2022  
**Project Number:** PG-18000

Golf Course Net and Artificial Turf

# Golf Course Net and Artificial Turf Replacement

## Description

This project provides funding for the removal and replacement of golf course driving range netting and synthetic turf.

## Justification

Based on age, condition, and useful life expectancy, replacement golf course driving range netting and synthetic turf will be needed. The golf course driving range is a popular facility, and is used as a teaching area. The facility is an important source of revenue to the City, and keeping it in a state of good repair will aid in maintaining this revenue stream.

## Supplemental Information

This project is pending a cost estimate update as current estimate was made in Fiscal Year 2013.

## Significant Changes

**2020-2024 CIP:** Project shifted from Fiscal Year 2020 to Fiscal Year 2022 due to a reprioritization of parks projects.

**2018-2022 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2020 due to a reprioritization of parks projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	988,000	0	0	988,000	0	988,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>988,000</b>	<b>0</b>	<b>0</b>	<b>988,000</b>	<b>0</b>	<b>988,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	963,000	0	0	963,000	0	963,000
Design	0	0	0	0	0	25,000	0	0	25,000	0	25,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>988,000</b>	<b>0</b>	<b>0</b>	<b>988,000</b>	<b>0</b>	<b>988,000</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

### Relationship to Comprehensive Plan

#### Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

### Potential Board/Commission Review:

Parks and Recreation Commission  
Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 300 Homer Avenue (bounded by Waverley, Homer, and Bryant)  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Summer 2022  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PG-21000

Heritage Park Bench, March 2017

# Heritage Park Site Amenities Replacement

## Description

The project provides funding for replacement of select walkways and all of the site amenities in Heritage Park including: benches, picnic tables, trash receptacles, playground arbor, bicycle racks and drinking fountain.

## Justification

Installed in 2005, the current site amenities have reached the use expectancy and need replacement. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	128,000	0	0	128,000	0	128,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>128,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	119,000	0	0	119,000	0	119,000
Design	0	0	0	0	0	9,000	0	0	9,000	0	9,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>128,000</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
<b>Primary Connection</b>	<b>Secondary Connection</b>	
Element: Community Services & Facilities	Element: Community Services & Facilities	Parks and Recreation Commission
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	Planning and Transportation Commission
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
<b>Environmental Impact Analysis:</b>		
This project is expected to have possible exemption from CEQA under Section 15301		

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 2901 Cowper Street  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:** Summer 2022  
**Revised Project Completion:** Summer 2023  
**Project Number:** PE-18012

Hoover Park, February 2015

# Hoover Park Improvements

## Description

This project provides funding for the replacement of the existing concrete walkway, repairs to the existing decomposed granite walkway and replacement of site amenities, including playfield backstops, benches, tables and trash receptacles. Also included are repairs to the existing brick wall surrounding the children's playground.

## Justification

The concrete walkway and decomposed granite pathway is cracked and/or uneven, creating safety hazards. The brick wall at the playground and other site amenities, including the playfield backstops, are old or damaged.

## Significant Changes

**2020-2024 CIP:** Project shifted from Fiscal Year 2022 to Fiscal Year 2023 due to a reprioritization of parks projects.

**2018-2022 CIP:** The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and Infrastructure Blue Ribbon Commission (IBRC) needs.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

**2016-2020 CIP:** Project moved from 2018 to 2017 based on review of staff work load.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	707,000	0	707,000	0	707,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>707,000</b>	<b>0</b>	<b>707,000</b>	<b>0</b>	<b>707,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	622,472	0	622,472	0	622,472
Design	0	0	0	0	0	0	84,528	0	84,528	0	84,528
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>707,000</b>	<b>0</b>	<b>707,000</b>	<b>0</b>	<b>707,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

### Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 251 Waverley Street  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Spring 2021  
**Initial Project Completion:** Winter 2022  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PE-21002

Johnson Park

# Johnson Park Renovation

## Description

This project provides funding for the renovation of existing park elements, including asphalt concrete and brick pathways, site furnishings, playground equipment and resurfacing, fencing, and improvements to irrigation and lighting.

## Justification

Pathways and park amenities are in need of repair or improvements to maintain functionality.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	103,000	1,091,000	0	0	1,194,000	0	1,194,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103,000</b>	<b>1,091,000</b>	<b>0</b>	<b>0</b>	<b>1,194,000</b>	<b>0</b>	<b>1,194,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	1,091,000	0	0	1,091,000	0	1,091,000
Design	0	0	0	0	103,000	0	0	0	103,000	0	103,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103,000</b>	<b>1,091,000</b>	<b>0</b>	<b>0</b>	<b>1,194,000</b>	<b>0</b>	<b>1,194,000</b>



## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 600 East Meadow Drive  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:** Summer 2022  
**Revised Project Completion:** Summer 2024  
**Project Number:** PE-18010

Mitchell Park, February 2015

# Mitchell Park Improvements

## Description

This project provides funding for repair and replacement of equipment and amenities throughout Mitchell Park. The improvements include replacement of the playground equipment located along East Meadow Drive, renovation of the water-play element, repair of the covered wood walkway structure, replacement of playground and water play area fencing, and new rubberized surfacing. Also included are irrigation renovations, turf restoration and replacement of site amenities and decomposed granite pathways.

## Justification

The playground equipment, water-play element, fencing, covered wood walkway structure, decomposed granite pathways and site amenities have surpassed their expected lifecycle. Repair and/or replacement is necessary. Loss of vegetation has been linked to poor irrigation.

## Supplemental Information

Design of the new playground equipment will include outreach to nearby schools that have provided input regarding the playground equipment in the past. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community needs and recommendations from the Infrastructure Blue Ribbon Committee (IBRC).

## Significant Changes

**2020-2024 CIP:** This project has been deferred due to staffing constraints.

**2019-2023 CIP:** This project has been deferred due to staffing constraints.

## CAPITAL IMPROVEMENT FUND

**2018-2022 CIP:** Design shifted from Fiscal Year 2021 to Fiscal Year 2020.

**2016-2020 CIP:** Based on the IBRC keep-up schedule for the park, irrigation renovations, turf restoration and park amenities replacement were added to the project's scope with an additional budget allocation of \$946,000. This additional work was scheduled for Fiscal Year 2020, and the project schedule was adjusted accordingly.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	0	0	0	0	0	0	288,000	1,590,200	1,878,200	0	1,878,200
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>288,000</b>	<b>1,590,200</b>	<b>1,878,200</b>	<b>0</b>	<b>1,878,200</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	0	1,590,200	1,590,200	0	1,590,200
<b>Design</b>	0	0	0	0	0	0	288,000	0	288,000	0	288,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>288,000</b>	<b>1,590,200</b>	<b>1,878,200</b>	<b>0</b>	<b>1,878,200</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

#### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project may require an environmental assessment in accordance with CEQA guidelines.



**Fund:** Capital Improvement Fund

**Category:** Parks and Open Space

**Project Location:** Various

**Managing Department:** Community Services

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** OS-09001

Byxbee Park pole field, January 2015

# Off-Road Pathway Resurfacing And Repair

## Description

This project provides funding for the maintenance of Palo Alto's 9-miles of off-road paved trail system that is 35 years old and requires on-going, phased repairs. This project removes and replaces severely damaged sections of asphalt, repairs, cracks and base failures, and resurfaces worn or uneven surfaces of off-road asphalt pathways and bicycle trails. Priority will be given to the repair of the most uneven sections of pathway. Staff uses surface assessment data prepared by Public Works Engineering and input from the public to prioritize repair or replacement projects.

## Justification

This project is intended to maintain the existing system of off-road pathways and trails throughout Palo Alto in order to extend the useful life of pathway surfaces. The project will ensure safe, even and handicapped accessible surfaces for pedestrians, cyclists, and skaters. Repair of uneven trail surfaces will greatly reduce accidents.

## Significant Changes

**2019 -2023 CIP:** The Adobe Creek Reach Trail is a 600 foot long segment of the existing Santa Clara Valley Water District's maintenance road on the east side of Adobe Creek, between West Bayshore Road and East Meadow Drive. This trail will provide an off-road, more direct access to the Highway 101 Pedestrian and Bicycle Overcrossing. The project includes trail pavement, grading and drainage, and installation of safety railing and fencing.

**2018 -2022 CIP:** In accordance with the Funding Agreement for the project, a payment of approximately \$170,000 will be made to the Joint Power Agreement (JPA) "Highway 101 to Bay Flood Control" project in FY 2018. The remaining balance will be used for off-road trail repairs.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	341,753	46,753	455,000	121,000	128,000	144,000	141,000	989,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>341,753</b>	<b>46,753</b>	<b>455,000</b>	<b>121,000</b>	<b>128,000</b>	<b>144,000</b>	<b>141,000</b>	<b>989,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	341,753	46,753	455,000	121,000	128,000	144,000	141,000	989,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>341,753</b>	<b>46,753</b>	<b>455,000</b>	<b>121,000</b>	<b>128,000</b>	<b>144,000</b>	<b>141,000</b>	<b>989,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Foothills Park Boronda Lake (3300 Page Mill Road between Central and Moody)  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** OS-00002

Boronda Lake, January 2015

# Open Space Lakes And Pond Maintenance

## Description

This project rehabilitates lakes and ponds in open space nature preserves to protect wildlife habitat and recreational safety and to meet State Division of Safety of Dams requirements. The project funds annual harvesting of non-native pond weeds and cattails at Boronda Lake in Foothills Park. The project also funds maintenance of the Duck Pond aerator for improved water quality.

## Justification

Pond weeds and cattails must be regularly removed from Boronda Lake to prevent non-native plants from displacing native plants that are essential to the survival of fish and foraging animals. This also will provide access for recreational fishing and boating safety. The State Division of Safety of Dams mandates cattail removal to maintain the Boronda Dam. The Baylands Duck Pond aeration system maintains water quality for wildlife.

## Significant Changes

**2016-2020 CIP:** This project was converted to annual recurring status, rather than past practice of receiving additional funding every other year. The change addressed the changing needs of Boronda Lake. The aquatic weeds that are harvested need to be cleared more thoroughly every year.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	105,689	105,689	54,000	54,000	58,000	66,000	63,000	295,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>105,689</b>	<b>105,689</b>	<b>54,000</b>	<b>54,000</b>	<b>58,000</b>	<b>66,000</b>	<b>63,000</b>	<b>295,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	105,689	105,689	54,000	54,000	58,000	66,000	63,000	295,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>105,689</b>	<b>105,689</b>	<b>54,000</b>	<b>54,000</b>	<b>58,000</b>	<b>66,000</b>	<b>63,000</b>	<b>295,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1.5

Program: N1.5.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** OS-00001

Baylands Bench, January 2015

# Open Space Trails and Amenities

## Description

This project provides funding to restore unpaved trails, fences, picnic areas, and campgrounds at Foothills Park, the Baylands, and the Pearson-Arastradero Nature Preserves. The project also provides habitat protection by guiding park users towards areas dedicated for hiking, biking, and assembling. Benches, tables, footbridges, and fences that are at the end of their useful life will systematically be replaced.

## Justification

Open Space trails require ongoing repair of natural erosion, storm damage, and control of aggressive plants, such as thistle and poison oak to ensure that facilities are safe, accessible, and maintained for recreational uses. These restoration projects are consistent with the Arastradero Preserve Trails Management Plan and the Foothills Park Trails Maintenance Plan.

## Supplemental Information

Improvements to the trails within Pearson-Arastradero Preserve move trails away from environmentally sensitive areas and correct steeply sloped trails, thereby reducing erosion and providing better access to park users with disabilities. These restoration projects are consistent with the Arastradero Preserve Trails Management Plan and the Foothills Park Trails Maintenance Plan.

## Significant Changes

**2017-2021 CIP:** Additional \$55,000 in funding added in Fiscal Year 2017 for one-time repairs of the Los Trancos Trail.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	313,611	272,611	248,000	212,000	225,000	252,000	246,000	1,183,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>313,611</b>	<b>272,611</b>	<b>248,000</b>	<b>212,000</b>	<b>225,000</b>	<b>252,000</b>	<b>246,000</b>	<b>1,183,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	313,611	272,611	248,000	212,000	225,000	252,000	246,000	1,183,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>313,611</b>	<b>272,611</b>	<b>248,000</b>	<b>212,000</b>	<b>225,000</b>	<b>252,000</b>	<b>246,000</b>	<b>1,183,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1.5

Program: N1.5.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PG-09002

Briones Park, January 2015

# Park and Open Space Emergency Repairs

## Description

This project provides funding for the replacement or extensive repair of playgrounds, play yard surfaces, wooden structures, park amenities, and play equipment in the event of storms, fire, vandalism or structural failure.

## Justification

This project allows for the replacement or repair of damaged equipment or play structures for the convenience of the public.

## Significant Changes

**2019-2023 CIP:** Funding is gradually increasing from \$75,000 to \$0.2 million annually over the 5 year CIP. The project is used to address unpredicted issues like trails closed due to strong storm damage, failing infrastructure that can be repaired (the Baylands Sailing Station), and premature failure of playground equipment and surfacing.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	148,673	148,673	142,000	151,000	193,000	288,000	316,000	1,090,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>148,673</b>	<b>148,673</b>	<b>142,000</b>	<b>151,000</b>	<b>193,000</b>	<b>288,000</b>	<b>316,000</b>	<b>1,090,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	148,673	148,673	142,000	151,000	193,000	288,000	316,000	1,090,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>148,673</b>	<b>148,673</b>	<b>142,000</b>	<b>151,000</b>	<b>193,000</b>	<b>288,000</b>	<b>316,000</b>	<b>1,090,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Potential Board/Commission Review:**

Parks and Recreation Commission  
Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** Various  
**Managing Department:** Community Services  
**IBRC Reference:** New  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PG-19000

Park Restroom, February 2017

# Park Restroom Installation

## Description

This project provides funding for installation of restrooms at City parks that currently do not have restroom facilities. The restrooms may be prefabricated, and each installation will require a Park Improvement Ordinance.

## Justification

Many parks in the City have no restroom facilities within the park boundaries. This project will provide for one park restroom installation every other year in parks that are approximately two acres or larger, have amenities that encourage visitors to stay in the park, have high level of use, and where there are no nearby public restrooms available. The Parks, Trails, Natural Open Space, and Recreation Master Plan provides guidance on potential restroom locations.

## Supplemental Information

Public outreach will occur as specific parks are considered for restroom installation.

## Significant Changes

**2020-2024 CIP:** Fiscal Year 2019 funding moved to Fiscal Year 2020 as next restroom installation is being coordinated with other park renovation projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	17,612	0	64,000	74,000	0	155,000	0	293,000	0	N/A
<b>Transfer from Parks Development Impact Fee Fund</b>	N/A	350,000	0	350,000	350,000	0	350,000	0	1,050,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>367,612</b>	<b>0</b>	<b>414,000</b>	<b>424,000</b>	<b>0</b>	<b>505,000</b>	<b>0</b>	<b>1,343,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	337,612	0	384,000	394,000	0	475,000	0	1,253,000	0	N/A
<b>Design</b>	N/A	30,000	0	30,000	30,000	0	30,000	0	90,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>367,612</b>	<b>0</b>	<b>414,000</b>	<b>424,000</b>	<b>0</b>	<b>505,000</b>	<b>0</b>	<b>1,343,000</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

Cleaning costs are approximately \$8,400 per year per restroom which are currently in the operating budget; however, the addition of more park restrooms may cause this amount to increase. Additional funding needs will be brought forward as part of future budget cycles.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

#### Relationship to Comprehensive Plan

##### Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

#### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have possible exemption from CEQA under Section 15303



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 1530 Arastradero Road  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Fall 2021  
**Revised Project Start:** Fall 2019  
**Revised Project Completion:** Fall 2023  
**Project Number:** PE-21001

Pearson Arastradero Preserve

# Pearson Arastradero Improvement Project

## Description

This project provides funds for replacing fencing, signs, gates, bridge decking, and making improvements to some of the seasonal trails to help reduce winter trail closures.

## Justification

The fencing, signs, gates, and bridge decking have exceeded their useful lifespans, and need to be replaced. There are a number of seasonal trails that must be closed during the rainy season. The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community needs and Infrastructure Blue Ribbon Committee recommendations.

## Significant Changes

**2020-2024 CIP:** Project construction shifted from Fiscal Year 2021 to Fiscal Year 2023 due to a reprioritization of parks projects.

**2018-2022 CIP:** Design was advanced from Fiscal Year 2021 to Fiscal Year 2020.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	32,000	360,000	0	392,000	0	392,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32,000</b>	<b>360,000</b>	<b>0</b>	<b>392,000</b>	<b>0</b>	<b>392,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	4,445	360,000	0	364,445	0	364,445
Design	0	0	0	0	0	27,555	0	0	27,555	0	27,555
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32,000</b>	<b>360,000</b>	<b>0</b>	<b>392,000</b>	<b>0</b>	<b>392,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301



## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 1530 Arastradero Road  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2017  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:** Fall 2020  
**Revised Project Completion:** Winter 2020  
**Project Number:** OS-18001

Pearson Arastradero Parking Lot - Overflow Area, February 2017

# Pearson Arastradero Preserve Parking Lot Improvement

## Description

This project provides funding to improve the Pearson Arastradero Preserve parking lot by improving the base rock surfacing, adding drainage, widening the entrance for safety, and new fencing. The improvement will allow the overflow parking area to be open year round, rather than only during the dry periods of the year.

## Justification

The existing parking lot and overflow lot are in poor condition. The main parking lot holds approximately 32 cars when carefully parked. The adjacent overflow lot holds approximately 15 cars, and cannot be used during the rainy season. The parking lot fills typically on weekends by 9:00 am. On weekdays the lot fills with users by late afternoon to sunset.

## Significant Changes

**2019-2023 CIP:** Completion date revised to FY 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	188,000	0	0	0	188,000	0	188,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>188,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>188,000</b>	<b>0</b>	<b>188,000</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	173,472	0	0	0	173,472	0	173,472
<b>Design</b>	0	0	0	0	14,528	0	0	0	14,528	0	14,528
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>188,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>188,000</b>	<b>0</b>	<b>188,000</b>

**Operating Impact**

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project may be exempt from CEQA under Section 15302.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 1899 Park Boulevard  
**Managing Department:** Community Services  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Summer 2023  
**Revised Project Completion:** Fall 2023  
**Project Number:** PG-14001

Peers Park, January 2015

# Peers Park Improvements

## Description

This project provides funding for upgrades and renovations of the irrigation system and turf at Peers Park. The project will also replace the park benches and drinking fountains, resurface the basketball and tennis court playing surfaces, and repair court fencing.

## Justification

The existing irrigation system, benches, and drinking fountains have exceeded their useful lives.

## Significant Changes

**2019-2023 CIP:** Project shifted from Fiscal Year 2021 to Fiscal Year 2023 due to reprioritization of parks projects.

**2018-2022 CIP:** Project shifted from Fiscal Year 2020 to Fiscal Year 2021 due to reprioritization of parks projects.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	296,000	0	296,000	0	296,000
Total	0	0	0	0	0	0	296,000	0	296,000	0	296,000

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	290,548	0	290,548	0	290,548
<b>Design</b>	0	0	0	0	0	0	5,452	0	5,452	0	5,452
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>296,000</b>	<b>0</b>	<b>296,000</b>	<b>0</b>	<b>296,000</b>

## Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 800 East Meadow Drive  
**Managing Department:** Community Services  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Summer 2015  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Spring 2020  
**Project Number:** PG-14000

Ramos Park, January 2015

# Ramos Park Improvements

## Description

This project provides funding for safety and accessibility improvements at Ramos Park including replacing the existing park playground, benches, and drinking fountain, as well as resurfacing the basketball court playing surface.

## Justification

The existing playground, benches, basketball court surfaces, and drinking fountains have exceeded their useful lives. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

## Significant Changes

**2018-2022 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2020 due to reprioritization of parks projects. Also, additional funding requested to address IBRC recommendations.

**2017-2021 CIP:** Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

**2016-2020 CIP:** The project completion originally referred only to the pre-design phase and was modified to represent completion of the full project, including construction.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	271,000	0	0	0	0	271,000	0	271,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271,000</b>	<b>0</b>	<b>271,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	271,000	0	0	0	0	271,000	0	271,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271,000</b>	<b>0</b>	<b>271,000</b>

### Operating Impact

This project is not anticipated to impact operating expenses and if any maintenance costs increase, costs will be absorbed with the available maintenance funding in the annual operating budget.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.3 Program: C3.3.1	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	<b>Potential Board/Commission Review:</b> Parks and Recreation Commission Planning and Transportation Commission
<b>Environmental Impact Analysis:</b> This project is expected to have a possible exemption from CEQA under Section 15301.		



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 777 Embarcadero Road  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:** Summer 2017  
**Revised Project Completion:** Winter 2020  
**Project Number:** PE-08001

Rinconada Park February 2015

# Rinconada Park Improvements

## Description

This project provides funding for upgrades to safety, site amenities, playground facilities, irrigation, drainage and accessibility improvements at Rinconada Park.

## Justification

The Rinconada Park Long Range Plan outlined improvements related to deferred maintenance items at the park, such as installing wider pathways rather than repairing the existing pathways.

## Significant Changes

**2020-2024 CIP:** Funding moved from Fiscal Year 2019 to Fiscal Year 2020 to align with work being done in the JMZ Renovation project (AC-18001).

**2019-2023 CIP:** The project increased by \$1.3 million to reconstruct the parking lot, update park signage, and renovate the playground and reconstruct the paths on the west end of the park. Funding from the Community Center Impact Fee Fund will be used for these items.

**2018-2022 CIP:** The project was delayed to coordinate with environmental assessments for the Junior Museum and Zoo (JMZ), Rinconada Park Long Range Plan and the Parks, Trails, Natural Open Space and Recreation Master Plan Parks (Master Plan), to be complete by Fiscal Year 2018. Park construction will be coordinated to follow the proposed JMZ rebuilding. \$706,000 of the construction phase funding will be utilized for costs associated with relocation of the existing JMZ operation to Cubberley and permit & inspection fees needed for the JMZ rebuilding.

**2017-2021 CIP:** Timeline extended to reflect direction from Finance Committee and City Council during budget approval process.

**2016-2020 CIP:** Project was delayed to await the completion of the Rinconada Park Long Range Plan and environmental review. Funding for construction was advanced from Fiscal Year 2018 to 2017 and combined with funding from Fiscal Year 2015 to implement a single phase project. The total budget has been reduced by \$600,000 from the budget shown in the Fiscal Years 2015-2019 CIP to focus on deferred maintenance items. Funding to enhance the park will be considered as part of the funding needs for the entire City park system once the Rinconada Park Long Range Plan and the Parks Master Plan are completed.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	2,047,380	177,772	177,772	365,000	16,000	0	0	0	381,000	0	2,606,152
<b>Transfer from Community Center Impact Fee Fund</b>	0	0	0	1,999,529	75,000	0	0	0	2,074,529	0	2,074,529
<b>Total</b>	<b>2,047,380</b>	<b>177,772</b>	<b>177,772</b>	<b>2,364,529</b>	<b>91,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,455,529</b>	<b>0</b>	<b>4,680,681</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,737,417	144,088	144,088	2,364,529	91,000	0	0	0	2,455,529	0	4,337,034
<b>Design</b>	309,960	33,684	33,684	0	0	0	0	0	0	0	343,644
<b>Total</b>	<b>2,047,377</b>	<b>177,772</b>	<b>177,772</b>	<b>2,364,529</b>	<b>91,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,455,529</b>	<b>0</b>	<b>4,680,678</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

### Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 4116 Park Boulevard  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:** Summer 2021  
**Revised Project Completion:** Summer 2022  
**Project Number:** PE-18015

Robles Park, February 2015

# Robles Park Improvements

## Description

This project provides funding for the replacement of play equipment and resurfacing in two children's playground areas; repairs to a basketball court and adjacent concrete wall; and replacement of perimeter fencing, concrete pathways and other site amenities. Irrigation renovations and turf restoration are also included in this project.

## Justification

The playground areas, backstop, basketball court, concrete pathways and site amenities have surpassed their intended useful lives and are in need of replacement or repairs. Damaged and/or dead vegetation necessitates irrigation renovation as well as turf restoration.

## Supplemental Information

The Parks, Trails, Natural Open Space and Recreational Master Plan projects were reviewed and adjusted according to staff availability as well as community and IBRC needs.

## Significant Changes

**2020-2024 CIP:** Design and construction for this project was shifted to Fiscal Year 2022.

**2018-2022 CIP:** Design was shifted from Fiscal Year 2020 to Fiscal Year 2021. Construction was shifted from Fiscal Year 2020 to Fiscal Year 2022.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2021 pending completion of the Parks Master Plan and a reprioritization of parks projects.

**2016-2020 CIP:** Project schedule moved forward by one year based on review of staff workload and resources.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	866,000	0	0	866,000	0	866,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>866,000</b>	<b>0</b>	<b>0</b>	<b>866,000</b>	<b>0</b>	<b>866,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	761,965	0	0	761,965	0	761,965
Design	0	0	0	0	0	104,035	0	0	104,035	0	104,035
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>866,000</b>	<b>0</b>	<b>0</b>	<b>866,000</b>	<b>0</b>	<b>866,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

**Potential Board/Commission Review:**

Parks and Recreation Commission

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 3100 Stockton Place  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Winter 2018  
**Revised Project Start:** Summer 2020  
**Revised Project Completion:** Summer 2021  
**Project Number:** PG-14003

Seale Park, February 2015

# Seale Park Improvements

## Description

This project provides funding for upgrades and renovations for safety and accessibility improvements at Seale Park. The project will replace existing park amenities, picnic tables, and playground structures including a playhouse and swings; refinish the playground perimeter fencing; and repair damaged decomposed granite and concrete pathways. Turf restoration and irrigation renovations will also be included as well as replacement of bollards at the park entrances, the park sign, and a small stone wall located in the middle of the park.

## Justification

As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues. Drainage issues will be resolved with repairs to the damaged pathways. Irrigation renovations and turf restoration is required where existing areas are damaged or dead.

## Significant Changes

**2018-2022 CIP:** Project shifted from Fiscal Year 2020 to Fiscal Year 2021 due to a reprioritization of parks projects.

**2017-2021 CIP:** Project shifted from Fiscal Year 2018 to Fiscal Year 2020 pending completion of the Parks Master Plan and a reprioritization of parks projects.

**2016-2020 CIP:** Based on the IBRC keep-up schedule for the park, replacement of the playground structure has been added to the project's scope with an additional budget allocation of \$209,000.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	400,000	0	0	0	400,000	0	400,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>400,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>400,000</b>	<b>0</b>	<b>400,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	366,238	0	0	0	366,238	0	366,238
Design	0	0	0	0	33,762	0	0	0	33,762	0	33,762
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>400,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>400,000</b>	<b>0</b>	<b>400,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

### Relationship to Comprehensive Plan

#### Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

### Potential Board/Commission Review:

Parks and Recreation Commission  
Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund

**Category:** Parks and Open Space

**Project Location:** Various

**Managing Department:** Community Services

**IBRC Reference:** New

**Initial Project Start:** Fall 2017

**Initial Project Completion:** Spring 2018

**Revised Project Start:** Fall 2018

**Revised Project Completion:** Spring 2020

**Project Number:** PG-18002

Cubberley Fields, March 2017

# Turf Management Plan

## Description

This project provides funding to evaluate select natural turf athletic fields maintained and brokered by the City for organized sports activities, and provides recommendations for improving the quality and durability of the fields.

## Justification

The Parks, Trails, Open Space, and Recreation Master Plan emphasizes a high community priority to maintain quality turf fields to accommodate high demand and high use of the fields. With such volume of usage, the ability to maintain natural turf fields becomes difficult. The Turf Management Plan will make recommendations to upgrade the fields making them more durable for heavy use and recommend maintenance practices to ensure extensive use.

## Significant Changes

**2020-2024 CIP:** Project funding moved to FY 2020 as project will be solicited for proposals in Summer 2019.

**2019-2023 CIP:** Completion date revised to FY 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(100,000)	105,032	0	118,000	0	0	0	0	118,000	0	18,000
Transfer from Parks Development Impact Fee Fund	100,000	0	0	0	0	0	0	0	0	0	100,000
<b>Total</b>	<b>0</b>	<b>105,032</b>	<b>0</b>	<b>118,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>118,000</b>	<b>0</b>	<b>118,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	105,032	0	118,000	0	0	0	0	118,000	0	118,000
<b>Total</b>	<b>0</b>	<b>105,032</b>	<b>0</b>	<b>118,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>118,000</b>	<b>0</b>	<b>118,000</b>

## Operating Impact

This project evaluates select athletic fields to provide recommendation plans and does not have an operating budget impact. Upon implementation of recommended plans, there will be operating budget impact that will be brought forward as part of future budget cycles.

## Relationship to Comprehensive Plan

## Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

Program: C3.3.1

## Relationship to Comprehensive Plan

## Secondary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

## Potential Board/Commission Review:

Parks and Recreation Commission  
Planning and Transportation Commission

## Environmental Impact Analysis:

This project is expected to have possible exemption from CEQA under Section 15301

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Parks and Open Space  
**Project Location:** 2100 Dartmouth Street between College and Stanford Avenues  
**Managing Department:** Community Services  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Fall 2021  
**Initial Project Completion:** Spring 2022  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PG-22000

Werry Playground, March 2017

# Werry Park Playground Improvements

## Description

This project provides funding for the replacement and ADA upgrades of the existing playground. The benches, tables, trash receptacles, bicycle rack and drinking fountain have reached the end of their useful life and need replacement as well. Perimeter landscaping will be replaced as part of this project.

## Justification

Built in 2002, the existing playground equipment has reached its use expectancy with limited accessibility. As park infrastructure ages, safety and compliance issues need to be addressed. This project will ensure compliance and address accessibility needs as well as safety issues.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	128,000	0	0	128,000	0	128,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>128,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	118,000	0	0	118,000	0	118,000
Design	0	0	0	0	0	10,000	0	0	10,000	0	10,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>128,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
<b>Primary Connection</b>	<b>Secondary Connection</b>	
Element: Community Services & Facilities	Element: Community Services & Facilities	Parks and Recreation Commission
Section: Maintenance of Parks and Community Facilities	Section: Maintenance of Parks and Community Facilities	Planning and Transportation Commission
Goal: C-3	Goal: C-3	
Policy: C-3.3	Policy: C-3.2	
Program: C3.3.1	Program: C3.2.1	
<b>Environmental Impact Analysis:</b>		
This project is expected to have possible exemption from CEQA under Section 15301		



CITY OF  
**PALO  
ALTO**



## Streets and Sidewalks



**Fund:** Capital Improvement Fund  
**Category:** Streets and Sidewalks  
**Project Location:** California Avenue District  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Fall 2017  
**Revised Project Completion:** Spring 2020  
**Project Number:** PE-17004

California Avenue Business District Gateway

# California Avenue District Gateway Signs

## Description

This project provides funding for design and construction of two gateway monument signs in the California Avenue District. The signs are located in the public right of way at the intersection of El Camino Real and California Avenue, and on the Birch Street Exit Ramp off of Oregon Expressway.

## Justification

The existing gateway sign on the Birch Street Exit Ramp is failing and the other gateway sign near El Camino Real is of a dated design. The signage design is an important factor in branding the newly improved California Avenue area.

## Significant Changes

**2020-2024 CIP:** Project completion has been extended due to staffing constraints.

**2019-2023 CIP:** Anticipated project completion date adjusted to reflect time needed for the Architectural Review Board (ARB) process.

**2018-2022 CIP:** Project schedule adjusted to reflect initial funding availability. Possible Public Art Commission review added due to proximity of existing public art to one of the sign locations.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(143,124)	143,125	239	169,886	0	0	0	0	169,886	0	27,001
<b>Transfer from California Ave Parking Permit Fund</b>	150,000	0	0	0	0	0	0	0	0	0	150,000
<b>Total</b>	<b>6,876</b>	<b>143,125</b>	<b>239</b>	<b>169,886</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>169,886</b>	<b>0</b>	<b>177,001</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	143,125	239	169,886	0	0	0	0	169,886	0	170,125
<b>Design</b>	6,874	0	0	0	0	0	0	0	0	0	6,874
<b>Total</b>	<b>6,874</b>	<b>143,125</b>	<b>239</b>	<b>169,886</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>169,886</b>	<b>0</b>	<b>176,999</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PO-12001

Byron Street (1200 Block), January 2013

# Curb and Gutter Repairs

## Description

This project provides funding to repair curbs and gutters that have been uplifted by tree roots and allows for the installation of valley gutters in the Barron Park neighborhood to address ponding and poor drainage.

## Justification

Ponding related to curb and gutter problems is a health hazard. Standing water can be a breeding ground for mosquitoes and encourage algae growth, becoming a hazard for bicyclists and pedestrians. The annual street maintenance project does not address these problems on small isolated sections of curb and gutter found on streets with good road surfaces.

## Significant Changes

**2020-2024 CIP:** Additional funding in the amount of \$150,000 for Fiscal Year 2020 to continue installing valley gutters as needed in the Barron Park neighborhood in coordination with Street Resurfacing Program work occurring in Barron Park.

**2018-2022 CIP:** Additional funding in the amount of \$250,000 for Fiscal Year 2018 to install valley gutters as needed in the Barron Park neighborhood in coordination with Street Resurfacing Program work occurring in Barron Park.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	974,864	666,741	665,123	136,000	143,000	144,000	144,000	1,232,123	0	N/A
<b>Total</b>	<b>N/A</b>	<b>974,864</b>	<b>666,741</b>	<b>665,123</b>	<b>136,000</b>	<b>143,000</b>	<b>144,000</b>	<b>144,000</b>	<b>1,232,123</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	972,527	666,741	663,458	132,327	137,096	137,414	144,000	1,214,295	0	N/A
<b>Design</b>	N/A	2,337	0	1,665	3,673	5,904	6,586	0	17,828	0	N/A
<b>Total</b>	<b>N/A</b>	<b>974,864</b>	<b>666,741</b>	<b>665,123</b>	<b>136,000</b>	<b>143,000</b>	<b>144,000</b>	<b>144,000</b>	<b>1,232,123</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Streets and Sidewalks  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Fall 2022  
**Project Number:** PE-13017

El Camino Median Landscape Improvements March 2015

# El Camino Median Landscape Improvements

## Description

This project provides funding for median improvements on El Camino Real. The improvements will include water conservation measures such as new drip irrigation systems and new drought tolerant trees, shrubs, and groundcover. Median designs will be consistent with the goals and objectives of the March 2007 El Camino Real Master Planning Study and will also consider any relevant guidance from the Grand Boulevard Initiative.

## Justification

Medians, planters, and islands along El Camino Real have fallen into disrepair. Landscape plants and materials have exceeded their useful lives. These structures are primarily designed to regulate traffic and provide attractive landscapes and welcoming gateways to the City.

## Supplemental Information

The provision of adequate landscaping and irrigation reduces siltation and runoff and removes carbon dioxide from the environment. The Fiscal Year 2021 improvements will address medians from City limits to University Avenue and from Page Mill Road to Arastradero Road.

## Significant Changes

**2018-2022 CIP:** The Cambridge to Grant median scope of work previously included in this project is now included in the El Camino Real Pedestrian Safety and Streetscape Project, PL-18002.

**2017-2021 CIP:** The Cambridge to Grant median work has been moved to Fiscal Year 2017. The City limits to University Avenue and Page Mill Road to Arastradero Road work has been moved to Fiscal Year 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	12,329	0	0	83,000	963,000	0	0	0	1,046,000	0	1,058,329
<b>Total</b>	<b>12,329</b>	<b>0</b>	<b>0</b>	<b>83,000</b>	<b>963,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,046,000</b>	<b>0</b>	<b>1,058,329</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	5,846	963,000	0	0	0	968,846	0	968,846
<b>Design</b>	12,328	0	0	77,154	0	0	0	0	77,154	0	89,482
<b>Total</b>	<b>12,328</b>	<b>0</b>	<b>0</b>	<b>83,000</b>	<b>963,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,046,000</b>	<b>0</b>	<b>1,058,328</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Land Use and Community Design

Section: Employment Districts

Goal: L-5

Policy: L-5.3

### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Capital Improvement Fund  
**Category:** Streets and Sidewalks  
**Project Location:** Newell Rd at San Francisquito Creek  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2012  
**Initial Project Completion:** Spring 2015  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2022  
**Project Number:** PE-12011

Newell Road Bridge, February 2015

# Newell Road/San Francisquito Creek Bridge Replacement

## Description

This project will provide funding to remove and replace the Newell Road bridge over San Francisquito Creek. Design considerations include a clear span over the creek to allow the channel to convey a flow consistent with the San Francisquito Joint Powers Authority's (JPA) initial flood protection project as well as bicycle and pedestrian traffic.

## Justification

The existing bridge, constructed in 1911, acts as a flow restriction of San Francisquito Creek as its abutments encroach into the channel cross-section. Removal of the existing bridge is a necessary element of the San Francisquito Creek Joint Powers Authority (JPA) comprehensive flood management program. Additionally, the existing bridge does not have accommodations for either pedestrians or bicyclists.

## Supplemental Information

Staff has secured grant funding from Caltrans Highway Bridge Program (HBP) for the design and environmental assessment/permitting of the project. HBP funds will likely be approved to pay for 88.53% of project construction costs. As the bridge links to East Palo Alto and is part of the JPAs comprehensive flood management plan, staff of all three agencies will coordinate closely on the design and public outreach elements of this project.

Due to community concern for traffic and the visual impacts of a replacement bridge, the scope of the project has expanded to include a CEQA Environmental Impact Report/NEPA Environ-



mental Assessment (EIR/EA) process that will evaluate multiple project alternatives, addressing flood control, traffic, aesthetics, and other potential impacts of the project. The cost estimate on this project will likely need to be reevaluated and adjusted since last done in 2015. The cost will likely increase due to escalation, project delays, and the need for more coordination with other agencies than initially anticipated.

### Significant Changes

**2020-2024 CIP:** The project completion date has been revised to Winter 2022. This delay is a result of changes to Caltrans environmental assessment format and comments provided by others regarding the Draft Environmental Impact Report.

**2017-2021 CIP:** The project completion date has been extended to Fall 2018 to account for the expanded environmental analysis and project permitting requirements.

**2016-2020 CIP:** Construction funding moved to Fiscal Year 2017 to reflect delays in securing State funding for environmental work. Timeline extended to reflect project duration through construction phase.

**2015-2020 CIP:** Construction funding moved to Fiscal Year 2016 to reflect the time needed to complete the additional CEQA work.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	760,978	646,917	719,248	362,669	0	0	0	0	362,669	0	1,842,895
Revenue from Other Agencies	58,018	0	0	0	0	0	0	0	0	0	58,018
Revenue from the State of California	303,946	2,500,000	150,600	2,349,400	0	0	0	0	2,349,400	0	2,803,946
<b>Total</b>	<b>1,122,942</b>	<b>3,146,917</b>	<b>869,848</b>	<b>2,712,069</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,712,069</b>	<b>0</b>	<b>4,704,859</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	548,422	2,526,626	249,848	2,712,069	0	0	0	0	2,712,069	0	3,510,339
Design	574,517	620,291	620,000	0	0	0	0	0	0	0	1,194,517
<b>Total</b>	<b>1,122,939</b>	<b>3,146,917</b>	<b>869,848</b>	<b>2,712,069</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,712,069</b>	<b>0</b>	<b>4,704,856</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan**

**Primary Connection**

Element: Safety  
Section: Natural Hazards  
Goal: S-2  
Policy: S-2.8  
Program: S2.8.4

**Relationship to Comprehensive Plan**

**Secondary Connection**

Element: Community Services & Facilities  
Section: Maintenance of Parks and Community Facilities  
Goal: C-3  
Policy: C-3.2

**Potential Board/Commission Review:**

Architectural Review Board  
Historic Resources Board  
Planning and Transportation Commission

**Environmental Impact Analysis:**

An Environmental Impact Report and NEPA analysis are being completed for this project.



CITY OF  
**PALO  
ALTO**



**Fund:** Capital Improvement Fund  
**Category:** Streets and Sidewalks  
**Project Location:** Various  
**Managing Department:** Public Works  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PO-89003

Middlefield Road (1500 Block), January 2013

# Sidewalk Repairs

## Description

This project provides funding for sidewalk repairs as part of an annual district-based rehabilitation program, alleviating the backlog of sidewalk repairs and enhancing pedestrian comfort and safety. Additionally, a sidewalk program assessment to evaluate options for improving the City's Sidewalk Repair Program was completed in Spring 2019 and provided suggestions for establishing goals and priorities related to repairs and replacements throughout the City.

## Justification

The result of this project is better sidewalk conditions and a potential reduction in sidewalk-related injuries.

## Supplemental Information

There are 23 sidewalk districts throughout the City. The district program began in 1986 with a goal of completing work in all 23 districts within 30 years. Work for all 23 districts was completed in early 2017 and the sidewalk program assessment was completed in 2016.

## Significant Changes

**2018-2022 CIP:** Funding for this project has been reduced by \$500k per year pending completion of the assessment study.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	2,153,018	1,891,442	1,533,575	1,649,999	1,725,000	1,741,001	1,740,000	8,389,575	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,153,018</b>	<b>1,891,442</b>	<b>1,533,575</b>	<b>1,649,999</b>	<b>1,725,000</b>	<b>1,741,001</b>	<b>1,740,000</b>	<b>8,389,575</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	2,026,918	1,891,442	1,504,914	1,620,004	1,693,883	1,708,825	1,740,000	8,267,626	0	N/A
<b>Design</b>	N/A	126,100	0	28,661	29,995	31,117	32,175	0	121,948	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,153,018</b>	<b>1,891,442</b>	<b>1,533,575</b>	<b>1,649,999</b>	<b>1,725,000</b>	<b>1,741,000</b>	<b>1,740,000</b>	<b>8,389,574</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PO-11000

Traffic sign, April 2015

# Sign Reflectivity Upgrade

## Description

This project provides funding for inventorying, upgrading, and maintaining all traffic signs owned by the City of Palo Alto in order to comply with new federal requirements for sign reflectivity standards.

## Justification

The FHWA (Federal Highway Administration) passed regulations requiring minimum retroreflectivity levels for traffic signs. The new retroreflectivity regulations require regular annual sign inspections and replacement of signs not meeting the new minimum retroreflectivity standards.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	221,917	121,454	189,463	68,000	71,000	72,000	72,000	472,463	0	N/A
<b>Total</b>	<b>N/A</b>	<b>221,917</b>	<b>121,454</b>	<b>189,463</b>	<b>68,000</b>	<b>71,000</b>	<b>72,000</b>	<b>72,000</b>	<b>472,463</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	221,917	121,454	189,463	68,000	71,000	72,000	72,000	472,463	0	N/A
<b>Total</b>	<b>N/A</b>	<b>221,917</b>	<b>121,454</b>	<b>189,463</b>	<b>68,000</b>	<b>71,000</b>	<b>72,000</b>	<b>72,000</b>	<b>472,463</b>	<b>0</b>	<b>N/A</b>

Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

<b>Relationship to Comprehensive Plan</b>	<b>Potential Board/Commission Review:</b>
<b>Primary Connection</b>	Planning and Transportation Commission
Element: Land Use and Community Design	
Section: Public Streets and Public Spaces	
Goal: L-9	
Policy: L-9.10	
<b>Environmental Impact Analysis:</b>	
This project is expected to have a possible exemption from CEQA under Section 15301.	



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** N/A

**Initial Project Start:** Summer 2012

**Initial Project Completion:** Spring 2013

**Revised Project Start:** Spring 2018

**Revised Project Completion:** Fall 2019

**Project Number:** PE-13014

Streetlight, Guinda Street, November 2014

# Street Lights Condition Assessment

## Description

This project provides funding to assess the condition of the streetlight system. The assessment will include an inventory of the entire lighting system, including age and condition of conduit, wiring, street light poles, foundations, luminaires, and lighting coverage. Determining the inspection, maintenance, repair, and rehabilitation necessary to prolong the life of the City's streetlight system is also included in this project.

## Justification

There are over 6,000 streetlights in Palo Alto. In some areas, existing conduit is over 40 years old and in such poor condition that no repairs can be made. Streetlight systems are integral as they afford safe routes for motorists and pedestrians. An assessment is needed to evaluate the age and condition of each element of the streetlight system in order to plan cost-effective maintenance and replacement programs for the future.

## Supplemental Information

The Infrastructure Blue Ribbon Commission recommended that a streetlight system assessment be conducted to determine the condition of and replacement program for the City's streetlight infrastructure. The assessment will also consider appropriate recommendations for streetlights determined to be historic, or in neighborhoods with unique streetlights.

## Significant Changes

**2020-2024 CIP:** Due to other high priority projects, this project has been delayed until Summer 2019.



**2019-2023 CIP:** Due to other high priority projects, this project has been delayed until Spring 2018.

**2018-2022 CIP:** Due to other high priority projects, this project has been delayed until Summer 2017.

**2017-2021 CIP:** Due to other high priority projects, initiation of this project has been delayed until Spring 2016.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	8,798	228,683	8,605	224,078	0	0	0	0	224,078	0	241,481
<b>Total</b>	<b>8,798</b>	<b>228,683</b>	<b>8,605</b>	<b>224,078</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>224,078</b>	<b>0</b>	<b>241,481</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	8,798	228,683	8,605	224,078	0	0	0	0	224,078	0	241,481
<b>Total</b>	<b>8,798</b>	<b>228,683</b>	<b>8,605</b>	<b>224,078</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>224,078</b>	<b>0</b>	<b>241,481</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.3

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PO-05054

East Bayshore Road street lights, February 2015

# Street Lights Improvements

## Description

This project provides funding to replace street light poles, pole foundations, luminaires, and wiring as needed to restore or improve street lighting.

## Justification

There are over 6,000 street lights in Palo Alto. In some areas existing concrete or cast iron street light poles are failing and no longer serviceable. Additionally, poles damaged due to accidents must be replaced immediately. Luminaires are replaced to improve lighting levels and therefore safety. The Electric Fund maintains the poles, luminaires, and circuits and installs new street lights as requested by the Public Works Department.

## Supplemental Information

The Street Lights Condition Assessment project (PE-13014) is expected to be completed in 2019 and will result in recommendations for replacement of street lights. Where desired, efforts to match existing will be made.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	259,775	70,623	404,152	205,000	214,000	216,000	216,000	1,255,152	0	N/A
<b>Total</b>	<b>N/A</b>	<b>259,775</b>	<b>70,623</b>	<b>404,152</b>	<b>205,000</b>	<b>214,000</b>	<b>216,000</b>	<b>216,000</b>	<b>1,255,152</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	259,775	70,623	404,152	205,000	214,000	216,000	216,000	1,255,152	0	N/A
<b>Total</b>	<b>N/A</b>	<b>259,775</b>	<b>70,623</b>	<b>404,152</b>	<b>205,000</b>	<b>214,000</b>	<b>216,000</b>	<b>216,000</b>	<b>1,255,152</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.3

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PE-86070

Curtner Avenue (300 Block), February 2015

# Street Maintenance

## Description

This project provides funding for annual resurfacing, slurry sealing, crack sealing, and reconstruction of various City streets.

## Justification

The Pavement Maintenance Management System (PMMS) and Metropolitan Transportation Agency's StreetSaver software are used to identify streets requiring maintenance (based on the biennial Pavement Condition Index (PCI) survey of all City streets). City Council established a goal of achieving an average citywide PCI of 85, excellent pavement condition, by 2021 with no street below a PCI of 60. The citywide average PCI of 85 was achieved in December 2018.

## Supplemental Information

Staff is supplementing the City's PMMS with Metropolitan Transportation Agency's StreetSaver software, whose modeling capabilities will be used to determine future funding levels to continue to work on streets with a PCI below 60 while still maintaining the citywide PCI average of 85.

The list of streets to be included in this project will be prioritized and coordinated with Utilities Department projects and in the 2012 Bicycle and Pedestrian Transportation Plan. This project is partially funded by revenues from gas taxes and vehicle registration fees.

## Significant Changes

**2020-2024 CIP:** The \$0.9 million from the San Antonio/W. Bayshore Impact Fee Fund will be moved to the Traffic Signal and Intelligent Transportation Systems project (PL-05053) for traffic signal improvements at San Antonio and Charleston in FY 2020.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** FY 2019 costs are offset by One Bay Area Grant (OBAG) Cycle 2 guaranteed funding and San Antonio/W.Bayshore Impact Fee Fund in the amount of \$1.0 million and \$0.9 million, respectively. The impact fee funding will be used to make improvements on the San Antonio/Charleston intersection and repave the San Antonio overpass. Funding increased by \$1.2 million annually from Road Maintenance and Rehabilitation Account (RMRA - S.B.1 funding) from the State of California in FY 2020.

**2018-2022 CIP:** The last phase of work on Alma Street (Rinconada Avenue to Palo Alto Avenue) is postponed until FY 2018 to incorporate additional transportation improvements that are currently in design.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	7,450,304	7,146,281	5,162,026	3,105,000	3,336,000	3,390,000	3,597,000	18,590,026	0	N/A
Revenue from Other Agencies	N/A	394,000	429,419	421,000	421,000	421,000	421,000	421,000	2,105,000	0	N/A
Revenue from the Federal Government	N/A	1,009,000	0	1,009,000	0	0	0	0	1,009,000	0	N/A
Revenue from the State of California	N/A	853,639	0	818,220	0	0	0	0	818,220	0	N/A
Transfer from Gas Tax Fund	N/A	1,300,000	1,300,000	2,453,997	2,455,000	2,455,000	2,455,000	2,455,000	12,273,997	0	N/A
Transfer from SA/W Bayshore Traffic Impact Fee Fnd	N/A	900,000	0	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>11,906,943</b>	<b>8,875,700</b>	<b>9,864,243</b>	<b>5,981,000</b>	<b>6,212,000</b>	<b>6,266,000</b>	<b>6,473,000</b>	<b>34,796,243</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	11,795,696	8,814,400	9,680,775	5,666,342	5,653,161	5,648,917	6,423,000	33,072,195	0	N/A
Design	N/A	111,247	61,300	183,468	314,658	558,839	617,083	50,000	1,724,048	0	N/A
<b>Total</b>	<b>N/A</b>	<b>11,906,943</b>	<b>8,875,700</b>	<b>9,864,243</b>	<b>5,981,000</b>	<b>6,212,000</b>	<b>6,266,000</b>	<b>6,473,000</b>	<b>34,796,243</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

CAPITAL IMPROVEMENT FUND

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund

**Category:** Streets and Sidewalks

**Project Location:** Various

**Managing Department:** Public Works

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PO-11001

Park and Oxford lane lines, February 2015

# Thermoplastic Lane Marking and Striping

## Description

This project provides funding for thermoplastic pavement markings on paved roadways to provide guidance and information to motorists, bicyclists, and pedestrians. By 2010, most pavement markings had been converted from paint to thermoplastic. While thermoplastic is a durable, long lasting pavement marking, most streets will require a second or third application of thermoplastic during the pavement's useful lifespan.

## Justification

Upgrading all street painting to thermoplastic has improved roadway safety for motorists, pedestrians, and bicyclists as the reflectivity and durability of thermoplastic exceeds that of paint.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	154,287	28,832	231,455	102,000	107,000	108,000	108,000	656,455	0	N/A
<b>Total</b>	<b>N/A</b>	<b>154,287</b>	<b>28,832</b>	<b>231,455</b>	<b>102,000</b>	<b>107,000</b>	<b>108,000</b>	<b>108,000</b>	<b>656,455</b>	<b>0</b>	<b>N/A</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	154,287	28,832	231,455	102,000	107,000	108,000	108,000	656,455	0	N/A
<b>Total</b>	<b>N/A</b>	<b>154,287</b>	<b>28,832</b>	<b>231,455</b>	<b>102,000</b>	<b>107,000</b>	<b>108,000</b>	<b>108,000</b>	<b>656,455</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.10

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Traffic and Transportation



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Various  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PL-04010

Ramona Street Bike Corral, March 2019

# Bicycle and Pedestrian Transportation Plan Implementation

## Description

This project provides funding for the design and construction of bicycle boulevards, enhanced bikeways, shared-use paths, bicycle parking, and pedestrian improvements in accordance with the Palo Alto Bicycle and Pedestrian Transportation Plan, which was adopted by City Council in 2012.

## Justification

Projects identified in the Palo Alto Bicycle and Pedestrian Transportation Plan, as well as bicycle parking facilities and bicycle/pedestrian project planning activities, will facilitate safer, traffic calmed biking and walking routes and provide better commute alternatives.

## Supplemental Information

The elements installed as part of Phase 1 of this project include the implementation of improvements along Louis, Amarillo, Moreno, E. Meadow, and Ross. Improvements included widened sidewalks, roundabouts, a bicycle boulevard, and other traffic calming devices.

## Significant Changes

**2020-2024 CIP:** The Neighborhood Traffic Safety and Bicycle Boulevards Project - Phase 1 has been partially implemented. The rest of Phase 1 of the project has been paused for additional review and evaluation. Upon direction to move forward, the project will resume with increased community engagement. The schedule for the initiation of Phase 2 will be determined at a later date.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	10,407,898	3,000,000	890,000	1,950,000	2,950,000	2,950,000	0	8,740,000	0	N/A
<b>Transfer from Stanford University Medical Ctr Fund</b>	N/A	1,200,000	0	1,200,000	1,200,000	0	0	0	2,400,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>11,607,898</b>	<b>3,000,000</b>	<b>2,090,000</b>	<b>3,150,000</b>	<b>2,950,000</b>	<b>2,950,000</b>	<b>0</b>	<b>11,140,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	11,325,336	2,717,000	2,090,000	3,150,000	2,950,000	2,950,000	0	11,140,000	0	N/A
<b>Design</b>	N/A	282,562	283,000	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>11,607,898</b>	<b>3,000,000</b>	<b>2,090,000</b>	<b>3,150,000</b>	<b>2,950,000</b>	<b>2,950,000</b>	<b>0</b>	<b>11,140,000</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary. There may be increased operating impacts due to ongoing maintenance of protected and separate bikeways. Certain types of bikeways may require special equipment or services to maintain them. The amount of impacts are unknown at this time.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Transportation  
Section: Sustainable Transportation  
Goal: T-1  
Policy: T-1.19  
Program: T1.19.2

#### Relationship to Comprehensive Plan

##### Secondary Connection

Element: Transportation  
Section: Streets  
Goal: T-3  
Policy: T-3-5  
Program: T3.5.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Charleston/Arastradero Corridor  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Spring 2013  
**Initial Project Completion:** Summer 2016  
**Revised Project Start:** Spring 2014  
**Revised Project Completion:** Spring 2020  
**Project Number:** PE-13011

Charleston-Arastradero, Arastradero at Clemo, January 2013

# Charleston/Arastradero Corridor Project

## Description

This project provides funding for the reconfiguration of the Charleston/Arastradero corridor, including engineering design and construction of new landscaped median islands, bulb outs, enhanced bike lanes, new street trees, and lighting. During the design phase, opportunities for including "green infrastructure" features such as infiltration basins and porous hardscape surfaces were explored. The conceptual design and California Environmental Quality Act (CEQA) review for the entire corridor was completed in September 2015 and the National Environmental Protection Act (NEPA) was completed in October 2016. Final design for the corridor was completed in Fall 2017.

## Justification

The project will result in enhanced travel safety, increased use of environmentally friendly travel alternatives, reduced motor vehicle congestion, and enhanced aesthetics on the Charleston-Arastradero Corridor. Construction will be addressed in phases due to grant funding deadlines starting with Arastradero Road (Clemo Avenue to Foothill Expressway) and Charleston Road (Middlefield Road to Alma Street). The last phase is Arastradero Road (Clemo Avenue to El Camino Real) and Charleston Road (El Camino Real to Alma Street and Middlefield Road to Fabian Way).

### Supplemental Information

The Charleston/Arastradero Corridor project was adopted by City Council in January 2003, and included in the City Council Infrastructure Plan in 2014. City Council approved the permanent retention of the new lane configurations on Charleston in 2008 and on Arastradero in 2012.

Grant proceeds and funding from the State will be used to partially offset the costs of this project, including: a \$0.50 million Caltrans Safe Routes to School (SR2S) grant, awarded in 2012; a \$1.0 million Valley Transportation Authority - Vehicle Emissions Reductions Based at Schools (VERBS) grant, awarded in 2013; a \$0.10 CalRecycle grant for rubberized asphalt pavement, awarded in 2017; and \$1.20 million for Road Maintenance and Rehabilitation (S.B.1 funding) from the State of California.

### Significant Changes

**2020-2024 CIP:** Phase 1 and 2 are expected to be complete in Summer 2019. Phase 3 will start construction in August 2019 and is anticipated to be complete in FY 2020.

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$19.6 million. This project will be completed in three phases, and the first phase is anticipated to be awarded at the end of Fiscal Year 2018.

**2018-2022 CIP:** This project is expected to be constructed in phases. The first phase of construction is anticipated to begin in November 2017.

**2016-2020 CIP:** The project completion date has been extended to reflect the full funding of the project's estimated cost.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(62,248)	7,333,533	9,192,971	4,480,881	0	0	0	0	4,480,881	0	13,611,604
Revenue from the State of California	0	1,825,904	1,585	1,824,319	0	0	0	0	1,824,319	0	1,825,904
Transfer from Charleston/Arastradero Dev Impct Fund	847,000	0	0	0	0	0	0	0	0	0	847,000
Transfer from Gas Tax Fund	0	1,140,686	1,105,567	0	0	0	0	0	0	0	1,105,567
Transfer from Stanford University Medical Ctr Fund	1,550,000	0	0	0	0	0	0	0	0	0	1,550,000
Transfer From Stormwater Management Fund	330,000	330,000	330,000	0	0	0	0	0	0	0	660,000
<b>Total</b>	<b>2,664,752</b>	<b>10,630,123</b>	<b>10,630,123</b>	<b>6,305,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,305,200</b>	<b>0</b>	<b>19,600,075</b>

# CAPITAL IMPROVEMENT FUND

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	222,224	10,469,197	10,469,197	6,305,200	0	0	0	0	6,305,200	0	16,996,621
<b>Design</b>	2,442,519	160,926	160,926	0	0	0	0	0	0	0	2,603,445
<b>Total</b>	<b>2,664,743</b>	<b>10,630,123</b>	<b>10,630,123</b>	<b>6,305,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,305,200</b>	<b>0</b>	<b>19,600,066</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>General Fund-Operating</b>	70,545	72,136	73,775	75,463	77,727

### Operating Impact

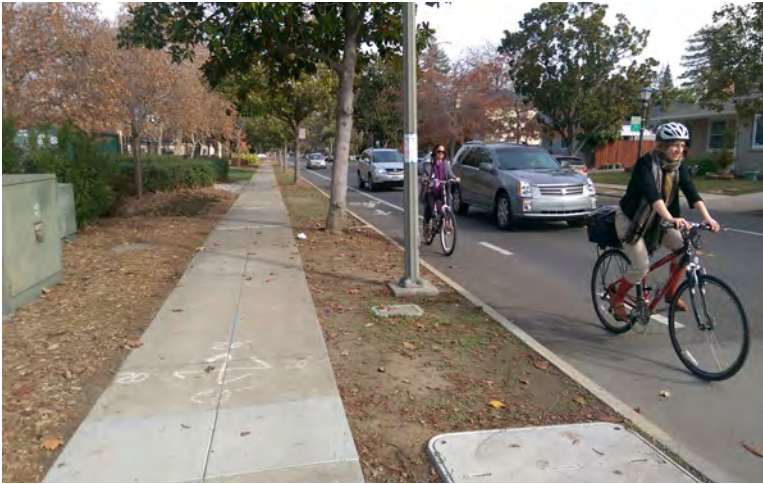
This project is anticipated to impact operating expenses in the future. Landscaping and irrigation maintenance is estimated to increase by \$53,045 in FY 2020 and by 3% annually thereafter. Tree trimming maintenance is estimated to be \$17,500 per year.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.7	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.6 Program: T6.6.6	<b>Potential Board/Commission Review:</b> Architectural Review Board Planning and Transportation Commission
<b>Environmental Impact Analysis:</b> A Mitigated Negative Declaration was completed in 2004, with an addendum completed in September 2015 for CEQA.		





CITY OF  
**PALO  
ALTO**



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** El Camino Real & Churchill Avenue  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2013  
**Initial Project Completion:** Fall 2015  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2020  
**Project Number:** PL-14000

Bicyclists on Churchill Ave, December 2015

# Churchill Avenue Enhanced Bikeway

## Description

This project includes planning, design and construction of a shared-use path along the north side of Churchill Avenue between the existing shared-use path at Castelleja Avenue and the Stanford Perimeter Trail. It also includes intersection improvements at Churchill Avenue and El Camino Real, which will include a new dedicated westbound right-turn lane.

## Justification

As a priority project within the Palo Alto Bicycle + Pedestrian Transportation Plan, this project advances objective three, which develops a core network of shared paths, bikeways, and traffic-calmed streets that connect residential districts, schools, and parks.

## Significant Changes

**2020-2024 CIP:** Project delays occurred mainly due to additional time needed for easement acquisitions. The project timeline has been adjusted to reflect those changes as well as allowing for more time for enhanced community engagement and Caltrans review.

**2019-2023 CIP:** Acquisition of necessary easements has been more time-consuming than was originally estimated. Project completion timeline has also been adjusted in light of project management staff departures and a focus on enhanced community engagement.

**2016-2020 CIP:** Possible delays to this project could occur as the design goes through the Caltrans permitting process.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(760,433)	1,057,492	57,492	3,075,000	0	0	0	0	3,075,000	0	2,372,059
<b>Transfer from Traffic Impact Fee Fund</b>	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000
<b>Total</b>	<b>239,567</b>	<b>1,057,492</b>	<b>57,492</b>	<b>3,075,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,075,000</b>	<b>0</b>	<b>3,372,059</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	232,925	1,057,492	57,492	3,075,000	0	0	0	0	3,075,000	0	3,365,417
<b>Design</b>	6,640	0	0	0	0	0	0	0	0	0	6,640
<b>Total</b>	<b>239,565</b>	<b>1,057,492</b>	<b>57,492</b>	<b>3,075,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,075,000</b>	<b>0</b>	<b>3,372,057</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.1

### Relationship to Comprehensive Plan

#### Secondary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.19

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Churchill Avenue and Alma Street  
**Managing Department:** Office of Transportation  
**IBRC Reference:** N/A  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Summer 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** PL-20000

Churchill Avenue/Alma Street Railroad Crossing Safety Improvements: photo taken September 2018

# Churchill Avenue/Alma Street Railroad Crossing Safety Improvements

## Description

This project provides funding for the design and construction of pedestrian and bicycle safety improvements on the west side of the Churchill Avenue and Alma Street railroad crossing intersection. Design includes, but is not limited to, traffic signal modifications, street lighting improvements, roadway resurfacing, sidewalk realignment and/or widening, drainage improvements, utility relocations, signage and striping, innovative bicycle treatments, traffic calming elements, and way-finding improvements.

## Justification

The rail crossing at Alma Street and Churchill Avenue experiences a large amount of bicycle traffic for Palo Alto High School and Stanford during the morning and afternoon commute hours. It is difficult for the existing sidewalk and roadway intersection to accommodate the large number of bicyclists using this intersection. Widening the sidewalk and new bicycle lane improvements will help move the bicyclists and pedestrians safely through the crossing.

## Supplemental Information

In Fiscal Year 2019, this project was included in PL-17001, Railroad Grade Separation. Since the projects need to be tracked against different funding sources, the safety improvements at Churchill Avenue/Alma Street have been separated into this project. This crossing was identified through the Federal Section 130 funds, a federally funded program administered by the states, for increasing safety at at-grade highway-rail crossings. All construction and design costs are fully reimbursable by Section 130 funding from Caltrans.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	0	0	0	13,000	301,000	0	0	0	314,000	0	314,000
<b>Revenue from Other Agencies</b>	0	0	0	500,000	4,000,000	0	0	0	4,500,000	0	4,500,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>513,000</b>	<b>4,301,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,814,000</b>	<b>0</b>	<b>4,814,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	13,000	4,301,000	0	0	0	4,314,000	0	4,314,000
<b>Design</b>	0	0	0	500,000	0	0	0	0	500,000	0	500,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>513,000</b>	<b>4,301,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,814,000</b>	<b>0</b>	<b>4,814,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.1

Program: T6.1.4

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project requires Environmental Impact Review



**Fund:** Capital Improvement Fund

**Category:** Traffic and Transportation

**Project Location:** Downtown

**Managing Department:** Office of Transportation

**IBRC Reference:** New

**Initial Project Start:** Summer 2015

**Initial Project Completion:** Summer 2020

**Revised Project Start:**

**Revised Project Completion:** Spring 2021

**Project Number:** PL-15002

Parking Facility Management System

# Downtown Automated Parking Guidance Systems, Access Controls & Revenue Collection Equip.

## Description

This project provides funding to address infrastructure and capital improvements for parking facilities. This includes a facility management system, lane equipment, lane access controls, and pay-on-foot pay stations. This project includes design and installation of new downtown parking guidance systems, access controls and revenue collection equipment that will be coordinated with the Downtown Parking Wayfinding project (PL-15004). This project includes cameras in garages for added security for patrons.

## Justification

This project is identified in the City's Comprehensive Plan as a means to reduce congestion, minimize air quality impacts from motorist, and provide live occupancy counts of open parking spaces.

## Supplemental Information

Due to the City Council's decision to defer the New Downtown Parking Garage Project (PE-15007) in February 2019, this project is recommended to be added as the tenth Infrastructure Plan project to mitigate parking congestion in downtown. Funding from the University Avenue Parking Permit Fund (\$1.1 million) that was previously planned to be used to cover the costs for this project, will now be reserved in the University Avenue Parking Permit Fund for future use towards PE-15007 or other ongoing costs.

### Significant Changes

**2020-2024 CIP:** This project was delayed as part of the work to develop an more comprehensive downtown parking plan and is now scheduled to go out to bid in the summer of 2020. Implementation will span Fiscal Years 2020 and 2021.

**2019-2023 CIP:** This project is scheduled to go out to bid in summer of 2018. Implementation will span Fiscal Years 2019 and 2020. The budget has been increased to cover the cost of security cameras in garages in Fiscal Year 2020.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	127,669	191,734	132,734	1,189,000	1,398,000	0	0	0	2,587,000	0	2,847,403
<b>Transfer from University Ave Parking Permit Fund</b>	0	1,100,000	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>127,669</b>	<b>1,291,734</b>	<b>132,734</b>	<b>1,189,000</b>	<b>1,398,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,587,000</b>	<b>0</b>	<b>2,847,403</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	1,291,734	132,734	1,189,000	1,398,000	0	0	0	2,587,000	0	2,719,734
<b>Design</b>	127,669	0	0	0	0	0	0	0	0	0	127,669
<b>Total</b>	<b>127,669</b>	<b>1,291,734</b>	<b>132,734</b>	<b>1,189,000</b>	<b>1,398,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,587,000</b>	<b>0</b>	<b>2,847,403</b>

### Operating Impact

The ongoing operating costs for cameras and other equipment is not know at this time; however, as these costs are quantified, adjustments will be brought forward in the next budget cycle.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

Program: T5.2.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15302.





**Fund:** Capital Improvement Fund

**Category:** Traffic and Transportation

**Project Location:** Downtown

**Managing Department:** Office of Transportation

**IBRC Reference:** New

**Initial Project Start:** Summer 2015

**Initial Project Completion:** Spring 2017

**Revised Project Start:** Summer 2015

**Revised Project Completion:** Summer 2021

**Project Number:** PL-15004

Downtown Parking Sign Upgrade, March 2019

# Downtown Parking Wayfinding

## Description

This project includes design and installation of new downtown parking wayfinding signage that will incorporate a new parking brand for the City and replace the existing parking signage to improve parking visibility for parking in Downtown Palo Alto. This project will be implemented in coordination with the planning and design work associated with Downtown Parking Guidance Systems, Access Controls and Revenue Collection Equipment (PL-15002) project, which will include parking availability displays. Signage to be installed as part of this project includes:

- Directional Signs: Direct customers toward parking facilities
- Lot Identification Banners: Identify particular lots via banners attached to existing light poles
- Garage Identification Signs: Identify garages via signs mounted to the exterior of the garages
- Pylons: Visible architectural markers that show parking facility information
- Rules/Regulation Signs: Depict hours, permit/hourly parking regulatory information

The combination of a visually appealing parking brand with an improved, comprehensive approach to wayfinding placement will help guide visitors, residents, and employees to find off-street parking more easily and the real-time occupancy will help to reduce congestion and circling by efficiently delineating where parking is available.

## Justification

This project is identified in the City's Comprehensive Plan as a means to reduce congestion and air quality impacts resulting from motorists searching for vacant parking spaces.



## Supplemental Information

This project is funded by a transfer from the University Avenue Parking Permit Fund to the Capital Improvement Fund. This project is expected to be under construction in Fiscal Year 2019, continuing into Fiscal Year 2020.

## Significant Changes

**2020-2024 CIP:** This project will continue to be evaluated in Fiscal Year 2020 to determine other infrastructure and electrification improvements needed. An expanded scope may delay the project and could increase the cost to complete.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	(581,432)	761,172	511,172	232,000	0	0	0	0	232,000	0	161,740
Transfer from University Ave Parking Permit Fund	661,325	280,015	280,015	40,000	0	0	0	0	40,000	0	981,340
<b>Total</b>	<b>79,893</b>	<b>1,041,187</b>	<b>791,187</b>	<b>272,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272,000</b>	<b>0</b>	<b>1,143,080</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	3,267	1,029,666	779,666	272,000	0	0	0	0	272,000	0	1,054,933
Design	76,625	11,521	11,521	0	0	0	0	0	0	0	88,146
<b>Total</b>	<b>79,892</b>	<b>1,041,187</b>	<b>791,187</b>	<b>272,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272,000</b>	<b>0</b>	<b>1,143,079</b>

## Operating Impact

Operating impacts are expected to be limited to general maintenance in the way of replacement of signs, as needed.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

Program: T5.2.1

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** El Camino Real between Stanford and Sheridan Avenues  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2021  
**Project Number:** PL-18000

El Camino Real and California Avenue Intersection

# El Camino Real Pedestrian Safety and Streetscape Project

## Description

The El Camino Real Pedestrian Safety and Streetscape Project will install improvements focused on pedestrian safety at controlled and uncontrolled crosswalks, enhanced bus operations at two existing major transit stops, and new urban design amenities between Stanford Avenue and Sheridan Avenue. The project includes: Curb extensions; median refuges; median shade trees; pedestrian scale lighting and potential bus enhancement.

## Justification

This segment of El Camino Real has a history of reported collisions for all modes, particularly the most vulnerable roadway users. The City of Palo Alto Bicycle and Pedestrian Transportation Plan (BPTP, 2012), the Grand Boulevard Multimodal Transportation Corridor Plan (2010), and the El Camino Real Master Planning Study (2007) all document the collision history of this stretch of El Camino Real. The Palo Alto BPTP reported that some of the highest frequency of active mode collisions in the city occurred on the project segment, highlighting the California Avenue/El Camino Real intersection as one of the top five locations for reported pedestrian collisions in Palo Alto. The design of El Camino Real will be enhanced to improve pedestrian safety. With its multi-lane cross-section, El Camino Real carries high volumes of traffic as a primary arterial connection between Peninsula cities in Santa Clara and San Mateo Counties, but it also has some of the highest levels of observed pedestrian activity along the Palo Alto segment of the corridor - particularly at the El Camino Real/Stanford Avenue and El Camino Real/California Avenue intersections, as documented in the El Camino Real Master Planning Study (2007). Despite the high

volumes of pedestrians, the high volumes of autos and general auto-orientation of the roadway design is uninviting and not conducive to pedestrian travel. The long crossing distances and infrequency of crossing opportunities in particular pose safety concerns on the corridor, which can be observed in the reported collision data.

## Supplemental Information

The majority of construction of this project will be funded by an OBAG 2 grant through VTA.

## Significant Changes

**2020-2024 CIP:** The construction for this project has been delayed to avoid a negative impact to traffic and parking while the New California Avenue Parking Garage is under construction. Construction cost estimates have been revised and the total cost of the project increased by \$500,000 based on the current costs of construction.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	4,828	179,975	126,975	823,000	871,750	0	0	0	1,694,750	0	1,826,553
Revenue from Other Agencies	0	0	0	0	4,655,000	0	0	0	4,655,000	0	4,655,000
<b>Total</b>	<b>4,828</b>	<b>179,975</b>	<b>126,975</b>	<b>823,000</b>	<b>5,526,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,349,750</b>	<b>0</b>	<b>6,481,553</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	5,526,750	0	0	0	5,526,750	0	5,526,750
Design	4,828	179,975	126,975	823,000	0	0	0	0	823,000	0	954,803
<b>Total</b>	<b>4,828</b>	<b>179,975</b>	<b>126,975</b>	<b>823,000</b>	<b>5,526,750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,349,750</b>	<b>0</b>	<b>6,481,553</b>

## Operating Impact

The maintenance costs are unknown at this time; however, as these costs are quantified, adjustments will be brought forward in the next budget cycle.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Transportation Section: Road Safety Goal: T-6 Policy: T-6.1 Program: T6.1.4  <b>Environmental Impact Analysis:</b> This project is expected to have possible exemption from CEQA	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Transportation Section: Streets Goal: T-3 Policy: T-3-6	<b>Potential Board/Commission Review:</b> Architectural Review Board Planning and Transportation Commission
--	---	---

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Embarcadero Road & El Camino Real  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2023  
**Project Number:** PL-15001

El Camino Real and Embarcadero Road Intersection Rendering, February 2018

# Embarcadero Road at El Camino Improvements

## Description

This project provides funding for the planning, design and construction of bicycle, pedestrian and traffic circulation improvements along Embarcadero Road between Bryant Street and El Camino Real. The concept approved by City Council includes Class IV raised separated bike-ways between the Caltrain Path, Bryant Street Bicycle Boulevard and Stanford Perimeter Trail, a protected intersection for bicyclists and pedestrians at El Camino Real, intersection realignments at High Street, Emerson Street and Kingsley Avenue, new landscaping, transit amenities, and pedestrian safety enhancements.

## Justification

This project provides mobility and safety improvements in response to resident and City Council concerns regarding congestion along Embarcadero Road.

## Significant Changes

**2020-2024 CIP:** Construction of this project is being delayed to Fiscal Year 2022 as the City evaluates options for traffic mitigation related to railroad grade separation alternatives resulting from the Railroad Grade Separation Project (PL-17001).

**2019-2023 CIP:** Budget increased by \$1.2 million due to estimated increases in construction costs.

**2017-2021 CIP:** Project name changed from Embarcadero Road Corridor Improvements.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	680,788	6,041,850	200,000	0	1,076,000	5,412,000	0	0	6,488,000	0	7,368,788
<b>Other</b>	102,151	0	0	0	0	0	0	0	0	0	102,151
<b>Total</b>	<b>782,939</b>	<b>6,041,850</b>	<b>200,000</b>	<b>0</b>	<b>1,076,000</b>	<b>5,412,000</b>	<b>0</b>	<b>0</b>	<b>6,488,000</b>	<b>0</b>	<b>7,470,939</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	509,794	6,041,850	200,000	0	1,076,000	5,412,000	0	0	6,488,000	0	7,197,794
<b>Design</b>	273,144	0	0	0	0	0	0	0	0	0	273,144
<b>Total</b>	<b>782,938</b>	<b>6,041,850</b>	<b>200,000</b>	<b>0</b>	<b>1,076,000</b>	<b>5,412,000</b>	<b>0</b>	<b>0</b>	<b>6,488,000</b>	<b>0</b>	<b>7,470,938</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

## Relationship to Comprehensive Plan

## Primary Connection

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.6

## Relationship to Comprehensive Plan

## Secondary Connection

Element: Transportation

Section: Road Safety

Goal: T-6

Policy: T-6.1

Program: T6.1.1

## Potential Board/Commission Review:

Planning and Transportation Commission

## Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Highway 101 Corridor North of San Antonio Rd. Interchange by Adobe Creek  
**Managing Department:** Public Works  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2012  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Summer 2016  
**Revised Project Completion:** Fall 2020  
**Project Number:** PE-11011

Bike path along E. Bayshore, Feb. 2015

# Highway 101 Pedestrian/Bicycle Overpass Project

## Description

This project provides funding for a new pedestrian/bicycle bridge across Highway 101 at Adobe Creek.

## Justification

The Highway 101 Pedestrian/Bicycle Overpass project is a priority project in the City's Bicycle & Pedestrian Transportation Plan 2012, providing safe, year-round access across Highway 101 in South Palo Alto to the Baylands and regional employment centers.

## Supplemental Information

The Highway 101 Pedestrian/Bicycle Overpass project is included in the Council Infrastructure Plan. The project will replace the existing seasonal Benjamin Lefkowitz Underpass. A Santa Clara County - Recreation Trails Program grant, awarded to the City in November 2012, will provide \$4 Million for the project. An additional \$4.35 million will be provided by a grant from One Bay Area Grant (OBAG) Program Cycle 2 anticipated to be approved in December 2018. A contribution of \$1 million from Google is also planned. Project design is anticipated to be complete by fall 2018 and construction is anticipated from early 2019 through spring 2020.

## Significant Changes

**2019-2023 CIP:** Budget increased to reflect total project cost estimate of \$18.5 million.

**2018-2022 CIP:** The project budget has been increased by \$1.0 million to include a contribution from Google toward the cost of the bridge. Additional design funding is budgeted in FY 2018.

**2017-2021 CIP:** The estimate for the project included in the prior budget document was \$10 million. The City Council increased the total project budget to \$13 million to account for construction cost escalation. The total project budget of \$13 million includes a feasibility study, conceptual design, design competition, environmental assessment, and design costs. The \$13 million figure does not include City staff time to support design and construction of the project

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	4,012,361	7,086,406	2,786,406	2,550,000	0	0	0	0	2,550,000	0	9,348,767
<b>Revenue from Other Agencies</b>	0	7,350,000	650,000	8,700,000	0	0	0	0	8,700,000	0	9,350,000
<b>Total</b>	<b>4,012,361</b>	<b>14,436,406</b>	<b>3,436,406</b>	<b>11,250,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,250,000</b>	<b>0</b>	<b>18,698,767</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	130,107	13,605,619	2,750,406	11,250,000	0	0	0	0	11,250,000	0	14,130,513
<b>Design</b>	3,882,250	830,786	686,000	0	0	0	0	0	0	0	4,568,250
<b>Total</b>	<b>4,012,357</b>	<b>14,436,405</b>	<b>3,436,406</b>	<b>11,250,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,250,000</b>	<b>0</b>	<b>18,698,763</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary. Maintenance and repairs will be provided through a maintenance agreement between the City and Caltrans which is still be negotiated.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.19

Program: T1.19.2

### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation

Commission

### Environmental Impact Analysis:

This project will require CEQA and NEPA environmental assessments.



## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Various  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PL-15003

Parking Mitigation, March, 2019

# Parking District Implementation

## Description

This project will fund the introduction of additional parking permit programs throughout the City. One aspect of this project is the City Council approved Residential Preferential Parking (RPP) ordinance to establish uniform procedures to implement RPP districts through the process outlined in the Municipal Code 10.50.

## Justification

Implementing parking districts, including RPP, is a parking management strategy that regulates parking where it was previously unregulated. Parking management strategies are critical to maximizing the use of existing parking supply and prioritizing the "right space for the right use" concept. RPP prioritizes parking on residential streets for residents and business who reside within the boundaries of the district.

## Significant Changes

**2020-2024 CIP:** The name of this project was changed from Residential Preferential Parking to accommodate a broader parking district strategy. In addition this project was changed to a recurring project in anticipation of implementing future parking districts.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	204,588	204,588	154,000	161,000	167,000	233,000	241,000	956,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>204,588</b>	<b>204,588</b>	<b>154,000</b>	<b>161,000</b>	<b>167,000</b>	<b>233,000</b>	<b>241,000</b>	<b>956,000</b>	<b>0</b>	<b>N/A</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	181,952	181,952	104,000	111,000	117,000	183,000	191,000	706,000	0	N/A
<b>Design</b>	N/A	22,636	22,636	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>204,588</b>	<b>204,588</b>	<b>154,000</b>	<b>161,000</b>	<b>167,000</b>	<b>233,000</b>	<b>241,000</b>	<b>956,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

RPPs and other City parking programs, are expected to have operating impacts to maintain the programs. The amounts of impact are not yet quantified and depend on the programs initiated.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.1

Program: T5.11.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to be eligible for an exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Downtown  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Winter 2017  
**Revised Project Start:** Summer 2018  
**Revised Project Completion:** Fall 2021  
**Project Number:** PL-16002

### Parking and Citation Management

# Parking Management and System Implementation

## Description

This project provides funding for the design and installation of the Comprehensive Parking Permit and Citation Management System. The all-inclusive system is a management tool staff will utilize in the management of parking permits for seven parking permit programs and associated on and off-street parking citations.

## Justification

As part of the integrated strategy to address traffic and parking concerns, staff conducted a comprehensive study of parking management strategies, including paid parking and permit parking. The study included an evaluation on how to best use the City's existing parking supply and recommended comprehensive strategies in Palo Alto.

## Supplemental Information

This project is funded proportionally by parking revenues from all parking funds. This may require a loan from the General Fund, to be repaid by the appropriate parking funds.

## Significant Changes

**2020-2024 CIP:** The project name was changed from Downtown Parking Management and System Implementation to broaden the scope of the project. The bid for the Comprehensive Parking Permit and Citation System was released in the Spring of 2018 with complete system implementation expected by September 2020.

## CAPITAL IMPROVEMENT FUND

**2019-2023 CIP:** Recent accomplishments include the completion of the Downtown Parking Management Plan and development of a finance and implementation plan. The bid for the Comprehensive Parking Permit and Citation System is expected to be released in Summer of 2018 with system implementation expected by September, 2018.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	116,123	116,123	25,780	0	0	0	0	25,780	0	141,903
Transfer from California Ave Parking Permit Fund	0	138,000	0	138,000	0	0	0	0	138,000	0	138,000
Transfer from Residential Parking Fund	0	255,000	0	255,000	0	0	0	0	255,000	0	255,000
Transfer from University Ave Parking Permit Fund	0	607,000	0	752,220	0	0	0	0	752,220	0	752,220
<b>Total</b>	<b>0</b>	<b>1,116,123</b>	<b>116,123</b>	<b>1,171,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,171,000</b>	<b>0</b>	<b>1,287,123</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,116,123	116,123	1,171,000	0	0	0	0	1,171,000	0	1,287,123
<b>Total</b>	<b>0</b>	<b>1,116,123</b>	<b>116,123</b>	<b>1,171,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,171,000</b>	<b>0</b>	<b>1,287,123</b>

### Operating Impact

The permit and citation system is designed to cover its own costs. No operating impacts are anticipated.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Transportation

Section: Motor Vehicle and Bicycle Parking

Goal: T-5

Policy: T-5.2

Program: T5.2.3

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15302.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Quarry Road between El Camino Real and Welch Road  
**Managing Department:** Office of Transportation  
**IBRC Reference:** Catch-up  
**Initial Project Start:** Winter 2016  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2022  
**Project Number:** PL-16000

Quarry Road Multi-Use Path, December 2017

# Quarry Road Improvements and Transit Center Access

## Description

This project provides funding for the planning, design and construction of bicycle and pedestrian improvements along Quarry Road between El Camino Real and Welch Road, including, but not limited to, upgraded bicycle lanes and crosswalks, innovative intersection treatments for bicyclists, and improved access to transit stops. Planning, design, and construction of a new bicycle, pedestrian, and transitway between the Palo Alto Transit Center bus depot and the intersection of Quarry Road and El Camino Real has been completed.

## Justification

The August 2011 Development Agreement between Stanford Hospitals and Clinics, the Lucille Salter Packard Children's Hospital at Stanford, the Board of Trustees of the Leland Stanford Junior University and the City of Palo Alto obligates the City to design and construct enhancements of various pedestrian and bicycle connections between the Palo Alto Intermodal Transit Center and the Stanford University Medical Center Campus (SUMC). Stanford provided funds for these projects. New to this project is a transit improvement element. The Comprehensive Plan Update 2030 identified the need for a transit, bicycle, and pedestrian linkage between the Palo Alto Transit Center bus depot and the Quarry Road and El Camino Real intersection to improve bus transit connectivity and service efficiency. As this project would directly benefit transit service between the Transit Center and the Medical Center campus, it would draw from the Stanford University Medical Center Development Agreement Intermodal Transit budget.

Implementation is timed to support expanded operations of the hospital and the completion of Caltrain electrification in 2022.

### Supplemental Information

This project is funded by the Quarry Road Improvements and Intermodal Transit funds from the Stanford University Medical Center Development Agreement via transfer to the Capital Improvement Fund. Design and construction of the temporary bicycle and pedestrian Transit Center pathway was completed in Summer, 2017. The pathway is accented with seating, decorative lighting, and new landscaping. Design and construction was also completed for bicycle and pedestrian improvements along the Quarry Road corridor between El Camino Real and Welch Road.

### Significant Changes

**2020-2024 CIP:** Project increased by \$1.1 million to account for increased construction costs, and construction moved to Fiscal Year 2022 to better align the workload with staff availability.

**2019-2023 CIP:** Changes include planning, design, and construction for a new bicycle, pedestrian, and transitway between El Camino Real and Quarry Road and the Palo Alto Transit Center. The location, project characteristics, and funding source are consistent with the portion of the project already completed.

**2018-2022 CIP:** The construction of the Quarry Road improvements (signing and striping along Quarry Road) has been delayed due to underground (trenching) electrical work needed to be done by Stanford. The project delay will most likely increase the cost to complete construction due to increasing construction costs.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	(715,378)	772,757	572,757	313,000	323,000	1,519,487	0	0	2,155,487	0	2,012,866
<b>Transfer from Stanford University Medical Ctr Fund</b>	1,442,004	0	0	200,000	0	1,493,513	0	0	1,693,513	0	3,135,517
<b>Total</b>	<b>726,626</b>	<b>772,757</b>	<b>572,757</b>	<b>513,000</b>	<b>323,000</b>	<b>3,013,000</b>	<b>0</b>	<b>0</b>	<b>3,849,000</b>	<b>0</b>	<b>5,148,383</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	466,477	660,000	460,000	195,599	323,000	3,013,000	0	0	3,531,599	0	4,458,076
<b>Design</b>	260,144	112,757	112,757	317,401	0	0	0	0	317,401	0	690,302
<b>Total</b>	<b>726,621</b>	<b>772,757</b>	<b>572,757</b>	<b>513,000</b>	<b>323,000</b>	<b>3,013,000</b>	<b>0</b>	<b>0</b>	<b>3,849,000</b>	<b>0</b>	<b>5,148,378</b>

## CAPITAL IMPROVEMENT FUND

### Operating Impact

Street and landscaping maintenance of the street connection would be supported by the Public Works Department's operations fund. Costs are still being determined and will be brought forward as part of the next budget cycle.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Transportation

Section: Road Safety

Goal: T-3

Policy: T-3-10

Program: T3.10.4

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation  
Commission

**Environmental Impact Analysis:**

May Require Environmental Review



CITY OF  
**PALO  
ALTO**



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Various  
**Managing Department:** Office of Transportation  
**IBRC Reference:** New  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2024  
**Project Number:** PL-17001

Caltrain Crossing at Charleston Road, July 2018

# Railroad Grade Separation and Safety Improvements

## Description

This project, Connecting Palo Alto, is a community-based process to advance the railroad grade crossing circulation study and context sensitive solutions study envisioned by the City Council. It will also fund the preparation of Project Study Report and environmental analysis that will be required for the City to realize its goals of advancing grade separations.

## Justification

This project is essential to support the City Council work related to the Council rail grade separation priority. It provides engineering support, circulation studies, community engagement efforts, and other subsequent tasks needed to advance the City's goal of grade separating railroad crossings in Palo Alto.

## Supplemental Information

Recent accomplishments include:

- Narrowing of grade separation ideas from 34 to 6 ideas currently being considered
- Successful engagement through community meetings and the establishment of a Community Advisory Panel (CAP)
- Further engaged with other agencies and narrowed the focus of the project



## Significant Changes

**2020-2024 CIP:** Funding for safety improvements at the railroad crossing at Alma Street and Churchill Avenue has been moved into a separate project, Churchill Avenue/Alma Street Railroad Crossing Safety Improvement Project (PL-20001).

**2019-2023 CIP:** The City has received a reimbursement grant from Caltrans for safety improvements at the railroad crossing at Alma Street and Churchill Avenue, an intersection with Palo Alto High School located in the northwest quadrant and a bicycle lane through the crossing for eastbound traffic. In addition, \$1.0 million in annual funding from the VTA Measure B has been programmed for this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	868,701	1,004,237	1,004,237	3,108,000	76,000	116,000	553,000	605,000	4,458,000	0	6,330,938
<b>Revenue from Other Agencies</b>	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	0	6,000,000
<b>Total</b>	<b>868,701</b>	<b>2,004,237</b>	<b>2,004,237</b>	<b>4,108,000</b>	<b>1,076,000</b>	<b>1,116,000</b>	<b>1,553,000</b>	<b>1,605,000</b>	<b>9,458,000</b>	<b>0</b>	<b>12,330,938</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	40,612	1,381,710	1,381,710	4,108,000	1,076,000	1,116,000	1,553,000	1,605,000	9,458,000	0	10,880,322
<b>Design</b>	828,087	622,527	622,527	0	0	0	0	0	0	0	1,450,614
<b>Total</b>	<b>868,699</b>	<b>2,004,237</b>	<b>2,004,237</b>	<b>4,108,000</b>	<b>1,076,000</b>	<b>1,116,000</b>	<b>1,553,000</b>	<b>1,605,000</b>	<b>9,458,000</b>	<b>0</b>	<b>12,330,936</b>

## Operating Impact

Operating impacts, if any, will depend upon the grade separation alternative selected.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Streets

Goal: T-3

Policy: T-3-15

Program: T3.15.1

### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

### Environmental Impact Analysis:

This project includes the completion of the necessary environmental analysis.

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Streets on Suggested Walk and Roll Routes for PAUSD schools  
**Managing Department:** Office of Transportation  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PL-00026

Fletcher Students Using New Bike Box, April 2018

# Safe Routes To School

## Description

This project provides funding for the City's Safe Routes to Schools program, including school commute planning, encouragement activities, and capital improvements along local and collector streets that may be impacted by school commute activities. Typical capital improvements include traffic calming devices, enhanced crosswalks, and improved signage along suggested routes to school. In Fiscal Year 2019, traffic calming projects from prior years will continue and traffic studies will be pursued for locations in need of traffic calming and other safety counter-measures.

## Justification

In collaboration with the Palo Alto Unified School District and Parent Teacher Associations, the City is leading the design and construction of capital improvements for suggested routes to school, helping to reduce risks to students and encouraging more families to use alternatives to driving. The budget in Fiscal Years 2020 and 2021 reflects the award of a grant from the Santa Clara Valley Transportation Authority for enhanced signage, striping and buffers on East Meadow Drive from Alma to Fabian Way, on Fabian Way from East Meadow Drive to East Charleston Road, and the widening and repaving of the Waverly Bike Path between East Meadow Drive and Charleston Road.

## Supplemental Information

The City was awarded a Vehicle Emissions Reductions Based at Schools (VERBS) grant of \$0.9 million for the Meadow-Fabian protected bikeway. The local match is \$0.2 million. Both amounts are included in the 2020-2024 CIP, and construction is scheduled for Fiscal Years 2021 and 2022.

## Significant Changes

**2020-2024 CIP:** The East Meadow Drive/Fabian Way and Waverley Bike path, originally planned to be completed in Fiscal Years 2020 and 2021 is now expected to be undertaken in Fiscal Years 2021 and 2022 due to current staffing shortages and fully engage the community in coordination with other bicycle projects.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	157,035	46,835	114,200	80,000	104,000	110,000	117,000	525,200	0	N/A
<b>Revenue from Other Agencies</b>	N/A	0	0	0	459,677	459,677	0	0	919,354	0	N/A
<b>Transfer from Gas Tax Fund</b>	N/A	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>257,035</b>	<b>146,835</b>	<b>214,200</b>	<b>639,677</b>	<b>663,677</b>	<b>210,000</b>	<b>217,000</b>	<b>1,944,554</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	207,035	96,835	179,200	604,677	628,677	175,000	182,000	1,769,554	0	N/A
<b>Design</b>	N/A	50,000	50,000	35,000	35,000	35,000	35,000	35,000	175,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>257,035</b>	<b>146,835</b>	<b>214,200</b>	<b>639,677</b>	<b>663,677</b>	<b>210,000</b>	<b>217,000</b>	<b>1,944,554</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation  
Section: Road Safety  
Goal: T-6  
Policy: T-6.4  
Program: T6.4.2

### Relationship to Comprehensive Plan

#### Secondary Connection

Element: Transportation  
Section: Sustainable Transportation  
Goal: T-1  
Policy: T-1.16

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Capital Improvement Fund  
**Category:** Traffic and Transportation  
**Project Location:** Various  
**Managing Department:** Office of Transportation  
**IBRC Reference:** Keep-up  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** PL-05030

Installation of new traffic signal equipment at Embarcadero Road and Middlefield Road, April 2018

# Traffic Signal and Intelligent Transportation Systems

## Description

This project provides funding for the design and construction of traffic signals, traffic signal communications networks, video surveillance projects for transportation use, and maintenance of the City's traffic signal central system. The project includes the replacement of traffic signal controllers/cabinets, video detection systems, and other field equipment.

## Justification

Traffic signal upgrades are essential in maintaining traffic safety and improving roadway operations including the reduction of roadway congestion with traffic signal retiming projects. To accomplish this, there is a need to add new traffic signals at locations throughout the city. This project replaces or adds traffic signal controller inventory in the field with new controllers and expands the current central management system to allow for communications to all signalized intersections. The new controllers enable additional traffic signal timing strategies and improve the reliability of the City's traffic signals.

## Supplemental Information

Funding from this project contributed to signal improvements related to the Upgrade Downtown project, which was completed in March 2019.

## Significant Changes

**2020-2024 CIP:** Although anticipated last fiscal year, this project will not include a new signal at Hamilton and Waverly since construction of a new downtown garage at that site is not proceed-

## CAPITAL IMPROVEMENT FUND

ing at this time. An additional \$900,000 from the San Antonio/West Bayshore Transportation Impact Fund has been added in Fiscal Year 2020 for traffic signal improvements at San Antonio and Charleston.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	595,018	(195,482)	773,138	53,000	80,000	609,000	679,000	2,194,138	0	N/A
<b>Revenue from Other Agencies</b>	N/A	400,000	400,000	300,000	300,000	300,000	300,000	300,000	1,500,000	0	N/A
<b>Transfer from SA/W Bayshore Traffic Impact Fee Fnd</b>	N/A	0	0	900,000	0	0	0	0	900,000	0	N/A
<b>Transfer from Traffic Impact Fee Fund</b>	N/A	506,475	506,475	383,362	400,000	395,000	0	0	1,178,362	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,501,493</b>	<b>710,993</b>	<b>2,356,500</b>	<b>753,000</b>	<b>775,000</b>	<b>909,000</b>	<b>979,000</b>	<b>5,772,500</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,450,058	659,558	2,226,500	693,000	715,000	849,000	919,000	5,402,500	0	N/A
<b>Design</b>	N/A	51,435	51,435	130,000	60,000	60,000	60,000	60,000	370,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,501,493</b>	<b>710,993</b>	<b>2,356,500</b>	<b>753,000</b>	<b>775,000</b>	<b>909,000</b>	<b>979,000</b>	<b>5,772,500</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Transportation  
Section: Traffic Delay and Congestion  
Goal: T-2  
Policy: T-2.1  
Program: T2.1.1

##### Environmental Impact Analysis:

This project is expected to be eligible for an exemption from CEQA under Section 15302.

#### Relationship to Comprehensive Plan

##### Secondary Connection

Element: Transportation  
Section: Streets  
Goal: T-3  
Policy: T-3-6

#### Potential Board/Commission Review:

Planning and Transportation Commission



**Fund:** Capital Improvement Fund

**Category:** Traffic and Transportation

**Project Location:** Various

**Managing Department:** Office of Transportation

**IBRC Reference:** Keep-up

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** PL-12000

New Crosswalk at Colorado Ave and Sandra Place, June 2018

# Transportation and Parking Improvements

## Description

This project provides funding for the implementation of miscellaneous neighborhood traffic calming improvements including neighborhood traffic studies and parking improvements. This project also funds the development of grant proposals used to procure funding for future projects.

## Justification

Traffic calming is identified as a high priority in the adopted Transportation element of the Comprehensive Plan. Traffic studies and miscellaneous traffic calming improvements help to improve the quality of life for residents and visitors.

## Supplemental Information

A few of the recent accomplishments of this project include:

- Signing and striping improvements along Middlefield Road between Forest Avenue and Lowell Avenue
- Approval of permanent improvements to Middlefield Road North Traffic Safety Pilot Project
- Addressed dozens of Palo Alto 311 service requests submitted by constituents

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Capital Improvement Fund</b>	N/A	475,083	369,083	337,000	403,000	418,000	582,000	602,000	2,342,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>475,083</b>	<b>369,083</b>	<b>337,000</b>	<b>403,000</b>	<b>418,000</b>	<b>582,000</b>	<b>602,000</b>	<b>2,342,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	358,773	252,773	262,000	328,000	343,000	507,000	227,000	1,667,000	0	N/A
<b>Design</b>	N/A	116,310	116,310	75,000	75,000	75,000	75,000	375,000	675,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>475,083</b>	<b>369,083</b>	<b>337,000</b>	<b>403,000</b>	<b>418,000</b>	<b>582,000</b>	<b>602,000</b>	<b>2,342,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Transportation

Section: Streets

Goal: T-4

Policy: T-4.2

Program: T4.2.1

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Transportation

Section: Road Safety

Goal: T-6

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to be eligible for an exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



## Unallocated Salaries and Benefits

## CAPITAL IMPROVEMENT FUND



**Fund:** Capital Improvement Fund  
**Category:** Unallocated Salaries and Benefits  
**Project Location:** N/A  
**Managing Department:** Administrative Services  
**IBRC Reference:** N/A  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** AS-10000

Capital Management Team

# Capital Improvement Fund Administration

## Description

This project provides funding for estimated administrative costs, including salaries and benefits costs of City staff assigned to manage the oversight of the General Fund Capital Improvement program.

## Justification

Administrative costs are associated with the completion of CIP projects. As such, these costs are capitalized and are added to the total costs of projects.

## Supplemental Information

Salaries and benefits have been included in CIP projects where appropriate and possible, in all fiscal years. The amounts included in this project represent salaries and benefits expense not associated with any particular project (for example, administration and oversight of the CIP process).

As part of the annual year-end process, the annually incurred amount will be allocated to all projects in the Capital Improvement Fund, on a proportional basis, and any unused balance will be returned to the Infrastructure Reserve.

## Significant Changes

**2019-2023 CIP:** Salary and benefit expenses have been allocated to capital projects in all years of the CIP. In prior years, costs were allocated only in the first year of the CIP.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	299,529	309,529	469,123	481,577	502,044	522,525	251,021	2,226,290	0	N/A
<b>Total</b>	<b>N/A</b>	<b>299,529</b>	<b>309,529</b>	<b>469,123</b>	<b>481,577</b>	<b>502,044</b>	<b>522,525</b>	<b>251,021</b>	<b>2,226,290</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	299,529	309,529	469,123	481,576	502,043	522,525	251,021	2,226,288	0	N/A
<b>Total</b>	<b>N/A</b>	<b>299,529</b>	<b>309,529</b>	<b>469,123</b>	<b>481,576</b>	<b>502,043</b>	<b>522,525</b>	<b>251,021</b>	<b>2,226,288</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no operating or maintenance expenses associated with this project.

Relationship to Comprehensive Plan

Primary Connection

Environmental Impact Analysis:

N/A



CITY OF  
**PALO  
ALTO**

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Overview

The Cubberley Property Infrastructure Fund accounts for expenditures related to the maintenance and renovation of the Cubberley Community Center property, which was formerly Cubberley High School from 1955 to 1979. Due to budget constraints resulting from the passage of Proposition 13 and declining enrollment, the Palo Alto Unified School District (PAUSD) was forced to close and sell school properties, including Terman Middle School, which the City of Palo Alto acquired, while PAUSD retained ownership of the Cubberley site. In 1989, the City and PAUSD entered into a lease agreement with the City providing annual revenue to PAUSD in exchange for 1) a lease of the 35-acre Cubberley site; 2) a Covenant Not to Develop for five other neighborhood school sites; and 3) an agreement that PAUSD provide space for extended day care at each of the eleven remaining elementary school sites.

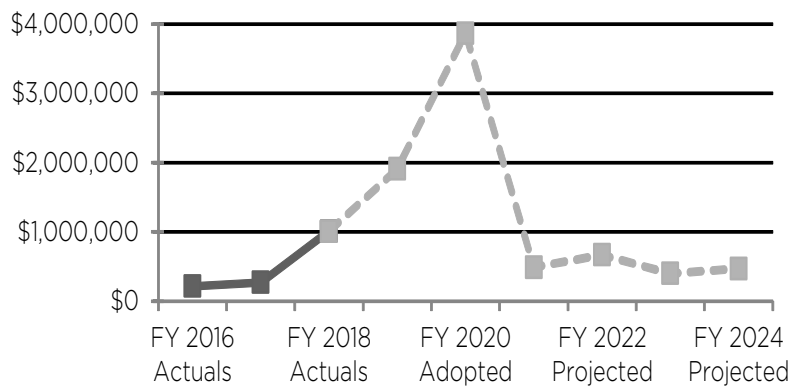
In 2001, the City relinquished ownership of the Terman site in exchange for ownership of eight acres of the Cubberley site. After several lease extensions and amendments in the years following, a restructured lease agreement was finalized in 2014. As part of the lease agreement, the previous Covenant Not to Develop clause, which required the City to transfer \$1.86 million to the school district, was eliminated and the funds were dedicated towards repairing, renovating and/or improving the Cubberley site, which is jointly owned by the City and PAUSD.

The budget for the Cubberley Property Infrastructure Fund is divided into two project categories: Buildings and Facilities and Parks and Open Space. Additional categories may be established in future years once needs are identified through the Master Plan process.

### Buildings and Facilities

The Buildings and Facilities category accounts for the projects funded to maintain the facilities on the Cubberley Community Center campus.

### Cubberley Fund Capital Expenditures



## Infrastructure Inventory

CLASSIFICATION	QUANTITY
City-owned acres	8
PAUSD-owned acres	27
Total square footage of buildings	175,540 (94,402 City-owned)
Parking spaces	750 (130 City-owned)
Artist studios	22
Dance studios	3
Schools	2
Childcare facilities	2
Nonprofit community organizations	9

**Recent Accomplishments**

- Continued the joint City of Palo Alto and Palo Alto Unified School District development of the Master Plan with consultant assistance, anticipated to be completed in Fiscal Year 2020.
- Completed roof replacements for the Pavillion and Wing L.
- Implemented minor improvements to rental classrooms.
- Addressed safety issues identified concerning asphalt, sidewalk, and trees.

**2020-2024 Capital Improvement Program**

For the 2020-2024 Capital Improvement Program (CIP), \$3.9 million is budgeted, with \$1.9 million allocated in Fiscal Year 2020 for four projects in the Buildings and Facilities category.

**Recurring Projects**

- Cubberley Roofing Replacements (Fiscal Year 2020: \$0.6 million; 5-Year CIP: \$2.2 million)
- Cubberley Repairs (Fiscal Year 2020: \$0.8 million; 5-Year CIP: \$1.2 million)

**Non-Recurring Projects**

- Cubberley Building Management Systems (Fiscal Year 2020 and 5-Year CIP: \$0.4 million)
- Cubberley Community Center Master Plan (Fiscal Year 2020 and 5-Year CIP: \$0.2 million)

## Parks and Open Space

The Parks and Open Space category accounts for projects that maintain Cubberley outdoor space and facilities improvements.

**Recent Accomplishments**

- Began design of the field restroom, which is anticipated to be installed in Fiscal Year 2020.

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## 2020-2024 Capital Improvement Program

For the 2020-2024 CIP, \$2.0 million is budgeted and allocated in Fiscal Year 2020 for two projects.

### Non-Recurring Projects

- Cubberley Field Restrooms (Fiscal Year 2020 and 5-Year CIP: \$0.1 million)
- Cubberley Track and Field (Fiscal Year 2020 and 5-Year CIP: \$1.9 million)

## Summary of Capital Activity

### CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Revenue from Other Agencies</b>									
CB-16001	Cubberley Community Center Master Plan	0	300,000	0	0	0	0	0	0
	<b>Total Revenue from Other Agencies</b>	<b>0</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfers from the General Fund</b>									
	General Fund Annual Capital Transfer	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	9,321,240
	<b>Total Transfers from the General Fund</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>9,321,240</b>
	<b>Total Sources</b>	<b>1,864,248</b>	<b>2,164,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>1,864,248</b>	<b>9,321,240</b>
<b>Use of Funds</b>									
<b>Buildings and Facilities</b>									
CB-19001	Cubberley Building Management Systems	0	6,807	354,000	0	0	0	0	354,000
CB-16001	Cubberley Community Center Master Plan	0	600,000	171,692	0	0	0	0	171,692
CB-17001	Cubberley Repairs	246,737	71,026	774,162	107,000	107,000	112,000	111,000	1,211,162
CB-16002	Cubberley Roof Replacements	694,789	948,965	587,700	384,449	564,711	291,650	362,318	2,190,828
	<b>Buildings and Facilities Total</b>	<b>941,526</b>	<b>1,626,798</b>	<b>1,887,554</b>	<b>491,449</b>	<b>671,711</b>	<b>403,650</b>	<b>473,318</b>	<b>3,927,682</b>
<b>Parks and Open Space</b>									
CB-17002	Cubberley Field Restrooms	71,197	272,637	97,500	0	0	0	0	97,500
CB-19000	Cubberley Track and Field Replacement	0	9,089	1,882,300	0	0	0	0	1,882,300
	<b>Parks and Open Space Total</b>	<b>71,197</b>	<b>281,726</b>	<b>1,979,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,979,800</b>
	<b>Total Uses</b>	<b>1,012,723</b>	<b>1,908,524</b>	<b>3,867,354</b>	<b>491,449</b>	<b>671,711</b>	<b>403,650</b>	<b>473,318</b>	<b>5,907,482</b>



## Buildings and Facilities

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND



**Fund:** Cubberley Property Infrastructure Fund

**Category:** Buildings and Facilities

**Project Location:** 4000 Middlefield Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2018

**Initial Project Completion:** Spring 2019

**Revised Project Start:**

**Revised Project Completion:** Fall 2019

**Project Number:** CB-19001

Building Management System Controls, March 2018

## Cubberley Building Management Systems

### Description

This project provides funding for replacement of the Building Management System (BMS) controls for the Pavilion, Theater, Wing I, and Gyms A and B boiler rooms at the Cubberley Community Center. The BMS is a software program that controls building systems such as air conditioning and heating.

### Justification

The old BMS is no longer supported by the City's IT Department or the BMS vendor. The new BMS controls will align the buildings mentioned above with the City's current standard BMS.

### Significant Changes

**2020-2024 CIP:** This project will be completed in the Fall of 2019 instead of the Spring due to specifications and bidding timeline.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	356,807	6,807	354,000	0	0	0	0	354,000	0	360,807
<b>Total</b>	<b>0</b>	<b>356,807</b>	<b>6,807</b>	<b>354,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>354,000</b>	<b>0</b>	<b>360,807</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	356,807	6,807	354,000	0	0	0	0	354,000	0	360,807
<b>Total</b>	<b>0</b>	<b>356,807</b>	<b>6,807</b>	<b>354,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>354,000</b>	<b>0</b>	<b>360,807</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Cubberley Property Infrastructure Fund

**Category:** Buildings and Facilities

**Project Location:** 4000 Middlefield Road

**Managing Department:** Public Works

**Initial Project Start:** Fall 2015

**Initial Project Completion:** Summer 2016

**Revised Project Start:** Spring 2018

**Revised Project Completion:** Summer 2019

**Project Number:** CB-16001

Cubberley Community Center, February 2015

# Cubberley Community Center Master Plan

## Description

This project provides funding to develop a master plan for the future of the Cubberley Community Center complex. The plan will include a prioritization for future projects to replace failing systems, improve reliability for use as an emergency shelter, and support tenant needs. The Master Plan is a requirement of the lease with the Palo Alto Unified School District (PAUSD).

## Justification

The City owns eight acres of the Cubberley Community Center and leases the remaining area from PAUSD. The renewed lease terms provide funding for additional capital investment in the facilities that are currently overdue for major improvements. This project is necessary to map out the future facility needs, determine the manner in which the improvements will be executed and prepare a long-term plan for the whole complex. Cubberley is a valuable community resource and significant source of rental income.

## Supplemental Information

The Cubberley Community Advisory Committee (CCAC) Report recommended that a community needs assessment and the site Master Plan be developed in the first five years of the new lease extension.

## Significant Changes

**2017-2021 CIP:** The project schedule has been extended to reflect the expected initiation of the project in Fiscal Year 2017. The project budget has been increased by \$150,000.

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	747,832	300,000	171,692	0	0	0	0	171,692	0	471,692
Revenue from Other Agencies	0	21,860	300,000	0	0	0	0	0	0	0	300,000
<b>Total</b>	<b>0</b>	<b>769,692</b>	<b>600,000</b>	<b>171,692</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171,692</b>	<b>0</b>	<b>771,692</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	769,692	600,000	171,692	0	0	0	0	171,692	0	771,692
<b>Total</b>	<b>0</b>	<b>769,692</b>	<b>600,000</b>	<b>171,692</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171,692</b>	<b>0</b>	<b>771,692</b>

### Operating Impact

There are no additional operating impacts anticipated from this project; however, recommendations from the completed master plan may result in additional operating and maintenance needs.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Community Services & Facilities Section: Maintenance of Parks and Community Facilities Goal: C-3 Policy: C-3.2 Program: C3.2.1	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Land Use and Community Design Section: Public Streets and Public Spaces Goal: L-9 Policy: L-9.5	<b>Potential Board/Commission Review:</b> Parks and Recreation Commission Planning and Transportation Commission
<b>Environmental Impact Analysis:</b> This project is expected to have a possible exemption from CEQA under Section 15301.		

## CUBBERLEY PROPERTY INFRASTRUCTURE FUND



**Fund:** Cubberley Property Infrastructure Fund

**Category:** Buildings and Facilities

**Project Location:** 4000 Middlefield Road

**Managing Department:** Public Works

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** CB-17001

Cubberley Pavement, 2016

# Cubberley Repairs

## Description

This project provides funding to make repairs and minor improvements at the Cubberley Community Center. Work completed under this project may include items such as painting, sidewalk repairs, breezeway pavement resurfacing, landscaping improvements, minor equipment replacement, and improvements to interior finishes.

## Justification

This project allows minor improvements to occur that will address safety concerns, functionality of building systems, and aesthetics.

## Supplemental Information

Repairs in various parts of the facility are scheduled on a per year basis. Funding is programmed for exterior maintenance, repairs to concrete and asphalt, tree removals, and interior maintenance and repairs including heating and ventilation, radiant floor heating, lighting, and painting.

## Significant Changes

**2020-2024 CIP:** Major projects for Fiscal Year 2020 will include Pavilion ceiling tile replacement, Theater lobby carpet replacement, and Wing M hallway flooring and carpet replacement.

**2019-2023 CIP:** This project has shifted from non-recurring to recurring to address repairs needed annually throughout the property. Funding will continue to be allocated on an annual basis until completion of the Cubberley Master Plan.

**2017-2021 CIP:** Project established.

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Cubberley Property Infrastructure Fund</b>	N/A	290,015	71,026	774,162	107,000	107,000	112,000	111,000	1,211,162	0	N/A
<b>Total</b>	<b>N/A</b>	<b>290,015</b>	<b>71,026</b>	<b>774,162</b>	<b>107,000</b>	<b>107,000</b>	<b>112,000</b>	<b>111,000</b>	<b>1,211,162</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	290,015	71,026	774,162	107,000	107,000	112,000	111,000	1,211,162	0	N/A
<b>Total</b>	<b>N/A</b>	<b>290,015</b>	<b>71,026</b>	<b>774,162</b>	<b>107,000</b>	<b>107,000</b>	<b>112,000</b>	<b>111,000</b>	<b>1,211,162</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



## CUBBERLEY PROPERTY INFRASTRUCTURE FUND



**Fund:** Cubberley Property Infrastructure Fund

**Category:** Buildings and Facilities

**Project Location:** 4000 Middlefield Road

**Managing Department:** Public Works

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** CB-16002

Cubberley Wing P, January 2015

# Cubberley Roof Replacements

## Description

This project provides funding for the replacement or restoration of failing roofs at the Cubberley Community Center.

## Justification

Most of the existing mineral cap roofs at Cubberley have exceeded their useful lives and are in poor condition. Rehabilitation is needed to prevent significant problems that may cause structural damage to buildings. In some cases, a more cost-effective roof restoration process is planned while in other cases a full replacement is necessary. A fluid, reinforced waterproofing system can be applied over the existing roof that also meets current cool roofing codes to optimize energy efficiency.

## Supplemental Information

Facilities scheduled for re-roofing with a fluid applied system or for major repairs are:

**Fiscal Year 2020:** Cubberley Wing F and FH

**Fiscal Year 2021:** Cubberley Wing T1 and T2

**Fiscal Year 2022:** Cubberley Pavilion Flat Section

**Fiscal Year 2023:** Cubberley Wing H and D

**Fiscal Year 2024:** Cubberley Wing U



# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Significant Changes

**2020-2024 CIP:** Cubberley Wings F and FH were postponed to Fiscal Year 2020 from Fiscal Year 2019 to prioritize Wings J and K from Fiscal Year 2021 to Fiscal Year 2019.

**2016-2020 CIP:** Project established in the Cubberley Property Infrastructure Fund. Funding was allocated in prior years for roofing replacements at Cubberley Community Center in the Capital Improvement Fund. Funding is now recommended in the Cubberley Property Infrastructure Fund for this purpose, consistent with the revised lease agreement with the Palo Alto Unified School District, approved by the City Council in 2014.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	N/A	1,069,965	948,965	587,700	384,449	564,711	291,650	362,318	2,190,828	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,069,965</b>	<b>948,965</b>	<b>587,700</b>	<b>384,449</b>	<b>564,711</b>	<b>291,650</b>	<b>362,318</b>	<b>2,190,828</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,069,965	948,965	587,700	384,449	564,711	291,650	362,318	2,190,828	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,069,965</b>	<b>948,965</b>	<b>587,700</b>	<b>384,449</b>	<b>564,711</b>	<b>291,650</b>	<b>362,318</b>	<b>2,190,828</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

### Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Planning and Transportation

Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Parks and Open Space

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND



**Fund:** Cubberley Property Infrastructure Fund  
**Category:** Parks and Open Space  
**Project Location:** 4000 Middlefield Road  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Summer 2018  
**Revised Project Start:** Fall 2018  
**Revised Project Completion:** Fall 2019  
**Project Number:** CB-17002

Cubberley Fields, February 2016

## Cubberley Field Restroom

### Description

This project provides the installation of restroom at the Cubberley Community Center Fields. The restroom will be a prefabricated structure.

### Justification

This project will provide a restroom facility to the Cubberley Community Center Fields due to intensive sports league and recreational usage. The facility consists of soccer and softball fields as well as tennis courts and a running track. It is the City's largest field complex without a restroom.

### Significant Changes

**2020-2024 CIP:** This project was delayed from being completed in FY 2019 to FY 2020 due to staffing constraints and issues purchasing the prefabricated restroom.

**2019-2023 CIP:** Funding has been increased by \$150,000 due to the placement, associated utility connections, and updated cost estimates.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	73,012	370,137	272,637	97,500	0	0	0	0	97,500	0	443,149
<b>Total</b>	<b>73,012</b>	<b>370,137</b>	<b>272,637</b>	<b>97,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>97,500</b>	<b>0</b>	<b>443,149</b>

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	7,097	367,187	272,637	97,500	0	0	0	0	97,500	0	377,234
<b>Design</b>	65,912	2,950	0	0	0	0	0	0	0	0	65,912
<b>Total</b>	<b>73,009</b>	<b>370,137</b>	<b>272,637</b>	<b>97,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>97,500</b>	<b>0</b>	<b>443,146</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Cubberley Property Infrastructure Fund</b>	15,500	15,965	16,444	16,937	17,445

### Operating Impact

This project is anticipated to impact operating expenses in the future. Custodial and maintenance costs are estimated to be \$15,500 in Fiscal Year 2020 and increase by 3% annually thereafter. These costs will be included as part of the City's custodial contract

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.3

#### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible categorical exemption from CEQA under section 15301.

## CUBBERLEY PROPERTY INFRASTRUCTURE FUND



**Fund:** Cubberley Property Infrastructure Fund

**Category:** Parks and Open Space

**Project Location:** Cubberley

**Managing Department:** Public Works

**Initial Project Start:** Summer 2019

**Initial Project Completion:** Spring 2021

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** CB-19000

Cubberley Field

# Cubberley Track and Field Replacement

## Description

This project provides funding for replacement of the synthetic turf field for multiple sport use, the surrounding track to an all-weather surface, and the existing bleachers and for the addition of a new multi-generational fitness area.

## Justification

The current synthetic turf field was installed in 2009 and has reached the end of its useful life. The decomposed granite track is older and the material does not support year round use. It is also not compatible to be positioned adjacent to synthetic turf as the material migrates onto the athletic field. The large bleachers with wood plank seating are deteriorating and will be replaced with smaller aluminum bleachers, creating space for a fitness area and equipment.

## Significant Changes

**2020-2024 CIP:** Additional funding of \$50,000 added to reflect updated project cost estimates.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	20,389	9,089	1,882,300	0	0	0	0	1,882,300	0	1,891,389
<b>Total</b>	<b>0</b>	<b>20,389</b>	<b>9,089</b>	<b>1,882,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,882,300</b>	<b>0</b>	<b>1,891,389</b>

# CUBBERLEY PROPERTY INFRASTRUCTURE FUND

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	4,700	1,834,981	0	0	0	0	1,834,981	0	1,839,681
<b>Design</b>	0	20,389	4,389	47,319	0	0	0	0	47,319	0	51,708
<b>Total</b>	<b>0</b>	<b>20,389</b>	<b>9,089</b>	<b>1,882,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,882,300</b>	<b>0</b>	<b>1,891,389</b>

### Operating Impact

This project may impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

#### Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

#### Environmental Impact Analysis:

Possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**



# Enterprise Funds





CITY OF  
**PALO  
ALTO**

# AIRPORT FUND

## Overview

The Airport Fund Capital Improvement Program (CIP) accounts for activities related to the construction and replacement of infrastructure necessary to operate and maintain the airport. The Palo Alto Airport (PAO) is a federally obligated airport, which receives federal funds for airport capital improvement projects based on Federal Aviation Administration (FAA) established grant assurances that airport operators must adhere to in order to receive funds. For detailed information on the maintenance and operations of the airport, please refer to the Airport Fund section in the Operating Budget.

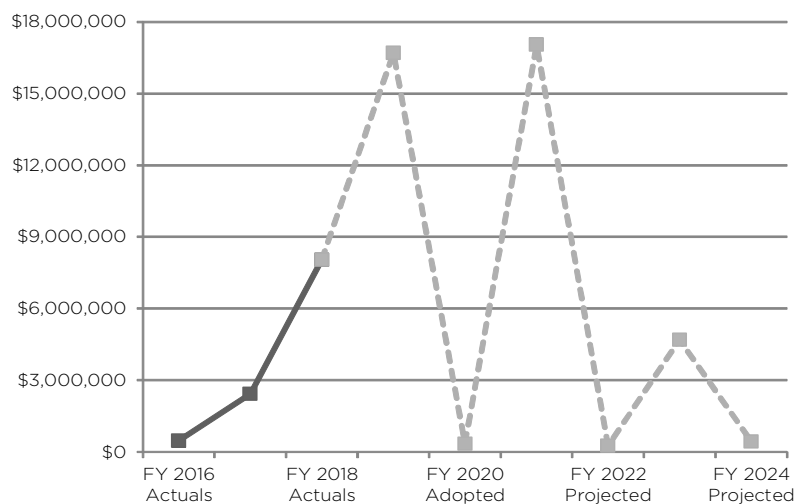
The 2020-2024 CIP includes projects totaling \$22.8 million with Fiscal Year 2020 projects totaling \$0.3 million. It is important to note the FAA provides grants to public agencies for the planning and development of public-use airports and reimburses up to 90 percent of the non-salary cost of eligible projects. Staff intends to continue applying for FAA grants for eligible capital improvement projects to ensure a safe and well-maintained airport. Staff will also apply for state grant-matching opportunities when available. The budget for the Airport Fund CIP is divided into two categories: Airport Apron, Runways, and Taxiways and Airport Facilities.

## Airport Apron, Runways, and Taxiways

The Airport Apron, Runways, and Taxiways category accounts for the design and construction of improvements and enhancements, which include pavement, lighting, drainage, and perimeter fencing. The Palo Alto Airport includes one runway of approximately 2,400 feet in length, one

parallel taxiway of the same length, and four connector taxiways for entering and exiting the runway. In Fiscal Year 2015, staff conducted a survey to determine the pavement condition index (PCI) values for all airfield pavement. PCI values are rated as follows: 80+ = very good or excellent, 70-79 = good, 60-69 = fair, 50-59 = at risk, 25-49 = poor, 0-24 = failed. Based on visual inspection, the average apron PCI value was 36, indicating the need for full pavement reconstruction. The apron score of 36 is anticipated to improve when the next PCI evaluation is conducted with the completed Apron and Taxi Lane Reconstruction (AP-15003) and current Airport Apron Reconstruction (AP-16000) projects. The average PCI target range anticipated is a score between 75-80.

Airport Fund Capital Expenditures



## Infrastructure Inventory - Summary of Airport Taxiways

CLASSIFICATION	QUANTITY	DESCRIPTION
Apron or Ramp	468	Tie-down spots
Runway	1	2443 x 70 feet
Taxiway	5	4 connector taxiways, 1 parallel taxiway

### Recent Accomplishments

- Completed construction of Phase II of the Apron Reconstruction project (AP-16000) utilizing an FAA grant reimbursement awarded for 90 percent of project costs.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are no recurring projects scheduled at this time.

### Non-Recurring Projects

There are three non-recurring, multi-phase projects scheduled in the 2020-2024 CIP: Airport Apron Reconstruction project (Fiscal Year 2020: \$0.1 million; 2020-2024 CIP: \$16.8 million), Airport Electrical Improvements (Fiscal Year 2020: \$0 million; 2020-2024 CIP: \$4.3 million), and Runway and Taxiway Reconstructions and Drainage Improvements (Fiscal Year 2020: \$0 million; 2020-2024 CIP: \$0.4 million). The FAA prioritized this project to be completed before all other airport projects, deferring the Airfield Electrical Improvements project to Fiscal Year 2023 and the Runway and Taxiway Reconstruction and Drainage Improvements project to Fiscal Year 2024.

The Airport Apron Reconstruction project will reconstruct 38 acres of pavement. In 2015, the FAA requested a Pavement Maintenance Management Plan (PMMP) to document conditions and prioritize future airport pavement projects. The completed PMMP showed all areas in disrepair, with the apron being most critical. The final phase of construction costs and associated grant reimbursements for this multi-phased project are budgeted in Fiscal Year 2021.

## Airport Facilities

The Airport Facilities category accounts for buildings, security systems, parking lot and all other infrastructure improvements. Prior to April 2017, Fixed Base Operators (FBO) leased spaces at the Airport and were responsible for the maintenance of their structures with the exception of the terminal. In April 2017, the FBO leases expired and the City became responsible for the maintenance of these structures. Interim lease agreements (1-3 years) between the City and existing businesses were executed with the understanding that agreements will need to be renegotiated based on the completion of the Airport Business Plan.

## Infrastructure Inventory - Summary of Airport Facilities

CLASSIFICATION	QUANTITY	DESCRIPTION
Buildings	2	Offices
Hangars	12	Medium Conventional Box Hangar
Hangars	2	Large Conventional Box Hangar
Hangars	45	Small Nested T-Hangar
Hangars	3	Large Conventional Multi-Aircraft Hangar
Trailers	2	Airport Terminal Building and Offices

### Recent Accomplishments

- Adopted Airport Hangars into the Palo Alto Airport Schedule of Fees and Charges for Fiscal Year 2020.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are no recurring projects scheduled at this time.

### Non-Recurring Projects

There are three non-recurring projects during the 2020-2024 CIP:

- Airport Facilities Electrical Improvements (Fiscal Year 2020 and 5-Year CIP: \$0.2 million)
- Airport Layout Plan (Fiscal Year 2020 and 5-Year CIP: \$0.6 million)
- Automated Weather Observation System (AWOS) (Fiscal Year 2020 and 5-Year CIP: \$0.6 million)

The Airport Layout Plan is required by the FAA to ensure grant eligibility and will include existing facilities and planned development, air traffic activity, noise contours, environmental documentation and 20-year demand forecasts.

## Summary of Capital Activity

## AIRPORT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Revenue from Federal Government</b>									
AP-19001	Airfield Electrical Improvements	0	0	0	0	0	3,712,500	0	3,712,500
AP-16000	Airport Apron Reconstruction	9,112,250	12,784,642	0	14,697,000	0	0	0	14,697,000
AP-21000	Airport Layout Plan	0	0	0	486,000	0	0	0	486,000
AP-16003	Airport Perimeter Fence	380,874	0	0	0	0	0	0	0
AP-19000	Automated Weather Observation System (AWOS)	0	0	0	0	74,250	346,500	0	420,750
AP-22000	Runway and Taxiway Reconstruction and Drainage Improvements	0	0	0	0	0	0	225,000	225,000
AP-16002	Wildlife Hazard Plan	12,923	4,608	0	0	0	0	0	0
	<b>Revenue from the Federal Government Total</b>	<b>9,506,047</b>	<b>12,789,250</b>	<b>0</b>	<b>15,183,000</b>	<b>74,250</b>	<b>4,059,000</b>	<b>225,000</b>	<b>19,541,250</b>
	<b>Total Sources</b>	<b>9,506,047</b>	<b>12,789,250</b>	<b>0</b>	<b>15,183,000</b>	<b>74,250</b>	<b>4,059,000</b>	<b>225,000</b>	<b>19,541,250</b>
<b>Use of Funds</b>									
<b>Airport Apron, Runways, and Taxiways</b>									
AP-19001	Airfield Electrical Improvements	0	0	0	0	0	4,270,000	50,000	4,320,000
AP-16000	Airport Apron Reconstruction	7,909,850	16,691,576	140,000	16,470,000	140,000	0	0	16,750,000
AP-22000	Runway and Taxiway Reconstruction and Drainage Improvements	0	0	0	0	0	0	383,000	383,000
	<b>Airport Apron, Runways, and Taxiways Total</b>	<b>7,909,850</b>	<b>16,691,576</b>	<b>140,000</b>	<b>16,470,000</b>	<b>140,000</b>	<b>4,270,000</b>	<b>433,000</b>	<b>21,453,000</b>
<b>Airport Facilities</b>									
AP-20000	Airport Facilities Electrical Improvements	0	0	206,000	0	0	0	0	206,000
AP-21000	Airport Layout Plan	0	0	0	573,500	10,000	0	0	583,500
AP-16003	Airport Perimeter Fence	118,627	5,500	0	0	0	0	0	0
AP-19000	Automated Weather Observation System (AWOS)	0	0	0	0	114,500	428,000	10,000	552,500
AP-16002	Wildlife Hazard Plan	16,187	5,121	0	0	0	0	0	0
	<b>Airport Facilities Total</b>	<b>134,814</b>	<b>10,621</b>	<b>206,000</b>	<b>573,500</b>	<b>124,500</b>	<b>428,000</b>	<b>10,000</b>	<b>1,342,000</b>
	<b>Total Uses</b>	<b>8,044,664</b>	<b>16,702,197</b>	<b>346,000</b>	<b>17,043,500</b>	<b>264,500</b>	<b>4,698,000</b>	<b>443,000</b>	<b>22,795,000</b>



CITY OF  
**PALO  
ALTO**



## Airport Apron, Runways, and Taxiways



**Fund:** Airport Enterprise Fund  
**Category:** Airport Apron, Runways, and Taxiways  
**Project Location:** 1925 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:** Fall 2023  
**Revised Project Completion:** Summer 2024  
**Project Number:** AP-19001

Airfield Electrical, July 2017

# Airfield Electrical Improvements

## Description

This project provides funding for electrical and lighting improvements to the airfield.

## Justification

The last known airfield electrical improvements were performed in 1993. Results of the electrical assessment conducted as part of the Airport Apron Reconstruction project will inform the necessary above ground electrical infrastructure needs including lighting, signage, and possible vault modifications.

## Supplemental Information

The design and construction of underground infrastructure being utilized will be completed in the Airport Apron Reconstruction project. LED lighting may be installed for greater efficiency and to comply with City sustainability goals.

## Significant Changes

**2020-2024 CIP:** This project was changed from four phases to three phases and moved up from Fiscal Year 2024 to Fiscal Year 2023, in conjunction with the Airport Apron Reconstruction project (AP-16000). The project was increased to anticipate extra costs that are likely to result from the Airport Layout Plan in order to meet FAA design standards such as costs for the emergency generator, vault building, runway end identifier lights (REIL), precision approach path indicator (PAPI) units, and windcone installation.

**2019-2023 CIP:** The FAA deferred grant funding for this project from Fiscal Year 2019 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Airport Fund</b>	0	0	0	0	0	0	557,500	50,000	607,500	0	607,500
<b>Revenue from the Federal Government</b>	0	0	0	0	0	0	3,712,500	0	3,712,500	0	3,712,500
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,270,000</b>	<b>50,000</b>	<b>4,320,000</b>	<b>0</b>	<b>4,320,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	4,270,000	50,000	4,320,000	0	4,320,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,270,000</b>	<b>50,000</b>	<b>4,320,000</b>	<b>0</b>	<b>4,320,000</b>

### Operating Impact

This project is anticipated to have operating expenses related to pavement maintenance. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

**Relationship to Comprehensive Plan**
**Primary Connection**

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project may be exempt from CEQA under Section 15301.



**Fund:** Airport Enterprise Fund  
**Category:** Airport Apron, Runways, and Taxiways  
**Project Location:** 1925 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Spring 2020  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2022  
**Project Number:** AP-16000

Airport Apron, March 2019

# Airport Apron Reconstruction

## Description

This project provides funding for the design and reconstruction of the Palo Alto Airport apron in multiple phases within the existing footprint.

## Justification

The pavement surfaces at the airport are failing and uneven and the need to reconstruct the aircraft parking apron is critical to airport safety. The City conducted a Pavement Management Study in Fiscal Year 2015 to determine the pavement condition index (PCI) and to assist in prioritization of pavement improvement projects. The average apron PCI value from the study was 36, which indicated a need for full pavement reconstruction.

## Supplemental Information

This project is being implemented in multiple phases. Design commenced in FY 2016 and was completed in FY 2017. Construction began in FY 2018 and is expected to be complete in FY 2022. Construction of Phase I was completed in June 2018 and Phase II is anticipated to be completed in June 2019. FAA grants will fund 90 percent of design and construction costs while staff will pursue other funding opportunities to offset the City obligation for the remaining 10% where available.

Additionally, the FAA will use the average apron PCI information to prioritize the Palo Alto Airport against other airport applicants. Due to the condition of the airport infrastructure, staff anticipates the Palo Alto Airport will rank high in eligibility for grant funding of this project.

### Significant Changes

**2020-2024 CIP:** Funding for the Airport Apron Reconstruction project was scheduled in FY 2019 for Phase III in FY 2020 and Phase IV in FY 2021. Now, both phases of the project have been combined into Phase III, with the final year of construction in FY 2021.

**2019-2023 CIP:** The apron reconstruction costs substantially increased from the previous estimate of \$18.0 million to \$39.3 million. Budget estimates for the project increased to include all remaining phases of the project as well as reconstruction design changes, solar infrastructure, and construction escalation costs identified while constructing Phase I.

**2018-2022 CIP:** Due to the findings of a geotechnical study, the subgrade requires more stabilization. The FAA recognizing the safety implications, has agreed to accelerate funding to expedite pavement corrections. Funding of \$17.3 million added to the project to account for the multiple phases of this project over the 5-year CIP.

**2017-2021 CIP:** Additional funding of \$715,845 in Fiscal Year 2017 to complete Phase I.

**2016-2020 CIP:** Project established.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Airport Fund</b>	(1,136,197)	4,131,673	3,906,934	140,000	1,773,000	140,000	0	0	2,053,000	0	4,823,737
<b>Revenue from the Federal Government</b>	9,681,680	12,357,910	12,784,642	0	14,697,000	0	0	0	14,697,000	0	37,163,322
<b>Total</b>	<b>8,545,483</b>	<b>16,489,583</b>	<b>16,691,576</b>	<b>140,000</b>	<b>16,470,000</b>	<b>140,000</b>	<b>0</b>	<b>0</b>	<b>16,750,000</b>	<b>0</b>	<b>41,987,059</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	7,135,612	16,128,716	16,330,709	140,000	16,470,000	140,000	0	0	16,750,000	0	40,216,321
<b>Design</b>	1,409,868	360,867	360,867	0	0	0	0	0	0	0	1,770,735
<b>Total</b>	<b>8,545,480</b>	<b>16,489,583</b>	<b>16,691,576</b>	<b>140,000</b>	<b>16,470,000</b>	<b>140,000</b>	<b>0</b>	<b>0</b>	<b>16,750,000</b>	<b>0</b>	<b>41,987,056</b>

### Operating Impact

This project will have operating expenses related to pavement maintenance for asphalt slurry seal estimated every five years. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

**Relationship to Comprehensive Plan**

**Primary Connection**

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project may be exempt from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



**Fund:** Airport Enterprise Fund  
**Category:** Airport Apron, Runways, and Taxiways  
**Project Location:** 1925 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2014  
**Initial Project Completion:** Summer 2015  
**Revised Project Start:** Summer 2023  
**Revised Project Completion:** Summer 2024  
**Project Number:** AP-22000

Runway and Taxiway, July 2017

## Runway and Taxiway Reconstruction and Drainage Improvements

### Description

This project will provide funding for the design and implementation of runway and taxiway reconstruction and drainage improvements for the Palo Alto Airport.

### Justification

In 2015, the Airport Pavement Management Plan identified integrity deficiencies beyond the immediate safety concerns addressed in the Airport Apron Reconstruction project (AP-16000). This project will address the lower priority repairs and drainage improvements after the Airport Apron Reconstruction project is completed in Fall 2022.

### Significant Changes

**2020-2024 CIP:** This CIP is pending FAA grant funding in Fiscal Year 2024.

**2019-2023 CIP:** The FAA is deferring grant funding for this project from Fiscal Year 2022 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	0	0	0	0	0	0	158,000	158,000	0	158,000
Revenue from the Federal Government	0	0	0	0	0	0	0	225,000	225,000	0	225,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>383,000</b>	<b>383,000</b>	<b>0</b>	<b>383,000</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	133,000	133,000	0	133,000
Design	0	0	0	0	0	0	0	250,000	250,000	0	250,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>383,000</b>	<b>383,000</b>	<b>0</b>	<b>383,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Airport Facilities



**Fund:** Airport Enterprise Fund  
**Category:** Airport Facilities  
**Project Location:** 1901 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Winter 2020  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** AP-20000

1901 Embarcadero Road, March 2019

# Airport Facilities Electrical Improvements

## Description

This project provides funding for upgrades to the electrical panels for the Palo Alto Airport office rental spaces.

## Justification

This project addresses outdated, overloaded, and unsafe electrical equipment located at the 1901 Embarcadero Road complex.

## Supplemental Information

The utility transformer needs to be replaced as it is currently undersized and overloaded. The circuit feeding the 1901 Embarcadero Road complex is currently 200 amps and feeds three 200-amp subpanels and one 100-amp subpanel, creating an overloaded and unsafe condition. The subpanels in this circuit are of the age where replacement breakers are not available. The utility transformer currently feeding the existing 800-amp switchgear is 75KVA. A sixty-day load metering was performed and readings registered over 100 KVA. The existing electrical distribution equipment is undersized for the existing demands. This project will provide the proper electrical sizing improvements to meet electrical standards.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Airport Fund</b>	0	0	0	206,000	0	0	0	0	206,000	0	206,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>0</b>	<b>206,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	206,000	0	0	0	0	206,000	0	206,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>206,000</b>	<b>0</b>	<b>206,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Program: L10.1.3

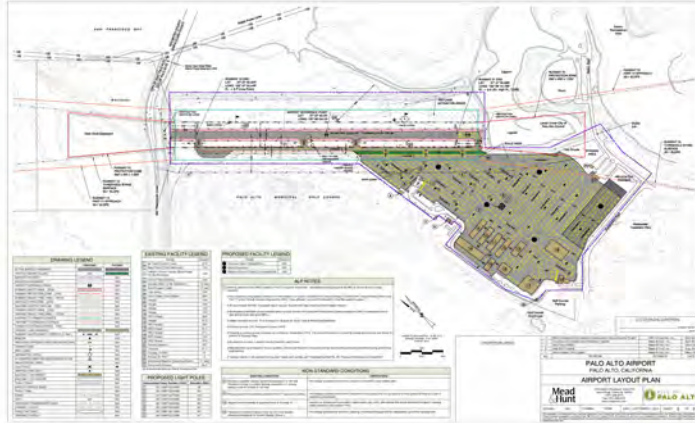
#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under section 15301



**Fund:** Airport Enterprise Fund  
**Category:** Airport Facilities  
**Project Location:** 1925 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Fall 2021  
**Initial Project Completion:** Summer 2022  
**Revised Project Start:** Summer 2021  
**Revised Project Completion:** Spring 2022  
**Project Number:** AP-21000

Airport Layout, March 2019

## Airport Layout Plan

### Description

This project provides funding for an update to the Airport Layout Plan (ALP), including a narrative report and environmental study.

### Justification

The ALP serves as a critical planning tool that depicts both existing facilities and planned development for an airport and is required by the FAA to ensure eligibility for the highest level of grant funding available for construction of safety and infrastructure improvements. A key objective of airport planning is to assure the effective use of airport resources to satisfy aviation demand in a financially feasible manner. Additionally, the plan will include air traffic activity, noise contours, environmental documentation, and 20-year demand forecasts.

### Significant Changes

**2020-2024 CIP:** Grant funding from the FAA was moved from Fiscal Year 2023 to Fiscal Year 2021. The anticipated increases in cost includes additional scope to complete a required air-space study identified by the FAA.

**2019-2023 CIP:** The FAA is deferring grant funding for this project from Fiscal Year 2021 to Fiscal Year 2023 to complete the Airport Apron Reconstruction project (AP-16000).

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Airport Fund</b>	0	0	0	0	87,500	10,000	0	0	97,500	0	97,500
<b>Revenue from the Federal Government</b>	0	0	0	0	486,000	0	0	0	486,000	0	486,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>573,500</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>583,500</b>	<b>0</b>	<b>583,500</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Design</b>	0	0	0	0	573,500	10,000	0	0	583,500	0	583,500
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>573,500</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>583,500</b>	<b>0</b>	<b>583,500</b>

### Operating Impact

This project is not anticipated to impact operating costs in the future.

**Relationship to Comprehensive Plan**
**Primary Connection**

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

Program: L10.1.2

**Environmental Impact Analysis:**

Requires Environmental Review

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission



**Fund:** Airport Enterprise Fund  
**Category:** Airport Facilities  
**Project Location:** 1925 Embarcadero Road  
**Managing Department:** Public Works  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:** Summer 2022  
**Revised Project Completion:** Summer 2024  
**Project Number:** AP-19000

Automated Weather Observation System, July 2017

# Automated Weather Observation System (AWOS)

## Description

This project provides funding for a new weather information system to be installed at the Palo Alto Airport.

## Justification

The FAA tower is staffed from 7:00am to 9:00pm and uses ceilometers, wind indicators, altimeters, and known distances to communicate weather and visibility to users. The new Automated Weather Observation System (AWOS) will provide users more information about weather conditions, feed all weather services, and give present weather 24 hours a day, 7 days a week. Providing users with accurate and up-to-date weather information is essential to the safe and economic operation of the airport.

## Significant Changes

**2020-2024 CIP:** This project was moved from Fiscal Year 2024 to Fiscal Year 2022 by the FAA so that grant funding for 90 percent of the project cost will most likely be available. Design will begin in Fiscal Year 2022 and construction will begin in Fiscal Year 2023.

**2019-2023 CIP:** The FAA is deferring grant funding for this project from Fiscal Year 2019 to Fiscal Year 2024 to complete the Airport Apron Reconstruction project (AP-16000).



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Airport Fund</b>	0	0	0	0	0	40,250	81,500	10,000	131,750	0	131,750
<b>Revenue from the Federal Government</b>	0	0	0	0	0	74,250	346,500	0	420,750	0	420,750
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114,500</b>	<b>428,000</b>	<b>10,000</b>	<b>552,500</b>	<b>0</b>	<b>552,500</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	114,500	428,000	10,000	552,500	0	552,500
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114,500</b>	<b>428,000</b>	<b>10,000</b>	<b>552,500</b>	<b>0</b>	<b>552,500</b>

### Operating Impact

This project is anticipated to have annual operating expenses related to maintenance and certification after project completion. These costs will be brought forward in future budgets, as necessary.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Land Use and Community Design

Section: Airport

Goal: L-10

Policy: L-10.1

##### Environmental Impact Analysis:

May Require Environmental Review

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission



CITY OF  
**PALO  
ALTO**

# ELECTRIC FUND

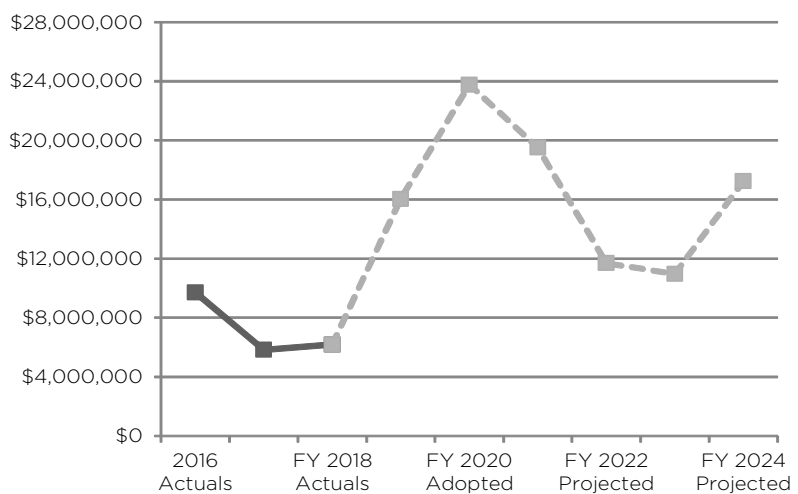
## Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal electric power system began operation in 1900 and continues to provide safe, reliable, cost effective electric service to residents and customers of Palo Alto. For the 2020-2024 Capital Improvement Program (CIP), approximately \$83.2 million is projected, with \$23.8 million budgeted in Fiscal Year 2020, of which \$9.2 million is recommended to be reappropriated from Fiscal Year 2019. Overall, a total of 38 projects are planned over the 5-year CIP.

Major projects funded in the 2020-2024 CIP include Smart Grid Technology Installation (\$12.9 million), Electric Customer Connections (\$12.5 million), total 4/12kV conversion projects (\$7.6 million), Wood Pole Replacement (\$7.5 million), Electric System Improvements (\$7.5 million), various underground system rebuild projects (\$6.9 million), Overhead to Underground Conversion (\$5.2 million), and Facility Relocation for Caltrain Modernization

(\$4.0 million). The budget for the Electric Fund CIP is categorized into three types of projects: Customer Connections, System Improvements, and Undergrounding Projects.

Electric Fund Capital Expenditures



## Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of 60kV sub transmission lines	18 miles
Substations (w/300 MVA total capacity)	9
Traffic Signals (intersections) maintained	101
Streetlights maintained	6,600
Overhead Primary Distribution	117 miles
Underground Primary Distribution	187 miles
Overhead Secondary Distribution	94 miles
Underground Secondary Distribution	74 miles

## Customer Connections

As customers' electric power needs continually change due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the electric system must evolve to meet these needs. The Electric Customer Connections Project, which is one of the largest project within the Electric Fund (\$2.4 million in Fiscal Year 2020, \$12.5 million over the 2020-2024 CIP), is accounted for within this category. Projects can range from new buildings associated with Stanford Hospital to upgrades of residential electric panels. These projects allow for the completion of work required to meet the needs of customers who have applied for new or upgraded electric service, need temporary power for construction, or require other services. The Electric Fund pays for a portion of these projects, while remaining costs are supported by reimbursements from customers for project work performed by the City.

### Recent Accomplishments

In Fiscal Year 2018 the Utilities Electric Division completed over 350 customer service projects with a total cost of \$2.5 million and revenue of \$1.8 million.

- 1.2 MW Solar System at Hewlett Packard (HP) due to be completed by April 2019.
- Two City garages with new solar rooftops under the Clean Local Energy Accessible Now (CLEAN) program producing approximately 0.65 MW.
- Completed phase one of the Veterans Affairs (VA) Hospital upgrades with the relocation of the North electric substation in February 2019.

## 2020-2024 Capital Improvement Program

### Recurring Projects

The Electric Customer Connections project, described above, is the only recurring project in this category. Electric Engineering has received close to 200 applications for small cell attachments to Electric utility streetlight and wood poles. The Electric Utility has about 6,500 wood poles and 6,500 streetlight poles citywide which are of interest to the mobile phone companies. This trend of small cell applications is anticipated to increase rapidly in the next few years which would increase both the workload and associated revenue in the Electric Customer Connections project.

### Non-Recurring Projects

VA Hospital - Customer Load Requirements Project. This project has been reduced in scope and folded into the Electric Customer Connections project. Utilities is working with the VA on their plans and awaits a decision from VA on the interim electric feeder enhancement solution until the new 60kV VA substation is built.

## System Improvements

Key elements for ensuring reliable electric service to City of Palo Alto residents and customers include replacing electric system components before they reach their end of life; ensuring there

is adequate capacity for the projected electric load; and installing protective equipment to minimize the impact of system problems. Projects in the System Improvements category allow for a variety of improvements, including the replacement/upgrade of old cables and equipment and bringing designs up to current standards, installation of protective equipment and switches, conversion of the electric system from 4,160 Volts (4kV) to 12,470 Volts (12kV), and installation of capacitors to improve efficiency.

The 2020-2024 CIP includes total funding of \$65.5 million in this category, with \$20.2 million allocated in FY 2020. Significant projects in this category include Smart Grid Technology Installation (\$12.9 million), 4/12kV conversion projects (\$7.6 million), Electric System Improvements (\$7.5 million), Wood Pole Replacements (\$7.5 million), 60kV Circuit Breaker Replacements (\$3.1 million), and various projects to rebuild underground districts and substation components.

### Recent Accomplishments

- Added security cameras at two electric substations.
- Completed replacement of one of twenty-five 60kV circuit breaker.
- Completed installation of new line relays and relay cabinets for protection of Adobe Creek to East Meadow and East Meadow to Maybell 60kV lines.
- Completed feeder relay coordination review and testing of relays at nine city substations.
- Completed other miscellaneous system improvement projects dealing with replacement of deteriorated facilities or to improve system operation and reliability.
- Completed phase I of Supervisory Control and Data Acquisition (SCADA) cybersecurity upgrade.
- Completed the Utilities Control Center room upgrade including new video screens and consoles.
- Engineered and completed replacement of 65 wood utility poles.
- Facility Relocation for Caltrain Modernization Project engineering is scheduled to be completed in June 2019 and construction will start in Fiscal Year 2020.

### 2020-2024 Capital Improvement Program

#### Recurring Projects

A total of \$21.9 million is programmed for System Improvements recurring projects in the 2020-2024 CIP, with \$4.8 million allocated in Fiscal Year 2020. Recurring projects in this category include the following:

- Communication System Improvements (Fiscal Year 2020: \$0.1 million; 5-Year CIP: \$0.5 million)
- Electric Distribution System Improvements (Fiscal Year 2020: \$1.5 million; 5-Year CIP: \$7.5 million)
- Electric Utility Geographic Information System (Fiscal Year 2020: \$0.3 million; 5-Year CIP: \$1.0 million)
- SCADA System Upgrades (Fiscal Year 2020: \$0.3 million; 5-Year CIP: \$1.0 million)
- Substation Facility Improvements (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$1.2 million)

- Substation Protection Improvements (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$1.6 million)
- Underground System Rebuild (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$1.8 million)
- Wood Pole Replacements (Fiscal Year 2020: \$1.5 million; 5-Year CIP: \$7.5 million)

### Non-Recurring Projects

A total of \$43.6 million is allocated in the 2020-2024 CIP for non-recurring System Improvement projects. Significant projects include:

- Facility Relocation for Caltrain Modernization (Fiscal Year 2020: \$4.0 million)
- Rebuild Underground District 20: (Fiscal Year 2020: \$1.5 million)
- Rebuild Underground District 23: (Fiscal Year 2020: \$0.2 million; 5-Year CIP: \$1.3 million)
- Colorado/Hopkins System Improvement: (Fiscal Year 2020: \$0.6 million; 5-Year CIP: \$3.6 million)
- Smart Grid Technology: (Fiscal Year 2020: \$0.9 million; 5-Year CIP: \$12.9 million)

## Undergrounding Projects

The City of Palo Alto began a program to underground overhead electric, telephone, and cable TV facilities in 1965 with a project along Oregon Expressway. Since that time, 45 Underground Districts have been formed. The undergrounding of electrical lines is a joint process between the City and AT&T, due to joint ownership of the poles, and Comcast, which leases pole space from AT&T. All three entities share in the cost of the installation of underground conduit and boxes necessary to enclose and protect wires and equipment. The City typically takes the lead in the design, bidding, and construction processes with AT&T and Comcast reimbursing the City for construction and administrative costs.

### Recent Accomplishments

- Underground District 46 - Completed installation of underground substructures (conduits and boxes) near the intersection of El Camino Real and Arastradero Road/West Charleston Road.
- Underground District 47 - Completed the installation of underground electric utility system in the area bounded by Middlefield Road/Addison Avenue/Cowper Street/Homer Avenue. Eighty percent of customers have completed the service conversions and connection to the underground system.

## 2020-2024 Capital Improvement Program

### Non-Recurring Projects

A total of \$5.2 million is allocated in the 2020-2024 CIP for non-recurring Undergrounding projects, with \$1.1 million allocated in FY 2020. Significant projects in this category include the following:

- Underground District 42 (\$2.1 million), which will underground overhead utility facilities in the area near Embarcadero Road/Emerson Street/Middlefield Road.

# ELECTRIC FUND

- Underground District 43 (\$2.1 million), which will underground overhead utility facilities in the area along Alma Street and Embarcadero Road.

## Summary of Capital Activity

### ELECTRIC FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Transfers from Other Funds</b>									
Gas Fund									
EL-11014	Smart Grid Technology Installation	710,000	180,000	0	0	0	0	410,000	410,000
	<b>Total Gas Fund Transfers</b>	<b>710,000</b>	<b>180,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>410,000</b>	<b>410,000</b>
Water Fund									
EL-11014	Smart Grid Technology Installation	910,000	290,000	0	0	0	0	610,000	610,000
	<b>Total Water Fund Transfers</b>	<b>910,000</b>	<b>290,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>610,000</b>	<b>610,000</b>
	<b>Total Transfers from Other Funds</b>	<b>1,620,000</b>	<b>470,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,020,000</b>	<b>1,020,000</b>
<b>Reimbursement from Customers, Telephone, and Cable Television Companies</b>									
EL-98003	Electric System Improvements	32,965	0	0	0	0	0	0	0
EL-89028	Electric Customer Connections	1,823,010	2,830,070	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000
EL-08001	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	0	0	300,000	0	0	300,000
EL-11009	Underground District 43 - Alma/Embarcadero	0	0	0	0	0	300,000	0	300,000
EL-12001	Underground District 46 - Charleston/El Camino Real	0	319,257	0	0	0	0	0	0
EL-17003	VA Hospital Customer Load Requirements	66,000	0	0	0	0	0	0	0
EL-19004	Wood Pole Replacement	0	0	150,000	150,000	150,000	150,000	150,000	750,000
	<b>Reimbursement from Customers, Telephone, and Cable Television Companies Total</b>	<b>1,921,975</b>	<b>3,149,327</b>	<b>1,850,000</b>	<b>1,850,000</b>	<b>2,150,000</b>	<b>2,150,000</b>	<b>1,850,000</b>	<b>9,850,000</b>
	<b>Total Sources</b>	<b>3,541,975</b>	<b>3,619,327</b>	<b>1,850,000</b>	<b>1,850,000</b>	<b>2,150,000</b>	<b>2,150,000</b>	<b>2,870,000</b>	<b>10,870,000</b>
<b>Use of Funds</b>									
<b>Customer Connections</b>									
EL-89028	Electric Customer Connections	2,408,545	2,830,070	2,400,000	2,550,000	2,700,000	2,400,000	2,400,000	12,450,000
EL-17003	VA Hospital Customer Load Requirements	33,929	0	0	0	0	0	0	0
	<b>Customer Connections Total</b>	<b>2,442,474</b>	<b>2,830,070</b>	<b>2,400,000</b>	<b>2,550,000</b>	<b>2,700,000</b>	<b>2,400,000</b>	<b>2,400,000</b>	<b>12,450,000</b>



# ELECTRIC FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>System Improvements</b>									
EL-06001	230 kV Electric Intertie	508	0	177,481	0	0	0	0	177,481
EL-16002	Capacitor Bank Installation	889	168,700	180,411	0	0	0	0	180,411
EL-14000	Coleridge/Cowper/Tennyson 4/12Kv Conversion	0	50,000	930,000	0	0	0	0	930,000
EL-19001	Colorado Power Station Equipment Upgrade	10,656	2,700,000	600,000	0	0	0	0	600,000
EL-19002	Colorado Substation Improvements	0	50,000	450,000	0	0	0	0	450,000
EL-15000	Colorado/Hopkins System Improvement	0	0	568,000	2,000,000	1,000,000	0	0	3,568,000
EL-89031	Communications System Improvements	199,216	993,757	100,000	100,000	100,000	100,000	100,000	500,000
EL-17001	East Meadow Circles 4/12kV Conversion	995	48,000	800,000	166,000	0	0	0	966,000
EL-13000	Edgewood/Wildwood 4kV Tie	0	0	0	50,000	400,000	0	0	450,000
EL-98003	Electric System Improvements	1,678,836	2,378,586	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
EL-02011	Electric Utility Geographic Information System	32,369	119,541	327,700	165,000	165,000	165,000	165,000	987,700
EL-17007	Facility Relocation for Caltrain Modernization Project	20,299	40,000	4,049,701	0	0	0	0	4,049,701
EL-20000	Hopkins Substation 4/12kV Conversion	0	0	100,000	1,950,000	2,100,000	1,543,000	0	5,693,000
EL-17005	Inter-Substation Line Protection Relay	159,057	185,000	125,501	150,000	150,000	0	0	425,501
EL-14004	Maybell 1&2 4/12kV Conversion	0	55,000	0	0	0	0	0	0
EL-11003	Rebuild Underground District 15	7,040	10,000	459,609	0	0	0	0	459,609
EL-13003	Rebuild Underground District 16	7,587	3,000	387,667	0	0	0	0	387,667
EL-14002	Rebuild Underground District 20	1,336	0	1,530,000	0	0	0	0	1,530,000
EL-17000	Rebuild Underground District 23	0	0	214,000	1,100,000	0	0	0	1,314,000
EL-10006	Rebuild Underground District 24	1,475	170,000	579,651	0	0	0	0	579,651
EL-19000	Rebuild Underground District 25	0	10,000	240,000	0	0	0	0	240,000
EL-16000	Rebuild Underground District 26	0	0	799,000	0	0	0	0	799,000
EL-19003	Rebuild Underground District 30	0	0	406,000	1,200,000	0	0	0	1,606,000
EL-14005	Reconfigure Quarry Feeders	0	75,000	506,616	0	0	0	0	506,616
EL-13002	Relocate Quarry/Hopkins Substation 60kV Line (A & B)	0	0	0	750,000	0	0	0	750,000
EL-02010	SCADA System Upgrades	209,945	65,000	265,000	320,000	120,000	120,000	130,000	955,000
EL-11014	Smart Grid Technology Installation	162,505	200,000	886,000	2,000,000	0	0	10,000,000	12,886,000
EL-17002	Substation 60kV Breaker Replacement	140,667	130,001	720,000	600,000	600,000	600,000	600,000	3,120,000
EL-89044	Substation Facility Improvements	156,533	346,934	376,600	200,000	200,000	200,000	200,000	1,176,600
EL-89038	Substation Protection Improvements	475,589	596,522	393,000	300,000	300,000	300,000	300,000	1,593,000
EL-16003	Substation Security	75,778	296,000	569,118	750,000	200,000	200,000	0	1,719,118
EL-16001	Underground System Rebuild	85,496	1,500	350,000	350,000	350,000	350,000	350,000	1,750,000
EL-13008	Upgrade Estimating Software	52,750	23,148	0	0	0	0	0	0
EL-17008	Utility Control Center Upgrades	0	497,187	0	0	0	0	0	0
EL-04012	Utility Site Security Improvements	26,614	45,000	133,500	50,000	0	0	0	183,500
EL-19004	Wood Pole Replacement	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
	<b>System Improvements Total</b>	<b>3,506,141</b>	<b>10,757,876</b>	<b>20,224,555</b>	<b>15,201,000</b>	<b>8,685,000</b>	<b>6,578,000</b>	<b>14,845,000</b>	<b>65,533,556</b>

# ELECTRIC FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Undergrounding Projects</b>									
<b>EL-08001</b>	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	50,000	1,750,000	250,000	0	0	2,050,000
<b>EL-11009</b>	Underground District 43 - Alma/Embarcadero	0	0	0	0	56,000	2,000,000	0	2,056,000
<b>EL-12001</b>	Underground District 46 - Charleston/El Camino Real	214,263	2,450,000	616,191	0	0	0	0	616,191
<b>EL-11010</b>	Underground District 47 - Middlefield/Homer/Webster/Addison	31,960	10,000	474,622	0	0	0	0	474,622
<b>Undergrounding Projects Total</b>		<b>246,223</b>	<b>2,460,000</b>	<b>1,140,813</b>	<b>1,750,000</b>	<b>306,000</b>	<b>2,000,000</b>	<b>0</b>	<b>5,196,813</b>
<b>Total Uses</b>		<b>6,194,839</b>	<b>16,047,946</b>	<b>23,765,368</b>	<b>19,501,000</b>	<b>11,691,000</b>	<b>10,978,000</b>	<b>17,245,000</b>	<b>83,180,369</b>





## LEGEND

## 42 PROPOSED UNDERGROUND PROJECTS

42	UG DISTRICT #42	(08001)	2000-2021
43	UG DISTRICT #43	(11009)	2021-2023
46	UG DISTRICT #46	(12001)	2011-2020
47	UG DISTRICT #47	(11010)	2011-2019
48	UG DISTRICT #48	(XXXXX)	2028-2031
49	UG DISTRICT #49	(XXXXX)	2032-2035
50	UG DISTRICT #50	(XXXXX)	2036-2039
51	UG DISTRICT #51	(XXXXX)	2040-2043
52	UG DISTRICT #52	(XXXXX)	2044-2047
53	UG DISTRICT #53	(XXXXX)	2048-2051

## A PROPOSED UNDERGROUND REBUILD

A5	REBUILD U.G., DISTRICT #15	(11/009)	2016-2020
A11	REBUILD U.G., DISTRICT #16	(13/003)	2017-2020
A12	REBUILD U.G., DISTRICT #20	(14/002)	2017-2020
A14	REBUILD U.G., DISTRICT #24	(16/000)	2016-2020
A15	REBUILD U.G., DISTRICT #25	(19/000)	2019-2020
A16	REBUILD U.G., DISTRICT #30	(19/003)	2019-2021
A17	REBUILD U.G., DISTRICT #32	(17/000)	2019-2021
A18	REBUILD U.G., DISTRICT #19	(11/006)	2017-2020
A19	REBUILD U.G., DISTRICT #24	(10/006)	2016-2020

## PROPOSED 60KV SYSTEM REBUILD

**B1** RELOCATE QR/HO 60KV LINE (LANE A & B) (13002) \_\_\_\_\_ 2019-2021

## PROPOSED SYSTEM IMPROVEMENT

D2	RECONFIGURE QUARRY FEEDERS	(1405)	2014-2019
D4	COLORADO / HOPKINS SYSTEM IMPROVEMENT	(1500)	2015-2022
	COLORADO POWER STATION EQUIPMENT UPGRADE	(1901)	2019-2020
	COLORADO SUBSTATION IMPROVEMENTS	(1902)	2019-2020



# PROPOSED 4/12KV CONVERSION

C5	ST. FRANCIS/ OREGON/ AAMARILLO/ LOUIS 4/12KV	(11002)	2001-2020
C6	SEALE/ WAYERLEY 4/12KV	(11000)	2002-2023
C8	EDGEWOOD/ WILDWOOD 4/12KV	(13000)	2021-2022
C9	COLORBIDGE/ COMBER/ TENNIS/ 4/12KV	(14000)	2019-2020
C10	MAYBELL 1.82 CONVERSION 4/12KV	(14004)	2019-2021
C11	EAST MEADOW - FARMVIEW 4/12KV	(17001)	2017-2020
C12	HOPKINS SUBSTATION 4/12KV	(20000)	
PH1	LOUIS/ CALIFORNIA/ MIDDLEFIELD/ MORENO 4/12KV		2020-2022
PH2	LOUIS/ OREGON/ EMBARCADERO/ ST. FRANCIS 4/12KV		2020-2022
PH3	CHANNING/ EDGEWOOD/ JACKSON/ GREER 4/12KV		2021-2023
PH4	CHANNING/ EMBARCADERO/ NEWELL/ GREER 4/12KV		2021-2023
PH5	CHANNING/ CENTER/ DAYA 4/12KV		2022-2024
PH6	CHANNING/ EMBARCADERO/ METVILLE/ NEWELL 4/12KV		2022-2024

## MISCELLANEOUS PROJECTS NOT LABELED

VA HOSPITAL CUSTOMER CONNECTION	(17003)	2017-2022
FACILITY REPLACEMENT FOR CALTAIN ELECTRIFICATION	(117007)	2018-2020
UTILITY CONTROL CENTER UPGRADE	(117008)	2017-2019
UNDERGROUND SYSTEM REBUILD - VARIOUS AREAS	(16001)	2016-2024
CAPACITOR BANK INSTALLATION - VARIOUS AREAS	(16002)	2016-2020
SUBSTATION SECURITY - VARIOUS AREAS	(16003)	2016-2023
SUBSTATION 40KV BREAKER REPLACEMENT	(117002)	2017-2024
PILOT WIRE RELAY REPLACEMENT	(117005)	2017-2022
SMART GRID TECHNOLOGY INSTALLATION	(11014)	2019-2024
ELECTRIC CUSTOMER CONNECTIONS	(89028)	2019-2024
230 KV ELECTRIC INTERTIE	(06001)	2019-2020
COMMUNICATIONS SYSTEM IMPROVEMENTS	(89031)	2019-2024
UPGRADE ESTIMATING SOFTWARE	(13008)	2018-2019
ELECTRIC SYSTEM IMPROVEMENTS	(98003)	2019-2024
ELECTRIC UTILITY GEOGRAPHIC INFORMATION SYSTEM	(02011)	2019-2024
SCADA SYSTEM UPGRADES	(02010)	2019-2024
SUBSTATION FACILITY IMPROVEMENTS	(89044)	2019-2024
SUBSTATION PROTECTION IMPROVEMENTS	(89038)	2019-2024
UTILITY SITE SECURITY IMPROVEMENTS	(04012)	2018-2021
WOOD POLE REPLACEMENT	(119004)	2019-2024
UNDERGROUND DISTRIBUTION SYSTEM SECURITY	(113007)	2018-2020





CITY OF  
**PALO  
ALTO**



## Customer Connections

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** Customer Connections  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-89028

Electric Troubleshooter installing an electric meter to provide service to a customer

# Electric Customer Connections

## Description

This project allows for the installation of services, transformers, meters for new customers, upgrades of existing services, temporary service connections, and overhead/underground extensions for new/existing customers.

## Justification

The project provides funding for installing electric services for new customer connections and the upgrading existing services. These are critical functions for providing electrical service to the City's customers. During a typical year, over 200 electric services are installed or upgraded in the City.

## Supplemental Information

Budget amounts requested for work covered by this project are based on historical expenditures and growth projections. The Electric Fund pays for a portion of this project while remaining costs are supported by reimbursements from customers, telephone, and cable television companies for project work performed by the City.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	1,130,070	0	700,000	850,000	1,000,000	700,000	700,000	3,950,000	0	N/A
<b>Other</b>	N/A	1,700,000	2,830,070	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	8,500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,830,070</b>	<b>2,830,070</b>	<b>2,400,000</b>	<b>2,550,000</b>	<b>2,700,000</b>	<b>2,400,000</b>	<b>2,400,000</b>	<b>12,450,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	2,830,070	2,830,070	2,400,000	2,550,000	2,700,000	2,400,000	2,400,000	12,450,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,830,070</b>	<b>2,830,070</b>	<b>2,400,000</b>	<b>2,550,000</b>	<b>2,700,000</b>	<b>2,400,000</b>	<b>2,400,000</b>	<b>12,450,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**



## System Improvements



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** National Accelerator Laboratory Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2013  
**Initial Project Completion:** Fall 2015  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2020  
**Project Number:** EL-06001

Possible electric substation connection point to existing 60 kV system

# 230 kV Electric Intertie

## Description

Funding for this project is used to perform technical feasibility studies to determine the general project requirements to establish a 230 kV electric intertie line and construct a 230/60 kV substation to connect the City's electric system directly to the 230kV transmission line. The City is in discussions with Stanford University and Stanford Linear Accelerator Laboratory (SLAC), one of ten Department of Energy (DOE) Office of Science laboratories, on the shared interest and benefits in the new intertie. If this project comes to fruition, the estimated total project cost for a secondary transmission line is \$40.0 - \$50.0 million and could be shared with both Stanford and SLAC/DOE. If this project is canceled, staff will seek funding for an alternative solution to provide a second transmission source to Palo Alto.

## Justification

This new electric line will allow the City to bypass the local transmission fees charged by PG&E. This transmission line will provide the City with an alternate source of power during emergencies, such as the plane crash in 2010 that impacted electric power to the entire City.

## Significant Changes

**2019-2023 CIP:** The City presented its findings to Stanford and SLAC/DOE and is waiting for a response from SLAC to determine whether this project will move forward.

**2017-2021 CIP:** Project completion has been moved out as discussions with Stanford and SLAC/DOE are ongoing and no agreement has been finalized. Cooperation between these two entities is necessary for this project to move forward.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	262,564	177,481	0	177,481	0	0	0	0	177,481	0	440,045
<b>Total</b>	<b>262,564</b>	<b>177,481</b>	<b>0</b>	<b>177,481</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>177,481</b>	<b>0</b>	<b>440,045</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	210,049	177,481	0	177,481	0	0	0	0	177,481	0	387,530
<b>Design</b>	52,510	0	0	0	0	0	0	0	0	0	52,510
<b>Total</b>	<b>262,559</b>	<b>177,481</b>	<b>0</b>	<b>177,481</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>177,481</b>	<b>0</b>	<b>440,040</b>

## Operating Impact

Projected net annual savings resulting from the interconnection fee reduction will be approximately \$2.0 million based on projected energy purchases and the price difference between 115 kV and 230 kV service as lower voltage services are more expensive than higher voltage services.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation

Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Electric Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2014  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:** Fall 2015  
**Revised Project Completion:** Fall 2019  
**Project Number:** EL-16002

Capacitor Bank

# Capacitor Bank Installation

## Description

The City of Palo Alto is required to maintain a power factor greater than 0.95 at its main supply point as part of its agreement with the Northern California Power Association. The power factor is the ratio of power drawn from the main supply and the power that it actually consumes. This project will install capacitor banks at electric substations and on distribution lines to ensure this requirement is met.

## Justification

In recent years, the power Factor, as measured at the service point from PG&E transmission lines, has dropped below the required 0.95 lagging amount. To raise the power factor above the required limit the Utilities Department will install up to 10 mega volt ampere reactive (MVAR) of capacitors at various locations on the electric system. With the installation of the capacitor bank, this project will increase the power factor to meet current requirements and maintain a sufficient power factor for the next 7 years.

## Significant Changes

**2020-2024 CIP:** Capacitor banks will be installed at Hanover, Hansen Way, Quarry Road and Park Boulevard Substations. Capacitor banks have been ordered, and installation is expected to be completed by fall 2019.

**2019-2023 CIP:** Staff has performed an analysis on where capacitors are needed to provide MVAR support to the system. This project has become a lower priority due to a decrease in the system electric load and staff shortages that have elevated other projects above this one.

**2017-2021 CIP:** Shifting project priorities have delayed the completion of this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	889	349,111	168,700	180,411	0	0	0	0	180,411	0	350,000
<b>Total</b>	<b>889</b>	<b>349,111</b>	<b>168,700</b>	<b>180,411</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180,411</b>	<b>0</b>	<b>350,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	710	349,111	168,700	180,411	0	0	0	0	180,411	0	349,821
<b>Design</b>	177	0	0	0	0	0	0	0	0	0	177
<b>Total</b>	<b>887</b>	<b>349,111</b>	<b>168,700</b>	<b>180,411</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180,411</b>	<b>0</b>	<b>349,998</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

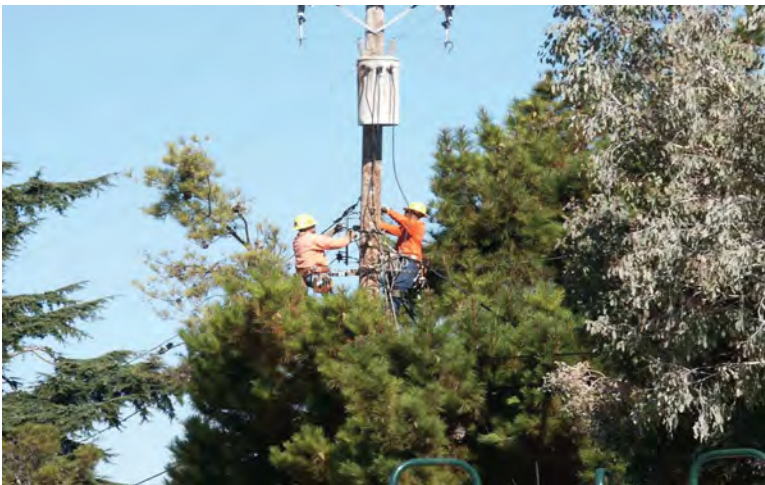
**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Coleridge/Cowper/Tennyson area  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2016  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Spring 2020  
**Project Number:** EL-14000

Overhead crews working on overhead lines

# Coleridge/Cowper/Tennyson 4/12kV Conversion

## Description

This project will convert the primary electric distribution system in the Coleridge/Cowper/Tennyson area from 4kV to 12kV.

## Justification

Because of the difference in voltage, the 4kV and 12kV systems cannot be directly connected and used to back up one another. Due to prior conversions to 12kV in adjacent areas, this 4kV area needs to be converted to 12kV so that adequate circuit connections can be restored. This will allow customers to be switched from one circuit to another during normal or emergency conditions, improve operating flexibility of the system, and enhance service reliability to customers in this area. Converting to 12kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

## Significant Changes

**2020-2024 CIP:** The majority of the project funding is moving to FY 2020 to coordinate with other projects planned in conjunction with the Colorado/Hopkins System Improvements.

**2019-2023 CIP:** This project is a precursor to work being planned for Colorado/Hopkins System Improvements (EL-15000). The purpose of this project converts the primary electric distribution system in the Coleridge/Cowper/Tennyson area from 4kV to 12kV. The start date has been pushed out to coordinate with other projects planned in conjunction with the Colorado/Hopkins System Improvements.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	50,000	50,000	930,000	0	0	0	0	930,000	0	980,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>50,000</b>	<b>930,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>930,000</b>	<b>0</b>	<b>980,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	930,000	0	0	0	0	930,000	0	930,000
Design	0	50,000	50,000	0	0	0	0	0	0	0	50,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>50,000</b>	<b>930,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>930,000</b>	<b>0</b>	<b>980,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.





**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Colorado Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Fall 2019  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2020  
**Project Number:** EL-19001

Colorado Power Substation

# Colorado Power Station Equipment Upgrades

## Description

This project will replace aging peripheral equipment used on the substation transformer banks at the Colorado Power Station. The Colorado Power Station is the 115kV/60kV transmission side of the Colorado Substation, which transforms the electricity to a lower voltage for distribution.

## Justification

A project was done in 2015 to replace all the original primary and secondary bushings. With these preventative maintenance and operating practices, the transformers have a life expectancy well beyond the industry expectations; however, the condition of the auxiliary equipment is not as good. The tanks and radiators are rusty and the paint is chalky and faded, leading to breakdown of the steel. The transformers have many minor oil leaks around the radiator flanges, inspection covers and valve packings from old and compressed cork gaskets. The leaks are a potential environmental hazard if the oil migrates to the ground and into storm water. Additionally, where oil gets out, water can seep in. This will eventually increase the moisture in the oil that could result in failure of the transformer. The temperature and level gauges show signs of long term UV exposure and the plastics have become brittle and cracked.

## Significant Changes

**2020-2024 CIP** The replacement of aging peripheral equipment at the Colorado Power Station has been reassigned to replacing the failed COP-2 transformer. The unexpected cost of replacing the failed transformer increased the project from \$900,000 to \$2,500,000. The aging peripheral equipment will be dealt with in a future year.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	3,300,000	2,700,000	600,000	0	0	0	0	600,000	0	3,300,000
<b>Total</b>	<b>0</b>	<b>3,300,000</b>	<b>2,700,000</b>	<b>600,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>3,300,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	3,300,000	2,700,000	600,000	0	0	0	0	600,000	0	3,300,000
<b>Total</b>	<b>0</b>	<b>3,300,000</b>	<b>2,700,000</b>	<b>600,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>3,300,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Normal maintenance costs that will be absorbed within the available maintenance schedule and annual budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.3

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Colorado Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2021  
**Project Number:** EL-19002

Colorado Electric Substation Driveway

# Colorado Substation Site Improvements

## Description

This project will make modifications to the substation driveways and fence to provide adequate ingress and egress for utility vehicles used for maintenance and repair as well as building concrete barriers between transformers #1 and #3.

## Justification

The Colorado Power Station (COP) site contains three, large utility power transformers. It also contains the 60kV main bus that forms the backbone of the 60kV loop throughout the City. COP transformers #1 and #3 are situated in close proximity to each other and in recent years, it has become apparent that catastrophic failure of an adjacent power transformer can damage the other. Although the station is built and designed to avoid the majority of disasters from an electric system protection perspective, environmental and other penetrants play a critical role in the risk exposure of these assets. It is prudent to guard against such events by erecting concrete barriers between COP transformers #1 and #3 and to begin conceptual design for concrete walls on a partial perimeter to protect against outside adversaries.

## Significant Changes

**2019-2023 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	100,000	50,000	450,000	0	0	0	0	450,000	0	500,000
<b>Total</b>	<b>0</b>	<b>100,000</b>	<b>50,000</b>	<b>450,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450,000</b>	<b>0</b>	<b>500,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	450,000	0	0	0	0	450,000	0	450,000
Design	0	100,000	50,000	0	0	0	0	0	0	0	50,000
<b>Total</b>	<b>0</b>	<b>100,000</b>	<b>50,000</b>	<b>450,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450,000</b>	<b>0</b>	<b>500,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Relationship to Comprehensive Plan****Secondary Connection**

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.11

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Hopkins and Colorado Substations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2015  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Spring 2023  
**Project Number:** EL-15000

Electric Substation

# Colorado/Hopkins System Improvement

## Description

This project will replace deteriorating equipment, which will increase system capacity and improve service reliability for the areas served by the Hopkins and Colorado substations and adjacent substations.

## Justification

Transformers at both the Hopkins and Colorado Substations are near the end of their useful life, along with much of the other equipment at Hopkins. Hopkins is a 4kV substation and has no connections to other substations, so there is no backup to serve customers should there be a catastrophic problem at that substation.

## Supplemental Information

Improvements are necessary to serve future electrical load projections and provide back up service to Hopkins. This project will evaluate solutions to best solve the multitude of issues facing these substations, such as how best to accommodate the replacement of this equipment.

## Significant Changes

**2020-2024 CIP:** The revised project total of \$3.0 million includes the complete demolition of 4kV equipment at Hopkins Substation and rebuild with new 12kV equipment. The project is still in the planning phase and Staff will return to Council once the design is complete.

**2019-2023 CIP:** Staff has completed the initial cost/benefit analysis to assess various alternatives to meet distribution system needs and increased the budget accordingly.

**2018-2022 CIP:** Revised load projections associated with new loads in the Stanford Hospital area and has necessitated adjustment to the project plans.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	50,000	0	568,000	2,000,000	1,000,000	0	0	3,568,000	0	3,568,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>568,000</b>	<b>2,000,000</b>	<b>1,000,000</b>	<b>0</b>	<b>0</b>	<b>3,568,000</b>	<b>0</b>	<b>3,568,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	518,000	2,000,000	1,000,000	0	0	3,518,000	0	3,518,000
<b>Design</b>	0	50,000	0	50,000	0	0	0	0	50,000	0	50,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>568,000</b>	<b>2,000,000</b>	<b>1,000,000</b>	<b>0</b>	<b>0</b>	<b>3,568,000</b>	<b>0</b>	<b>3,568,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-89031

Traffic/Fiber technicians repairing the city fiber optic cables

# Communications System Improvements

## Description

This project installs copper wire cable systems, high frequency coaxial cable, fiber optic cable, and related equipment to provide communications services for traffic signal coordination, telephone links, computer data transmission, and the Electric Supervisory Control and Data Acquisition (SCADA) system.

## Justification

Installation of communication lines is essential for the provision of City services. The broadband system provides communication between the Utility Control Center to substations and field equipment and between substation protection equipment. This annual project funds, as necessary, expansion of the system and replacement of deteriorating facilities.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	993,757	993,757	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>993,757</b>	<b>993,757</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	993,757	993,757	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>993,757</b>	<b>993,757</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** East Charleston/Alma Street/East Meadow Drive/Middlefield Road area  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2022  
**Project Number:** EL-17001

Electric Linemen working on utility pole

# East Meadow Circles 4/12kV Conversion

## Description

This project will convert the primary electric distribution system in the East Charleston/Alma Street/East Meadow Drive/Middlefield Road area from 4kV to 12kV.

## Justification

Because of the difference in voltage, the 4kV and 12kV systems cannot be directly connected and used to back up one another. Due to prior 12kV conversions in adjacent areas, this 4kV area needs to be converted to 12kV so that adequate circuit connections can be restored. This will allow customers to be switched from one circuit to another during normal or emergency conditions, and improve operating flexibility of the system and service reliability to customers in this area. Converting to 12kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

## Significant Changes

**2019-2023 CIP:** The project converts the primary electric distribution system in the East Charleston/Alma Street/East Meadow Drive/Middlefield Road area from 4kV to 12kV. This project is in the preliminary stages of assessment for engineering design and is being reevaluated to determine the scope of work that should be involved. Issues with replacing the rear-easement facilities may dictate a change in direction of the project scope. Project funding has been decreased by \$0.9 million and pushed out.

**2017-2021 CIP:** Project established.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	995	48,000	48,000	800,000	166,000	0	0	0	966,000	0	1,014,995
<b>Total</b>	<b>995</b>	<b>48,000</b>	<b>48,000</b>	<b>800,000</b>	<b>166,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>966,000</b>	<b>0</b>	<b>1,014,995</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	795	48,000	48,000	800,000	166,000	0	0	0	966,000	0	1,014,795
<b>Design</b>	198	0	0	0	0	0	0	0	0	0	198
<b>Total</b>	<b>993</b>	<b>48,000</b>	<b>48,000</b>	<b>800,000</b>	<b>166,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>966,000</b>	<b>0</b>	<b>1,014,993</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Edgewood/Wildwood area  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2016  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Spring 2021  
**Revised Project Completion:** Spring 2022  
**Project Number:** EL-13000

Electric linemen working on overhead electric connection

## Edgewood/Wildwood 4kV Tie

### Description

This project will install new overhead wires to connect the Hopkins electric feeders #3 (HO-3) and #7 (HO-7) in the Edgewood/Wildwood area.

### Justification

Because of the voltage difference, the 4kV and 12kV systems cannot be directly connected and provide redundancy. When the East Meadow 4kV feeders are converted to 12kV (EL-17001), the 4kV back-up connections from East Meadow to Hopkins substations will be eliminated. In order to maintain reliable service in the event of a feeder outage at the Hopkins Substation, this project will construct a tie between the HO-3 and HO-7 feeders.

### Significant Changes

**2019-2023 CIP:** The project has shifted to begin in Fiscal Year 2021 after completion of project EL-17001.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	50,000	400,000	0	0	450,000	0	450,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>400,000</b>	<b>0</b>	<b>0</b>	<b>450,000</b>	<b>0</b>	<b>450,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	400,000	0	0	400,000	0	400,000
<b>Design</b>	0	0	0	0	50,000	0	0	0	50,000	0	50,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>400,000</b>	<b>0</b>	<b>0</b>	<b>450,000</b>	<b>0</b>	<b>450,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-98003

Electric crews working in an underground vault terminating cables

# Electric System Improvements

## Description

This project provides funding, as needed, to improve the Electric Distribution System. Typical activities include: increasing system capacity for load growth, replacing deteriorated capital facilities, reconfiguring/adding to the system to improve service reliability, repairing and replacing storm damaged equipment, and making general improvements to the system.

## Justification

Electric system service reliability and adequate system capacity are critical to providing a high level of service to customers in Palo Alto. When service interruptions occur, customers may experience significant economic losses. The City must continuously evaluate service reliability needs and make improvements to the system to maintain top-level service to City customers.

## Supplemental Information

Other funding sources include reimbursements from the telephone company for work performed on their behalf by City staff.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	2,168,586	2,378,586	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A
<b>Other</b>	N/A	210,000	0	0	0	0	0	0	0	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,378,586</b>	<b>2,378,586</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>7,500,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	2,378,586	2,378,586	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,378,586</b>	<b>2,378,586</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>7,500,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

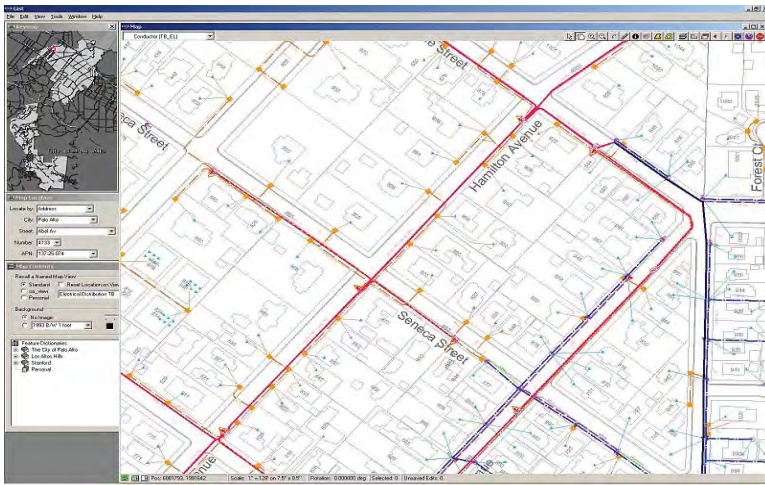
Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-02011

View of City of Palo Alto GIS System

# Electric Utility Geographic Information System

## Description

This project will enhance the citywide Geographical Information System (GIS). The primary emphasis will be to provide a compatible user interface and estimating software to edit and update data, which will reside in the citywide GIS. The project includes the migration of the existing electric and fiber networks to a unified mapping solution compatible with the citywide GIS.

## Justification

GIS has grown from being a set of special purpose computer applications to being an information tool that serves all segments of the City. Applications have been developed that make GIS information accessible to hundreds of users, which has greatly increased the value of the system. Funding in the CIP is for ongoing mapping system modifications to facilitate technical requirements, external contractor system support, anticipated system upgrades, and to meet future needs and facilitate integration to the new citywide GIS. This could include recommendations for upgrade or replacement of existing systems.

## Significant Changes

**2020-2024 CIP:** The City will move to a new GIS platform, Esri, in FY 2020. Annual funding will support Electric's portion of the implementation and ongoing support of the new GIS system.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	282,241	119,541	327,700	165,000	165,000	165,000	165,000	987,700	0	N/A
<b>Total</b>	<b>N/A</b>	<b>282,241</b>	<b>119,541</b>	<b>327,700</b>	<b>165,000</b>	<b>165,000</b>	<b>165,000</b>	<b>165,000</b>	<b>987,700</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	282,241	119,541	327,700	165,000	165,000	165,000	165,000	987,700	0	N/A
<b>Total</b>	<b>N/A</b>	<b>282,241</b>	<b>119,541</b>	<b>327,700</b>	<b>165,000</b>	<b>165,000</b>	<b>165,000</b>	<b>165,000</b>	<b>987,700</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations along railroad  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2017  
**Initial Project Completion:** Winter 2018  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2019  
**Project Number:** EL-17007

Intersection of Alma and East Meadow

# Facility Relocation for Caltrain Modernization Project

## Description

This project allows for the relocation of overhead Utility Electric and Fiber Optic lines to provide adequate clearance from new electric lines being installed by the Peninsula Corridor Joint Powers Board (Caltrain) to convert their commuter trains from diesel to electric power.

## Justification

The Caltrain Modernization Program consists of converting Caltrain from diesel-hauled to Electric Multiple Unit trains. The installation of the Overhead Catenary System above the rails to power the trains will cause conflicts with the City's overhead electric and communication lines, as well as those owned by others, such as AT&T and Comcast, which cross the railroad tracks. Originally, Caltrain was looking to have the overhead lines relocated/removed by August 2018 for an anticipated project completion in 2020. In order to meet Caltrain's timeline, Utilities obtained funding and started the design process in FY 2017. If lines are placed underground, Utilities will look for opportunities to share the costs with AT&T and Comcast as part of the joint construction agreement between the three entities for installation of underground facilities.

## Supplemental Information

Though electric power for the trains will be provided by PG&E from outside of Palo Alto's city limits, the timely relocation/removal of overhead electric lines will facilitate the conversion of the commuter train system from diesel fuel to electricity, reducing greenhouse gas emissions, noise, and pollution in Palo Alto. Caltrain is receiving funding for the project from several differ-



ent sources. If Caltrain does not obtain full funding to complete the project, construction funding approved by Council for the relocation of facilities will be returned to reserves.

### Significant Changes

**2020-2024 CIP:** The Utilities Department received approval from Caltrain to continue removal of the overhead lines in October 2018. The installation of the Overhead Catenary System above the rails to power the trains will cause conflicts with the City's overhead electric and communication lines, as well as those owned by others, including AT&T and Comcast, which cross the railroad tracks. Engineering is scheduled to be completed in June 2019 and construction will start in FY 2020.

**2019-2023 CIP:** The project was put on hold in FY 2018 until Caltrain received funding and gave the Utilities Department notice that the project was moving ahead. Staff is still negotiating with Caltrain on an agreement on cost sharing. At this time, Caltrain's requirement is to raise the overhead power lines and the budget was increased by \$1.3 million to reflect the change.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	20,299	2,979,701	40,000	4,049,701	0	0	0	0	4,049,701	0	4,110,000
<b>Total</b>	<b>20,299</b>	<b>2,979,701</b>	<b>40,000</b>	<b>4,049,701</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,049,701</b>	<b>0</b>	<b>4,110,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	16,239	2,979,701	40,000	4,049,701	0	0	0	0	4,049,701	0	4,105,940
<b>Design</b>	4,059	0	0	0	0	0	0	0	0	0	4,059
<b>Total</b>	<b>20,298</b>	<b>2,979,701</b>	<b>40,000</b>	<b>4,049,701</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,049,701</b>	<b>0</b>	<b>4,109,999</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

#### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

May Require Environmental Review



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Louis/Oregon/Embarcadero/St Francis  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Spring 2023  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** EL-20000

Garland Drive

# Hopkins Substation 4/12kV Conversion

## Description

This project will fund the conversion of the distribution system connected to the Hopkins Substation from 4kV to 12kV.

## Justification

The future conversion of the Hopkins Substation from 4kV to 12kV requires that all the areas currently served at 4kV from the Hopkins Substation be converted to 12kV. This project will improve operating flexibility of the system, service reliability, and back-up to customers in downtown and other adjacent areas.

## Supplemental Information

This project will be completed in the following seven phases, (schedule subject to change):

FY 2020 - 1) Louis/California/Middlefield/Moreno and 2) Louis/Oregon/Embarcadero/St. Francis

FY 2021 - 3) St. Francis/Oregon/Amarillo/Louis; 4) Channing/Edgewood/Jackson/Greer; and 5) Channing/Embarcadero/Newell/Greer

FY 2022 - 6) Channing/Center/Dana and 7) Channing/Embarcadero/Melville/Newell

## Significant Changes

**2019-2023 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	0	0	100,000	1,950,000	2,100,000	1,543,000	0	5,693,000	0	5,693,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,000</b>	<b>1,950,000</b>	<b>2,100,000</b>	<b>1,543,000</b>	<b>0</b>	<b>5,693,000</b>	<b>0</b>	<b>5,693,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	322	1,800,001	2,000,001	1,543,000	0	5,343,324	0	5,343,324
<b>Design</b>	0	0	0	99,678	149,999	99,999	0	0	349,676	0	349,676
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,000</b>	<b>1,950,000</b>	<b>2,100,000</b>	<b>1,543,000</b>	<b>0</b>	<b>5,693,000</b>	<b>0</b>	<b>5,693,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2022  
**Project Number:** EL-17005

Aging electric equipment

# Inter-substation Line Protection Relay

## Description

This project funds the replacement of existing wire relays with new microprocessor-based line differential protective relays to protect the City's 60kV sub-transmission line sections and equipment from damage due to faults (i.e. short circuits) on the 60kV line sections.

## Justification

The existing electro-mechanical wire differential relays are approaching the end of their useful life and rely on a copper pilot wire cable system running between each substation to maintain communication between the relay pairs located at the ends of each 60kV line section. These pilot wire cables have aged significantly and are the source of repeated failures due to corrosion in connections and splices, which cause open circuits, particularly during the rainy season. During these periods of interrupted pilot wire communication, the existing pilot wire relays do not provide adequate back-up protection, putting the City at risk of an outage should a fault occur on the 60kV line section.

## Significant Changes

**2020-2024 CIP:** Project title change from HCB Pilot Wire Replay Replacement to Inter-substation Line Protection Relay. The scope and funding for the project have increased as staff has determined that replacing the entire 60kV protection system is the best way to ensure reliable service.

**2019-2023 CIP:** Staff completed the relay replacements between Quarry and Hopkins Substations, installation of fiber optic communication cables between Colorado, Maybell, East Meadow

and Adobe Creek Substations, and is now working on installation of the relays at Maybell and East Meadow and placing them in service.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	210,559	282,502	185,000	125,501	150,000	150,000	0	0	425,501	0	821,060
<b>Total</b>	<b>210,559</b>	<b>282,502</b>	<b>185,000</b>	<b>125,501</b>	<b>150,000</b>	<b>150,000</b>	<b>0</b>	<b>0</b>	<b>425,501</b>	<b>0</b>	<b>821,060</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	168,441	282,502	185,000	125,501	150,000	150,000	0	0	425,501	0	778,942
<b>Design</b>	42,105	0	0	0	0	0	0	0	0	0	42,105
<b>Total</b>	<b>210,546</b>	<b>282,502</b>	<b>185,000</b>	<b>125,501</b>	<b>150,000</b>	<b>150,000</b>	<b>0</b>	<b>0</b>	<b>425,501</b>	<b>0</b>	<b>821,047</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation  
Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Area bounded by Los Palos, Glenbrook, Pomona, and Arastradero  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2010  
**Initial Project Completion:** Summer 2012  
**Revised Project Start:** Spring 2018  
**Revised Project Completion:** Fall 2019  
**Project Number:** EL-11003

Underground transformer and cable after years of service

# Rebuild Underground District 15

## Description

This project will rebuild and replace the underground electric system in Underground District 15. The area is bounded by Los Palos, Glenbrook, Pomona, and Arastradero. Work will include the replacement of deteriorated electrical cables, transformers and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The underground system serving Underground District 15 was installed in 1973. The cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

## Significant Changes

**2020-2024 CIP:** Work on this project has been delayed due to public input regarding the design of the project.

**2019-2023 CIP:** This project rebuilds and replaces the underground electric system in Underground District 15, the area bounded by Los Palos, Glenbrook, Pomona, and Arastradero. This project is in the preliminary stages of assessment for engineering design and work will be coordinated with Rebuild Underground District 26 (EL-16000) which is rebuilding the electric system along Arastradero Road. Work on this project has been delayed due to staffing shortages.

**2017-2021 CIP:** Shifting project priorities and the loss of Engineering staff have delayed the completion of this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	36,502	472,960	10,000	459,609	0	0	0	0	459,609	0	506,111
<b>Total</b>	<b>36,502</b>	<b>472,960</b>	<b>10,000</b>	<b>459,609</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>459,609</b>	<b>0</b>	<b>506,111</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	29,200	472,960	0	419,609	0	0	0	0	419,609	0	448,809
<b>Design</b>	7,298	0	10,000	40,000	0	0	0	0	40,000	0	57,298
<b>Total</b>	<b>36,498</b>	<b>472,960</b>	<b>10,000</b>	<b>459,609</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>459,609</b>	<b>0</b>	<b>506,107</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Louis Road between Greer Street and Loma Verde Avenue  
**Managing Department:** Utilities  
**Initial Project Start:** Winter 2016  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2020  
**Project Number:** EL-13003

Electric crews installing new underground cables

# Rebuild Underground District 16

## Description

This project will rebuild and replace the underground electric system in Underground District 16. The area is located along Louis Road between Greer Street and Loma Verde Avenue. Work will include the replacement of deteriorated electrical cables, transformers, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The underground system serving Underground District 16 was installed in 1974, and cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in them in the winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

## Significant Changes

**2020-2024 CIP:** Work on this project has been delayed as Staff continues with the process of receiving public input regarding the design of the project.

**2019-2023 CIP:** This project is in the preliminary stages of assessment for engineering design and work will be coordinated with Rebuild Underground District 26 (EL-16000), which is rebuilding the electric system along Arastradero Road. Funding has increased to reflect market prices and moved to FY 2019.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	7,587	392,413	3,000	387,667	0	0	0	0	387,667	0	398,254
<b>Total</b>	<b>7,587</b>	<b>392,413</b>	<b>3,000</b>	<b>387,667</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387,667</b>	<b>0</b>	<b>398,254</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	6,069	392,413	3,000	387,667	0	0	0	0	387,667	0	396,736
<b>Design</b>	1,516	0	0	0	0	0	0	0	0	0	1,516
<b>Total</b>	<b>7,585</b>	<b>392,413</b>	<b>3,000</b>	<b>387,667</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387,667</b>	<b>0</b>	<b>398,252</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Channing Avenue; Center Street; Hamilton Avenue; and Lincoln Avenue  
**Managing Department:** Utilities  
**Initial Project Start:** Winter 2017  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2020  
**Project Number:** EL-14002

Utility Engineer planning out the next underground rebuild project

# Rebuild Underground District 20

## Description

This project will rebuild and replace the underground electric system in Underground District 20. Work will include the replacement of deteriorated electrical cables, transformers, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The underground system serving Underground District 20 was installed in 1979, and cables and equipment in the area have exceeded their expected life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water during winter. The water reduces the life of the equipment and electrical connections and requires the rebuilding of the facilities.

## Significant Changes

**2019-2023 CIP:** This project rebuilds and replaces the underground electric system in Underground District 20, the area bounded by Channing Avenue, Center Street, Hamilton Avenue, and Lincoln Avenue. This project is in the preliminary stages of assessment for engineering design.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	9,968	130,000	0	1,530,000	0	0	0	0	1,530,000	0	1,539,968
<b>Total</b>	<b>9,968</b>	<b>130,000</b>	<b>0</b>	<b>1,530,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,530,000</b>	<b>0</b>	<b>1,539,968</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	7,974	130,000	0	1,530,000	0	0	0	0	1,530,000	0	1,537,974
<b>Design</b>	1,991	0	0	0	0	0	0	0	0	0	1,991
<b>Total</b>	<b>9,965</b>	<b>130,000</b>	<b>0</b>	<b>1,530,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,530,000</b>	<b>0</b>	<b>1,539,965</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



Electric underground cable vault

**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Hamilton Avenue, San Francisquito Creek, Southwood Drive and Chaucer Street  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2016  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2021  
**Project Number:** EL-17000

# Rebuild Underground District 23

## Description

This project will rebuild and replace the underground electric system in the area of the City bounded by Hamilton Avenue, San Francisquito Creek, Southwood Drive, and Chaucer Street. Work will include the replacement of deteriorated electrical cables, transformers, switches and enclosures.

## Justification

The underground electric distribution system in the area bounded by Hamilton Avenue, San Francisquito Creek, Southwood Drive, and Chaucer Street was installed in 1983. Typical underground cable and equipment expected life is approximately 30 years in ideal conditions and now needs to be replaced. Installation of new equipment will bring the electrical system up to current construction standards.

## Significant Changes

**2020-2024 CIP:** The budget has increased \$600,000 to account for increased substructure work and construction costs.

**2019-2023 CIP:** This project rebuilds and replaces the underground electric system in the area bounded by Chaucer Street, San Francisquito Creek, Hamilton Avenue, and Southwood Drive. This project is in the preliminary stages of assessment for engineering design.

**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	50,000	0	214,000	1,100,000	0	0	0	1,314,000	0	1,314,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>214,000</b>	<b>1,100,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,314,000</b>	<b>0</b>	<b>1,314,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	164,000	1,100,000	0	0	0	1,264,000	0	1,264,000
<b>Design</b>	0	50,000	0	50,000	0	0	0	0	50,000	0	50,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>214,000</b>	<b>1,100,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,314,000</b>	<b>0</b>	<b>1,314,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Lytton Avenue; Bryant Street; Forest Avenue; and Alma Street  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2009  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:**  
**Revised Project Completion:** Winter 2019  
**Project Number:** EL-10006

University Avenue (part of Underground District 24 where underground electric facilities will be replaced)

# Rebuild Underground District 24

## Description

This project will rebuild and replace the underground electric system in Underground District 24. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The underground electric distribution system in the Underground District 24 was installed in 1983 and cables and equipment in the area have exceeded their useful life of 30 years. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water during winter. The water reduces the life of the equipment and electrical connections and requires that rebuilding be performed on the facilities. Underground District 24 covers a major portion of the University Avenue downtown area bounded by Lytton Avenue, Bryant Street, Forest Avenue, and Alma Street and reliable electric power is critical to the businesses in the area.

## Significant Changes

**2019-2023 CIP:** Much of this work is performed during the evening hours to avoid impacting commercial businesses, which increases the construction timeline. Construction by City staff is approximately 85% completed and further progress is delayed waiting for delivery of long lead-time materials. Work is being done in conjunction with Rebuild Underground District 19 (EL-11008).

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	1,779,569	749,651	170,000	579,651	0	0	0	0	579,651	0	2,529,220
<b>Total</b>	<b>1,779,569</b>	<b>749,651</b>	<b>170,000</b>	<b>579,651</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>579,651</b>	<b>0</b>	<b>2,529,220</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,423,642	749,651	170,000	579,651	0	0	0	0	579,651	0	2,173,293
<b>Design</b>	355,902	0	0	0	0	0	0	0	0	0	355,902
<b>Total</b>	<b>1,779,544</b>	<b>749,651</b>	<b>170,000</b>	<b>579,651</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>579,651</b>	<b>0</b>	<b>2,529,195</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Architectural Review Board

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Orme Street between Los Robles Avenue and Juana Briones School  
**Managing Department:** Utilities  
**Initial Project Start:** Winter 2018  
**Initial Project Completion:** Spring 2020  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2020  
**Project Number:** EL-19000

Orme Street (part of Underground District 25)

# Rebuild Underground District 25

## Description

This project will rebuild and replace the underground electric system in Underground District 25. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The electric system included in the scope of work of Underground District 25 was installed in 1983. Underground District 25 includes Orme Street between Los Robles Avenue and Juana Briones School. The cables are at the end of their expected life of 30 years and need to be replaced. In addition, most of the other equipment (transformers, junctions, etc.) were installed in subsurface enclosures that have standing water, garden chemicals, oil, or other corrosive materials that impact equipment life.

## Significant Changes

**2020-2024 CIP:** The budget has decreased by \$300,000 as the substructure work was not as extensive as originally estimated.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	50,000	10,000	240,000	0	0	0	0	240,000	0	250,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>10,000</b>	<b>240,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>240,000</b>	<b>0</b>	<b>250,000</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	200,000	0	0	0	0	200,000	0	200,000
<b>Design</b>	0	50,000	10,000	40,000	0	0	0	0	40,000	0	50,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>10,000</b>	<b>240,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>240,000</b>	<b>0</b>	<b>250,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Arastradero Road between El Camino Real and Hillview Avenue  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2016  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Summer 2020  
**Project Number:** EL-16000

Arastradero Road (part of Underground District 26)

# Rebuild Underground District 26

## Description

This project will rebuild and replace the underground electric system in Underground District 26. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The electric system included in the scope of work of Underground District 26 was installed in 1984. Underground District 26 includes Arastradero Road between El Camino Real and Hillview Avenue. The cables are nearing the end of their expected life of 30 years and the fused switches that were installed at that time have issues with operation and need to be replaced. In addition, most of the other equipment (transformers, junctions, etc.) were installed in subsurface enclosures that have standing water, garden chemicals, oil, or other corrosive materials that impact equipment life.

## Significant Changes

**2019-2023 CIP:** This project is in the preliminary stages of assessment for engineering design and will be designed in conjunction with the Underground District 15 project, which is rebuilding the electric system on Los Palos/Glenbrook/Pomona area.

**2017-2021 CIP:** Shifting project priorities and turnover of engineering staff have caused the delay for the completion of this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	1,330	149,000	0	799,000	0	0	0	0	799,000	0	800,330
<b>Total</b>	<b>1,330</b>	<b>149,000</b>	<b>0</b>	<b>799,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>799,000</b>	<b>0</b>	<b>800,330</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,063	0	0	650,000	0	0	0	0	650,000	0	651,063
<b>Design</b>	264	149,000	0	149,000	0	0	0	0	149,000	0	149,264
<b>Total</b>	<b>1,327</b>	<b>149,000</b>	<b>0</b>	<b>799,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>799,000</b>	<b>0</b>	<b>800,327</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Louis/California/Middlefield/  
Moreno  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2018  
**Initial Project Completion:** Spring 2020  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2021  
**Project Number:** EL-19003

Underground Utilities Enclosure

# Rebuild Underground District 30

## Description

This project will rebuild and replace the underground electric system in the area of the City bounded by San Francisquito Creek, Edgewood Drive, Island Drive, Hamilton Avenue, Center Drive, Dana Avenue, Alester Avenue, and Jackson Drive. Work will include the replacement of deteriorated electrical cables, transformers, switches, and enclosures.

## Justification

The underground electric distribution system in the area bounded by San Francisquito Creek, Edgewood Drive, Island Drive, Hamilton Avenue, Center Drive, Dana Avenue, Alester Avenue, and Jackson Drive was installed in 1987. Typical underground cable and equipment expected life is approximately 30 years in ideal conditions and now need to be replaced. Installation of new equipment will bring the electrical system up to current construction standards. Rebuild of this area is being done ahead of other older underground areas to facilitate the 4/12kV conversions needed for changes at Hopkins Substation (EL-20000).

## Significant Changes

**2020-2024 CIP:** The budget has increased \$300,000 to account for increased substructure work and construction costs.

**2019-2023 CIP:** Project established

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	50,000	0	406,000	1,200,000	0	0	0	1,606,000	0	1,606,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>406,000</b>	<b>1,200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,606,000</b>	<b>0</b>	<b>1,606,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	356,000	1,200,000	0	0	0	1,556,000	0	1,556,000
Design	0	50,000	0	50,000	0	0	0	0	50,000	0	50,000
<b>Total</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>406,000</b>	<b>1,200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,606,000</b>	<b>0</b>	<b>1,606,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

San Francisquito Creek Joint Powers Authority

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Quarry Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2013  
**Initial Project Completion:** Spring 2015  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2019  
**Project Number:** EL-14005

Substation crews installing underground facilities

# Reconfigure Quarry Feeders

## Description

This project includes the reconfiguration of distribution circuits connections to substation transformers at Quarry Substation. The circuits will be more evenly divided between the four transformers at this substation to provide greater operating flexibility during outages.

## Justification

Quarry Substation serves the Stanford Mall/Hospital area and the majority of the University Avenue downtown area. It has four substation transformers and ten circuits emanating from the substation to serve different areas. Two transformers have four circuits each while the remaining two (formerly at Alma Substation) have one circuit each. Load growth in the area requires the transfer of some of the circuits to the newly installed transformers to maintain operating flexibility and balance the load. If this work is not performed, outages that affect two of the transformers could be longer in duration, leading to customer dissatisfaction, business impact, and financial losses.

## Significant Changes

**2019-2023 CIP:** The designs for this project are being adjusted to facilitate new electric loads proposed by Stanford Hospital and other significant projects in the area. The new design will incorporate work required to serve the new loads and will be constructed after the customer service work is completed. The project estimate and construction drawings are completed. The project has been delayed waiting for Stanford to complete the installation of boxes and conduits to facilitate the work as part of the service to the new Stanford BioMedical Innovations building.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	481,260	581,616	75,000	506,616	0	0	0	0	506,616	0	1,062,876
<b>Total</b>	<b>481,260</b>	<b>581,616</b>	<b>75,000</b>	<b>506,616</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>506,616</b>	<b>0</b>	<b>1,062,876</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	384,996	581,616	75,000	506,616	0	0	0	0	506,616	0	966,612
<b>Design</b>	96,242	0	0	0	0	0	0	0	0	0	96,242
<b>Total</b>	<b>481,238</b>	<b>581,616</b>	<b>75,000</b>	<b>506,616</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>506,616</b>	<b>0</b>	<b>1,062,854</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.





**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2018  
**Initial Project Completion:** Spring 2020  
**Revised Project Start:** Summer 2020  
**Revised Project Completion:** Spring 2021  
**Project Number:** EL-13002

Electric linemen working on 60kV overhead lines

## Relocate Quarry/Hopkins Substation 60kV Line (A & B)

### Description

This project relocates the Quarry/Hopkins (QR/HO) 60kV sub-transmission line and associated facilities in Lanes A & B, and the nearby Alma Street area to a more physically accessible route for electric crews and equipment. When the Alma Substation was removed, the current transmission line route was no longer required. This project will investigate relocating this line to a more acceptable location that meets technical and aesthetic requirements.

### Justification

The old 60kV overhead lines are located in a congested area of downtown and are difficult to access and maintain. The existing configuration is awkward and space consuming.

### Significant Changes

**2019-2023 CIP:** This project relocates the Quarry/Hopkins (QR/HO) 60kV sub-transmission line and associated facilities in Lanes A & B, and the nearby Alma Street area to a more physically accessible route for electric crews and equipment. The engineering design has been delayed to FY 2020 with construction anticipated to begin in FY 2021.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	750,000	0	0	0	750,000	0	750,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>750,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>750,000</b>	<b>0</b>	<b>750,000</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	750,000	0	0	0	750,000	0	750,000
Total	0	0	0	0	750,000	0	0	0	750,000	0	750,000

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** SCADA System at Utility Control Center  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-02010

SCADA Technologist configuring SCADA software

# SCADA System Upgrades

## Description

This project will upgrade the Supervisory Control and Data Acquisition (SCADA) system hardware. The SCADA system is used to monitor and control critical assets of the City's Electric, Gas, and Water utility systems from the Utility Control Center.

## Justification

An upgrade to peripheral equipment is necessary each year to keep the hardware and software current in order to handle the ever-increasing demands on the system and maintain manufacturer/industry support.

## Supplemental Information

Annual budget amounts are for minor system upgrades/replacements. Full system upgrades are on a 3 to 4 year cycle.

## Significant Changes

**2020-2024 CIP:** The increase in FY 2021 budget increase is to fund the purchase and installation of a demilitarized zone (DMZ) to add an additional layer of security to the City's local area network (LAN). An external network node can access only what is exposed in the DMZ, while the rest of the organization's network is firewalled. The DMZ functions as a small, isolated network positioned between the Internet and the LAN which will allow the City extra time to detect and address breaches before they further penetrate into the internal networks.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	115,000	65,000	265,000	320,000	120,000	120,000	130,000	955,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>115,000</b>	<b>65,000</b>	<b>265,000</b>	<b>320,000</b>	<b>120,000</b>	<b>120,000</b>	<b>130,000</b>	<b>955,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	115,000	65,000	265,000	320,000	120,000	120,000	130,000	955,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>115,000</b>	<b>65,000</b>	<b>265,000</b>	<b>320,000</b>	<b>120,000</b>	<b>120,000</b>	<b>130,000</b>	<b>955,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

Program: C3.2.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2016  
**Initial Project Completion:** Fall 2022  
**Revised Project Start:** Fall 2024  
**Revised Project Completion:** Fall 2026  
**Project Number:** EL-11014

Sample of energy use information that could be available to customers

# Smart Grid Technology Installation

## Description

This project will implement portions of the Smart Grid Road Map that can be cost effectively applied to the City's Electric, Gas, and Water utility systems resulting in operating cost savings, environmental benefits, plus an increased quality of life and productivity for the residents and businesses of Palo Alto.

## Justification

The Smart Grid will help the City of Palo Alto achieve its goals in: energy conservation, carbon emission reduction, efficient utilization of aging infrastructure, improved system reliability, integration of distributed energy resources, accommodation of battery charging demands, cost-effective commodity purchases, and meeting customer demands for information.

## Supplemental Information

This project could include aspects of data management system, smart metering, fiber optic infrastructure improvement, distribution system automation, outage management system, load management system, demand-side management system, leak and revenue protection, customer interface to energy usage, and customer equipment control.

## Significant Changes

**2020-2024 CIP:** In December 2018, the City Council accepted the 'Smart Grid and Utilities Technology Implementation Plan' that recommended the implementation of an Automated Metering Infrastructure (AMI) based smart grid system at an estimated cost of \$19 million. The Smart Grid will help the City achieve its goals in: energy and water conservation, carbon emission reduction, efficient utilization of aging infrastructure, improved system reliability, integration of dis-

tributed energy resources, cost-effective commodity purchases, and meeting customer demands for information.

The cost is estimated to be borne by the Electric (\$10.5 million), Gas (\$3.4 million) and Water (\$5.1 million) Funds. The actual project implementation is not expected to begin until 2023, upon the implementation of the customer information system upgrade project. It is also anticipated the funds from the Electric Special Projects (ESP) reserves will be used to cover the initial capital costs. The Gas and Water Funds will then repay the ESP reserve loan over 10 years at 3.5% interest with an annualized payment of \$0.41 million and \$0.61 million respectively.

**2019-2023 CIP:** Project activities in 2019 include consultant development of system specifications in preparation for an RFP to solicit contracts with meter data management systems and advanced metering infrastructure vendors for delivery in 2021 and 2022, respectively. Implementation will begin in 2021 once the upgrade of Utilities' Customer Information System is complete.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	(592,558)	615,981	(270,000)	886,000	2,000,000	0	0	8,980,000	11,866,000	5,680,000	16,683,442
<b>Transfer from Gas Fund</b>	436,334	180,000	180,000	0	0	0	0	410,000	410,000	410,000	1,436,334
<b>Transfer from Water Fund</b>	436,334	290,000	290,000	0	0	0	0	610,000	610,000	610,000	1,946,334
<b>Total</b>	<b>280,110</b>	<b>1,085,981</b>	<b>200,000</b>	<b>886,000</b>	<b>2,000,000</b>	<b>0</b>	<b>0</b>	<b>10,000,000</b>	<b>12,886,000</b>	<b>6,700,000</b>	<b>20,066,110</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	221,306	1,085,981	200,000	886,000	2,000,000	0	0	10,000,000	12,886,000	6,700,000	20,007,306
<b>Design</b>	58,798	0	0	0	0	0	0	0	0	0	58,798
<b>Total</b>	<b>280,104</b>	<b>1,085,981</b>	<b>200,000</b>	<b>886,000</b>	<b>2,000,000</b>	<b>0</b>	<b>0</b>	<b>10,000,000</b>	<b>12,886,000</b>	<b>6,700,000</b>	<b>20,066,104</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Transportation

Section: Sustainable Transportation

Goal: T-1

Policy: T-1.5

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

## ELECTRIC FUND

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2028  
**Project Number:** EL-17002

High voltage circuit breakers

# Substation 60kV Breaker Replacement

## Description

This project funds the purchase and replacement of high voltage circuit breakers that interconnect the nine electric substations and two power switching stations. There are 25 circuit breakers reaching the end of their recommended reliable useful life expectancy and/or are now underrated for the use.

## Justification

A recent 60kV circuit breaker study performed for the City of Palo Alto found that the interrupting current rating of two of these circuit breakers on the system is not high enough to handle the expected maximum fault current level. Three other circuit breakers are marginal with respect to their interrupting current rating. Six additional older oil circuit breakers are obsolete and have reached or are reaching the ends of their operable lives. One oil circuit breaker has experienced a non-catastrophic failure. Should there be a fault, it could result in a failure of any one of these twelve circuit breakers to operate properly, damaging the breaker and leading to a prolonged electric outage. These circuit breakers are integral and critical components of the electric utility transmission system.

## Significant Changes

**2020-2024 CIP:** Staff has increased the project scope to include all 60kV circuit breakers in the distribution system, bringing the number of circuit breakers to replace from 12 to 25. This project will be a 10-year program replacing 5 breakers per year. The annual budget of \$600,000 includes engineering consulting services, material, and construction.



**2017-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	163,179	250,001	130,001	720,000	600,000	600,000	600,000	600,000	3,120,000	0	3,413,180
<b>Total</b>	<b>163,179</b>	<b>250,001</b>	<b>130,001</b>	<b>720,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>3,120,000</b>	<b>0</b>	<b>3,413,180</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	130,538	250,001	130,001	720,000	600,000	600,000	600,000	600,000	3,120,000	0	3,380,539
<b>Design</b>	32,630	0	0	0	0	0	0	0	0	0	32,630
<b>Total</b>	<b>163,168</b>	<b>250,001</b>	<b>130,001</b>	<b>720,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>3,120,000</b>	<b>0</b>	<b>3,413,169</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-89044

Electric Substation transformer and bus structure

## Substation Facility Improvements

### Description

This project involves several improvements to each of the nine substation facilities in Palo Alto, including installation and replacement of capacitors, replacement of various substation equipment, renovation of security fences and entry gates, paving of driveways and parking areas in substations, upgrading of substation drainage systems, replacement of Remote Terminal Unit (RTU) equipment, bus voltage monitoring and local area network (LAN) connections, as well as other improvements.

### Justification

The electric substations are the link between the transmission and distribution systems. At the substations, voltage levels are converted and distribution circuits branch out to provide power throughout the City. They are a key element to providing reliable electric service to residents and customers in Palo Alto. Work completed under this project helps to ensure reliable operation and electric service.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	523,534	346,934	376,600	200,000	200,000	200,000	200,000	1,176,600	0	N/A
<b>Total</b>	<b>N/A</b>	<b>523,534</b>	<b>346,934</b>	<b>376,600</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,176,600</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	523,534	346,934	376,600	200,000	200,000	200,000	200,000	1,176,600	0	N/A
<b>Total</b>	<b>N/A</b>	<b>523,534</b>	<b>346,934</b>	<b>376,600</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,176,600</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Colorado Substation  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2015  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Fall 2018  
**Revised Project Completion:** Winter 2023  
**Project Number:** EL-16003

Substation perimeter wall providing security for the enclosed equipment

# Substation Physical Security

## Description

The electric substations are a key element of the Electric Distribution System used to provide electricity to residents and customers of Palo Alto. This project will evaluate options for protecting electric substations from outside vandalism and intrusion. If necessary, fences and other protections will be repaired. If warranted and approved, a request for proposal will be issued for construction.

## Justification

The 2013 incident involving PG&E's Metcalf Substation in South San Jose has brought about increased security concerns regarding utility sites and systems. A severe disruption to one of Palo Alto's substations could result in outages of an extended period. The Utility Site Security Improvements project (EL-04012) is addressing the aspects of visual security such as digital cameras, while this project will address the need for physical protection.

## Significant Changes

**2020-2024 CIP:** Project title changed from Substation Security to Substation Physical Security. The project budget has increased by \$1.0 million to account for increased project scope at Colorado and Hansen Substations and construction cost escalation.

**2019-2023 CIP:** Project budget increased by \$0.3 million to account for construction escalation.

**2017-2021 CIP:** Shifting project priorities have caused the delay for the completion of this project. A consultant assessed and recommended security measures in 2017. Staff will review recommendations and issue bids for selected improvements.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	124,678	365,118	296,000	569,118	750,000	200,000	200,000	0	1,719,118	0	2,139,796
<b>Total</b>	<b>124,678</b>	<b>365,118</b>	<b>296,000</b>	<b>569,118</b>	<b>750,000</b>	<b>200,000</b>	<b>200,000</b>	<b>0</b>	<b>1,719,118</b>	<b>0</b>	<b>2,139,796</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	99,732	365,117	296,000	569,118	750,000	200,000	200,000	0	1,719,118	0	2,114,850
<b>Design</b>	24,923	1	0	0	0	0	0	0	0	0	24,923
<b>Total</b>	<b>124,655</b>	<b>365,118</b>	<b>296,000</b>	<b>569,118</b>	<b>750,000</b>	<b>200,000</b>	<b>200,000</b>	<b>0</b>	<b>1,719,118</b>	<b>0</b>	<b>2,139,773</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Electric Substations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-89038

Electric Substation used to distribute power to City of Palo Alto customers

# Substation Protection Improvements

## Description

This project funds the purchase of protective overcurrent relays, circuit breakers, high voltage fuses, and other equipment used at electric substations to protect the equipment and circuits emanating from the substation from damage due to faults (i.e. short circuits) on the electric system.

## Justification

The electric substations are the link between the transmission and distribution systems. At the substations, voltage levels are converted and distribution circuits branch out to provide power throughout the City. They are a key element to providing reliable electric service to residents and customers in Palo Alto. Protective equipment is used to stop power flow when there are problems on the electric system. As the Electric Distribution System becomes more complex and reliability more critical, maintenance of these systems is imperative.

This project includes replacement of old protective devices and controls that no longer provide the level of functionality now required for more sophisticated and sensitive devices. Properly designed and operating protective systems are required to ensure public safety, reduce equipment damage, and minimize the impact of faults such as reduction in outage durations.

## Significant Changes

**2020-2024 CIP:** Staff completed the 60kV coordination study and is working on designs for replacement of current transformers that would be overloaded during faults. Staff is also working on the designs to replace the relays on the Maybell Substation feeders. Due to the size and

complexity of this project, staff is in the process of procuring an Engineering Consultant to do the detailed design of the equipment layout and wiring.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	689,522	596,522	393,000	300,000	300,000	300,000	300,000	1,593,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>689,522</b>	<b>596,522</b>	<b>393,000</b>	<b>300,000</b>	<b>300,000</b>	<b>300,000</b>	<b>300,000</b>	<b>1,593,000</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	689,522	596,522	393,000	300,000	300,000	300,000	300,000	1,593,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>689,522</b>	<b>596,522</b>	<b>393,000</b>	<b>300,000</b>	<b>300,000</b>	<b>300,000</b>	<b>300,000</b>	<b>1,593,000</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.





**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-16001

Electric crews preparing to enter underground vault

# Underground System Rebuild

## Description

Underground primary electric cables and equipment have a limited life span and need to be replaced before they fail and cause outages. This project will replace underground electric equipment in areas that were originally installed underground instead of as a part of an Underground District. Work will include the replacement of deteriorated electrical cables, transformers, switches and enclosures. Installation of new equipment will bring the electrical system up to current construction standards.

## Justification

The underground system cables and equipment installed prior to 1990 have an expected life of 30 years and now need to be replaced. In addition, most of the equipment and cables were installed in subsurface enclosures that have standing water in them in the winter. Exposure to water reduces the life of the equipment and electrical connections and require the rebuilding of the facilities. Utilities has specific projects to address rebuilding Underground Districts. This project will address replacing underground equipment that was installed originally as underground and not part of an Underground District.

## Significant Changes

**2020-2024 CIP:** Staff is working to identify areas that are high priority for cable replacement based on the age of the existing cables. This currently includes areas in the Stanford Research Park, Arastradero Road, and along East Bayshore Road.

**2019-2023 CIP:** Shifting project priorities and staffing shortages have delayed identification and development of projects to replace underground facilities that fall under this project.



**2016-2021 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	64,504	1,500	350,000	350,000	350,000	350,000	350,000	1,750,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>64,504</b>	<b>1,500</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>1,750,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	64,504	1,500	350,000	350,000	350,000	350,000	350,000	1,750,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>64,504</b>	<b>1,500</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>350,000</b>	<b>1,750,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2004  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2021  
**Project Number:** EL-04012

Security cameras for system security and monitoring

# Utility Site Security Improvements

## Description

The Utilities Electric, Water, and Gas Distribution Systems provide services to residents and businesses that are fundamental necessities of living and working in Palo Alto. This project will add electronic security systems at utility sites to protect equipment at electric substations, water pumping plants, reservoirs, and gas stations from intrusion and vandalism.

## Justification

This project addresses security risks and mitigation methods for City utility facilities identified in a utility site assessment that was completed in 2003. The 2013 vandalism incident at PG&E's Metcalf Substation has heightened security concerns regarding utility sites and systems. This project implements the recommendations in the site assessment report and installs equipment at two to three facilities per year.

## Significant Changes

**2020-2024 CIP:** To date, cameras and detection systems have been installed at seven of nine electric substations, three water stations, and one natural gas station to monitor the facilities. Software agreements and assessing the need for electronic security at the remaining substations continue to be finalized. After FY 2021, any scope improvements to physical substation security will be absorbed in Substation Physical Security (EL-16003).

**2017-2021 CIP:** Shifting project priorities have caused the delay for the completion of this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	1,416,181	128,466	45,000	133,500	50,000	0	0	0	183,500	0	1,644,681
<b>Total</b>	<b>1,416,181</b>	<b>128,466</b>	<b>45,000</b>	<b>133,500</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>183,500</b>	<b>0</b>	<b>1,644,681</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,132,939	128,466	45,000	133,500	50,000	0	0	0	183,500	0	1,361,439
<b>Design</b>	283,229	0	0	0	0	0	0	0	0	0	283,229
<b>Total</b>	<b>1,416,168</b>	<b>128,466</b>	<b>45,000</b>	<b>133,500</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>183,500</b>	<b>0</b>	<b>1,644,668</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Electric Fund - Operating</b>	0	0	30,000	30,000	30,000

## Operating Impact

After Fiscal Year 2021, operating and maintenance cost will increase by \$30,000 annually for ongoing maintenance of the cameras and detection equipment installed as part of this project.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## ELECTRIC FUND



**Fund:** Electric Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** EL-19004

Aging pole that needs to be replaced.

# Wood Pole Replacement

## Description

This project will fund the annual replacement of deteriorated wood poles.

## Justification

Wood poles are used to support overhead utility lines throughout the City of Palo Alto. Though poles are inspected, tested, and treated to maintain their integrity, over time poles will deteriorate to the point that they are no longer safe for utility workers. Replacement of wood poles has been funded under the Electric System Improvement project (EL-98003); however, wood pole replacement competes with other system improvement and service reliability work for funding. A new specific project for pole replacement is being established to give pole replacement a higher priority, as poles are getting older, and to ensure proper funding is approved and allocated each year.

## Significant Changes

**2020-2024 CIP:** Project revenues updated to reflect estimated shared costs from AT&T for joint pole access.

**2019-2023 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	N/A	1,200,000	1,500,000	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000	6,750,000	0	N/A
<b>Other</b>	N/A	0	0	150,000	150,000	150,000	150,000	150,000	750,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,200,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>7,500,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,200,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,200,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>7,500,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301



CITY OF  
**PALO  
ALTO**

## Undergrounding Projects



**Fund:** Electric Fund - Operating  
**Category:** Undergrounding Projects  
**Project Location:**  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2017  
**Initial Project Completion:** Spring  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Spring 2022  
**Project Number:** EL-08001

Intersection of Embarcadero Road and Waverley Street (part of Underground District 42)

# Underground District 42 - Embarcadero Road, Emerson, Middlefield

## Description

This project will replace the existing overhead electrical distribution system with an underground system along Embarcadero between Emerson and Middlefield. This project involves creating an Underground Utilities District and performing the work on a general benefit basis under the provisions of Utility Rule 17 which requires the Utility to bear the cost of the distribution system and the property owners to bear the cost of undergrounding their services.

## Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Undergrounding has been approved to continue the ongoing underground conversion program and also because the area meets the California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

## Significant Changes

**2020-2024 CIP:** Design and construction are being spread over two years.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	0	0	50,000	1,750,000	(50,000)	0	0	1,750,000	0	1,750,000
<b>Other</b>	0	0	0	0	0	300,000	0	0	300,000	0	300,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>1,750,000</b>	<b>250,000</b>	<b>0</b>	<b>0</b>	<b>2,050,000</b>	<b>0</b>	<b>2,050,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	1,750,000	250,000	0	0	2,000,000	0	2,000,000
<b>Design</b>	0	0	0	50,000	0	0	0	0	50,000	0	50,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>1,750,000</b>	<b>250,000</b>	<b>0</b>	<b>0</b>	<b>2,050,000</b>	<b>0</b>	<b>2,050,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to be categorically exempt from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** Undergrounding Projects  
**Project Location:** Alma, Addison, Bryant, and Melville  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2018  
**Initial Project Completion:** Spring 2019  
**Revised Project Start:** Spring 2021  
**Revised Project Completion:** Spring 2023  
**Project Number:** EL-11009

Alma Street at Embarcadero Road (part of Underground District 43)

# Underground District 43 - Alma/ Embarcadero

## Description

This project will replace the existing overhead electrical distribution system with an underground system in the area bounded by Alma, Addison, Bryant, and Melville. This project involves creating an Underground Utilities District and performing the work on a general benefit basis under the provisions of Utility Rule 17, which requires the Utility to bear the cost of the distribution system and the property owners to bear the cost of undergrounding their services. The design phase of this project will start in Fiscal Year 2020.

## Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Undergrounding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

## Significant Changes

**2020-2024 CIP:** Design and construction work is being spread over two years.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	0	0	0	0	0	56,000	1,700,000	0	1,756,000	0	1,756,000
<b>Other</b>	0	0	0	0	0	0	300,000	0	300,000	0	300,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,000</b>	<b>2,000,000</b>	<b>0</b>	<b>2,056,000</b>	<b>0</b>	<b>2,056,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	2,000,000	0	2,000,000	0	2,000,000
<b>Design</b>	0	0	0	0	0	56,000	0	0	56,000	0	56,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,000</b>	<b>2,000,000</b>	<b>0</b>	<b>2,056,000</b>	<b>0</b>	<b>2,056,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** Undergrounding Projects  
**Project Location:** 400 block of West Charleston and El Camino Real  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2015  
**Initial Project Completion:** Spring 2017  
**Revised Project Start:** Spring 2017  
**Revised Project Completion:** Summer 2019  
**Project Number:** EL-12001

Overhead facilities at the intersection of Arastradero Road and El Camino Real (part of Underground District 46)

# Underground District 46 - Charleston/ El Camino Real

## Description

This project includes the costs to underground the existing overhead Electrical Distribution System in the area along the 400 block of West Charleston and El Camino Real.

## Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics of this busy intersection. Funding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines.

## Significant Changes

**2020-2024 CIP:** Construction began in June 2018. Undergrounding will be completed by June 2019, and the overhead system will be removed.

**2017-2021 CIP:** Due to safety concerns, this project was re-prioritized and moved up by one year.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	433,812	3,066,191	2,130,743	616,191	0	0	0	0	616,191	0	3,180,746
<b>Other</b>	0	0	319,257	0	0	0	0	0	0	0	319,257
<b>Total</b>	<b>433,812</b>	<b>3,066,191</b>	<b>2,450,000</b>	<b>616,191</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>616,191</b>	<b>0</b>	<b>3,500,003</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	347,040	3,054,455	2,450,000	616,191	0	0	0	0	616,191	0	3,413,231
<b>Design</b>	86,752	11,736	0	0	0	0	0	0	0	0	86,752
<b>Total</b>	<b>433,792</b>	<b>3,066,191</b>	<b>2,450,000</b>	<b>616,191</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>616,191</b>	<b>0</b>	<b>3,499,983</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Electric Fund - Operating  
**Category:** Undergrounding Projects  
**Project Location:** Middlefield, Homer Avenue, Webster Street, and Addison Avenue  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2013  
**Initial Project Completion:** Spring 2016  
**Revised Project Start:**  
**Revised Project Completion:** Summer 2019  
**Project Number:** EL-11010

Overhead facilities that will be undergrounded as part of Underground District 47

# Underground District 47-Middlefield, Homer, Webster, Addison

## Description

This project includes the design costs to underground the existing overhead Electrical Distribution System.

## Justification

Benefits of undergrounding include system improvement, higher reliability, reduced tree trimming, and improved aesthetics. Funding has been approved to continue the ongoing underground conversion program and also because the area meets California Public Utilities Commission rules dictating the areas where a telephone company can underground their lines. Underground District 47 is bounded by Middlefield, Homer Avenue, Webster Street, and Addison Avenue.

## Significant Changes

**2020-2024 CIP:** Remaining property owners completed their portion of conversion work by February 2019. Removal of existing overhead distribution lines commenced in March 2019 and is expected to be complete by June 2019.

**2019-2023 CIP:** Construction by City staff is approximately 85% completed for this area. Work is being done in conjunction with the Underground District 19 project (EL-11008).

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Electric Fund</b>	2,059,600	486,812	10,000	474,622	0	0	0	0	474,622	0	2,544,222
<b>Other</b>	1,105,161	0	0	0	0	0	0	0	0	0	1,105,161
<b>Total</b>	<b>3,164,761</b>	<b>486,812</b>	<b>10,000</b>	<b>474,622</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>474,622</b>	<b>0</b>	<b>3,649,383</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,531,796	486,812	10,000	474,622	0	0	0	0	474,622	0	3,016,418
<b>Design</b>	632,938	0	0	0	0	0	0	0	0	0	632,938
<b>Total</b>	<b>3,164,734</b>	<b>486,812</b>	<b>10,000</b>	<b>474,622</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>474,622</b>	<b>0</b>	<b>3,649,356</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



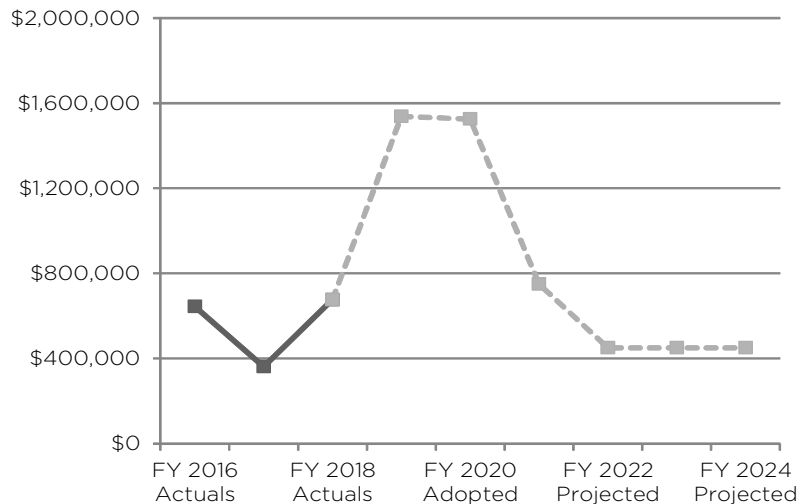
# FIBER OPTICS FUND

## Overview

The City of Palo Alto is the only municipality in the State of California that operates a full suite of City-owned utility services. The most recent addition to this list of services provided to City of Palo Alto residents and commercial customers is the leasing of dark fiber service connections on a dark optical fiber backbone system (fiber system), originally designed and built by the City in the mid to late 1990s.

For the 2020-2024 Capital Improvement Program (CIP), expenditures of \$3.6 million are programmed, with \$1.5 million allocated in Fiscal Year 2020. Major projects funded in the 2020-2024 CIP include Fiber Optics Customer Connections (\$1.3 million), Fiber Optics Network System Improvements (\$1.3 million) and Fiber Optics System Rebuild (\$1.1 million). The budget for the Fiber Optics CIP can be categorized into two types of projects: Capacity Improvements and Customer Connections.

Fiber Optics Fund Capital Expenditures



## Infrastructure Inventory

CLASSIFICATION	QUANTITY
Route Miles of Backbone Fiber Cable	49
Route Miles of Overhead Backbone Fiber Optic Cable	16
Route Miles of Underground Backbone Fiber Optic Cable	33

## Capacity Improvements

With the advance in technology, increase in online services, and increase in data transmission needs to meet consumer demand, the capability afforded by fiber optic cables is increasingly in demand. To ensure reliable fiber optic service to City of Palo Alto residents and commercial customers, fiber optic system components (fiber optic cables and splice cabinets) need to be upgraded or added to increase capacity; replaced or protected from damage by animals; and rerouted away from hazardous conditions.

### Recent Accomplishments

- Added new fiber conduit on University Avenue as part of the Upgrade Downtown project.
- Completed field investigation and design of new fiber backbone from Park Boulevard Substation to Stanford Research Park area.

### 2020-2024 Capital Improvement Program

#### Recurring Projects

There is one recurring project in the Capacity Improvements category in the 2020-2024 CIP:

- Fiber Optics Network System Improvements (Fiscal Year 2020: \$0.5 million; 2020-2024 CIP: \$1.3 million)

#### Non-Recurring Projects

There is one non-recurring project in the Capacity Improvements category in the 2020-2024 CIP:

- Fiber Optics System Rebuild (Fiscal Year 2020: \$0.8 million; 2020-2024 CIP: \$1.1 million)

The Fiber Optics System Rebuild project is expected to extend through Fiscal Year 2021 and will rebuild portions of the fiber system that have reached capacity, limiting the City's ability to provide dark fiber optic service connections to all potential customers. Rebuilding portions of the fiber system includes installation of additional fiber optic cables in the Stanford Research Park area and replacement of several below ground splice closures with pad-mounted pedestals. Rebuild work scheduled for Fiscal Year 2020 includes installing substructure and dark fiber for the new fiber path from Park Boulevard Substation to the Stanford Research Park area.

## Customer Connections

As customers continually change their fiber optic needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the fiber optics system must evolve to meet these needs. Projects in this category include work required to meet the needs of customers who have applied for new or upgraded fiber optic service connections. The connection costs associated with new or upgraded connections are offset by non-recurring charges (NRC) to establish the connections and monthly recurring charges (MRC) or dark fiber license fees.

### Recent Accomplishments

- Installed public Wi-Fi to unserved City facilities, including community areas in Cubberley Community Center, Lucie Stern Community Center, and Baylands Golf Links.

# FIBER OPTICS FUND

## 2020-2024 Capital Improvement Program

### Recurring Projects

In the Customer Connections category there is one recurring project: Fiber Optics Customer Connections. In the 2020-2024 Capital Improvement Program, recurring funding in this project remains at \$0.3 million annually. This project provides funding for the installation of fiber optic infrastructure for new service connections.

### Non-Recurring Projects

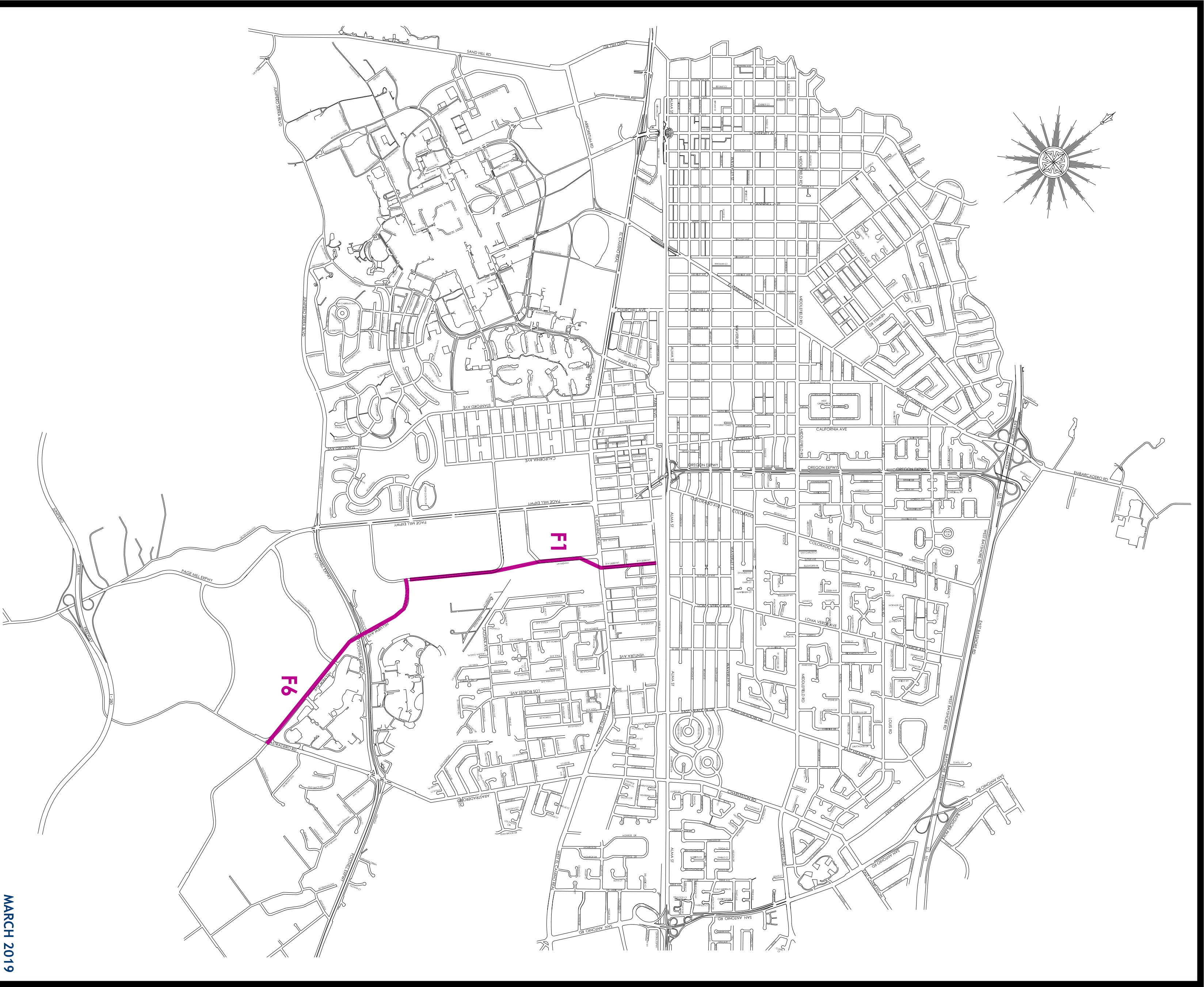
There are no non-recurring projects in this category.

## Summary of Capital Activity

### FIBER OPTICS FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Other Revenues</b>									
FO-10000	Fiber Optics Customer Connections: Connection Charges	236,972	45,000	200,000	200,000	200,000	200,000	200,000	1,000,000
FO-10001	Fiber Optics Network System Improvements	4,795	0	0	0	0	0	0	0
	<b>Other Revenues Total</b>	<b>241,767</b>	<b>45,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,000,000</b>
	<b>Total Sources</b>	<b>241,767</b>	<b>45,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,000,000</b>
<b>Use of Funds</b>									
<b>Capacity Improvements</b>									
FO-10001	Fiber Optics Network System Improvements	400,928	1,327,635	500,000	200,000	200,000	200,000	200,000	1,300,000
FO-16000	Fiber Optics System Rebuild	5,656	50,000	775,000	300,000	0	0	0	1,075,000
	<b>Capacity Improvements Total</b>	<b>406,584</b>	<b>1,377,635</b>	<b>1,275,000</b>	<b>500,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>2,375,000</b>
<b>Customer Connections</b>									
FO-10000	Fiber Optics Customer Connections	270,213	160,000	250,000	250,000	250,000	250,000	250,000	1,250,000
	<b>Customer Connections Total</b>	<b>270,213</b>	<b>160,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>1,250,000</b>
	<b>Total Uses</b>	<b>676,797</b>	<b>1,537,635</b>	<b>1,525,000</b>	<b>750,000</b>	<b>450,000</b>	<b>450,000</b>	<b>450,000</b>	<b>3,625,000</b>





MARCH 2019

# LEGEND

- |           |  |           |                |  |
|-----------|--|-----------|----------------|--|
| <b>F</b>  | <b>PROPOSED FIBER OPTIC BACKBONE EXTENSION</b> |           | <b>VARIOUS</b> | <b>PROPOSED FIBER OPTIC SYSTEM IMPROVEMENT</b> |
| <b>F1</b> | ADD FIBER CABLE TO INCREASE CAPACITY TO SERVE  | (16000)   |                | (10001)  |
| <b>F6</b> | SAME AS ABOVE                                  | (16000)   |                |  |
|           |  | 2016-2020 |                |  |
|           |  | 2016-2020 |                |  |



The City of Palo Alto



## FIBER OPTIC FUND 2020-2024 CAPITAL IMPROVEMENT PROGRAM

This map is a product of the City of Palo Alto GIS





CITY OF  
**PALO  
ALTO**

## Capacity Improvements





**Fund:** Fiber Optics  
**Category:** Capacity Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** FO-10001

Fiber optic crew installing new fiber optic cables

# Fiber Optics Network System Improvements

## Description

This project provides funding to improve reliability within the existing fiber system. Typical activities in this project include: purchasing, upgrading, and installing fiber optic cables, conduits, and splice enclosures.

## Justification

This project promotes the formation of a competitive market for telecommunications in Palo Alto by accelerating the pace at which high-quality, low-cost, advanced telecommunications services are delivered to the residents and businesses in Palo Alto. This occurs while limiting the negative impacts on Palo Alto's environment by using pre-existing conduit and wood utility poles. This also enables the Fiber Optics Fund to generate additional revenues through the enhanced use of its existing conduit and wood utility poles.

## Supplemental Information

The Fiber Optics Utility continues to add capacity improvements in the form of additional fiber in congested areas as well as areas of predicted growth.

## Significant Changes

**2020-2024 CIP:** The Fiber Optics Fund will build emergency water supply resiliency at Montebello reservoir to enable the Utilities Supervisory Control and Data Acquisition (SCADA) to add full remote-control valves at the reservoir. Montebello is the only reservoir (1 of 7) remaining without available fiber service connections. Staff must manually turn on/off the valves which



may be difficult after a major earthquake or unsafe during a wildfire or similar emergencies. In addition, intermittent loss of cellular and radio coverage occurs in the foothills area where the reservoir is located. This is a major impediment for emergency response calls. Finally, if fiber is available at Montebello Reservoir, Utilities can use this fiber as a backhaul communication link for Advanced Metering Infrastructure (AMI) collectors to serve the customers.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Fiber Optics Fund</b>	N/A	1,327,635	1,327,635	500,000	200,000	200,000	200,000	200,000	1,300,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,327,635</b>	<b>1,327,635</b>	<b>500,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,300,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,327,635	1,327,635	500,000	200,000	200,000	200,000	200,000	1,300,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,327,635</b>	<b>1,327,635</b>	<b>500,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>200,000</b>	<b>1,300,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

The estimated monthly recurring charge (MRC) for fiber from Dahl Reservoir to Montebello Reservoir is \$777, \$9,324 annually, and is anticipated to come online in Fall 2019. This final cost will be shared among the Technology Fund, Water Fund, and Public Safety departments and the proportional cost will be dependent on the number of fiber strands activated.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Business & Economics  
 Section: Culture of Innovation and Business Diversity  
 Goal: B-4  
 Policy: B-4.1

### Potential Board/Commission Review:

Architectural Review Board  
 Planning and Transportation Commission  
 Utilities Advisory Commission

### Environmental Impact Analysis:

This project is categorically exempt from CEQA under section 15302.



**Fund:** Fiber Optics  
**Category:** Capacity Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2016  
**Initial Project Completion:** Spring 2018  
**Revised Project Start:** Spring 2019  
**Revised Project Completion:** Spring 2021  
**Project Number:** FO-16000

Fiber optic splice closer ready for inspection and work

# Fiber Optics System Rebuild

## Description

This system capacity improvement project rebuilds portions of the fiber system around Palo Alto, which, in turn, licenses dark fiber to companies providing telecommunication services to residents and businesses in Palo Alto. The rebuild projects will install new aerial duct or sub-structures (conduit and boxes) and additional fiber backbone cable to increase capacity for sections of the system that are at or near capacity. This will allow the Utilities Department to meet customer requests for service connections. The main rebuild project areas are the Stanford Research Park, the Palo Alto Internet Exchange (PAIX) at 529 Bryant Street, and the downtown business district.

## Justification

The fiber system was planned, designed, and constructed in the mid to late 1990s by the City of Palo Alto Utilities Department. The Utilities Department began to license dark fiber service connections for commercial purposes in the late 1990s. Since that time, several sections of the fiber system have reached capacity and limited the City's ability to efficiently serve its customers. This project will increase system capacity and improve system reliability, allowing the City to maintain a competitive market for telecommunications by accelerating the pace at which high-quality and low-cost advanced telecommunications services are delivered to residents and businesses.

## Significant Changes

**2019-2023 CIP:** Due to limited staffing, this project has shifted to start in FY 2019. Additionally, \$0.3 million has been added to the following two years to address additional site locations.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Fiber Optics Fund</b>	167,165	1,074,344	50,000	775,000	300,000	0	0	0	1,075,000	0	1,292,165
<b>Total</b>	<b>167,165</b>	<b>1,074,344</b>	<b>50,000</b>	<b>775,000</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,075,000</b>	<b>0</b>	<b>1,292,165</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	133,727	1,074,344	50,000	775,000	300,000	0	0	0	1,075,000	0	1,258,727
<b>Design</b>	33,429	0	0	0	0	0	0	0	0	0	33,429
<b>Total</b>	<b>167,156</b>	<b>1,074,344</b>	<b>50,000</b>	<b>775,000</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,075,000</b>	<b>0</b>	<b>1,292,156</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Business & Economics  
 Section: Culture of Innovation and Business Diversity  
 Goal: B-4  
 Policy: B-4.1

**Potential Board/Commission Review:**

Architectural Review Board  
 Planning and Transportation Commission  
 Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is categorically exempt from CEQA under section 15302.



CITY OF  
**PALO  
ALTO**

## Customer Connections

## FIBER OPTICS FUND



**Fund:** Fiber Optics  
**Category:** Customer Connections  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** FO-10000

Technician installing new fiber optic cables

# Fiber Optics Customer Connections

## Description

This project provides funding for the installation of fiber optic infrastructure for new service connections. Typical activities in this project include: purchasing, upgrading, and installing fiber optic cables, conduits, and splice enclosures at customer sites.

## Justification

This project promotes the formation of a competitive market for telecommunications in Palo Alto, accelerating the pace at which high-quality, low-cost, advanced telecommunications services are delivered to businesses while limiting the negative impacts on Palo Alto's environment by using existing conduits and wood utility poles rather than adding additional infrastructure to support the system. Finally, it enables the Fiber Optics Fund to generate additional revenues through the enhanced use of its conduits and poles.

## Supplemental Information

The cost to the Fiber Optics Fund associated with new service connections and the City's cost of ownership are billed to the requesting parties.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Fiber Optics Fund</b>	N/A	51,056	115,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
<b>Other</b>	N/A	200,000	45,000	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>251,056</b>	<b>160,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>1,250,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	251,056	160,000	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>251,056</b>	<b>160,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>1,250,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Business & Economics  
 Section: Culture of Innovation and Business Diversity  
 Goal: B-4  
 Policy: B-4.1

**Potential Board/Commission Review:**

Architectural Review Board  
 Planning and Transportation Commission  
 Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is categorically exempt from CEQA under section 15302.



CITY OF  
**PALO  
ALTO**

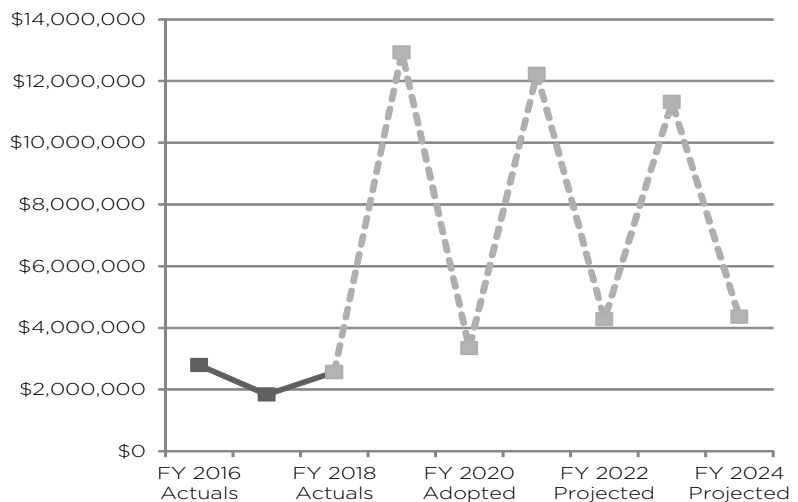


# GAS FUND

## Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal natural gas distribution system began operation in 1917 and provides safe, reliable, and cost effective gas service to residents and customers of Palo Alto. For the 2020-2024 Capital Improvement Program (CIP), approximately \$35.5 million is projected, with \$3.3 million allocated in Fiscal Year 2020. Overall, a total of eight projects are planned for the 5-year CIP.

Gas Fund Capital Expenditures



Major projects funded in the 2020-2024 CIP include Gas Main Replacements (cumulative total of \$23.9 million), Gas System, Customer Connections (\$7.1 million), and Gas Meters and Regulators (\$1.3 million). The budget for the Gas Fund CIP can be categorized into three separate types of projects: Customer Connections, Gas Main Replacements, and System Improvements.

## Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of gas main distribution system	210
Total miles of gas service extension to residents and businesses	176
Number of gas receiving stations	4

## Natural Gas System

MATERIAL TYPE	MILES OF MAINS IN SYSTEM	NUMBER OF SERVICES IN SYSTEM	MILES OF SERVICES IN SYSTEM (AVG 53'/SERVICE)
Steel	63.14	1,784	17.91
Plastic, PVC	34.12	708	7.107
Plastic, PE	113.38	14,071	141.24
Plastic, ABS	0.38	82	0.82
Plastic, Other	0.01	67	0.67
Other	0	817	8.20
TOTAL	210.75	17,529	175.96

## Customer Connections

As customers continually change their gas needs due to equipment additions, new construction, building expansions, building remodels, tear-downs and rebuilds, and new building occupancy types, the gas system must evolve to meet these needs. The Gas System Customer Connections project, which is one of the largest recurring projects within the Gas Fund (\$1.3 million in Fiscal Year 2020, \$7.1 million over the 2020-2024 CIP), is accounted for within this category. This project allows for the completion of work required to meet the needs of customers who have applied for new or upgraded gas service. The Gas Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

### Recent Accomplishments

- In Fiscal Year 2018, the Utilities Gas Division completed approximately 95 customer service projects, at a cost of \$1.0 million.

## 2020-2024 Capital Improvement Program

### Recurring Projects

A total of \$7.1 million is programmed for Customer Connections recurring projects in the 2020-2024 CIP, with \$1.3 million allocated in Fiscal Year 2020. Recurring projects in this category include the following:

- Gas System, Customer Connections (Fiscal Year 2020: \$1.3 million; 5-Year CIP: \$7.1 million)

## Gas Main Replacements

The Gas Main Replacements (GMR) category accounts for the replacement of inadequately-sized and structurally deficient gas mains that are subject to corrosion or reaching the end of their expected life. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiency. In the next five years, it is anticipated that 90,391 linear feet of gas mains, or eight percent of the entire system, will be replaced. The 2020-2024 CIP includes \$23.9 million in funding for projects within this category.

### Recent Accomplishments

- Completion of the construction of approximately 19,500 linear feet of natural gas mains and 370 natural gas service pipelines under the Gas Main Replacement (GMR) 22 and Upgrade Downtown projects.
- Began design of the Gas Main Replacement 23 project within business districts to replace approximately 20,000 linear feet of natural gas mains and 350 natural gas service pipelines made of Polyvinyl Chloride (PVC).

### 2020-2024 Capital Improvement Program

#### Non-Recurring Projects

Four GMR projects are included in the 2020-2024 CIP (Fiscal Year 2020: \$0.9 million; 5-Year CIP: \$23.9 million).

### System Improvements

To ensure reliable gas services for the City of Palo Alto residents and customers, gas infrastructure must be replaced upon reaching the end of its expected life. The System Improvements category includes four projects during the 2020-2024 CIP at a total cost of \$5.0 million, with \$1.6 million allocated in Fiscal Year 2020.

#### Recent Accomplishments

- Completed design of the Acrylonitrile Butadiene Styrene (ABS)/Tenite natural gas service replacement project to replace approximately 130 natural gas service pipelines at various locations within the city.
- Completed design of Phase II of the Crossbore Gas Safety Program to inspect sanitary sewer laterals for potential damage during natural gas pipeline installation.

### 2020-2024 Capital Improvement Program

#### Recurring Projects

There are three funded recurring projects in the System Improvements category in the 2020-2024 CIP:

- Gas Distribution System Improvements (Fiscal Year 2020: \$0.5 million, 5-Year CIP: \$2.5 million)
- Gas Equipment and Tools (Fiscal Year 2020: \$0.1 million, 5-Year CIP: \$0.5 million)
- Gas Meters and Regulators (Fiscal Year 2020: \$0.3 million, 5-Year CIP: \$1.3 million).

#### Non-Recurring Projects

There is one non-recurring project in the System Improvements category in the 2020-2024 CIP:

- Gas ABS/Tenite Replacement (Fiscal Year 2020: \$0.3 million)

Please refer to the City of Palo Alto Utilities webpage to confirm project details:

<http://www.cityofpaloalto.org/gov/depts/utl/projects/default.asp>

## Summary of Capital Activity

## GAS FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Other Revenues</b>									
GS-80017	Gas System, Customer Connections	1,067,979	775,000	1,111,303	1,144,642	1,178,981	1,200,000	1,236,000	5,870,926
	<b>Other Revenue Total</b>	<b>1,067,979</b>	<b>775,000</b>	<b>1,111,303</b>	<b>1,144,642</b>	<b>1,178,981</b>	<b>1,200,000</b>	<b>1,236,000</b>	<b>5,870,926</b>
	<b>Total Sources</b>	<b>1,067,979</b>	<b>775,000</b>	<b>1,111,303</b>	<b>1,144,642</b>	<b>1,178,981</b>	<b>1,200,000</b>	<b>1,236,000</b>	<b>5,870,926</b>
<b>Use of Funds</b>									
<b>Customer Connections</b>									
GS-80017	Gas System, Customer Connections	1,035,755	900,000	1,342,415	1,382,688	1,424,169	1,466,894	1,510,901	7,127,067
GS-03009	System Extensions - Unreimbursed	44,706	40,000	0	0	0	0	0	0
	<b>Customer Connections Total</b>	<b>1,080,461</b>	<b>940,000</b>	<b>1,342,415</b>	<b>1,382,688</b>	<b>1,424,169</b>	<b>1,466,894</b>	<b>1,510,901</b>	<b>7,127,067</b>
<b>Gas Main Replacements</b>									
GS-12001	Gas Main Replacement - Project 22	1,186,940	9,433,799	0	0	0	0	0	0
GS-13001	Gas Main Replacement - Project 23	22,082	150,000	850,000	10,000,000	0	0	0	10,850,000
GS-14003	Gas Main Replacement - Project 24	0	0	0	0	2,000,000	9,000,000	0	11,000,000
GS-15000	Gas Main Replacement - Project 25	0	0	0	0	0	0	2,000,000	2,000,000
	<b>Gas Main Replacements Total</b>	<b>1,209,022</b>	<b>9,583,799</b>	<b>850,000</b>	<b>10,000,000</b>	<b>2,000,000</b>	<b>9,000,000</b>	<b>2,000,000</b>	<b>23,850,000</b>
<b>System Improvements</b>									
GS-18000	Gas ABS/Tenite Replacement Project	0	1,923,000	300,000	0	0	0	0	300,000
GS-11002	Gas Distribution System Improvements	135,825	9,000	500,000	500,000	500,000	500,000	500,000	2,500,000
GS-14004	Gas Distribution System Model	732	29,357	0	0	0	0	0	0
GS-13002	Gas Equipment and Tools	50,000	350,000	100,000	100,000	100,000	100,000	100,000	500,000
GS-80019	Gas Meters and Regulators	77,968	50,000	250,000	250,000	250,000	250,000	250,000	1,250,000
GS-15001	Security at City's Gas Receiving Stations	6,167	41,534	0	0	0	0	0	0
	<b>System Improvements Total</b>	<b>270,692</b>	<b>2,402,891</b>	<b>1,150,000</b>	<b>850,000</b>	<b>850,000</b>	<b>850,000</b>	<b>850,000</b>	<b>4,550,000</b>
	<b>Total Uses</b>	<b>2,560,175</b>	<b>12,926,690</b>	<b>3,342,415</b>	<b>12,232,688</b>	<b>4,274,169</b>	<b>11,316,894</b>	<b>4,360,901</b>	<b>35,527,067</b>

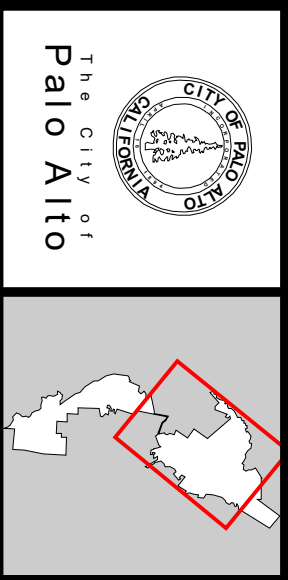


CITY OF  
**PALO  
ALTO**



**Gas Main Replacement (GMR) Projects**

- FY 2020 (No Construction Projects)
- FY 2021 (GMR 23)
- FY 2022 (No Construction Projects)
- FY 2023 (GMR 24)
- FY 2024 (No Construction Projects)



**GAS FUND MAP**  
**FY 2020 to FY 2024**  
**CAPITAL IMPROVEMENT PROGRAM**

This map is a product of the  
City of Palo Alto GIS

0' 2500'



CITY OF  
**PALO  
ALTO**



## Customer Connections

## GAS FUND



**Fund:** Gas Fund - Operating  
**Category:** Customer Connections  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** GS-80017

Gas System

# Gas System, Customer Connections

## Description

This funding allows for the Gas Distribution System to be extended in order to provide gas service to new customers and augment service to customers with increased natural gas demands. Improvements include new mains, services, valves, regulators, meters, and accessories.

## Justification

This project upgrades infrastructure to provide gas service connections to new customers, meet changes in existing customer service demands, and respond to changes in gas service requirements due to new development or redevelopment. This project is funded partially from reimbursements by customers.

## Significant Changes

**2015-2019 CIP:** Project was retitled from Gas Systems Extensions.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Gas Fund</b>	N/A	265,371	125,000	231,112	238,046	245,188	266,894	274,901	1,256,141	0	N/A
<b>Other</b>	N/A	1,078,935	775,000	1,111,303	1,144,642	1,178,981	1,200,000	1,236,000	5,870,926	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,344,306</b>	<b>900,000</b>	<b>1,342,415</b>	<b>1,382,688</b>	<b>1,424,169</b>	<b>1,466,894</b>	<b>1,510,901</b>	<b>7,127,067</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	1,344,306	900,000	1,342,415	1,382,688	1,424,169	1,466,894	1,510,901	7,127,067	0	N/A
<b>Total</b>	<b>N/A</b>	<b>1,344,306</b>	<b>900,000</b>	<b>1,342,415</b>	<b>1,382,688</b>	<b>1,424,169</b>	<b>1,466,894</b>	<b>1,510,901</b>	<b>7,127,067</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

## Gas Main Replacements



**Fund:** Gas Fund - Operating  
**Category:** Gas Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Winter 2018  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Winter 2021  
**Project Number:** GS-13001

Installation of new HDPE gas service main

# Gas Main Replacement - Project 23

## Description

This project replaces approximately 27,136 linear feet (which represents 1.8% of the City's Gas Distribution System) of gas mains that may be leaking, inadequately-sized, and/or structurally deficient. These replacements are located on various streets in Evergreen Park, College Terrace, Ventura, Green Acres, and Midtown neighborhoods. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire Gas Distribution System, and considering risks ratings of the Distribution Integrity Management Plan.

## Justification

The project will target replacing PVC mains and services located in business districts and steel mains and services with ineffective corrosion protection, also known as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

## Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. Revised total project estimate to \$11.0 million, an increase of \$3.8 million, due to higher construction costs. The project scope has also increased by 7,136 in linear footage.

**2019-2023 CIP:** The budget has been revised to account for construction cost escalation.

**2018-2022 CIP:** The construction is postponed to start in FY 2018 due to GMR 22 being delayed.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	64,581	550,000	150,000	850,000	10,000,000	0	0	0	10,850,000	0	11,064,581
<b>Total</b>	<b>64,581</b>	<b>550,000</b>	<b>150,000</b>	<b>850,000</b>	<b>10,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,850,000</b>	<b>0</b>	<b>11,064,581</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	51,664	50,000	150,000	850,000	10,000,000	0	0	0	10,850,000	0	11,051,664
Design	12,915	500,000	0	0	0	0	0	0	0	0	12,915
<b>Total</b>	<b>64,579</b>	<b>550,000</b>	<b>150,000</b>	<b>850,000</b>	<b>10,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,850,000</b>	<b>0</b>	<b>11,064,579</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation

Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Gas Fund - Operating  
**Category:** Gas Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Winter 2020  
**Revised Project Start:** Summer 2022  
**Revised Project Completion:** Fall 2023  
**Project Number:** GS-14003

Installation of new HDPE gas service main

# Gas Main Replacement - Project 24

## Description

This project replaces approximately 24,030 linear feet (which represents 2.1% of the City's Gas Distribution System) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in neighborhoods of the Stanford Research Park, Green Acres, Charleston Terrace, and the Stanford Industrial business districts. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire Gas Distribution System, and considering risks ratings of the Distribution Integrity Management Plan.

## Justification

The project will target replacing PVC mains and services located in business districts and steel mains and services with ineffective corrosion protection, also known as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

## Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities, located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.



## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. Revised total project estimate to \$11.0 million, an increase of \$3.8 million, due to higher construction costs. Project scope increased by 4,030 in linear footage.

**2019-2023 CIP:** The budget has been revised to account for construction cost escalation.

**2018-2022 CIP:** Due to delays of GMR 22 and GMR 23, GMR 24 is being postponed to FY 2019.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	2,000,000	9,000,000	0	11,000,000	0	11,000,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,000,000</b>	<b>9,000,000</b>	<b>0</b>	<b>11,000,000</b>	<b>0</b>	<b>11,000,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	9,000,000	0	9,000,000	0	9,000,000
Design	0	0	0	0	0	2,000,000	0	0	2,000,000	0	2,000,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,000,000</b>	<b>9,000,000</b>	<b>0</b>	<b>11,000,000</b>	<b>0</b>	<b>11,000,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation

Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Gas Fund - Operating  
**Category:** Gas Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Winter 2020  
**Revised Project Start:** Summer 2024  
**Revised Project Completion:** Winter 2026  
**Project Number:** GS-15000

New gas service meter and regulating equipment

# Gas Main Replacement - Project 25

## Description

This project replaces approximately 21,623 linear feet (which represents 1.9% of the City's Gas Distribution System) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the neighborhoods of Palo Verde, Midtown, Evergreen, and Ventura. Staff identifies problematic mains/services by researching maintenance and leak histories, analyzing performance of the entire Gas Distribution System, and considering risks ratings of the Distribution Integrity Management Plan.

## Justification

The project will target replacing PVC mains and services, also known in the industry as cathodic protection, located in business districts and steel mains and services with ineffective corrosion protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

## Supplemental Information

The City of Palo Alto Distribution Integrity Management Plan's mathematical model is used to evaluate risks presented by PVC facilities located within business districts that have been assigned the highest probability and consequence scores. Targeted streets will be coordinated with the Public Works Street Maintenance Program to complete replacement before streets are paved. Linear footage and locations are subject to change. Please refer to the City of Palo Alto Utilities webpage for the most recent project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. Revised total project estimate to \$12.0 million, an increase of \$3.8 million, due to higher construction costs. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services.

**2019-2023 CIP:** The budget has been revised to account for construction cost escalation.

**2018-2022 CIP:** Project postponed to begin in FY 2020 due to GMR 22 being delayed.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	0	2,000,000	2,000,000	10,000,000	12,000,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,000,000</b>	<b>2,000,000</b>	<b>10,000,000</b>	<b>12,000,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	10,000,000	10,000,000
Design	0	0	0	0	0	0	0	2,000,000	2,000,000	0	2,000,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,000,000</b>	<b>2,000,000</b>	<b>10,000,000</b>	<b>12,000,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

### Potential Board/Commission Review:

Planning and Transportation

Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

## System Improvements



**Fund:** Gas Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Winter 2018  
**Initial Project Completion:** Summer 2019  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** GS-18000

Installed HDPE gas service pipe

# Gas ABS/Tenite Replacement Project

## Description

This project will replace the remaining known acrylonitrile-butadiene-styrene (ABS) or tenite gas pipes, which includes approximately 130 gas services. These gas services are located in various neighborhoods throughout the City. The Distribution Integrity Management Plan (DIMP) has identified ABS/tenite gas pipes as a priority to be replaced.

## Justification

Over time ABS pipes develop an elliptical shape with brittle sidewalls and have become vulnerable to rapid crack propagation failure. In addition, these services do not have tracer wires and are hard to locate. This project is needed to reduce the City's liability exposure due to material failure or damage caused by construction dig-ins.

## Supplemental Information

The City of Palo Alto's Distribution Integrity Management Plan (DIMP) mathematical model is used to evaluate risks presented by ABS and tenite material with high probability and consequence scores. The number of gas services is subject to change upon further validation.

## Significant Changes

**2020-2024 CIP:** The number of gas services with ABS or tenite gas pipes was updated from 160 to 130. The number of gas services has been changed using the most up to date information in our GIS system.

**2019-2023 CIP:** The number of gas services with ABS or tenite gas pipes was updated from 250 to 160.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Gas Fund</b>	0	2,223,116	1,923,000	300,000	0	0	0	0	300,000	0	2,223,000
<b>Total</b>	<b>0</b>	<b>2,223,116</b>	<b>1,923,000</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300,000</b>	<b>0</b>	<b>2,223,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	2,223,116	1,923,000	300,000	0	0	0	0	300,000	0	2,223,000
<b>Total</b>	<b>0</b>	<b>2,223,116</b>	<b>1,923,000</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300,000</b>	<b>0</b>	<b>2,223,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Gas Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** GS-11002

Gas system improvements

# Gas Distribution System Improvements

## Description

This project provides funding as needed to improve the Gas Distribution System. Typical activities include: increasing distribution system capacity for load growth, replacing deteriorated capital facilities, re-configuring/adding to the system to improve service reliability, conducting research related to performance of the Gas Distribution System or its various components, and making general improvements to the system.

## Justification

Gas Distribution System reliability and adequate capacity are critical to providing a high level of service to customers. When service interruptions occur, customers may experience significant economic losses. The City must continuously evaluate service reliability needs and make improvements to the system to maintain top-level service to City customers.

## Significant Changes

**2020-2024 CIP:** Project funding increased in Fiscal Years 2020 to 2024 by \$254,000 each year. This project has been consolidated with GS-03009 as the project activities are similar in nature.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	8,980	9,000	500,000	500,000	500,000	500,000	500,000	2,500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>8,980</b>	<b>9,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>500,000</b>	<b>2,500,000</b>	<b>0</b>	<b>N/A</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	8,980	9,000	500,000	500,000	500,000	500,000	500,000	2,500,000	0	N/A
Total	N/A	8,980	9,000	500,000	500,000	500,000	500,000	500,000	2,500,000	0	N/A

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

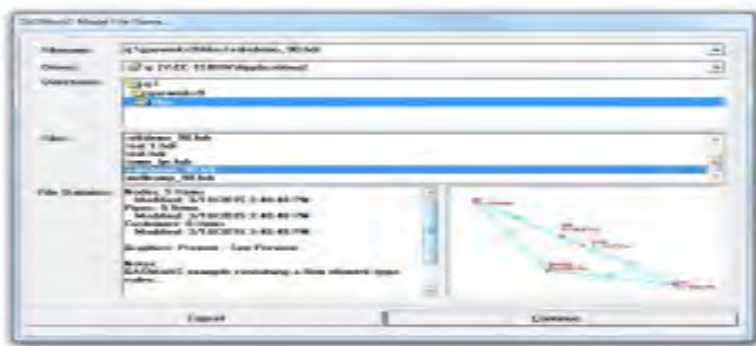
**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Gas Fund - Operating  
**Category:** System Improvements  
**Project Location:** N/A  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2014  
**Initial Project Completion:** Fall 2016  
**Revised Project Start:** Fall 2015  
**Revised Project Completion:** Summer 2019  
**Project Number:** GS-14004

GASWorks model snapshot example of a flow element type valve

## Gas Distribution System Model

### Description

This project funds development of a computerized geographic information system (GIS) based natural gas distribution system model, installation and testing of the model, and staff training.

### Justification

A GIS based computerized natural gas distribution system model will significantly improve engineering staff's ability to analyze the performance of the distribution system, predict gas flow and pressures at any location within the system, foresee possible affects of additional loads, and provide a scientific basis for sizing new gas mains.

### Supplemental Information

The model will also facilitate managing the distribution systems' risks determined by the City of Palo Alto Distribution Integrity Management Plan (DIMP).

### Significant Changes

**2020-2024 CIP:** Funding for professional services moved to the Gas Fund Operating budget. Project to be closed by end of FY 2019.

**2019-2023 CIP:** Additional funding was added for professional services in Fiscal Years 2019 through 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Gas Fund</b>	43,971	29,357	29,357	0	0	0	0	0	0	0	73,328
<b>Total</b>	<b>43,971</b>	<b>29,357</b>	<b>29,357</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73,328</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	7,405	29,357	29,357	0	0	0	0	0	0	0	36,762
<b>Design</b>	36,563	0	0	0	0	0	0	0	0	0	36,563
<b>Total</b>	<b>43,968</b>	<b>29,357</b>	<b>29,357</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73,325</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Gas Fund - Operating  
**Category:** System Improvements  
**Project Location:** Municipal Service Center  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** GS-13002

New HDPE gas pipe being fused prior to installation

## Gas Equipment and Tools

### Description

This project funds the purchase of polyethylene (PE) fusion equipment and tools, directional boring/locating equipment and tools, and general shop equipment and tools.

### Justification

In order to safely operate and maintain a natural gas distribution system and support operating personnel safety and productivity, PE fusion, directional boring/locating, and general equipment and tools need to be upgraded on an annual basis.

### Significant Changes

**2019-2023 CIP:** Project funding increased to include purchase of new tapping and stopping equipment for Operations. This equipment is required to safely interrupt the flow of gas without performing large shutdowns of service to customers.

**2015-2019 CIP:** Project was retitled from General Shop Equipment and Tools.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Gas Fund</b>	N/A	350,000	350,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>350,000</b>	<b>350,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	350,000	350,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>350,000</b>	<b>350,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>500,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Gas Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** GS-80019

Gas Meters and Regulators

## Gas Meters and Regulators

### Description

This project provides replacement of the existing meters and regulators at approximately 1,000 meter sets per year.

### Justification

The meter replacement program ensures accuracy of gas consumption measurement, reduces possible revenue loss due to under-registering gas, and provides customers with accurate monthly bills. The program exchanges large meters (630 cubic feet per hour and larger) every 10 years and smaller meters every 17 to 20 years.

### Significant Changes

**2020-2024 CIP:** The number of meters replaced annually was updated from 2,000 to 1,000 meters and the annual funding has been reduced to \$250,000 throughout the 2020-2024 CIP. The division has adjusted the replacement number and budget accordingly after reviewing their workload and available resources.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Gas Fund</b>	N/A	425,456	50,000	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>425,456</b>	<b>50,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>1,250,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	425,456	50,000	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>425,456</b>	<b>50,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>250,000</b>	<b>1,250,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Energy

Goal: N-7

Policy: N-7.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**



# STORMWATER MANAGEMENT FUND

## Overview

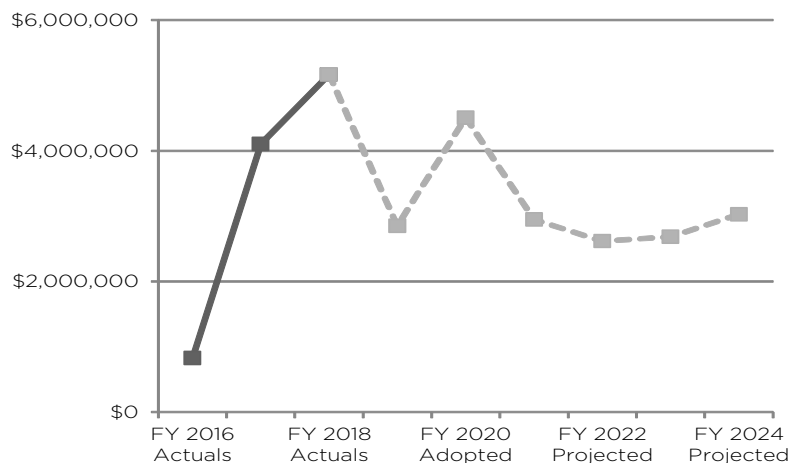
The Stormwater Management Fund Capital Improvement Program (CIP) accounts for activities related to the improvement of the City's storm drain system (including pipelines, manholes, catch basins, and pump stations). The 2020-2024 CIP includes projects totaling \$15.8 million with Fiscal Year 2020 projects totaling \$4.5 million. The budget for the Stormwater Management CIP is divided into two categories: Capacity Improvements (projects to upgrade the conveyance capacity of the storm drain system as a whole) and System Rehabilitation (projects for the replacement and rehabilitation of the existing storm drain infrastructure).

In April 2017, the Storm Water Management Fee was approved by a majority of property owners via a ballot-by-mail process, establishing a base rate of \$13.65 per Equivalent Residential Unit (ERU) per month along with a provision that the City Council could increase the rate on an annual basis by the local inflation rate (as measured by the Consumer Price Index) or 6%, whichever is less. Under the provisions of the ballot measure, the fee is recommended to be increased by 4.5%, from \$14.05 in FY 2019 to \$14.45 per ERU for Fiscal Year 2020.

## Capacity Improvements

The Capacity Improvements category accounts for new or enhanced infrastructure added to the storm drain system, increasing its capacity to convey stormwater runoff to local creeks and San Francisco Bay. In Fiscal Year 2015, an update to the Storm Drain Master Plan resulted in the identification of \$98.0 million in additional recommended storm drainage improvements, with \$22.0 million identified as high-priority projects. With the passage of the 2017 Storm Water Management Fee ballot measure, 13 drainage improvement projects will be recommended over the next 13 years.

Stormwater Management Fund  
Capital Expenditures



## Recent Accomplishments

- Initiated design of the Loma Verde Avenue Trunk Line Improvements project, the first of the 13 high-priority projects included in the 2017 Storm Water Management Fee ballot measure.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are no recurring Capacity Improvement projects scheduled.

## Non-Recurring Projects

There are six projects in this category during the 2020-2024 CIP:

- Corporation Way System Upgrades and Pump Station (Fiscal Year 2020: \$0.2 million; 5-Year CIP: \$3.1 million)
- East Meadow Drive System Upgrades (5-Year CIP: \$0.5 million)
- Loma Verde Avenue Trunk Line Improvements (Fiscal Year 2020: \$2.3 million; 5-Year CIP: \$2.3 million)
- Louis Road System Upgrades (5-Year CIP: \$2.4 million)
- West Bayshore Road Pump Station (Fiscal Year 2020: \$0.2 million; 5-Year CIP: \$1.3 million)
- West Bayshore Road Trunk Line Improvements (5-Year CIP: \$2.1 million)

Improvements to the trunk storm drain pipelines along Loma Verde Avenue to the Matadero Creek Pump Station will increase capacity, benefiting a watershed area of 1,250-acres including the Midtown and Palo Verde neighborhoods. The upgrade of pipes located under East Meadow Drive between East Meadow Circle and the Adobe Pump Station will reduce flooding in the area. The design and construction of the two new pump stations at Corporation Way and West Bayshore Road will reduce flooding where stormwater is discharged into Adobe Creek.

## System Rehabilitation

The System Rehabilitation category accounts for the replacement or rehabilitation of deteriorated components of the storm drain system. Funding is budgeted annually to replace or rehabilitate storm drain pipelines, manholes, catch basins, and pump station equipment. Funding is also budgeted for system modifications needed to accommodate new operational requirements, such as the mandate in the Municipal Regional Stormwater Discharge Permit to incorporate trash capture devices into the storm drain system to reduce the amount of trash entering local creeks and San Francisco Bay.

### Infrastructure Inventory

CLASSIFICATION	QUANTITY
Storm drain pipelines	130 miles
Catch Basins	3,000
Manholes	800
Stormwater pump stations	8

## 2020-2024 Capital Improvement Program

### Recurring Projects

The 2020-2024 CIP includes funding for one project in this category: Storm Drain System Replacement and Rehabilitation (Fiscal Year 2020: \$1.7 million; 5-Year CIP: \$3.9 million), focused on the replacement and rehabilitation of the existing storm drain pipelines, manholes, and catch basins.

# STORMWATER MANAGEMENT FUND

## Non-Recurring Projects

There are no non-recurring System Rehabilitation projects scheduled.

## Summary of Capital Activity

### STORMWATER MANAGEMENT FUND

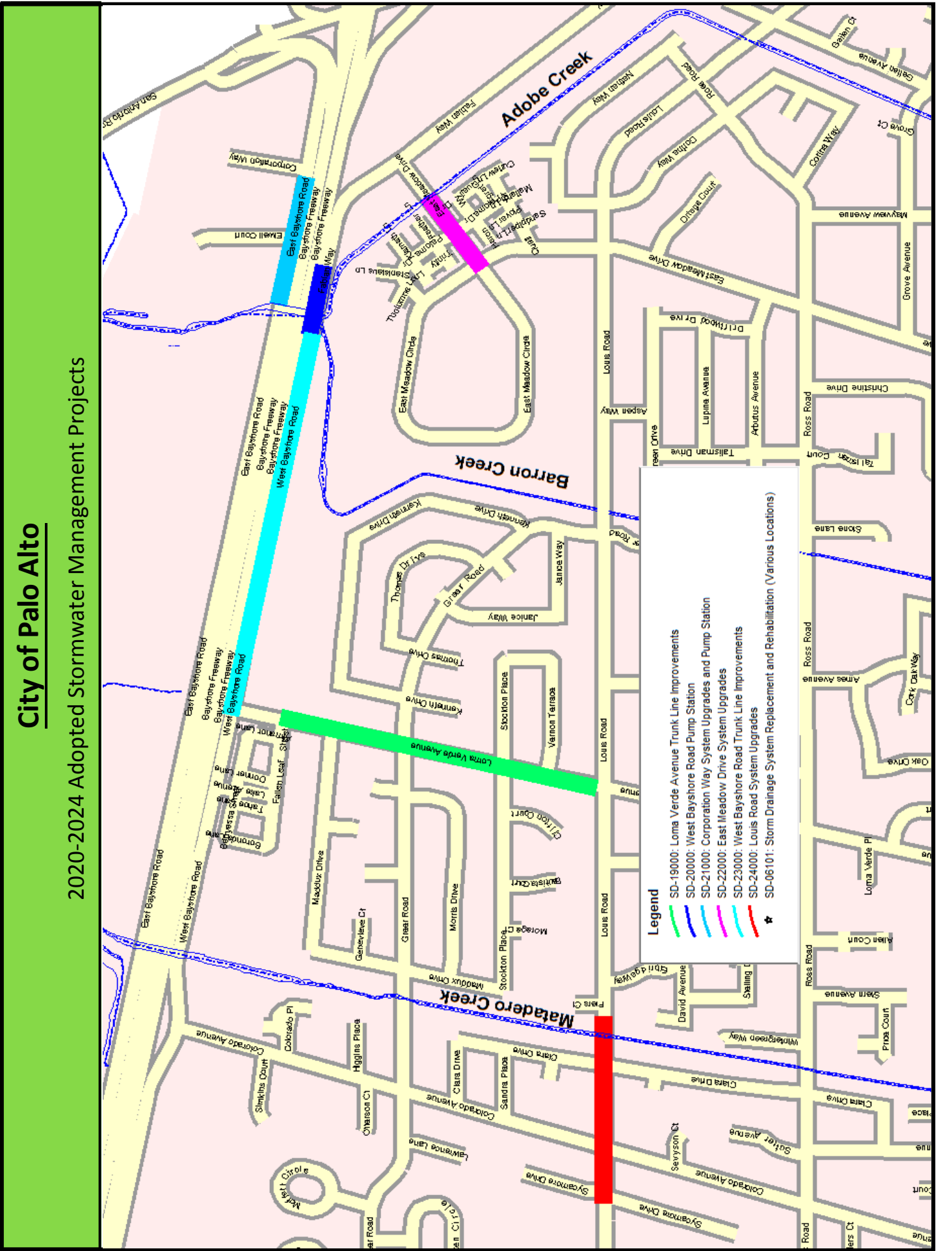
Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Use of Funds</b>									
<b>Capacity Improvements</b>									
SD-11101	Channing Avenue/Lincoln Avenue Storm Drain Improvements	118,516	0	0	0	0	0	0	0
SD-21000	Corporation Way System Upgrades and Pump Station	0	40,000	231,000	1,271,000	1,624,000	0	0	3,126,000
SD-22000	East Meadow Drive System Upgrades	0	0	0	86,100	434,000	0	0	520,100
SD-19000	Loma Verde Avenue Trunk Line Improvements	0	340,913	2,340,000	0	0	0	0	2,340,000
SD-24000	Louis Road System Upgrades	0	0	0	0	0	0	2,446,000	2,446,000
SD-13003	Matadero Creek Storm Water Pump Station and Trunk Line Improvements	4,618,573	934,000	0	0	0	0	0	0
SD-20000	West Bayshore Road Pump Station	0	40,000	231,000	1,068,400	0	0	0	1,299,400
SD-23000	West Bayshore Road Trunk Line Improvements	0	0	0	0	0	2,109,000	0	2,109,000
	<b>Capacity Improvements Total</b>	<b>4,737,089</b>	<b>1,354,913</b>	<b>2,802,000</b>	<b>2,425,500</b>	<b>2,058,000</b>	<b>2,109,000</b>	<b>2,446,000</b>	<b>11,840,500</b>
<b>System Rehabilitation</b>									
SD-06101	Storm Drain System Replacement and Rehabilitation	429,112	1,495,277	1,704,481	524,000	558,000	575,000	580,000	3,941,481
	<b>System Rehabilitation Total</b>	<b>429,112</b>	<b>1,495,277</b>	<b>1,704,481</b>	<b>524,000</b>	<b>558,000</b>	<b>575,000</b>	<b>580,000</b>	<b>3,941,481</b>
	<b>Total Uses</b>	<b>5,166,201</b>	<b>2,850,190</b>	<b>4,506,481</b>	<b>2,949,500</b>	<b>2,616,000</b>	<b>2,684,000</b>	<b>3,026,000</b>	<b>15,781,981</b>

**City of Palo Alto**

2020-2024 Adopted Stormwater Management Projects

**City of Palo Alto**

2020-2024 Adopted Stormwater Management Projects





CITY OF  
**PALO  
ALTO**

## Capacity Improvements



**Fund:** Stormwater Management - Operating  
**Category:** Capacity Improvements  
**Project Location:** East Bayshore Road- from Corporation Way to Adobe Creek  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Winter 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** SD-21000

E. Bayshore Road at Corporation Way, 2017

# Corporation Way System Upgrades and Pump Station

## Description

This project provides funding for the design of a new small pump station with 25 cubic feet per second capacity and the upgrade of 700 linear feet of storm drain pipe to 30-inch High Density Polyethylene.

## Justification

The invert elevations of the existing storm drain lines are lower than the outfall and, as a result, this area is subject to flooding problems. Adding a pump in advance of the outfall will eliminate the routine flooding along East Bayshore Road and upsizing the pipe from 21 inches will eliminate ponding and increase capacity to convey runoff from a 10-year storm event. Due to hydraulics requirements, the pump station will be constructed before the storm drain line will be replaced. The pump station design is scheduled in Fiscal Year 2020, construction in Fiscal Year 2021, and associated pipe upgrades are scheduled in Fiscal Year 2022 due to funding constraints.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 2. Corporation Way/E. Bayshore Road Pump Station to Adobe Creek. The need for this project was identified in Fiscal Year 2015 in the Storm Drain Master Plan dated June 2015. The funding amount is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc.



## Significant Changes

**2020-2024 CIP:** Design and construction expenses have been adjusted by an annual 3% for escalation.

**2019-2023 CIP:** Previously split between Storm Drainage Pump Stations to Adobe Creek (SD-20000) and Storm Drainage System Upgrades-East Bayshore Road and East Meadow Drive (SD-22000), the scope of this project was combined in alignment with the 13 projects approved in April 2017 as part of the Storm Water Management Fee ballot measure.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Stormwater Management Fund	0	40,000	40,000	231,000	1,271,000	1,624,000	0	0	3,126,000	0	3,166,000
<b>Total</b>	<b>0</b>	<b>40,000</b>	<b>40,000</b>	<b>231,000</b>	<b>1,271,000</b>	<b>1,624,000</b>	<b>0</b>	<b>0</b>	<b>3,126,000</b>	<b>0</b>	<b>3,166,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,271,000	1,624,000	0	0	2,895,000	0	2,895,000
Design	0	40,000	40,000	231,000	0	0	0	0	231,000	0	271,000
<b>Total</b>	<b>0</b>	<b>40,000</b>	<b>40,000</b>	<b>231,000</b>	<b>1,271,000</b>	<b>1,624,000</b>	<b>0</b>	<b>0</b>	<b>3,126,000</b>	<b>0</b>	<b>3,166,000</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future with costs for electricity to serve the pump station; future routine inspections; and maintenance of the mechanical, electrical, and fiber operating systems. As these costs are quantified, and if the department determines they cannot be absorbed within the available maintenance schedule and annual operating budget, adjustments will be brought forward in future budgets, as necessary.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

### Potential Board/Commission Review:

Planning and Transportation Commission

Storm Water Management Oversight Committee

### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.



East Meadow Drive

**Fund:** Stormwater Management - Operating

**Category:** Capacity Improvements

**Project Location:** East Meadow Drive from East Meadow Circle to Adobe Creek Pump Station

**Managing Department:** Public Works

**Initial Project Start:** Winter 2021

**Initial Project Completion:** Winter 2022

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** SD-22000

# East Meadow Drive System Upgrades

## Description

This project provides funding for the upgrade of approximately 400 linear feet of 36-inch pipe located in East Meadow Drive between East Meadow Circle and the Adobe Pump Station.

## Justification

Upgrading this segment of pipe to 48-inches will reduce flooding, contain runoff from a 10-year storm event, and allow for upstream improvements at a later date. Along with the new pipelines, this project will also replace storm drain manholes, reconnect and/or install new inlets, and connect lines to the pump station.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 7. East Meadow Drive to Adobe Creek Pump Station capacity upgrades. The need for this project was identified in Fiscal Year 2015 and ranked as highest priority on the Storm Drain Master Plan dated June 2015. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc.

## Significant Changes

**2020-2024 CIP:** Design and construction expenses were adjusted by 3% to account for escalation.

**2019-2023 CIP:** Previously incorporating two separate projects, the scope of this project was separated in alignment with the 13 projects approved in April 2017 as part of the Storm Water Management Fee ballot measure. SD-22000 was renamed East Meadow Drive System

## STORMWATER MANAGEMENT FUND

Upgrades from the previous title Storm Drainage System Upgrades - East Bayshore Road and East Meadow Drive in the 2018-2022 CIP.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Stormwater Management Fund</b>	0	0	0	0	86,100	434,000	0	0	520,100	0	520,100
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,100</b>	<b>434,000</b>	<b>0</b>	<b>0</b>	<b>520,100</b>	<b>0</b>	<b>520,100</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	386,327	0	0	386,327	0	386,327
<b>Design</b>	0	0	0	0	86,100	47,673	0	0	133,773	0	133,773
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,100</b>	<b>434,000</b>	<b>0</b>	<b>0</b>	<b>520,100</b>	<b>0</b>	<b>520,100</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

#### Potential Board/Commission Review:

Planning and Transportation Commission

Storm Water Management Oversight Committee

#### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.



**Fund:** Stormwater Management - Operating

**Category:** Capacity Improvements

**Project Location:** Loma Verde Avenue between Louis Road and Sterling Canal past Maddux Drive

**Managing Department:** Public Works

**Initial Project Start:** Summer 2019

**Initial Project Completion:** Winter 2020

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** SD-19000

Loma Verde Trunk Line Improvements Location

# Loma Verde Avenue Trunk Line Improvements

## Description

This project provides funding to upgrade 1,750 linear feet of storm drain pipe with 51-inch High Density Polyethylene and replace associated catch basins, laterals, and manholes.

## Justification

Upsizing the pipe from 36 inches will eliminate ponding and increase capacity to convey runoff from a 10-year storm event in the Midtown and Palo Verde neighborhoods.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. The need for this project was identified in Fiscal Year 2015 and ranked as highest priority on the Storm Drain Master Plan dated June 2015. This is the first project on the list that was described to the voters. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc.

## Significant Changes

**2019-2023 CIP:** This project was previously planned as part of the Matadero Creek Storm Water Pump Station and Trunk Line Improvements (SD-13003) project. Due to funding constraints, the trunk line was separated and approved as one of the 13 projects included in the April 2017 Storm Water Management Fee ballot measure.

# STORMWATER MANAGEMENT FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Stormwater Management Fund</b>	0	2,430,913	340,913	2,340,000	0	0	0	0	2,340,000	0	2,680,913
<b>Total</b>	<b>0</b>	<b>2,430,913</b>	<b>340,913</b>	<b>2,340,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,340,000</b>	<b>0</b>	<b>2,680,913</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	1,895,734	245,734	2,340,000	0	0	0	0	2,340,000	0	2,585,734
<b>Design</b>	0	535,179	95,179	0	0	0	0	0	0	0	95,179
<b>Total</b>	<b>0</b>	<b>2,430,913</b>	<b>340,913</b>	<b>2,340,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,340,000</b>	<b>0</b>	<b>2,680,913</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

### Potential Board/Commission Review:

Planning and Transportation Commission

Storm Water Management Oversight Committee

### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.



**Fund:** Stormwater Management - Operating

**Category:** Capacity Improvements

**Project Location:** Louis Road from Sycamore Drive to Matadero Creek

**Managing Department:** Public Works

**Initial Project Start:** Fall 2023

**Initial Project Completion:** Winter 2024

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** SD-24000

Intersection of Louis Road and Clara Drive

# Louis Road System Upgrades

## Description

This project provides funding to install 1,100 linear feet of new High Density Polyethylene storm drain pipe, concrete inlets, and manholes northwest of Sycamore Drive to a new outfall with a flap-gate at Matadero Creek.

## Justification

Installing storm drain improvements will divert flows that currently drain into Colorado Avenue directly into Matadero Creek. In addition, the proposed 72-inch pipe will provide storage during the storm peak. This is recommended to alleviate flooding in the pipes northwest of Sycamore Drive and achieve a 10-year level of service.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto residents in April 2017. The need for this project was identified in Fiscal Year 2015 and this project ranked as high-priority on the Storm Drain Master Plan dated June 2015. This is the eleventh project on the Storm Drain Blue Ribbon Committee Recommended list that was described to voters. Once this project is complete, other upstream improvements along Louis Road can be scheduled. The funding amount shown is based on the engineer's estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc., and includes a 3% annual increase for escalation.

# STORMWATER MANAGEMENT FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Stormwater Management Fund</b>	0	0	0	0	0	0	0	2,446,000	2,446,000	0	2,446,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,446,000</b>	<b>2,446,000</b>	<b>0</b>	<b>2,446,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	0	2,446,000	2,446,000	0	2,446,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,446,000</b>	<b>2,446,000</b>	<b>0</b>	<b>2,446,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment  
Section: Water Resources  
Goal: N-4  
Policy: N-4.14

#### Potential Board/Commission Review:

Planning and Transportation Commission  
Storm Water Management Oversight Committee

#### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.





**Fund:** Stormwater Management - Operating  
**Category:** Capacity Improvements  
**Project Location:** West Bayshore Road at Adobe and Barron Creek junction  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Winter 2021  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** SD-20000

Location of New West Bayshore Pump Station

# West Bayshore Road Pump Station

## Description

This project provides funding for the design and construction of a new small pump station with 15 cubic feet per second capacity.

## Justification

The invert elevations of the existing storm drain lines are lower than the outfall. As such, this area is subject to flooding problems. Adding a pump in advance of the outfall would eliminate the routine flooding along West Bayshore Road. The pump station design is scheduled for Fiscal Year 2020 and construction is scheduled for Fiscal Year 2021.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via a ballot measure by Palo Alto voters in April 2017. On the ballot, this project is referred to as 4. West Bayshore Road Pump Station to Adobe Creek. The need for this project was identified in Fiscal Year 2015 and ranked as highest priority on the Storm Drain Master Plan dated June 2015. The funding amount shown here is based on the engineer's cost estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc.

## Significant Changes

**2020-2024 CIP:** Design and construction expenses were adjusted by 3% to account for escalation.

**2019-2023 CIP:** Previously incorporating two separate projects, the scope of this project was separated in alignment with the 13 projects approved in April 2017 as part of the Storm Water



# STORMWATER MANAGEMENT FUND

Management Fee ballot measure. SD-20000 was renamed West Bayshore Road Pump Station from the previous title Storm Drain Pump Stations to Adobe Creek in the 2018-2022 CIP.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Stormwater Management Fund</b>	0	40,000	40,000	231,000	1,068,400	0	0	0	1,299,400	0	1,339,400
<b>Total</b>	<b>0</b>	<b>40,000</b>	<b>40,000</b>	<b>231,000</b>	<b>1,068,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,299,400</b>	<b>0</b>	<b>1,339,400</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	1,068,400	0	0	0	1,068,400	0	1,068,400
<b>Design</b>	0	40,000	40,000	231,000	0	0	0	0	231,000	0	271,000
<b>Total</b>	<b>0</b>	<b>40,000</b>	<b>40,000</b>	<b>231,000</b>	<b>1,068,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,299,400</b>	<b>0</b>	<b>1,339,400</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future with costs for electricity to serve the pump station; future routine inspections; and maintenance of the mechanical, electrical, and fiber operating systems. As these costs are quantified, and if the department determines they cannot be absorbed within the available maintenance schedule and annual operating budget, adjustments will be brought forward in future budgets, as necessary.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

### Potential Board/Commission Review:

Planning and Transportation Commission

Storm Water Management Oversight Committee

### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.

## STORMWATER MANAGEMENT FUND



**Fund:** Stormwater Management - Operating  
**Category:** Capacity Improvements  
**Project Location:** West Bayshore Road from Adobe Creek to Loma Verde Avenue  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2023  
**Initial Project Completion:** Summer 2024  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** SD-23000

West Bayshore Road, North of Adobe and Barron Creek confluence

# West Bayshore Road Trunk Line Improvements

## Description

This project provides funding to upgrade 1,400 linear feet of storm drain pipe with 36-inch High Density Polyethylene.

## Justification

Upsizing the existing 15-inch pipes will eliminate ponding and increase the capacity required to convey runoff from a 10-year storm event along West Bayshore Road.

## Supplemental Information

This project is funded by the Storm Water Management Fee approved via ballot measure by Palo Alto voters in April 2017. The need for this project was identified in Fiscal Year 2015 and ranked as a high priority in the Storm Drain Master Plan dated June 2015. This is the third project on the Storm Drain Blue Ribbon Committee Recommended list that was described to voters. The funding amount shown is based on the engineer's estimate prepared for the Storm Drain Master Plan, which references the 2014 Current Construction Cost, Saylor Publications Inc., and includes a 3% annual increase for escalation.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Stormwater Management Fund	0	0	0	0	0	0	2,109,000	0	2,109,000	0	2,109,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,109,000</b>	<b>0</b>	<b>2,109,000</b>	<b>0</b>	<b>2,109,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	2,109,000	0	2,109,000	0	2,109,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,109,000</b>	<b>0</b>	<b>2,109,000</b>	<b>0</b>	<b>2,109,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

Program: N4.14.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

Storm Water Management Oversight Committee

#### Environmental Impact Analysis:

This project is expected to have an exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

## System Rehabilitation



**Fund:** Stormwater Management - Operating

**Category:** System Rehabilitation

**Project Location:** Various

**Managing Department:** Public Works

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** SD-06101

Storm Drain Repair & Rehabilitation

# Storm Drainage System Replacement And Rehabilitation

## Description

This project provides funding for annual replacement and rehabilitation projects, identified by a previous condition assessment, to help maintain the integrity of the storm drain system, including the replacement or rehabilitation of deteriorated storm drain pipes, manholes, and storm drain inlets.

## Justification

The project implements the recommendations established by the 1993 Storm Drain Condition Assessment Report. The specific pipes and drainage structures selected for replacement and/or rehabilitation were determined based on their 1993 condition score and recommendations by field maintenance staff. The pipelines and structures need to be replaced since they are approaching the end of their intended useful life.

## Supplemental Information

The proposed improvements are feasible due to the passing of the Storm Water Management Fee ballot measure. Several of the highest priority projects are located under Page Mill Road and will be coordinated as part of a resurfacing project. Pipe and structure replacements also include recommendations by field maintenance staff who inspect structures during routine inlet and pipe cleaning, identifying broken segments or structures. Lastly, if an existing storm drain line is located near or within another public improvement project, replacement may be warranted to extend useful life and/or avoid limited future access.

# STORMWATER MANAGEMENT FUND

**Fiscal Year 2020:** Replace or repair the 20 high-priority lines that were identified by staff during the 2017 inspections.

**Fiscal Year 2021:** Replace or repair moderate-priority lines as identified during the 2017 inspections.

**Fiscal Year 2022:** Replace or repair low-priority lines as identified during the 2017 inspections.

**Fiscal Year 2023:** Remove sediment and debris within the 6'x6' box culvert located above Oregon Expressway to improve flows.

**Fiscal Year 2024:** Line the box culvert over Oregon Expressway to protect the structure's integrity.

## Significant Changes

**2019-2023 CIP:** Replace pipes within Page Mill ranked high priority and pipes within public utility easements associated with public infrastructure.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Stormwater Management Fund</b>	N/A	2,593,758	1,495,277	1,704,481	524,000	558,000	575,000	580,000	3,941,481	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,593,758</b>	<b>1,495,277</b>	<b>1,704,481</b>	<b>524,000</b>	<b>558,000</b>	<b>575,000</b>	<b>580,000</b>	<b>3,941,481</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	2,520,530	1,461,305	1,668,654	488,800	518,804	524,725	580,000	3,780,983	0	N/A
<b>Design</b>	N/A	73,228	33,972	35,827	35,200	39,196	50,275	0	160,498	0	N/A
<b>Total</b>	<b>N/A</b>	<b>2,593,758</b>	<b>1,495,277</b>	<b>1,704,481</b>	<b>524,000</b>	<b>558,000</b>	<b>575,000</b>	<b>580,000</b>	<b>3,941,481</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.14

### Potential Board/Commission Review:

Storm Water Management Oversight Committee

## STORMWATER MANAGEMENT FUND

**Environmental Impact Analysis:**

This project is exempt from CEQA under Section 15302.



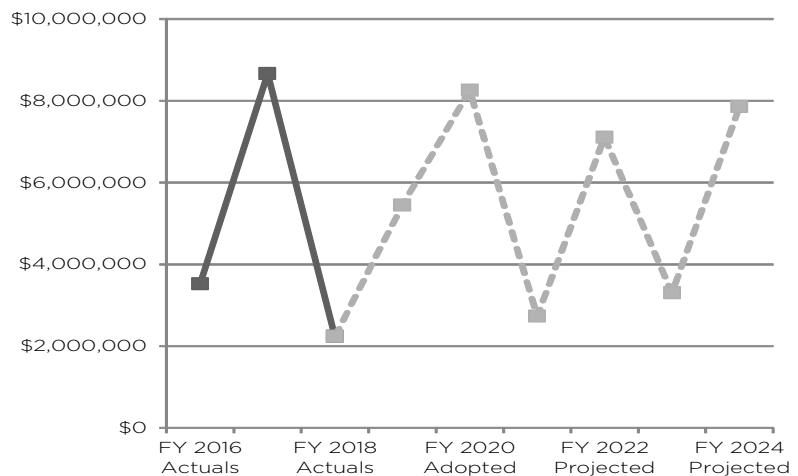
# WASTEWATER COLLECTION FUND

## Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal Wastewater Collection System began operation in 1898 and continues to provide safe, reliable, and cost effective services to residents and customers of Palo Alto. For the 2020-2024 Capital Improvement Program (CIP), approximately \$29.3 million is projected, with \$8.3 million allocated in Fiscal Year 2020. Overall, a total of 11 projects are programmed for the 5-year CIP.

Major projects funded in the 2020-2024 CIP include Wastewater Collection System Rehabilitation/Augmentation projects (cumulative total of \$20.9 million), Sewer Lateral/Manhole Rehabilitation and Replacement (\$4.3 million), and Sewer System, Customer Connections (\$2.4 million). The budget for the Wastewater Collection Fund CIP is categorized into two separate types of projects: Customer Connections and System Improvements.

**Wastewater Collection Fund  
Capital Expenditures**



## Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of sanitary sewer lines	216.0
Total number of sanitary laterals	18,031

## Customer Connections

As customers continually change their wastewater needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the Wastewater Collection System must evolve to meet these needs. The Sewer System Customer Connections project is the only project within this category and includes work required to meet the needs of customers who have applied for new sewer laterals. The Wastewater Collection Fund pays for a portion of this project while remaining costs are supported by reimbursements from customers for project work performed by the City.

### Recent Accomplishments

- In Fiscal Year 2018, the Utilities Wastewater Division completed over 33 customer service projects with a total cost of \$0.3 million.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There is only one project within this category, the Sewer System, Customer Connections project, with funding of \$2.4 million over the 5-year CIP. This project funds changes to customer connections and costs are partially offset by reimbursements from customers requesting the service.

## System Improvement

To ensure reliable wastewater services for the City of Palo Alto residents and customers, infrastructure must be replaced upon reaching the end of its useful life. The infrastructure replacement program includes projects that will rehabilitate or replace deteriorated pipelines. In the next five years, it is estimated that approximately 90,000 linear feet of wastewater mains will be replaced.

### Recent Accomplishments

- Completed construction of Sanitary Sewer Replacement Project (SSR 28) Part A to replace approximately 477 linear feet of sewer main pipelines at the Jr. Museum and Zoo (JMZ).
- Completed design and solicitation package of Sanitary Sewer Replacement Project (SSR 28) Part B to replace approximately 6,000 linear feet of sewer main pipelines on Oregon Expressway and rehabilitate 2,000 linear feet of sewer main pipelines on lower Page Mill Road and Colorado Avenue.
- Started design of Sanitary Sewer Replacement Project 29 (SSR29) to replace approximately 16,000 linear feet of sewer main pipelines in the Charleston Meadows neighborhood.

## 2020-2024 Capital Improvement Program

### Recurring Projects

A total of \$5.8 million is programmed for System Improvement recurring projects in the 2020-2024 CIP, with \$1.1 million allocated in Fiscal Year 2020. Recurring projects in this category include the following:

- Wastewater System Improvements (Fiscal Year 2020: \$0.3 million; 5-Year CIP: \$1.4 million)
- Wastewater General Equipment and Tools (Fiscal Year 2020: \$0.1 million; 5-Year CIP: \$0.3 million)
- Sewer Lateral/Manhole Rehabilitation and Replacement (Fiscal Year 2020: \$0.9 million; 5-Year CIP: \$4.3 million)

### Non-Recurring Projects

The majority of funding within this category is allocated towards Wastewater Collection System Rehabilitation/Augmentation Projects (cumulative total of \$20.9 million). These projects implement high-priority rehabilitation, augmentation, and lateral replacement work which reduces inflow of rainfall and groundwater into the collection system. The Utilities Department coordi-

# WASTEWATER COLLECTION FUND

nates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies.

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details: <http://www.cityofpaloalto.org/gov/depts/utl/projects/default.asp>.

## Summary of Capital Activity

### WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Other Revenues</b>									
WC-80020	Sewer System, Customer Connections	548,864	447,286	430,534	443,450	456,754	470,457	484,571	2,285,766
	<b>Other Revenue Total</b>	<b>548,864</b>	<b>447,286</b>	<b>430,534</b>	<b>443,450</b>	<b>456,754</b>	<b>470,457</b>	<b>484,571</b>	<b>2,285,766</b>
	<b>Total Sources</b>	<b>548,864</b>	<b>447,286</b>	<b>430,534</b>	<b>443,450</b>	<b>456,754</b>	<b>470,457</b>	<b>484,571</b>	<b>2,285,766</b>
<b>Use of Funds</b>									
<b>Customer Connections</b>									
WC-80020	Sewer System, Customer Connections	295,652	447,286	445,000	468,000	480,000	497,000	512,000	2,402,000
	<b>Customer Connections Total</b>	<b>295,652</b>	<b>447,286</b>	<b>445,000</b>	<b>468,000</b>	<b>480,000</b>	<b>497,000</b>	<b>512,000</b>	<b>2,402,000</b>
<b>System Improvements</b>									
WC-99013	Sewer Lateral/Manhole Rehabilitation and Replacement	494,877	654,224	921,500	945,000	800,000	825,000	850,000	4,341,500
WC-11000	Wastewater Collection System Rehabilitation/ Augmentation Project 24	121,353	94,406	34,850	0	0	0	0	34,850
WC-12001	Wastewater Collection System Rehabilitation/ Augmentation Project 25	346,954	186,531	0	0	0	0	0	0
WC-13001	Wastewater Collection System Rehabilitation/ Augmentation Project 26	166,536	215,194	46,400	0	0	0	0	46,400
WC-14001	Wastewater Collection System Rehabilitation/ Augmentation Project 27	741,531	73,015	0	0	0	0	0	0
WC-15001	Wastewater Collection System Rehabilitation/ Augmentation Project 28	47,557	3,435,000	1,610,043	0	0	0	0	1,610,043
WC-16001	Wastewater Collection System Rehabilitation/ Augmentation Project 29	0	40,000	4,468,339	0	0	0	0	4,468,339
WC-17001	Wastewater Collection System Rehabilitation/ Augmentation Project 30	0	0	421,684	1,000,000	5,500,000	0	0	6,921,684
WC-19001	Wastewater Collection System Rehabilitation/ Augmentation Project 31	0	0	0	0	0	1,650,000	5,500,000	7,150,000
WC-20000	Wastewater Collection System Rehabilitation/ Augmentation Project 32	0	0	0	0	0	0	650,000	650,000


## WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
WC-13002	Wastewater General Equipment and Tools	24,204	50,000	50,000	50,000	50,000	50,000	50,000	250,000
WC-15002	Wastewater System Improvements	0	253,001	260,000	269,000	276,875	285,181	293,737	1,384,793
	<b>System Improvements Total</b>	<b>1,943,012</b>	<b>5,001,371</b>	<b>7,812,816</b>	<b>2,264,000</b>	<b>6,626,875</b>	<b>2,810,181</b>	<b>7,343,737</b>	<b>26,857,609</b>
	<b>Total Uses</b>	<b>2,238,664</b>	<b>5,448,657</b>	<b>8,257,816</b>	<b>2,732,000</b>	<b>7,106,875</b>	<b>3,307,181</b>	<b>7,855,737</b>	<b>29,259,609</b>

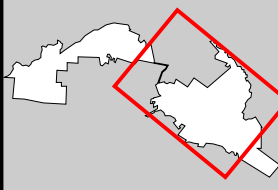


CITY OF  
**PALO  
ALTO**



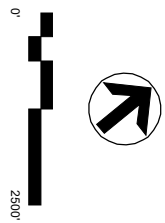


The City of Palo Alto



**WASTEWATER FUND MAP**  
FY 2020 to FY 2024  
**CAPITAL IMPROVEMENT PROGRAM**

This map is a product of the City of Palo Alto GIS





CITY OF  
**PALO  
ALTO**



## Customer Connections



**Fund:** Wastewater Collection - Operating  
**Category:** Customer Connections  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WC-80020

Sewer System, Customer Connections

# Sewer System, Customer Connections

## Description

This project provides for the installation of sewer lateral connections, additions of existing mains, and extensions of mains for new or existing customers.

## Justification

It is necessary to provide sewer connections to serve new customers and to respond to changes in sewer requirements due to redevelopment. Old existing non-plastic sewer service laterals become cracked and broken by tree root intrusion, ground movement, and third party excavation damages requiring the laterals to be replaced.

## Supplemental Information

Other funding sources include customer connection and capacity fees for connecting to the Wastewater Collection System. Capacity fees are collected through connection charges to cover the proportionate cost of system improvements required to serve new customers.

## Significant Changes

**2015-2019 CIP:** This project was previously titled Sewer System Extension. As part of the Fiscal Year 2015 budget, it was retitled to more accurately reflect the work done with this funding.

# WASTEWATER COLLECTION FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	417,995	447,286	430,534	443,450	456,754	470,457	484,571	2,285,766	0	N/A
Wastewater Collection Fund	N/A	29,291	0	14,466	24,550	23,246	26,543	27,429	116,234	0	N/A
<b>Total</b>	<b>N/A</b>	<b>447,286</b>	<b>447,286</b>	<b>445,000</b>	<b>468,000</b>	<b>480,000</b>	<b>497,000</b>	<b>512,000</b>	<b>2,402,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	447,286	447,286	445,000	468,000	480,000	497,000	512,000	2,402,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>447,286</b>	<b>447,286</b>	<b>445,000</b>	<b>468,000</b>	<b>480,000</b>	<b>497,000</b>	<b>512,000</b>	<b>2,402,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

## System Improvements

## WASTEWATER COLLECTION FUND



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WC-99013

Sewer manhole base

# Sewer Lateral/Manhole Rehabilitation and Replacement

## Description

This project will replace defective sewer laterals, cleanouts, and manholes; install backwater devices; and purchase equipment to support these activities in order to maintain the Wastewater Collection System. Information collected during routine annual maintenance activities is used to prioritize work. Defective laterals, for example, will be replaced to re-establish existing services, reduce maintenance expenses, and eliminate ground water intrusion. Backwater devices will be installed to reduce backflows of sewage. New manholes will be installed or rehabilitated to improve structural integrity.

## Justification

The work will help reduce both the backflow of sewage onto private property and the City's treatment expenses. This project also cleans and takes videos of sewer collection mains and laterals as necessary.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	825,724	654,224	921,500	945,000	800,000	825,000	850,000	4,341,500	0	N/A
<b>Total</b>	<b>N/A</b>	<b>825,724</b>	<b>654,224</b>	<b>921,500</b>	<b>945,000</b>	<b>800,000</b>	<b>825,000</b>	<b>850,000</b>	<b>4,341,500</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	825,724	654,224	921,500	945,000	800,000	825,000	850,000	4,341,500	0	N/A
<b>Total</b>	<b>N/A</b>	<b>825,724</b>	<b>654,224</b>	<b>921,500</b>	<b>945,000</b>	<b>800,000</b>	<b>825,000</b>	<b>850,000</b>	<b>4,341,500</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

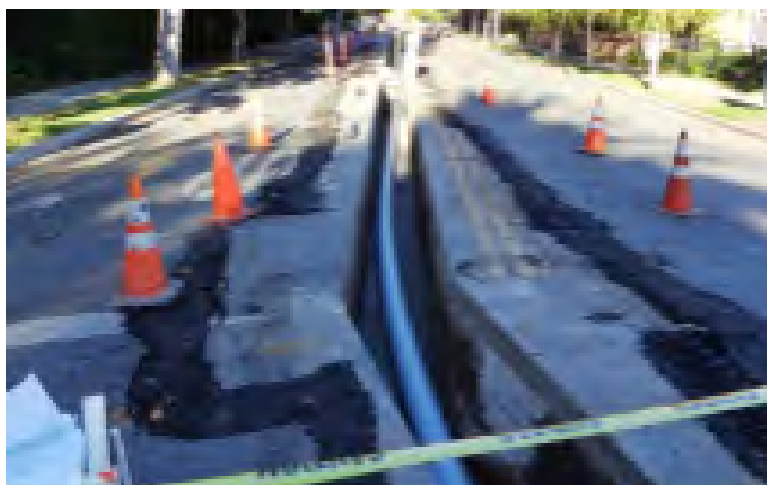
#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating

**Category:** System Improvements

**Project Location:** Various locations

**Managing Department:** Utilities

**Initial Project Start:** Summer 2010

**Initial Project Completion:** Winter 2013

**Revised Project Start:** Summer 2014

**Revised Project Completion:** Fall 2019

**Project Number:** WC-11000

New HDPE sewer main

# Wastewater Collection System Rehabilitation/Augmentation Project 24

## Description

The funding for this project is for replacement and/or rehabilitation of approximately 14,102 linear feet (which represents 4.0% of the City's Wastewater Collection system) of sanitary sewer mains of various sizes and installation of 121 sewer manholes. The project will include various streets in the University South, Professorville and Old Palo Alto neighborhoods. In addition, 779 existing sewer service laterals and cleanouts will be replaced with new 4" High Density Polyethylene (HDPE) service laterals and cleanouts. All new service laterals will be installed from the new sewer main (usually located in the street) to the new sewer cleanouts (located in the City's right-of-way, usually in a planting strip or behind the sidewalk).

## Justification

This project is part of the Utilities Department plan to address areas that were identified in Wastewater Capital Improvement Project 17 (Cleaning and Video Inspection of the Collection System) as needing rehabilitation. The planned areas were prioritized based on system maintenance needs, the 2004 Wastewater Master Plan, the Public Works street paving program, and the goals of the Sanitary Sewer Management Plan. Staff also coordinated this project with other underground work to minimize interference with other contractors and their schedules.



# WASTEWATER COLLECTION FUND

## Supplemental Information

Project funding and timeline were revised due to significantly high bids. Bids were originally solicited for Wastewater Collection System Rehabilitation/Augmentation Projects 24/25 in August 2014. At that time the City received five (5) bids, all of which were at least 20 percent above the engineer's estimate. In September 2014, the City rejected all bids because the bids exceeded the project budget. Following the rejection of the bids, the work scope was reduced in order to stay within the project budget. Wastewater Collection System Rehabilitation/Augmentation Projects 24/25/26 were combined and rebid in December 2014 and five (5) bids were received.

## Significant Changes

**2020-2024 CIP:** Funding reappropriated to complete project close activities.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Wastewater Collection Fund</b>	3,002,339	129,256	94,406	34,850	0	0	0	0	34,850	0	3,131,595
<b>Total</b>	<b>3,002,339</b>	<b>129,256</b>	<b>94,406</b>	<b>34,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,850</b>	<b>0</b>	<b>3,131,595</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,401,868	129,256	94,406	34,850	0	0	0	0	34,850	0	2,531,124
<b>Design</b>	600,460	0	0	0	0	0	0	0	0	0	600,460
<b>Total</b>	<b>3,002,328</b>	<b>129,256</b>	<b>94,406</b>	<b>34,850</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,850</b>	<b>0</b>	<b>3,131,584</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation

Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Wastewater Collection - Operating

**Category:** System Improvements

**Project Location:** Various locations

**Managing Department:** Utilities

**Initial Project Start:** Summer 2012

**Initial Project Completion:** Winter 2014

**Revised Project Start:** Summer 2015

**Revised Project Completion:** Fall 2019

**Project Number:** WC-13001

Installation of HDPE sewer main by directional drilling method

# Wastewater Collection System Rehabilitation/Augmentation Project 26

## Description

The funding for this project is for replacement and/or rehabilitation of approximately 14,196 linear feet (which represents 4.0% of the City's Wastewater Collection system) of sanitary sewer mains of various sizes and installation of 121 sewer manholes. The project will include various streets in the University South, Professorville and Old Palo Alto neighborhoods. In addition, 779 existing sewer service laterals and cleanouts will be replaced with new 4" High Density Polyethylene (HDPE) service laterals and cleanouts. All new service laterals will be installed from the new sewer main (usually located in the street) to the new sewer cleanouts (located in the City's right-of-way, usually in a planting strip or behind the sidewalk).

## Justification

This project is part of the Utilities Department plan to address areas that were identified in Wastewater Capital Improvement Project 17 (Cleaning and Video Inspection of the Collection System) as needing rehabilitation. The planned areas were prioritized based on system maintenance needs, the 2004 Wastewater Master Plan, the Public Works street paving program, and the goals of the Sanitary Sewer Management Plan. Staff also coordinated this project with other underground work to minimize interference with other contractors and their schedules.

# WASTEWATER COLLECTION FUND

## Supplemental Information

Project funding and timeline were revised due to significantly high bids. Bids were originally solicited for Wastewater Collection System Rehabilitation/Augmentation Projects 24/25 in August 2014. At that time the City received five (5) bids, all of which were at least 20 percent above the engineer's estimate. In September 2014, the City rejected all bids because the bids exceeded the project budget. Following the rejection of the bids, the work scope was reduced in order to stay within the project budget. Wastewater Collection System Rehabilitation/Augmentation Projects 24/25/26 were combined and rebid in December 2014 and five (5) bids were received.

## Significant Changes

**2020-2024 CIP:** Funding reappropriated to complete project close activities.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Wastewater Collection Fund</b>	3,048,404	261,594	215,194	46,400	0	0	0	0	46,400	0	3,309,998
<b>Total</b>	<b>3,048,404</b>	<b>261,594</b>	<b>215,194</b>	<b>46,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,400</b>	<b>0</b>	<b>3,309,998</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,438,720	261,594	215,194	46,400	0	0	0	0	46,400	0	2,700,314
<b>Design</b>	609,677	0	0	0	0	0	0	0	0	0	609,677
<b>Total</b>	<b>3,048,397</b>	<b>261,594</b>	<b>215,194</b>	<b>46,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,400</b>	<b>0</b>	<b>3,309,991</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating

**Category:** System Improvements

**Project Location:** Various locations

**Managing Department:** Utilities

**Initial Project Start:** Summer 2016

**Initial Project Completion:** Winter 2018

**Revised Project Start:** Summer 2018

**Revised Project Completion:** Fall 2020

**Project Number:** WC-15001

**Trenching for installation of High Density Polyethylene (HDPE) sewer main by open trench method**

# Wastewater Collection System Rehabilitation/Augmentation Project 28

## Description

The project will fund the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 8,155 linear feet (which represents 0.6% of the City's Wastewater Collection System) for various streets in the City, including sections in the Charleston Meadows and Leland Manor/Garland neighborhoods, as well as near the Junior Museum and Zoo (JMZ). The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

## Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are determined by the recommendations for the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** Project scope reduced from 21,889 to 7,655 linear feet in the Charleston/Meadows and Leland Manor/Garland neighborhoods due to higher than expected construction prices, and to accommodate work needed for 500 linear feet of pipe for the Palo Alto Junior Museum & Zoo (JMZ) renovation (AC-18001) to prevent a delay to the estimated summer 2020 reopening.

**2019-2023 CIP:** Project budget has increased by \$0.8 million to account for construction cost escalation.

**2018-2022 CIP:** Due to delays in Sewer System Replacement (SSR) Projects 24, 25, 26, and 27, the construction for this project is postponed to Fiscal Year 2019.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	47,556	5,045,043	3,435,000	1,610,043	0	0	0	0	1,610,043	0	5,092,599
<b>Total</b>	<b>47,556</b>	<b>5,045,043</b>	<b>3,435,000</b>	<b>1,610,043</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,610,043</b>	<b>0</b>	<b>5,092,599</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	38,044	4,592,443	3,435,000	1,610,043	0	0	0	0	1,610,043	0	5,083,087
Design	9,510	452,600	0	0	0	0	0	0	0	0	9,510
<b>Total</b>	<b>47,554</b>	<b>5,045,043</b>	<b>3,435,000</b>	<b>1,610,043</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,610,043</b>	<b>0</b>	<b>5,092,597</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

## WASTEWATER COLLECTION FUND

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**





**Fund:** Wastewater Collection - Operating

**Category:** System Improvements

**Project Location:** Various locations

**Managing Department:** Utilities

**Initial Project Start:** Summer 2017

**Initial Project Completion:** Winter 2019

**Revised Project Start:** Summer 2019

**Revised Project Completion:** Fall 2020

**Project Number:** WC-16001

Rehabilitation Equipment

# Wastewater Collection System Rehabilitation/Augmentation Project 29

## Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 9,965 linear feet (which represents 0.9% of the City's Wastewater Collection System) for large sections in the Charleston neighborhood and along several streets on El Camino Real. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among different City departments.

## Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are informed by the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.



# WASTEWATER COLLECTION FUND

## Significant Changes

**2020-2024 CIP:** Project footage has been decreased by 4,387 linear feet.

**2019-2023 CIP:** Project budget has increased by \$0.9 million to account for construction cost escalation.

**2018-2022 CIP:** Due to delays in SSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	409,849	40,000	4,468,339	0	0	0	0	4,468,339	0	4,508,339
<b>Total</b>	<b>0</b>	<b>409,849</b>	<b>40,000</b>	<b>4,468,339</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,468,339</b>	<b>0</b>	<b>4,508,339</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	4,097,966	0	0	0	0	4,097,966	0	4,097,966
Design	0	409,849	40,000	370,373	0	0	0	0	370,373	0	410,373
<b>Total</b>	<b>0</b>	<b>409,849</b>	<b>40,000</b>	<b>4,468,339</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,468,339</b>	<b>0</b>	<b>4,508,339</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:**

**Managing Department:** Utilities

**Initial Project Start:** Summer 2018

**Initial Project Completion:** Winter 2020

**Revised Project Start:** Summer 2020

**Revised Project Completion:** Winter 2022

**Project Number:** WC-17001

Trenching for installation of High Density Polyethylene (HDPE) sewer main by open trench method

# Wastewater Collection System Rehabilitation/Augmentation Project 30

## Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 12,066 linear feet (which represents 1.1% of the City's Wastewater Collection System) for various streets in the City, including Ventura and Research Park neighborhoods. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring coordination between departments.

## Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are informed by the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

# WASTEWATER COLLECTION FUND

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The overall project budget has increased by \$2.3 million to account for a reduction of 3,614 in linear feet and construction cost escalation.

**2019-2023 CIP:** Project budget has increased by \$0.9 million to account for construction cost escalation.

**2018-2022 CIP:** Due to delays in SSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	421,684	1,000,000	5,500,000	0	0	6,921,684	0	6,921,684
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>421,684</b>	<b>1,000,000</b>	<b>5,500,000</b>	<b>0</b>	<b>0</b>	<b>6,921,684</b>	<b>0</b>	<b>6,921,684</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,000,000	5,500,000	0	0	6,500,000	0	6,500,000
Design	0	0	0	421,684	0	0	0	0	421,684	0	421,684
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>421,684</b>	<b>1,000,000</b>	<b>5,500,000</b>	<b>0</b>	<b>0</b>	<b>6,921,684</b>	<b>0</b>	<b>6,921,684</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Winter 2021  
**Revised Project Start:** Summer 2023  
**Revised Project Completion:** Winter 2024  
**Project Number:** WC-19001

Sewer Trench Line

# Wastewater Collection System Rehabilitation/Augmentation Project 31

## Description

This project funds the design and construction of high priority lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces 12,874 linear feet (which represents 1.1% of the City's Wastewater Collection System) for various streets in the City, including Old Palo Alto, Ventura, and Green Acres neighborhoods. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring coordination between departments.

## Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are informed by the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

# WASTEWATER COLLECTION FUND

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The overall project budget has increased by \$2.3 million and decreased in linear footage by 12,109 to account for construction cost escalation.

**2019-2023 CIP:** Project budget has increased by \$1.0 million to account for construction cost escalation.

**2018-2022 CIP:** Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2022.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	1,650,000	5,500,000	7,150,000	0	7,150,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,650,000</b>	<b>5,500,000</b>	<b>7,150,000</b>	<b>0</b>	<b>7,150,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	1,000,000	5,500,000	6,500,000	0	6,500,000
Design	0	0	0	0	0	0	650,000	0	650,000	0	650,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,650,000</b>	<b>5,500,000</b>	<b>7,150,000</b>	<b>0</b>	<b>7,150,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Winter 2022  
**Revised Project Start:** Summer 2024  
**Revised Project Completion:** Winter 2026  
**Project Number:** WC-20000

Sewer Main Replacement Project using Pipe Bursting Method

# Wastewater Collection System Rehabilitation/Augmentation Project 32

## Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project replaces approximately 15,437 linear feet (which represents 1% of the City's Wastewater Collection System) for various streets in the City, including sections in the Midtown/Midtown West and Palo Verde neighborhoods and a portion of University Avenue in the Crescent Park neighborhood. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring coordination between departments.

## Justification

The 2004 Collection System Master Plan (Master Plan Study) update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are informed by the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.



# WASTEWATER COLLECTION FUND

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The overall project budget has increased by \$2.3 million to account for construction cost escalation.

**2019-2023 CIP:** Project budget has increased by \$1.0 million to account for construction cost escalation.

**2018-2022 CIP:** Due to delays in WCSR 24, 25, 26, and 27, the construction for this project is postponed to FY 2023.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	0	650,000	650,000	5,500,000	6,150,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>650,000</b>	<b>650,000</b>	<b>5,500,000</b>	<b>6,150,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	650,000	650,000	5,500,000	6,150,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>650,000</b>	<b>650,000</b>	<b>5,500,000</b>	<b>6,150,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation

Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2023  
**Initial Project Completion:** Winter 2024  
**Revised Project Start:** Summer 2027  
**Revised Project Completion:** Winter 2028  
**Project Number:** WC-21000

Rehabilitation equipment

# Wastewater Collection System Rehabilitation/Augmentation Project 33

## Description

This project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and groundwater into the collection system. The project will include approximately 15,000 to 25,000 linear feet for various streets within the City's limits. The project will be comprised of laterals identified in video inspection work or through maintenance records as deficient and in need of replacement. Priority will be given to areas identified by Public Works as targeted work zones ensuring coordination between departments.

## Justification

The 2004 Collection System Master Plan Study update indicated certain facilities are in need of enlargement to handle growth and peak flows. The mains selected for replacement and/or rehabilitation are informed by the Master Plan Study; research and analysis of sewer main maintenance records; cleaning and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling.

## Supplemental Information

Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.



# WASTEWATER COLLECTION FUND

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The overall project budget has increased by \$2.3 million to account for construction cost escalation.

**2019-2023 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	0	0	0	6,500,000	6,500,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,500,000</b>	<b>6,500,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	0	0	6,500,000	6,500,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,500,000</b>	<b>6,500,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

## WASTEWATER COLLECTION FUND



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Municipal Service Center  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WC-13002

Equipment used to install fuse High Density Polyethylene (HDPE) pipe

# Wastewater General Equipment and Tools

## Description

This funding allows for the acquisition of new fusion equipment and other associated tools. This equipment is used to fuse together pipe joints in the City's Wastewater Collection System.

## Justification

As the equipment ages, the quality of the fusion joints begin to decline and the operators must spend more time scraping, aligning, and fusing construction joints. In order to maintain high quality standards for the installation of the City's wastewater collection mains, along with the associated service standards and worker safety and productivity measures, equipment and tools require continuous upgrades.

## Significant Changes

**2015-2019 CIP:** Project was retitled from Wastewater Fusion and General Equipment/Tools.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>250,000</b>	<b>0</b>	<b>N/A</b>

# WASTEWATER COLLECTION FUND

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>50,000</b>	<b>250,000</b>	<b>0</b>	<b>N/A</b>

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## WASTEWATER COLLECTION FUND



**Fund:** Wastewater Collection - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WC-15002

Trenching for installation of High Density Polyethylene (HDPE) sewer main by directional drilling method

# Wastewater System Improvements

## Description

This project provides funding as needed to improve the Wastewater Collection System. Typical activities include: increasing system capacity for growth, flow monitoring, hydraulic modeling and system analysis, load simulations, asset management analysis and assessment, system inflow/infiltration analysis, and sanitary sewer overflow monitoring and reduction.

## Justification

Wastewater Collection System reliability and adequate capacity are critical to providing a high level of service to customers. Mainline sewer backups and overflows into homes and businesses are costly and a health risk. Reducing the losses associated with these backup claims requires a continuous evaluation of system needs and making improvements to maintain a high level of service.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	253,001	253,001	260,000	269,000	276,875	285,181	293,737	1,384,793	0	N/A
<b>Total</b>	<b>N/A</b>	<b>253,001</b>	<b>253,001</b>	<b>260,000</b>	<b>269,000</b>	<b>276,875</b>	<b>285,181</b>	<b>293,737</b>	<b>1,384,793</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	253,001	253,001	260,000	269,000	276,875	285,181	293,737	1,384,793	0	N/A
<b>Total</b>	<b>N/A</b>	<b>253,001</b>	<b>253,001</b>	<b>260,000</b>	<b>269,000</b>	<b>276,875</b>	<b>285,181</b>	<b>293,737</b>	<b>1,384,793</b>	<b>0</b>	<b>N/A</b>

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

# WASTEWATER TREATMENT FUND

## Overview

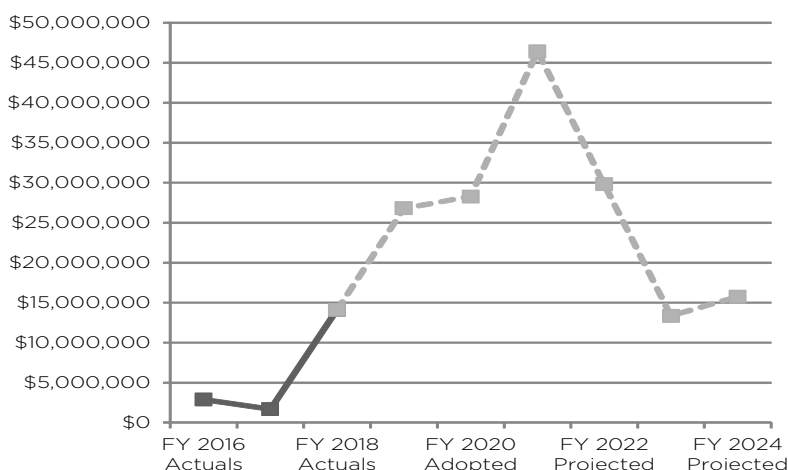
Activities related to the replacement, rehabilitation, optimization, and upgrading of the City's wastewater treatment plant infrastructure are accounted for in the Wastewater Treatment Fund. For detailed information on the maintenance and operation of the wastewater treatment plant, please refer to the Wastewater Treatment Fund section of the Operating Budget. As part of the 2020-2024 Capital Improvement Program (CIP) expenditures of \$133.6 million programmed with \$28.3 million allocated in Fiscal Year 2020. Note that about 65% of expenditures in the Wastewater Treatment Fund are reimbursed by five contributing partner agencies outside of the City of Palo Alto, based on each agency's expected capacity share. The Wastewater Treatment Fund recovers costs from the Palo Alto Wastewater Collection Fund, Stanford University, East Palo Alto Sanitary District, Mountain View, Los Altos, and Los Altos Hills. Each agency bills their respective sewer ratepayers for associated sewer and treatment costs as well as the Wastewater Treatment Fund's capital projects. Approximately 250,000 residents are served by the six agencies contributing sewage to the Regional Water Quality Control Plant (RWQCP). Overall, a total of seven projects are programmed in the 2020-2024 CIP with the budget accounted for in two categories: Buildings and Facilities and System Improvements.

The 2012 Long Range Facilities Plan evaluated the infrastructure needs of the RWQCP. It analyzed and made recommendations on future regulations, replacement and rehabilitation needed, site planning, and flow and load projections. Funding for the major projects included in the 2020-2024 CIP requires debt financing and approval by the partners, per the individual agreements between the City and each of the partners. Over the years, staff has met with partner agencies at the staff and board/council level to discuss major capital projects. It should be noted that a portion of the expenses for these projects are expected to be incurred after the five years included in the 2020-2024 CIP. Staff has applied for state revolving fund loans and has considered revenue bonds for these projects.

Major projects planned include:

- Advanced Water Purification Facility (Fiscal Year 2020: \$11.1 million; 5-Year CIP: \$23.2 million)
- Headworks Facility Replacement (5-Year CIP: \$15.8 million)
- New Laboratory and Environmental Services Building (Fiscal Year 2020: \$1.4 million; 5-Year CIP: \$21.7 million)

**Wastewater Treatment Fund  
Capital Expenditures**





- Outfall Line Construction (Fiscal Year 2020: \$3.9 million; 5-Year CIP: \$8.2 million)
- Primary Sedimentation Tank Rehabilitation (Fiscal Year 2020: \$6.1 million; 5-Year CIP: \$17.3 million)
- Secondary Treatment Upgrades (Fiscal Year 2020: \$0.8 million; 5-Year CIP: \$29.3 million)

Minor CIP projects are funded through recurring payments to the City by the partner agencies, with the total dollar amount for the minor CIP projects capped by the partner agreements and adjusted annually for inflation. Minor projects are budgeted in Plant Repair, Retrofit, and Equipment Replacement (Fiscal Year 2020: \$5.0 million; 5-Year CIP: \$18.1 million).

## Infrastructure Inventory

CLASSIFICATION	TYPE
Liquid Treatment Systems	Preliminary, Primary, Secondary, and Tertiary Treatment, UV Disinfection, and Outfall
Solids Treatment Systems	Solids Handling
Staff Buildings	Staff Buildings and Support Systems
Recycled Water	Recycled Water Treatment

## Buildings and Facilities

The Buildings and Facilities category accounts for projects that will improve or construct facilities that house equipment related to wastewater treatment at the RWQCP. During the 2020-2024 CIP, one project is programmed in this category.

### Recent Accomplishments

- Completed construction of the Dewatering and Loadout Facility in Fiscal Year 2019 utilizing funding from a state revolving fund loan.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There are no recurring projects scheduled.

### Non-Recurring Projects

There is one non-recurring project in this category as part of the 2020-2024 CIP: New Laboratory and Environmental Services Building (Fiscal Year 2020: \$1.4 million; 5-Year CIP: \$21.7 million). The New Laboratory and Environmental Services Building was identified in the 2012 Long Range Facilities Plan. With its larger and updated lab, the building will consolidate staff currently located in four separate facilities. The project is expected to be funded by state revolving fund loans or revenue bonds.

## System Improvements

The System Improvements category accounts for all infrastructure and equipment related to the safe and efficient treatment of wastewater received at the RWQCP. Over the course of the 2020-2024 CIP, approximately \$111.8 million is allocated towards System Improvements projects, with \$26.9 million allocated in Fiscal Year 2020.

### Recent Accomplishments

- Completed 95% of the design of the Primary Sedimentation Tank Rehabilitation project.
- Commenced design on the Secondary Treatment Upgrades project.
- Commenced environmental review on the Advanced Water Purification Facility.

## 2020-2024 Capital Improvement Program

### Recurring Projects

There is one recurring project in this category: Plant Repair, Retrofit, and Equipment Replacement (Fiscal Year 2020: \$5.0 million; 5-Year CIP: \$18.1 million). This project provides funding for the assessment, repair, and retrofit of the concrete and metal structural condition of the plant; the replacement of necessary plant equipment to maintain treatment reliability and ancillary facilities to maintain existing infrastructure; and the replacement of large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines. The United States Environmental Protection Agency mandates that funding is allocated for equipment replacement to ensure adequate wastewater treatment reliability.

### Non-Recurring Projects

There are five non-recurring projects in this category:

- Advanced Water Purification Facility (Fiscal Year 2020: \$11.1 million; 5-Year CIP: \$23.2 million)
- Headworks Facility Replacement (5-Year CIP: \$15.8 million)
- Outfall Line Construction (Fiscal Year 2020: \$3.9 million; 5-Year CIP: \$8.2 million).
- Primary Sedimentation Tank Rehabilitation (Fiscal Year 2020: \$6.1 million; 5-Year CIP: \$17.3 million)
- Secondary Treatment Upgrades (Fiscal Year 2020: \$0.8 million; 5-Year CIP: \$29.3 million)

# WASTEWATER TREATMENT FUND

## Summary of Capital Activity

### WASTEWATER TREATMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Revenue from the State of California</b>									
WQ-14001	Dewatering and Loadout Facility	10,786,671	14,000,000	0	0	0	0	0	0
WQ-10001	Plant Master Plan	1,587,166	100,000	0	0	0	0	0	0
	<b>Revenue from the State of California Total</b>	<b>12,373,837</b>	<b>14,100,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Miscellaneous Revenue</b>									
WQ-19003	Advanced Water Purification Facility	0	0	11,000,000	12,000,000	0	0	0	23,000,000
WQ-16002	Headworks Facility Replacement	0	0	0	1,147,000	1,147,000	1,147,000	12,060,221	15,501,221
WQ-14002	New Laboratory and Environmental Services Building	0	0	1,910,000	6,750,000	6,750,000	6,600,000	0	22,010,000
WQ-19000	Outfall Line Construction	0	0	3,850,000	3,850,000	440,000	0	0	8,140,000
WQ-14003	Primary Sedimentation Tank Rehabilitation	0	0	8,302,000	6,062,000	2,981,000	0	0	17,345,000
WQ-19001	Secondary Treatment Upgrades	0	0	2,300,000	12,200,000	14,000,000	2,000,000	0	30,500,000
	<b>Miscellaneous Revenue Total</b>	<b>0</b>	<b>0</b>	<b>27,362,000</b>	<b>42,009,000</b>	<b>25,318,000</b>	<b>9,747,000</b>	<b>12,060,221</b>	<b>116,496,221</b>
	<b>Total Sources</b>	<b>12,373,837</b>	<b>14,100,000</b>	<b>27,362,000</b>	<b>42,009,000</b>	<b>25,318,000</b>	<b>9,747,000</b>	<b>12,060,221</b>	<b>116,496,221</b>
<b>Use of Funds</b>									
<b>Buildings and Facilities</b>									
WQ-14001	Dewatering and Loadout Facility	10,081,875	15,487,855	0	0	0	0	0	0
WQ-04011	Facility Condition Assessment and Retrofit	683,045	412,315	0	0	0	0	0	0
WQ-14002	New Laboratory and Environmental Services Building	0	1,020,000	1,357,993	6,808,000	6,822,000	6,760,000	0	21,747,993
WQ-10001	Plant Master Plan	639,617	2,293,668	0	0	0	0	0	0
	<b>Buildings and Facilities Total</b>	<b>11,404,537</b>	<b>19,213,838</b>	<b>1,357,993</b>	<b>6,808,000</b>	<b>6,822,000</b>	<b>6,760,000</b>	<b>0</b>	<b>21,747,993</b>
<b>System Improvements</b>									
WQ-19003	Advanced Water Purification Facility	0	30,073	11,113,000	12,103,000	0	0	0	23,216,000
WQ-16002	Headworks Facility Replacement	0	0	0	1,157,000	1,159,000	1,175,000	12,316,221	15,807,221
WQ-19000	Outfall Line Construction	0	0	3,890,000	3,883,000	446,000	0	0	8,219,000
WQ-80021	Plant Equipment Replacement	2,494,904	1,980,396	0	0	0	0	0	0
WQ-19002	Plant Repair, Retrofit, and Equipment Replacement	0	3,148,877	4,951,019	3,129,000	3,219,000	3,349,000	3,427,000	18,075,019
WQ-14003	Primary Sedimentation Tank Rehabilitation	145,186	906,654	6,124,000	7,114,000	4,013,000	0	0	17,251,000

## WASTEWATER TREATMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
WQ-19001	Secondary Treatment Upgrades	0	1,506,809	846,300	12,211,000	14,150,000	2,049,000	0	29,256,300
WQ-80022	System Flow Meters	38,598	0	0	0	0	0	0	0
	<b>System Improvements Total</b>	<b>2,678,688</b>	<b>7,572,809</b>	<b>26,924,319</b>	<b>39,597,000</b>	<b>22,987,000</b>	<b>6,573,000</b>	<b>15,743,221</b>	<b>111,824,540</b>
	<b>Total Uses</b>	<b>14,083,225</b>	<b>26,786,647</b>	<b>28,282,312</b>	<b>46,405,000</b>	<b>29,809,000</b>	<b>13,333,000</b>	<b>15,743,221</b>	<b>133,572,533</b>

## Buildings and Facilities



**Fund:** Wastewater Treatment - Operating  
**Category:** Buildings and Facilities  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Winter 2015  
**Initial Project Completion:** Fall 2021  
**Revised Project Start:** Winter 2019  
**Revised Project Completion:** Winter 2022  
**Project Number:** WQ-14002

Water Quality Control Plant Laboratory

# New Laboratory And Environmental Services Building

## Description

This project provides funding for a new building that will consolidate staff and provide a larger updated lab.

## Justification

The existing laboratory does not have adequate space for staff, instruments, chemical storage, and microbiology testing. Due to limited space, staff is currently located in four separate aging buildings, which house industrial pumps, limiting the number of staff that can be assigned to each building.

## Supplemental Information

This project was identified in the Long Range Facilities Plan accepted by City Council in 2012. Construction funding via a low interest state revolving fund loan (SRF) or a revenue bond will be pursued for this project, which is subject to approval from partner agencies (Stanford University, Mountain View, Los Altos, Los Altos Hills, and the East Palo Alto Sanitary District). Partners have already approved repayment of an SRF design and planning loan, while staff evaluate the revenue bond option as an alternative funding source.

## Significant Changes

**2020-2024 CIP:** Design phase of the project began with the design contract awarded in February 2019.

# WASTEWATER TREATMENT FUND

**2019-2023 CIP:** Design phase of the project is expected to start in Fall 2018. The City is exploring funding alternatives for the project, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

**2018-2022 CIP:** All partners approved repayment of the SRF design and planning loan, but securing the SRF design and planning loan took longer than expected and there was uncertainty about availability of State funds. The City will have to explore alternate methods of funding such as a revenue bond. Project planning/design can commence once the funds are secured, but the project timeline has been impacted.

**2017-2021 CIP:** Approval by partner agencies was required for project approval and to guarantee repayment of any state loans.

**2016-2020 CIP:** Project budget in Fiscal Year 2016 now captures an additional \$4.0 million more in Fiscal Year 2020 for final design and start of construction.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	910,000	0	1,910,000	6,750,000	6,750,000	6,600,000	0	22,010,000	0	22,010,000
Wastewater Treatment Fund	0	452,995	1,020,000	(552,007)	58,000	72,000	160,000	0	(262,007)	0	757,993
<b>Total</b>	<b>0</b>	<b>1,362,995</b>	<b>1,020,000</b>	<b>1,357,993</b>	<b>6,808,000</b>	<b>6,822,000</b>	<b>6,760,000</b>	<b>0</b>	<b>21,747,993</b>	<b>0</b>	<b>22,767,993</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	5,679	0	6,658,000	6,672,000	6,760,000	0	20,090,000	0	20,095,679
Design	0	1,362,995	1,014,321	1,357,993	150,000	150,000	0	0	1,657,993	0	2,672,314
<b>Total</b>	<b>0</b>	<b>1,362,995</b>	<b>1,020,000</b>	<b>1,357,993</b>	<b>6,808,000</b>	<b>6,822,000</b>	<b>6,760,000</b>	<b>0</b>	<b>21,747,993</b>	<b>0</b>	<b>22,767,993</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future such as utilities, janitorial services, and alarm/security systems. Once the design, including features and square feet, is complete, costs will be quantified and adjustments will be brought forward in future budgets.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

### Environmental Impact Analysis:

CEQA will be required.



CITY OF  
**PALO  
ALTO**



## System Improvements



Filtration system testing unit

**Fund:** Wastewater Treatment - Operating  
**Category:** System Improvements  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Winter 2018  
**Initial Project Completion:** Spring 2021  
**Revised Project Start:** Winter 2019  
**Revised Project Completion:** Fall 2021  
**Project Number:** WQ-19003

# Advanced Water Purification Facility

## Description

This project provides funding for an Advanced Water Purification Facility to further improve the quality of the tertiary-treated recycled water by microfiltration or ultrafiltration followed by reverse osmosis to reduce the level of total dissolved solids (TDS).

## Justification

The Regional Water Quality Control Plant (RWQCP) currently provides tertiary-treated recycled water to permitted users in its service area, mostly for irrigation. The current recycled water delivered has a TDS level of 800-900 mg/L. City Council adopted a goal to reduce the TDS level to 600 mg/L in 2010. In 2015, City Council adopted an Environmental Impact Report for the Phase III Recycled Water Pipeline to South Palo Alto and Stanford Research Park, which specifically mentioned recycled water quality would be improved through additional treatment at the RWQCP. In addition, there are approximately 40 potential recycled water users in the service area with their connection still pending until the RWQCP lowers the recycled water TDS level.

## Supplemental Information

The RWQCP, in collaboration with Valley Water (formerly known as the Santa Clara Valley Water District) and the City of Mountain View, conducted an Advanced Water Purification System Feasibility Study. This study recommended microfiltration or ultrafiltration followed by reverse osmosis after comparing different water quality improvement options. The study also included evaluations of greenhouse gas emissions, storage requirements, facility sites, concentrate treatment options, and initial design and construction cost estimates.

# WASTEWATER TREATMENT FUND

This project was also identified in the Long Range Facilities Plan accepted by City Council in 2012. Funding via contributions from Valley Water, the City of Mountain View, and other external sources such as a low interest state revolving fund loan or revenue bond will be pursued for this project.

## Significant Changes

**2020-2024 CIP:** Project start delayed from Winter 2018 to Winter 2019 due to lack of funding as staff is still negotiating with the City of Mountain View and Valley Water to secure funding for this project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	1,000,000	0	11,000,000	12,000,000	0	0	0	23,000,000	0	23,000,000
Wastewater Treatment Fund	0	30,073	30,073	113,000	103,000	0	0	0	216,000	0	246,073
<b>Total</b>	<b>0</b>	<b>1,030,073</b>	<b>30,073</b>	<b>11,113,000</b>	<b>12,103,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,216,000</b>	<b>0</b>	<b>23,246,073</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	8,082,377	12,103,000	0	0	0	20,185,377	0	20,185,377
Design	0	1,030,073	30,073	3,030,623	0	0	0	0	3,030,623	0	3,060,696
<b>Total</b>	<b>0</b>	<b>1,030,073</b>	<b>30,073</b>	<b>11,113,000</b>	<b>12,103,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,216,000</b>	<b>0</b>	<b>23,246,073</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future such as utilities, janitorial services, and alarm/security systems. Once the design, including features and square feet, is complete, costs will be quantified and adjustments will be brought forward in future budgets.

<b>Relationship to Comprehensive Plan</b> <b>Primary Connection</b> Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.17	<b>Relationship to Comprehensive Plan</b> <b>Secondary Connection</b> Element: Natural Environment Section: Water Resources Goal: N-4 Policy: N-4.16 Program: N4.16.1	<b>Potential Board/Commission Review:</b> Architectural Review Board Planning and Transportation Commission
<b>Environmental Impact Analysis:</b> An addendum to the existing EIR completed in 2015 for the expansion of the Palo Alto recycled water distribution system will be required.		



**Fund:** Wastewater Treatment - Operating  
**Category:** System Improvements  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Spring 2020  
**Initial Project Completion:** Winter 2024  
**Revised Project Start:** Winter 2020  
**Revised Project Completion:** Spring 2026  
**Project Number:** WQ-16002

Headworks Facility

# Headworks Facility Replacement

## Description

This project provides funding for replacing influent pumping, including the suction and discharge piping, pipe manifolds, valves, the electrical and controls system, screening equipment, grit handling equipment, the force main to the primaries and modifying headworks building, and yard piping.

## Justification

This project was identified in the Long Range Facilities Plan (LRFP) report accepted by City Council in 2012. The existing headworks are at the end of their useful life and replacement is required for operational reliability of pumping the raw sewage from the influent sewers into the treatment plant.

## Supplemental Information

Partner agencies' approval to repay design and construction loans is needed as a low interest state revolving fund loan or a revenue bond will be pursued to fund the project.

## Significant Changes

**2020-2024 CIP:** Project start delayed from Summer 2019 to Winter 2020 due to budget constraints, staffing resources, and construction logistics with other projects in progress.

**2019-2023 CIP:** Staff is evaluating alternative funding options, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

# WASTEWATER TREATMENT FUND

**2018-2022 CIP:** Staff revised the Funding Sources Schedule and the Expenditure Schedule to better reflect the project timeline recommended in the LRFP, where design will take place from 2020 to 2022, with CEQA and construction to follow.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	1,147,000	1,147,000	1,147,000	12,060,221	15,501,221	11,678,221	27,179,442
Wastewater Treatment Fund	0	5,000	0	0	10,000	12,000	28,000	256,000	306,000	0	306,000
<b>Total</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>1,157,000</b>	<b>1,159,000</b>	<b>1,175,000</b>	<b>12,316,221</b>	<b>15,807,221</b>	<b>11,678,221</b>	<b>27,485,442</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	11,934,221	11,934,221	11,678,221	23,612,442
Design	0	5,000	0	0	1,157,000	1,159,000	1,175,000	382,000	3,873,000	0	3,873,000
<b>Total</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>1,157,000</b>	<b>1,159,000</b>	<b>1,175,000</b>	<b>12,316,221</b>	<b>15,807,221</b>	<b>11,678,221</b>	<b>27,485,442</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation

Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Wastewater Treatment - Operating

**Category:** System Improvements

**Project Location:** Wastewater Treatment Plant and Palo Alto Airport

**Managing Department:** Public Works

**Initial Project Start:** Summer 2018

**Initial Project Completion:** Fall 2019

**Revised Project Start:** Fall 2019

**Revised Project Completion:** Winter 2022

**Project Number:** WQ-19000

Outfall, Winter 2017

# Outfall Line Construction

## Description

This project consists of the construction of a new parallel outfall pipe to convey final plant effluent to San Francisco Bay.

## Justification

Installation of a new outfall line is needed to address outfall age (built in 1964) and, more importantly, to address the outfall capacity in light of peak wet-weather flow, peak tide, and future sea level rise scenarios. The existing system of a 54-inch outfall line and a 36-inch emergency backup outfall line are inadequate to pass the Plant's peak wet-weather hydraulic flow capacity of 80 million gallons per day.

## Supplemental Information

This project was identified in the Long Range Facilities Plan report accepted by City Council in 2012. Construction funding via a low-interest state revolving fund loan will be pursued for this project, while staff evaluate revenue bond options as an alternative funding source.

The existing 54-inch outfall needs rehabilitation, which can only be completed after the new outfall is operational. Rehabilitating the existing 54-inch outfall will be a future project. Once rehabilitated, the 54-inch outfall along with the new parallel outfall in this project are anticipated to work together to convey peak flows for another 50 or more years.

## Significant Changes

**2020-2024 CIP:** Project design was completed and construction has not begun due to permitting and finalization on the lease agreement with California State Lands Commission (CSLC).

# WASTEWATER TREATMENT FUND

**2019-2023 CIP:** Staff is evaluating alternative funding options, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	3,850,000	3,850,000	440,000	0	0	8,140,000	0	8,140,000
Wastewater Treatment Fund	0	10,000	0	40,000	33,000	6,000	0	0	79,000	0	79,000
<b>Total</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>3,890,000</b>	<b>3,883,000</b>	<b>446,000</b>	<b>0</b>	<b>0</b>	<b>8,219,000</b>	<b>0</b>	<b>8,219,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	10,000	0	3,890,000	3,883,000	446,000	0	0	8,219,000	0	8,219,000
<b>Total</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>3,890,000</b>	<b>3,883,000</b>	<b>446,000</b>	<b>0</b>	<b>0</b>	<b>8,219,000</b>	<b>0</b>	<b>8,219,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Relationship to Comprehensive Plan

#### Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project had a mitigated negative declaration from CEQA under Section 15070.





**Fund:** Wastewater Treatment - Operating  
**Category:** System Improvements  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WQ-19002

Old pumping plant

# Plant Repair, Retrofit, and Equipment Replacement

## Description

This project provides funding for the assessment, repair, and retrofit of the RWQCP's concrete and metal structures; the replacement of necessary RWQCP equipment and ancillary facilities to maintain treatment reliability and existing infrastructure; and the replacement of large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines.

Tasks and funding previously budgeted in three separate maintenance related projects, WQ-80021, WQ-80022, and WQ-04011, will now be consolidated and budgeted in this one recurring project.

## Justification

Plant facilities are subject to many adverse conditions and plant equipment requires periodic replacement to maintain reliability. Concrete and metal structures are evaluated for evidence of damage caused by corrosion, weathering, age, and ground movement. Facilities with repair and retrofit deficiencies need to be repaired to good structural condition to ensure that the plant continues to operate safely and reliably. In addition, United States Environmental Protection Agency and State Water Resources Control Board regulations and permits require ongoing allocated funding for equipment replacement to ensure adequate treatment reliability.

In addition to equipment physically located at the plant, there are 13 key magnetic flow meters throughout the collection system. Meters have an average life of ten years, however when the meter's reliability fails, the meter must be replaced immediately to continue accurate partner billing, process control, and regulatory reporting.



# WASTEWATER TREATMENT FUND

## Supplemental Information

Planned projects include replacement of equipment mechanisms for secondary clarifiers and sludge thickeners; and replacement of wire, transformers, switches, and electrical components in the medium voltage electrical network.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Wastewater Treatment Fund</b>	N/A	5,025,877	3,148,877	4,951,019	3,129,000	3,219,000	3,349,000	3,427,000	18,075,019	0	N/A
<b>Total</b>	<b>N/A</b>	<b>5,025,877</b>	<b>3,148,877</b>	<b>4,951,019</b>	<b>3,129,000</b>	<b>3,219,000</b>	<b>3,349,000</b>	<b>3,427,000</b>	<b>18,075,019</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	4,524,594	2,735,550	4,588,019	2,757,000	2,837,000	2,957,000	3,024,000	16,163,019	0	N/A
<b>Design</b>	N/A	501,283	413,327	363,000	372,000	382,000	392,000	403,000	1,912,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>5,025,877</b>	<b>3,148,877</b>	<b>4,951,019</b>	<b>3,129,000</b>	<b>3,219,000</b>	<b>3,349,000</b>	<b>3,427,000</b>	<b>18,075,019</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Wastewater Treatment - Operating  
**Category:** System Improvements  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Spring 2014  
**Initial Project Completion:** Fall 2019  
**Revised Project Start:** Winter 2017  
**Revised Project Completion:** Spring 2022  
**Project Number:** WQ-14003

Primary Sedimentation Tank

# Primary Sedimentation Tank Rehabilitation

## Description

This project provides funding for new protective coatings on each of the four concrete primary sedimentation tanks and replacement of worn rotating parts. The tanks, installed in 1972, are 220 feet long by 41 feet wide and remove settleable solids and grease. The coating ensures reinforcing steel bars within the concrete are protected from penetrating corrosive sewer gases and extends the concrete's life another 30 years.

## Justification

Without recoating, the concrete will lose its structural integrity, gradually spalling and harming pumps, pipes, and treatment systems as a result. In a mild seismic event, weakened concrete could potentially collapse, endangering staff and the treatment system. Rehabilitation of the concrete slabs will extend the life of the tanks, preserving capital resources for other uses.

## Supplemental Information

This project was identified in the Long Range Facilities Plan report accepted by City Council in 2012. Construction funding via a low-interest state revolving fund loan (SRF) will be pursued for this project, which is subject to approval from the partner agencies. The partners already approved repayment of an SRF design and planning loan, while staff evaluate a revenue bond option as an alternative to an SRF for construction.

## Significant Changes

**2019-2023 CIP:** Design phase of the project started in January-March of 2018. The City is exploring funding alternatives for the project, therefore the funding source is no longer stated explicitly as Revenue from the State of California.

**2018-2022 CIP:** All partner agencies approved repayment of a planning/design loan. Securing the SRF planning/design loan took longer than expected, and there is uncertainty about availability of State funds. The City may have to explore alternative methods of funding such as a revenue bond, but the project planning/design can commence once the funds are secured. Project timeline is impacted.

**2017-2021 CIP:** Approval by the partner agencies was required for project approval and to guarantee repayment of any state loans.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	2,240,000	0	8,302,000	6,062,000	2,981,000	0	0	17,345,000	0	17,345,000
Wastewater Treatment Fund	145,186	666,654	906,654	(2,178,000)	1,052,000	1,032,000	0	0	(94,000)	0	957,840
<b>Total</b>	<b>145,186</b>	<b>2,906,654</b>	<b>906,654</b>	<b>6,124,000</b>	<b>7,114,000</b>	<b>4,013,000</b>	<b>0</b>	<b>0</b>	<b>17,251,000</b>	<b>0</b>	<b>18,302,840</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	2,041,536	41,536	5,809,280	6,801,619	3,908,000	0	0	16,518,899	0	16,560,435
Design	145,186	865,118	865,118	314,720	312,381	105,000	0	0	732,101	0	1,742,405
<b>Total</b>	<b>145,186</b>	<b>2,906,654</b>	<b>906,654</b>	<b>6,124,000</b>	<b>7,114,000</b>	<b>4,013,000</b>	<b>0</b>	<b>0</b>	<b>17,251,000</b>	<b>0</b>	<b>18,302,840</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



Aeration basins

**Fund:** Wastewater Treatment - Operating  
**Category:** System Improvements  
**Project Location:** 2501 Embarcadero Way  
**Managing Department:** Public Works  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Fall 2021  
**Revised Project Start:** Fall 2018  
**Revised Project Completion:** Winter 2022  
**Project Number:** WQ-19001

# Secondary Treatment Upgrades

## Description

This project provides funding for upgrades to the Secondary Treatment process at the Regional Water Quality Control Plant. The existing Secondary Treatment process has two main components; the Fixed Film Reactors (FFR) and the Activated Sludge (AS) Process. This project includes the reconstruction of the AS Process, rehabilitation of the AS Aeration Basins and the elimination of the FFRs. The AS Aeration Basins will be subdivided with concrete walls creating different zones where different pollutants can be treated. One of the zones will then operate without oxygen, treating nitrogen and cutting the nitrogen in the treated wastewater in half. The project will not only reduce organics and ammonia in the existing processes, but will also reduce total nitrogen, the next pollutant being regulated.

## Justification

The components of the Secondary Treatment process are between 35 and 45 years old and show extreme signs of wear and structural weakness. The rehabilitation of both the FFRs and the AS Process were identified in the Long Range Facilities Plan accepted by Council in 2012. In addition, regulatory agencies are developing new compliance and permit requirements for total nitrogen. A special study was completed in 2017, which proposed a complete Secondary Treatment process upgrade instead of individual rehabilitation projects. The completion of the upgrades will meet several objectives.

## Supplemental Information

The project cost is estimated to be \$30.6 million, which is less than the combined estimated cost for the FFRs, AS Aeration Basins rehabilitation, and large-scale Denitrification System (or other nutrients removal) projects.

# WASTEWATER TREATMENT FUND

## Significant Changes

**2020-2024 CIP:** Design phase began in October 2018. Project start delayed from Summer 2018 to Fall 2018 with project completion now estimated to be in Winter 2022.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	1,500,000	0	2,300,000	12,200,000	14,000,000	2,000,000	0	30,500,000	0	30,500,000
Wastewater Treatment Fund	0	45,109	1,506,809	(1,453,700)	11,000	150,000	49,000	0	(1,243,700)	0	263,109
<b>Total</b>	<b>0</b>	<b>1,545,109</b>	<b>1,506,809</b>	<b>846,300</b>	<b>12,211,000</b>	<b>14,150,000</b>	<b>2,049,000</b>	<b>0</b>	<b>29,256,300</b>	<b>0</b>	<b>30,763,109</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	11,511,000	14,150,000	2,049,000	0	27,710,000	0	27,710,000
Design	0	1,545,109	1,506,809	846,300	700,000	0	0	0	1,546,300	0	3,053,109
<b>Total</b>	<b>0</b>	<b>1,545,109</b>	<b>1,506,809</b>	<b>846,300</b>	<b>12,211,000</b>	<b>14,150,000</b>	<b>2,049,000</b>	<b>0</b>	<b>29,256,300</b>	<b>0</b>	<b>30,763,109</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future, potentially by lowering utilities usage. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.16

Program: N4.16.1

### Potential Board/Commission Review:

Planning and Transportation  
Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



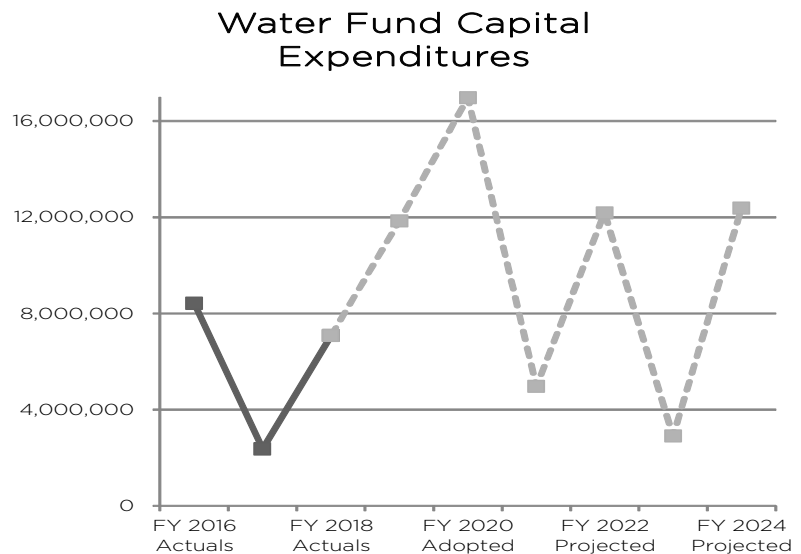
CITY OF  
**PALO  
ALTO**

# WATER FUND

## Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal Water Distribution System began operation in 1896 and continues to provide safe, reliable, and cost-effective water service to residents and customers of Palo Alto. For the 2020-2024 Capital Improvement Program (CIP), approximately \$49.4 million is projected, with \$17.0 million allocated in Fiscal Year 2020. Overall, a total of 15 projects are planned for the 5-year CIP.

Major projects funded in the 2020-2024 CIP include Water Main Replacements (cumulative total of \$26.0 million), Water System Customer Connections (\$4.0 million), Water Meters (\$3.5 million) and Water, Gas, and Wastewater Utility GIS Data (\$2.7 million). The budget for the Water Fund CIP is categorized into three types of projects: Customer Connections, System Improvements, and Water Main Replacements.



## Infrastructure Inventory

Classification	Quantity
Miles of water main	235.58
Number of wells	1 active standby and 7 emergency standby
Number of reservoirs	4 steel and 3 reinforced concrete



## Water Distribution System Main Materials

MATERIAL TYPE	TOTAL LENGTH	PERCENT
Asbestos Cement Pipe	131.65 mi	55.84%
Concrete Cylinder Pipe	16.72 mi	7.09%
Cast Iron Pipe	18.54 mi	7.86%
Copper	0.24 mi	0.1%
Ductile Iron Pipe	6.93 mi	2.94%
Polyethylene	17.78 mi	7.54%
Polyvinyl Chloride	42.57 mi	18.05%
Steel	0.7 mi	0.3%
Total:	235.77 mi	

## Customer Connections

As customers continually change their water needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the water system must evolve to meet these needs. The Water System Customer Connections is the only project in this category and includes work required to meet the needs of customers who have applied for new or upgraded water service. The Water Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

### Recent Accomplishments

In Fiscal Year 2018 the Water Utility completed over 59 customer service projects with a total cost of \$0.8 million.

## 2020-2024 Capital Improvement Program

### Recurring Projects

The Water System Customer Connections is the only project within this category. Over the course of the 2020-2024 CIP, \$4.0 million is forecasted, with \$0.8 million allocated in Fiscal Year 2020.

## System Improvements

To ensure reliable water services for the City of Palo Alto's residents and customers, infrastructure must be replaced at the end of its expected life. The System Improvements category includes 10 projects as part of the 2020-2024 CIP at a total cost of \$19.4 million, with \$8.9 million allocated in Fiscal Year 2020.

### Recent Accomplishments

- Started the design to replace the Corte Madera tank. The Conceptual Engineering Report (CER) has been completed and the work is currently about 30% complete.
- Started the El Camino Real Pump Station and Mayfield Pump Station modifications to the system and control programs to improve operational flexibility and system resiliency.
- Completed seismic work and upgrades for Arastradero, Page Mill, and California Avenue turnouts, and currently working on project closeout.
- Continued reviewing water storage and operational needs citywide, and worked with a consultant to develop a steady state water model that will assist in the storage and operational recommendations.
- Completed the geological investigation of the foundation leaks at the Mayfield Tank and provided a report containing results of the subsurface explorations and laboratory testing and recommended repair alternatives.
- Completed a survey and geotechnical investigation of the Corte Madera tank site.
- Completed two transmission valve replacements on Arastradero Road.

### 2020-2024 Capital Improvement Program

#### Recurring Projects

A total of \$11.5 million is programmed for System Improvement recurring projects during the 2020-2024 CIP, with \$3.2 million allocated in Fiscal Year 2020. Recurring projects in this category include the following:

- Water Distribution System Improvements (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$1.6 million)
- Water Fusion and General Equipment/Tools (Fiscal Year 2020: \$0.1 million; 5-Year CIP: \$0.3 million)
- Water, Gas, Wastewater Utility GIS Data (Fiscal Year 2020: \$0.8 million; 5-Year CIP: \$2.7 million)
- Water Meters (Fiscal Year 2020: \$1.3 million; 5-Year CIP: \$3.5 million)
- Water Service Hydrant Replacement (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$2.0 million)
- Water System Supply Improvements (Fiscal Year 2020: \$0.3 million; 5-Year CIP: \$1.4 million)

#### Non-Recurring Projects

A total of \$7.9 million is programmed for non-recurring projects during the 2020-2024 CIP, with the \$5.7 million allocated in Fiscal Year 2020. Non-recurring projects in this category include the following:

- Mayfield Reservoir Subgrade and Venting (Fiscal Year 2020: \$0.4 million; 5-Year CIP: \$0.6 million)
- Water Recycling Facilities (Fiscal Year 2020: \$0.4 million)
- Water Reservoir Coating Improvements (Fiscal Year 2020: \$0.1 million; 5-year CIP: \$0.1 million)

- Water Tank Seismic Water System Upgrades (Fiscal Year 2020: \$4.9 million; 5-year CIP: \$6.9 million)

## Water Main Replacements

The Water Main Replacements category accounts for the replacement of inadequately sized and structurally deficient water mains. In the next five years, it is estimated that approximately 50,000 linear feet of water mains will be replaced. The annual linear feet replacement totals were reduced by approximately 23% due to significant increases in labor and material costs. Based on the last two water main replacement project bids, the engineer's estimate was increased and a budget augmentation was necessary in FY 2020 to cover construction costs. City staff has proposed a new replacement schedule of water & wastewater construction every even year and gas construction every odd year to reduce the amount of construction when prices are high and allow staff to focus on other priorities such as ABS/Tenite gas services replacement and cross-bore inspections.

The annual replacement footage was reduced to compensate for some of the market changes that forced a rebid and a single bid in the past. Water main replacement project (WMR) 26B - Upgrade Downtown did not receive any bids. Rebids and the reduction of total footage completed annually will extend to overall system replacement time; however, a recent study indicated that the City has already replaced many of the most leak-prone and deteriorated pipes from the past water main replacement projects 1 through 26. This study recommended replacing 13.5 miles of mains within the next decade, and proposed every-other-year construction program still allows staff to replace these 13.5 miles of water mains within the next 10 years, as recommended in the study.

### Recent Accomplishments

- Completed construction of Water Main Replacement project (WMR 26) to replace approximately 13,000 linear feet of water main pipelines, 200 service pipelines, and 40 fire hydrants. Currently working on project closeout.
- Started construction of water main replacement for Upgrade Downtown (WMR 26B) to replace approximately 3,155 linear feet of water main pipelines, 52 service pipelines, and 10 fire hydrants. Currently the work is about 80% complete.
- Started design of Water Main Replacement project (WMR 27) to replace approximately 10,000 linear feet of water main pipelines in the Sand Hill Road area.

### 2020-2024 Capital Improvement Program

The 2020-2024 CIP includes \$26.0 million in funding for 5 non-recurring projects within this category, with \$7.3 million appropriated for Fiscal Year 2020. The Utilities Department coordinates with the Public Works Department's street maintenance projects to minimize damage to the City's pavement and maximize cost efficiencies when replacing water mains.

# WATER FUND

## Summary of Capital Activity

### WATER FUND

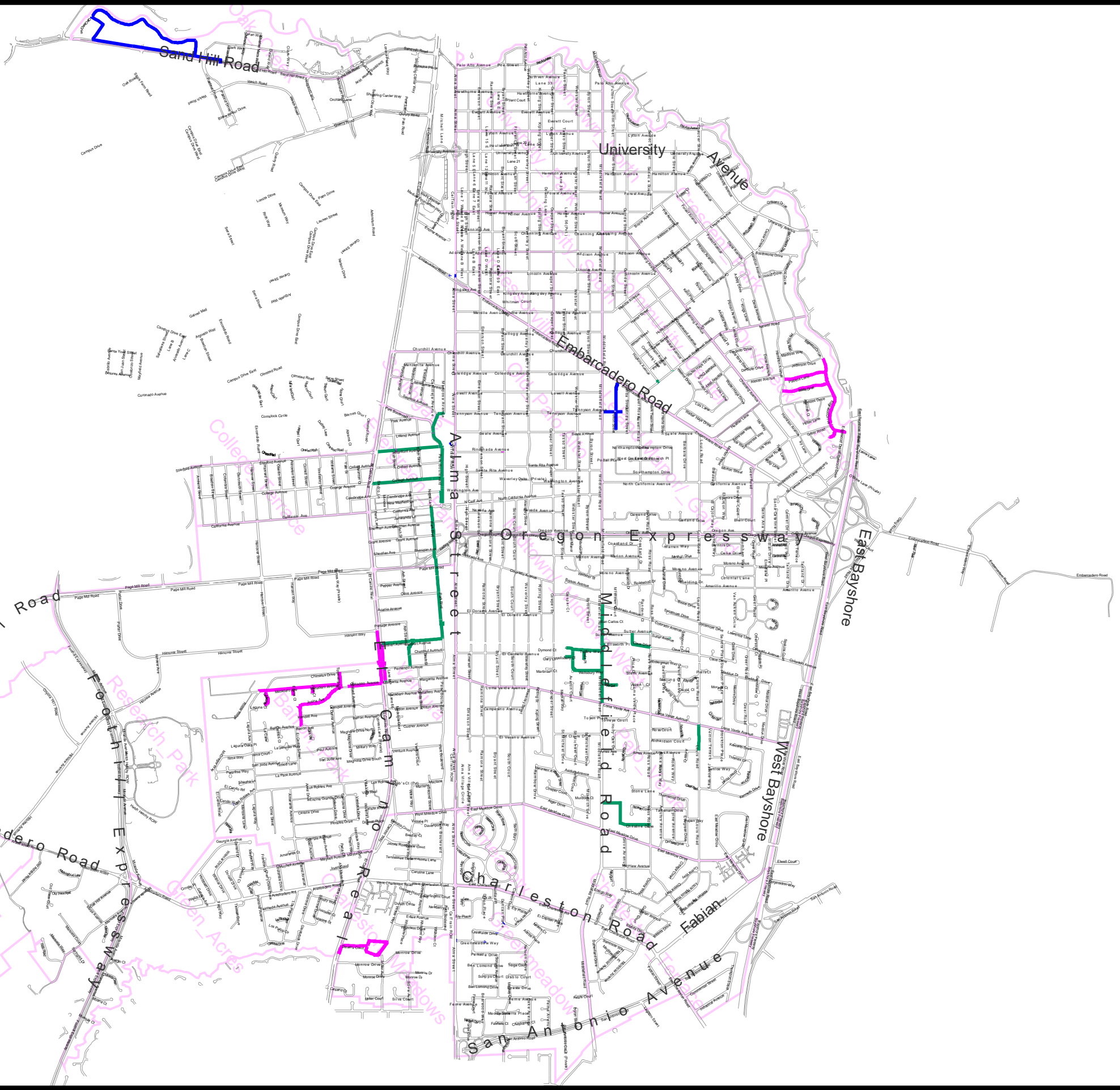
Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Transfer from Other Funds</b>									
Gas Fund									
WS-02014	Water Gas Wastewater GIS Data	134,209	147,630	152,059	156,621	161,320	166,160	166,160	802,320
	<b>Total Gas Fund Transfers</b>	<b>134,209</b>	<b>147,630</b>	<b>152,059</b>	<b>156,621</b>	<b>161,320</b>	<b>166,160</b>	<b>166,160</b>	<b>802,320</b>
Wastewater Collection Fund									
WS-02014	Water Gas Wastewater GIS Data	134,209	147,630	152,059	156,621	161,320	166,160	166,160	802,320
	<b>Total Wastewater Collection Fund</b>	<b>134,209</b>	<b>147,630</b>	<b>152,059</b>	<b>156,621</b>	<b>161,320</b>	<b>166,160</b>	<b>166,160</b>	<b>802,320</b>
	<b>Total Transfer from Other Funds</b>	<b>268,418</b>	<b>295,260</b>	<b>304,118</b>	<b>313,242</b>	<b>322,640</b>	<b>332,320</b>	<b>332,320</b>	<b>1,604,640</b>
<b>Other Revenues</b>									
WS-80014	Water Service Hydrant Replacement	6,365	0	0	0	0	0	0	0
WS-80013	Water System, Customer Connections	1,404,420	765,995	957,228	985,946	1,015,524	1,045,990	1,195,819	5,200,507
	<b>Other Revenue Total</b>	<b>1,410,785</b>	<b>765,995</b>	<b>957,228</b>	<b>985,946</b>	<b>1,015,524</b>	<b>1,045,990</b>	<b>1,195,819</b>	<b>5,200,507</b>
	<b>Total Sources</b>	<b>1,679,203</b>	<b>1,061,255</b>	<b>1,261,346</b>	<b>1,299,188</b>	<b>1,338,164</b>	<b>1,378,310</b>	<b>1,528,139</b>	<b>6,805,147</b>
<b>Use of Funds</b>									
<b>Customer Connections</b>									
WS-80013	Water System, Customer Connections	763,694	765,995	750,000	775,000	800,000	825,027	850,000	4,000,027
	<b>Customer Connections Total</b>	<b>763,694</b>	<b>765,995</b>	<b>750,000</b>	<b>775,000</b>	<b>800,000</b>	<b>825,027</b>	<b>850,000</b>	<b>4,000,027</b>
<b>System Improvements</b>									
WS-19000	Mayfield Reservoir Subgrade and Venting Repair	0	0	400,000	200,000	0	0	0	600,000
WS-11003	Water Distribution System Improvements	172,466	400,000	446,620	269,469	277,553	285,880	294,456	1,573,978
WS-13002	Water Fusion and General Equipment/Tools	0	20,000	50,000	50,000	50,000	50,000	50,000	250,000
WS-02014	Water, Gas, Wastewater Utility GIS Data	97,106	514,000	736,399	469,862	483,958	498,477	513,431	2,702,127
WS-80015	Water Meters	114,853	90,000	1,325,000	530,450	546,364	562,755	579,638	3,544,207
WS-07001	Water Recycling Facilities	0	0	395,649	0	0	0	0	395,649
WS-07000	Water Regulation Station Improvements	97,777	579,578	0	0	0	0	0	0
WS-08001	Water Reservoir Coating Improvements	224,549	850,771	55,532	0	0	0	0	55,532
WS-80014	Water Service Hydrant Replacement	296,913	79,000	400,000	400,000	400,000	400,000	400,000	2,000,000
WS-11004	Water System Supply Improvements	165,015	289,744	261,620	269,469	277,553	285,880	345,131	1,439,653

# WATER FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
WS-09000	Water Tank Seismic Water System Upgrades	602,721	2,152,575	4,868,532	2,000,000	0	0	0	6,868,532
	<b>System Improvements Total</b>	<b>1,771,399</b>	<b>4,975,668</b>	<b>8,939,352</b>	<b>4,189,250</b>	<b>2,035,428</b>	<b>2,082,992</b>	<b>2,182,656</b>	<b>19,429,678</b>
<b>Water Main Replacements</b>									
WS-12001	Water Main Replacement - Project 26	4,547,950	5,426,718	200,000	0	0	0	0	200,000
WS-13001	Water Main Replacement - Project 27	862	675,000	6,499,138	0	0	0	0	6,499,138
WS-14001	Water Main Replacement - Project 28	0	0	585,107	0	8,500,000	0	0	9,085,107
WS-15002	Water Main Replacement - Project 29	0	0	0	0	850,000	0	8,500,000	9,350,000
WS-16001	Water Main Replacement - Project 30	0	0	0	0	0	0	850,000	850,000
	<b>Water Main Replacements Total</b>	<b>4,548,813</b>	<b>6,101,718</b>	<b>7,284,245</b>	<b>0</b>	<b>9,350,000</b>	<b>0</b>	<b>9,350,000</b>	<b>25,984,245</b>
	<b>Total Uses</b>	<b>7,083,905</b>	<b>11,843,381</b>	<b>16,973,597</b>	<b>4,964,250</b>	<b>12,185,428</b>	<b>2,908,019</b>	<b>12,382,656</b>	<b>49,413,950</b>



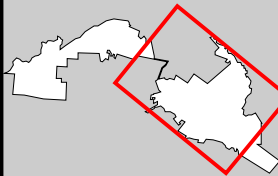
CITY OF  
**PALO  
ALTO**



- Water Main Replacement (WMR) Projects**
- FY 2020 (WMR 27)
  - FY 2021 (No Construction Projects)
  - FY 2022 (WMR 28)
  - FY 2023 (No Construction Projects)
  - FY 2024 (WMR 29)



The City of  
Palo Alto



**WATER FUND MAP**  
**FY 2020 to FY 2024**  
**CAPITAL IMPROVEMENT PROGRAM**

This map is a product of the  
City of Palo Alto GIS



0' 2500'



CITY OF  
**PALO  
ALTO**



## Customer Connections

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** Customer Connections  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-80013

Installation of 8" HDPE pipe by directional drilling method

# Water System Customer Connections

## Description

This project allows for improvements that include new main extensions, valves, domestic services, meters on upgraded services, backflow devices, fire services, and fire hydrants.

## Justification

System extensions are required to provide service to new customers and to serve existing customers requesting expanded service.

## Supplemental Information

Revenues appear to exceed expense budget due to the addition of capacity fees.

## Significant Changes

**2015-2019 CIP:** This project was previously titled Water System Extensions. As part of the Fiscal Year 2015 budget, it was re-titled to more accurately reflect the work done with this funding.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	929,348	765,995	957,228	985,946	1,015,524	1,045,990	1,195,819	5,200,507	0	N/A
Water Fund	N/A	(163,353)	0	(207,228)	(210,946)	(215,524)	(220,963)	(345,819)	(1,200,480)	0	N/A
Total	N/A	765,995	765,995	750,000	775,000	800,000	825,027	850,000	4,000,027	0	N/A

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	765,995	765,995	750,000	775,000	800,000	825,027	850,000	4,000,027	0	N/A
<b>Total</b>	<b>N/A</b>	<b>765,995</b>	<b>765,995</b>	<b>750,000</b>	<b>775,000</b>	<b>800,000</b>	<b>825,027</b>	<b>850,000</b>	<b>4,000,027</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

## System Improvements



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Mayfield Reservoir  
**Managing Department:** Utilities  
**Initial Project Start:** Fall 2019  
**Initial Project Completion:** Fall 2021  
**Revised Project Start:**  
**Revised Project Completion:** Spring 2021  
**Project Number:** WS-19000

Exterior view of Mayfield Reservoir

# Mayfield Reservoir Subgrade and Venting Repair

## Description

As part of the City's recent Seismic Upgrade and Emergency Water Supply and Storage projects, the reservoir was drained in 2012 for approximately two years to allow extensive seismic rehabilitation work to be performed and construction of a new pump station. While the reservoir was empty, a number of cracks developed in the concrete slabs. After construction was completed and the reservoir was refilled, the cracks that had formed in the concrete caused the reservoir to leak. It was determined that the cracking had not been caused by construction activities but was due to the age of the concrete and the expansion and contraction of the structure during the extended period of time the reservoir was empty.

## Justification

In order to minimize the risk of further damage to the reservoir and adjacent properties, the City hired a contractor to perform a crack assessment within the reservoir. Once the assessment was complete, the contractor sealed cracks in the concrete slabs and filled voids that had developed under the concrete slabs. The reservoir was filled and all leaks appeared to be sealed. However, during a recent inspection of the reservoir, it was found that a large number of additional cracks had formed on the concrete slabs, indicating potential problems with the structure and subgrade support. Furthermore, the perimeter venting was also found inadequate for keeping debris out and preserving water quality as required by the State Water Resources Control Board (SWRCB). To repair the reservoir's existing subgrade, this project will include excavation around and under the existing reservoir, backfill and compaction of excavated areas, and instal-

lation of a new reservoir floor. The project will also include State required improvements to the existing venting system.

## Significant Changes

**2019-2023 CIP:** Project established.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	0	200,000	0	400,000	200,000	0	0	0	600,000	0	600,000
<b>Total</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>400,000</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>600,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	200,000	0	400,000	200,000	0	0	0	600,000	0	600,000
<b>Total</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>400,000</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600,000</b>	<b>0</b>	<b>600,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-11003

Installation of a new fire hydrant with FlowGuard fire hydrant check valve

# Water Distribution System Improvements

## Description

This project provides funds to improve Water Distribution System deliverability and reliability. Typical activities include: installing restraining joints at critical pipelines and bridge crossings, increasing the size of inadequate facilities, system leakage surveys, network modeling, and fire flow studies or other system improvements as required.

## Justification

Water Distribution System reliability and adequate capacity are critical to providing a high level of service to customers in Palo Alto. Continuous evaluation of system needs and making required improvements are necessary to maintain adequate quantities of quality water, that meets local, state, and federal safe drinking water standards.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	585,000	400,000	446,620	269,469	277,553	285,880	294,456	1,573,978	0	N/A
<b>Total</b>	<b>N/A</b>	<b>585,000</b>	<b>400,000</b>	<b>446,620</b>	<b>269,469</b>	<b>277,553</b>	<b>285,880</b>	<b>294,456</b>	<b>1,573,978</b>	<b>0</b>	<b>N/A</b>



## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	585,000	400,000	446,620	269,469	277,553	285,880	294,456	1,573,978	0	N/A
<b>Total</b>	<b>N/A</b>	<b>585,000</b>	<b>400,000</b>	<b>446,620</b>	<b>269,469</b>	<b>277,553</b>	<b>285,880</b>	<b>294,456</b>	<b>1,573,978</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-13002

16" HDPE pipe being fused prior to installation

# Water General Equipment/Tools

## Description

This funding allows for the acquisition of new equipment and tools, replacement of existing fusion equipment, and other associated tools. The fusion equipment is used to fuse together pipe joints in the City's Water Distribution System.

## Justification

As equipment ages, the quality of the fusion joints begins to decline, and the operators must spend more time scraping, aligning, and fusing construction joints. In order to maintain high quality standards for the installation of the City's water distribution mains, along with the associated service standards and worker safety and productivity measures, equipment and tools are required to be upgraded on an annual basis.

## Significant Changes

**2015-2019 CIP:** Project was retitled from Water Fusion and General Equipment/Tools.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	50,000	20,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	50,000	20,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	50,000	20,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	N/A	50,000	20,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-80015

5/8" Badger water meter

# Water Meters

## Description

This funding allows for the purchase of meters for new customers, upgrading meters for current customers, installing meter bypasses, and replacing obsolete meters that are no longer repairable. This funding also allows for annual testing and calibration of select meters.

## Justification

This project will maintain meter accuracy, reliability, and stock meter equipment and replacement parts. Meter replacements enhance information on system water volume; align the Utility's ten-year meter testing and replacement cycle in accordance with industry-standard best management practices; and provide accurate data for the Water Utility billing system.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	N/A	900,000	90,000	1,325,000	530,450	546,364	562,755	579,638	3,544,207	0	N/A
<b>Total</b>	<b>N/A</b>	<b>900,000</b>	<b>90,000</b>	<b>1,325,000</b>	<b>530,450</b>	<b>546,364</b>	<b>562,755</b>	<b>579,638</b>	<b>3,544,207</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	900,000	90,000	1,325,000	530,450	546,364	562,755	579,638	3,544,207	0	N/A
<b>Total</b>	<b>N/A</b>	<b>900,000</b>	<b>90,000</b>	<b>1,325,000</b>	<b>530,450</b>	<b>546,364</b>	<b>562,755</b>	<b>579,638</b>	<b>3,544,207</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2011  
**Initial Project Completion:** Spring 2015  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2021  
**Project Number:** WS-07001

Recycled water piping

# Water Recycling Facilities

## Description

This funding allows the City to hire a consultant to prepare a business plan, prepare a preliminary design, and secure funding options for an expansion of the existing recycled water delivery system in the City. The pipeline will primarily serve the Stanford Research Park and provide an alternative supply source of 435,600 cubic feet per year, roughly 10% of Palo Alto's total water consumption in 2015. A key part of the proposed business plan will be evaluating potential alternative uses of the new pipeline to serve future needs in Direct Potable Reuse and Indirect Potable Reuse. This more detailed plan follows the successful completion and certification of the project's environmental impact report in September 2015. The next phase of the project is to evaluate the results of this business plan and other deliverables, and pending a satisfactory assessment, move forward with the full design work of the proposed expansion of the recycled water delivery system.

## Justification

Palo Alto is aggressively pursuing all options to meet future water supply needs. Recycled water provides a stable, drought-proof supply of water that replaces the need to use Hetch Hetchy potable supplies for irrigation purposes and other non-potable uses in anticipation of extended periods of drought and mandatory potable water reduction imposed by the State. The City is taking an integrated approach to evaluating the most flexible and robust strategic plan for non-potable recycled water, shallow aquifer groundwater, deep aquifer groundwater, and Direct Potable Reuse and Indirect Potable Reuse.

## Significant Changes

**2020-2024 CIP:** The remaining build portion of this project will be implemented in the Regional Water Quality Control Plant's project WQ-19003, Advanced Water Purification Facility.

**2018-2022 CIP:** While staff has addressed many issues regarding a future recycled water project, including the completion and certification by the Council of the project's environmental impact report (EIR), the replacement of high quality potable water with recycled water remains a concern for the landscape community among others. Completion of the EIR was essential for securing Federal or State grant or loan funding for the construction of the project, and now the City needs to reassess a more exhaustive number of potential end uses, assess customer demand, prepare a business plan, finish a preliminary design, and secure funding.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the Federal Government	111,013	0	0	0	0	0	0	0	0	0	111,013
Water Fund	346,037	395,649	0	395,649	0	0	0	0	395,649	0	741,686
<b>Total</b>	<b>457,050</b>	<b>395,649</b>	<b>0</b>	<b>395,649</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>395,649</b>	<b>0</b>	<b>852,699</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	365,639	395,649	0	395,649	0	0	0	0	395,649	0	761,288
Design	91,409	0	0	0	0	0	0	0	0	0	91,409
<b>Total</b>	<b>457,048</b>	<b>395,649</b>	<b>0</b>	<b>395,649</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>395,649</b>	<b>0</b>	<b>852,697</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2008  
**Initial Project Completion:** Spring 2009  
**Revised Project Start:** Summer 2013  
**Revised Project Completion:** Spring 2019  
**Project Number:** WS-08001

Seismic Upgrade, Dahl Reservoir, May 2006

# Water Reservoir Coating Improvements

## Description

This project will remove and replace the coatings on the interiors and exteriors of the City's four foothill steel water reservoirs. Detailed inspection of the remaining metal structural components will be made after the coatings are completely removed. Minor strengthening of the structural components is expected.

## Justification

Recent coating inspection of the interiors showed signs of heavy rusting on the interior walls, roof, and support beams on each of the steel reservoirs. The reservoirs' coatings need to be replaced to extend the life of the reservoir structures.

## Supplemental Information

These reservoirs were last coated in 1995.

## Significant Changes

**2019-2023 CIP:** The City is currently under contract with an engineering consultant to study the Water Distribution System. Staff will make recommendations for upgrades and/or improvements when the study is completed.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	1,234,879	906,303	850,771	55,532	0	0	0	0	55,532	0	2,141,182
<b>Total</b>	<b>1,234,879</b>	<b>906,303</b>	<b>850,771</b>	<b>55,532</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55,532</b>	<b>0</b>	<b>2,141,182</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	987,899	906,303	850,771	55,532	0	0	0	0	55,532	0	1,894,202
<b>Design</b>	246,970	0	0	0	0	0	0	0	0	0	246,970
<b>Total</b>	<b>1,234,869</b>	<b>906,303</b>	<b>850,771</b>	<b>55,532</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55,532</b>	<b>0</b>	<b>2,141,172</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-80014

Newly installed fire hydrant service line and assembly on Greenwood Avenue

# Water Service Hydrant Replacement

## Description

This project replaces system control valves, deteriorated galvanized service lines, lead goose-necks, and fire hydrant valves and assemblies needed for Fire Department flow testing; upgrades fire hydrants in main replacement project areas; and replaces existing undersized or deteriorated copper water services. Upgrading hydrants and system control valves is consistent with fire protection policies.

## Justification

In order to maintain a high water quality standard for Palo Alto's water supplies, it is necessary to replace old, lead, galvanized, and corroded copper water service lines.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	N/A	431,130	79,000	400,000	400,000	400,000	400,000	400,000	2,000,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>431,130</b>	<b>79,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>2,000,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	431,130	79,000	400,000	400,000	400,000	400,000	400,000	2,000,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>431,130</b>	<b>79,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>400,000</b>	<b>2,000,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation  
Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.

## WATER FUND



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-11004

Installation of 8" HDPE pipe and valve between two main connection points on El Camino Real at El Camino Way

# Water System Supply Improvements

## Description

This project provides funding to improve the City's Water Distribution System, which connects facilities between the City's and the San Francisco Public Utility Commission's pipelines, emergency water wells within the City, pumping stations, and water reservoirs.

## Justification

It is critical that the City has an adequate supply of water that meets federal and state drinking water requirements. To meet these objectives, the City must continually evaluate the system and make improvements as needed.

## Supplemental Information

Typical activities performed under this project include: piping modifications, equipment replacements associated with water delivery, Supervisory Control software upgrades, system modifications for water system quality compliance, implementation of an asset management system, conditional assessment of the reliability of transmission mains, and security system installations.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	289,744	289,744	261,620	269,469	277,553	285,880	345,131	1,439,653	0	N/A
Total	N/A	289,744	289,744	261,620	269,469	277,553	285,880	345,131	1,439,653	0	N/A

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	289,744	289,744	261,620	269,469	277,553	285,880	345,131	1,439,653	0	N/A
<b>Total</b>	<b>N/A</b>	<b>289,744</b>	<b>289,744</b>	<b>261,620</b>	<b>269,469</b>	<b>277,553</b>	<b>285,880</b>	<b>345,131</b>	<b>1,439,653</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Spring 2014  
**Initial Project Completion:** Winter 2017  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2021  
**Project Number:** WS-09000

Seismic Upgrade, Boronda Reservoir, December 2014

# Water Tank Seismic Upgrade and Rehabilitation

## Description

This project will provide tank rehabilitation, seismic upgrades, and/or tank replacement structural reinforcement for the Corte Madera, Park, Boronda, and Dahl reservoirs in order to improve earthquake resistance in compliance with the American Society of Civil Engineers (ASCE 7) seismic codes. Work at the reservoir sites will also include the installation of: new seismic shut off valves between the reservoirs and valve vaults, new plug valves, piping and pipe supports in the valve vaults, and recoating of the interior and exterior reservoir walls.

## Justification

Palo Alto's water tanks have no protection from water loss in a seismic event. If an earthquake causes a significant water leak, various impacts such as loss of water for fire fighting purposes, loss of water storage for drinking, property damage from flooding or mudslides, and environmental damages could occur. The seismic protection systems will preserve potable water after a seismic event. Additionally, during the seismic upgrade of the Montebello reservoir the structural condition of the tank required significant repair, which is now anticipated in the remaining three tanks constructed in a similar time period.

## Significant Changes

**2019-2023 CIP:** Project was retitled from Seismic Water System Upgrade. Budget has also increased to account for scope changes and construction cost escalation.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	2,706,936	5,021,107	2,152,575	4,868,532	2,000,000	0	0	0	6,868,532	0	11,728,043
<b>Total</b>	<b>2,706,936</b>	<b>5,021,107</b>	<b>2,152,575</b>	<b>4,868,532</b>	<b>2,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,868,532</b>	<b>0</b>	<b>11,728,043</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	2,165,546	5,021,107	2,152,575	4,868,532	2,000,000	0	0	0	6,868,532	0	11,186,653
<b>Design</b>	541,380	0	0	0	0	0	0	0	0	0	541,380
<b>Total</b>	<b>2,706,926</b>	<b>5,021,107</b>	<b>2,152,575</b>	<b>4,868,532</b>	<b>2,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,868,532</b>	<b>0</b>	<b>11,728,033</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.





**Fund:** Water Fund - Operating  
**Category:** System Improvements  
**Project Location:** Software maintenance & update  
**Managing Department:** Utilities  
**Initial Project Start:** Recurring  
**Initial Project Completion:** Recurring  
**Project Number:** WS-02014

Staff collecting data for GIS system

# Water, Gas, Wastewater Utility GIS Data

## Description

This project covers the annual maintenance and support contract to improve the ability of Utilities Department staff to use the Geographic Information System (GIS). As with other GIS activities, continuing the completion of data-related tasks is the primary emphasis. Because field personnel still need accurate paper maps in the field, standard map books will be produced that meet their specific needs. Funding is also included to improve the GIS user interface to better serve the unique requirements of Utility Department users.

## Justification

The GIS program is used for interfacing with modeling software to perform engineering analysis and master planning, develop and prioritize cost-effective capital improvement designs, and asset management of the City's utility enterprise system to enhance the level of service to utility customers.

## Significant Changes

**2020-2024 CIP:** The City will transition to a new GIS platform in FY 2020. Remaining FY 2019 funds are being reappropriated to fund the conversion activities required to bring the maps to the new platform.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Gas Fund	N/A	147,630	147,630	152,059	156,621	161,320	166,160	166,160	802,320	0	N/A
Transfer from Wastewater Collection Fund	N/A	147,630	147,630	152,059	156,621	161,320	166,160	166,160	802,320	0	N/A
Water Fund	N/A	499,350	218,740	432,281	156,620	161,318	166,157	181,111	1,097,487	0	N/A
<b>Total</b>	<b>N/A</b>	<b>794,610</b>	<b>514,000</b>	<b>736,399</b>	<b>469,862</b>	<b>483,958</b>	<b>498,477</b>	<b>513,431</b>	<b>2,702,127</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	794,610	514,000	736,399	469,862	483,958	498,477	513,431	2,702,127	0	N/A
<b>Total</b>	<b>N/A</b>	<b>794,610</b>	<b>514,000</b>	<b>736,399</b>	<b>469,862</b>	<b>483,958</b>	<b>498,477</b>	<b>513,431</b>	<b>2,702,127</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

Program: C1.3.1

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Water Main Replacements



**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2015  
**Initial Project Completion:** Winter 2017  
**Revised Project Start:**  
**Revised Project Completion:** Fall 2019  
**Project Number:** WS-12001

16" HDPE pipe ready to be installed

# Water Main Replacement - Project 26

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 9,708 linear feet (which represents 0.8% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in University Park and Downtown North.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** Complete project close activities.

**2019-2023 CIP:** This project included Upgrade Downtown which added an additional \$3.0 million for construction services. Funding was increased by \$0.6 million in 2019 to include project closing activities for both WMR 26 and Upgrade Downtown projects.

**2018-2022 CIP:** This project was delayed due to recent increases in construction cost which has required the department to reduce the scope of the project.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	4,901,072	5,626,718	5,426,718	200,000	0	0	0	0	200,000	0	10,527,790
<b>Total</b>	<b>4,901,072</b>	<b>5,626,718</b>	<b>5,426,718</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>10,527,790</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	3,920,846	5,626,718	5,426,718	200,000	0	0	0	0	200,000	0	9,547,564
<b>Design</b>	980,201	0	0	0	0	0	0	0	0	0	980,201
<b>Total</b>	<b>4,901,047</b>	<b>5,626,718</b>	<b>5,426,718</b>	<b>200,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,000</b>	<b>0</b>	<b>10,527,765</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2016  
**Initial Project Completion:** Winter 2018  
**Revised Project Start:** Summer 2019  
**Revised Project Completion:** Summer 2020  
**Project Number:** WS-13001

Installed 16" HDPE pipe waiting to be backfilled

# Water Main Replacement - Project 27

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2018 and 2019. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 9,150 linear feet (which represents 0.8% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Oak Creek and Greenmeadow neighborhoods.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2019-2023 CIP:** Project budget has increased by \$0.6 million to account for construction cost escalation.

**2018-2022 CIP:** The construction is postponed to start in the later part of FY 2019 due to delays of WMR 26.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	43,362	7,174,138	675,000	6,499,138	0	0	0	0	6,499,138	0	7,217,500
<b>Total</b>	<b>43,362</b>	<b>7,174,138</b>	<b>675,000</b>	<b>6,499,138</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,499,138</b>	<b>0</b>	<b>7,217,500</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	34,689	6,499,138	0	6,499,138	0	0	0	0	6,499,138	0	6,533,827
<b>Design</b>	8,671	675,000	675,000	0	0	0	0	0	0	0	683,671
<b>Total</b>	<b>43,360</b>	<b>7,174,138</b>	<b>675,000</b>	<b>6,499,138</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,499,138</b>	<b>0</b>	<b>7,217,498</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2017  
**Initial Project Completion:** Winter 2019  
**Revised Project Start:** Summer 2020  
**Revised Project Completion:** Spring 2022  
**Project Number:** WS-14001

New HDPE main connecting to side street with new valve

# Water Main Replacement - Project 28

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2020 and 2022. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 14,985 linear feet (which represents 1.2% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Crescent Par, Barron Park, and Charleston Meadows neighborhoods.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The total project cost increased to \$9.0 million to account for an additional 1,400 in linear feet and escalating construction costs.



**2018-2022 CIP:** Due to delays of WMR 26 and 27, the project design and construction will be delayed to FY 2019 and FY 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	0	585,107	0	585,107	0	8,500,000	0	0	9,085,107	0	9,085,107
<b>Total</b>	<b>0</b>	<b>585,107</b>	<b>0</b>	<b>585,107</b>	<b>0</b>	<b>8,500,000</b>	<b>0</b>	<b>0</b>	<b>9,085,107</b>	<b>0</b>	<b>9,085,107</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	8,500,000	0	0	8,800,000	0	8,500,000
<b>Design</b>	0	585,107	0	585,107	0	0	0	0	585,107	0	585,107
<b>Total</b>	<b>0</b>	<b>585,107</b>	<b>0</b>	<b>585,107</b>	<b>0</b>	<b>8,500,000</b>	<b>0</b>	<b>0</b>	<b>9,085,107</b>	<b>0</b>	<b>9,085,107</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2018  
**Initial Project Completion:** Winter 2020  
**Revised Project Start:** Summer 2022  
**Revised Project Completion:** Spring 2024  
**Project Number:** WS-15002

16" HDPE pipe ready to be installed by open trench method

# Water Main Replacement - Project 29

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2022 and 2024. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 13,425 linear feet (which represents 1.2% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Evergreen Park, Ventura, and Midtown/Midtown West neighborhoods.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The total project linear footage increased by 1,475 and overall project cost increased to \$9.4 million to account for escalating construction costs.

**2018-2022 CIP:** Due to delays of WMR 26, 27 and 28, the project design and construction will be postponed to FY 2020 and FY 2021.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Water Fund</b>	0	0	0	0	0	850,000	0	8,500,000	9,350,000	0	9,350,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>8,500,000</b>	<b>9,350,000</b>	<b>0</b>	<b>9,350,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	0	0	0	0	8,500,000	8,500,000	0	8,500,000
<b>Design</b>	0	0	0	0	0	850,000	0	0	850,000	0	850,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>0</b>	<b>8,500,000</b>	<b>9,350,000</b>	<b>0</b>	<b>9,350,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



HDPE pipe waiting to be fused

**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:**  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Winter 2021  
**Revised Project Start:** Summer 2024  
**Revised Project Completion:** Spring 2026  
**Project Number:** WS-16001

# Water Main Replacement - Project 30

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2024 and 2026. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes approximately 13,025 linear feet (which represents 1.1% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Community Center, Midtown/Midtown West and Palo Verde, and Greenmeadow neighborhoods.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction

services. The project increased by 2,600 linear footage and the overall cost increased to \$9.4 million to account for escalating construction costs.

**2018-2022 CIP:** Due to delays of WMR 26 - 29, the project design and construction is postponed to FY 2021 and FY 2022.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	850,000	850,000	8,500,000	9,350,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>850,000</b>	<b>8,500,000</b>	<b>9,350,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	850,000	850,000	8,500,000	9,350,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>850,000</b>	<b>850,000</b>	<b>8,500,000</b>	<b>9,350,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various Locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2020  
**Initial Project Completion:** Winter 2022  
**Revised Project Start:** Summer 2026  
**Revised Project Completion:** Spring 2028  
**Project Number:** WS-19001

Installed 16" HDPE pipe waiting to be backfilled

# Water Main Replacement - Project 31

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2026 and 2028. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope includes 11,250 linear feet (which represents 0.9% of the City's Water Distribution System) of mains and services on various streets within the City, including areas in the Research Park, Midtown/Midtown West, Old Palo Alto, and Ventura neighborhoods.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, some are located in areas of high liquefaction, and others are subject to recurring breaks.

## Supplemental Information

Each year the projects are re-evaluated and the highest priority is given to the most deteriorated portions of the system. Linear footage and locations are subject to change; please refer to the City of Palo Alto Utilities webpage to confirm project details.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The linear footage increased by 1,700 and the overall total project cost increased to \$9.4 million to account for escalating construction costs.

**2018-2022 CIP:** Due to delays of WMR 26 - 30, project design and construction is postponed to FY 2022 and FY 2023.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	0	0	9,350,000	9,350,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,350,000</b>	<b>9,350,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	8,500,000	8,500,000
Design	0	0	0	0	0	0	0	0	0	850,000	850,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,350,000</b>	<b>9,350,000</b>

## Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.





**Fund:** Water Fund - Operating  
**Category:** Water Main Replacements  
**Project Location:** Various Locations  
**Managing Department:** Utilities  
**Initial Project Start:** Summer 2023  
**Initial Project Completion:** Fall 2024  
**Revised Project Start:** Summer 2028  
**Revised Project Completion:** Spring 2030  
**Project Number:** WS-20000

Old Water Main being Replaced

# Water Main Replacement - Project 32

## Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2028 and 2030. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The project scope will include approximately 15,000 to 25,000 linear feet of mains and services on various streets within the City.

## Justification

Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks.

## Significant Changes

**2020-2024 CIP:** City staff has proposed a new replacement schedule of completing a water, gas and wastewater construction project every other year instead of annually to reduce the amount of construction when prices are high. In the last few years there have been fewer bidders and higher prices on construction projects due to the increased demand for construction services. The total project cost increased to \$9.4 million to account for escalating construction costs.

**2019-2023 CIP:** Project established.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	0	0	9,350,000	9,350,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,350,000</b>	<b>9,350,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	8,500,000	8,500,000
Design	0	0	0	0	0	0	0	0	0	850,000	850,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,350,000</b>	<b>9,350,000</b>

### Operating Impact

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-4.1

Program: N4.13.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15302.



CITY OF  
**PALO  
ALTO**

# Internal Service Fund Projects





CITY OF  
**PALO  
ALTO**

# TECHNOLOGY FUND

## Overview

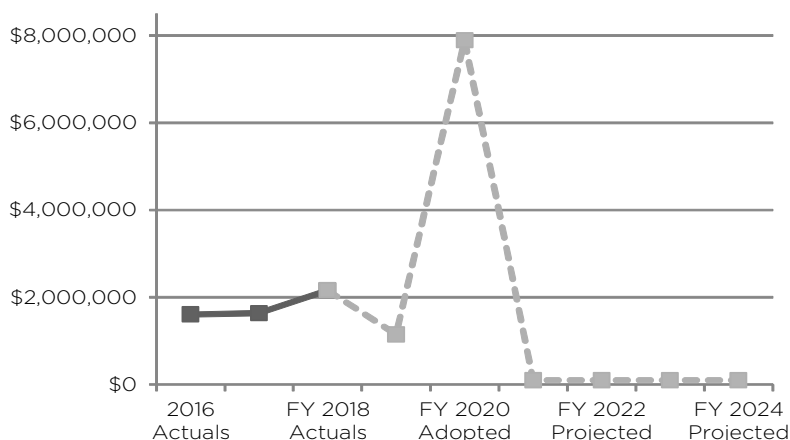
The Technology Fund accounts for expenses associated with citywide Information Technology activities. Technology Fund capital projects enhance service delivery to the community and to City staff through the delivery and implementation of Information Technology infrastructure. It is important to note that all expenditures in the Technology Fund are reimbursed by transfers from the other City funds benefiting from the services and purchases incurred in the Technology Fund. Overall, a total of eight capital projects are programmed over the five-year Capital Improvement Program (CIP). The projects outlined in the capital program represent only a small subset of the total number of technology projects delivered to the City, as most technology projects are funded through the operating budget and do not meet the criteria of a capital project. Please refer to the Information Technology Department section of the Operating Budget for additional information.

The budget for the Technology Fund Capital Improvement Program is accounted for in two separate categories: Citywide Technology Upgrades and Department Technology Upgrades and Improvements.

### Citywide Technology Upgrades

The Citywide Technology Upgrades category includes projects that benefit multiple City departments. They tend to have a larger scope than projects for individual departments and thus entail more coordination and complexity. For the 2020-2024 Capital Improvement Program, \$6.9 million is allocated within this category, all of which was approved by the City Council in prior years.

Technology Fund Capital Expenditures



### Recent Accomplishments:

- Implemented additional disaster recovery and security software/hardware to further bolster the City's network security presence.
- Purchased radios and related equipment to move to the new countywide radio communication system.
- Obtained approval from City Council of process to move forward with the upgrade of the City's Enterprise Resource Planning (ERP) system.

## 2020-2024 Capital Improvement Program

### Recurring Projects:

There is one recurring project within this category:

- **Radio Infrastructure Replacement:** This project, which is funded by annual transfers from the General Fund and Utility Enterprise Funds as well as funding from Stanford, allows for the replacement of various items in the City's Public Safety infrastructure inventory.

### Non-Recurring Projects:

- **IT Disaster Recovery:** This initiative identifies and addresses gaps in business continuity. There are \$0.08 million in additional enhancements remaining for this project, which is scheduled to be completed by the end of Fiscal Year 2020 (Fiscal Year 2020 and 5-Year CIP: \$0.08 million).
- **Enterprise Resource Planning Upgrade:** This project will upgrade the existing Enterprise Resource Planning (ERP) system and replace the existing Customer Information System (CIS) to better meet the City's needs (Fiscal Year 2020 and 5-Year CIP: \$4.7 million).
- **City Council Chambers Upgrade:** This project will upgrade the necessary audio visual equipment in Council Chambers as the equipment in place now is unsupportable and outdated. This project will also bring the identified Americans with Disabilities Act (ADA) components to compliance (Fiscal Year 2020 and 5-Year CIP: \$1.7 million).
- **Infrastructure Management System:** This project establishes an Enterprise Asset Management System (EAMS) to maintain an up-to-date inventory of the City's infrastructure, its catch-up and keep-up needs, and available funding (Fiscal Year 2020 and 5-Year CIP: \$0.04 million).

## Department Technology Upgrades and Improvements

The Department Technology Upgrades and Improvements category includes projects that benefit one or a limited number of City departments. For the 2020-2024 Capital Improvement Program, \$1.4 million is programmed within this category.

### Recent Accomplishments:

- Continuing replacement of the My Utilities Account (MUA) self-service customer portal, initiated in Summer 2017, to provide new online services and functionality. The design and implementation of the portal have taken longer than initially anticipated and the portal is now expected to be fully operational in Summer 2019.
- Continued technology enhancements at the Development Center to increase efficiency and effectiveness of the services offered.

## 2020-2024 Capital Improvement Program

### Recurring Projects:

The 2020-2024 CIP includes one recurring project within this category:

## TECHNOLOGY FUND

- Utilities Customer Bill System Improvements: This project allows for enhancements to the Utilities Billing system particularly in response to new legislative, regulatory, and security requirements. Other system enhancements may include third party or hosted services for bill printing and invoicing, customer self-service portal (My Utilities Account), and reporting capabilities. This project will continue to be recurring until the upgrade of the ERP and replacement of the Utilities Billing system is completed. After the systems are implemented, the project will be reevaluated to determine if recurring funding is required (Fiscal Year 2020: \$0.2 million; 5-Year CIP: \$0.6 million).

### Non-Recurring Projects:

- Public Safety Computer-Aided Dispatch (CAD) Replacement: The old Public Safety CAD system, Public Safety Systems Incorporated (PSSI), was replaced by the Intergraph CAD system. There is one piece that remains to be implemented, which is the Records Management System (RMS). This replacement was a Tri-City Consortium coordinated effort between Mountain View, Los Altos, and Palo Alto (Fiscal Year 2020 and 5-Year CIP: \$0.4 million).
- Development Center Blueprint Technology Enhancements: This project allows for the introduction of new technologies to support business processes and optimize customer service at the Development Center. Major enhancements to the existing Accela permitting system are included in this initiative (Fiscal Year 2020 and 5-Year CIP: \$0.5 million).

## Summary of Capital Activity

### TECHNOLOGY FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Transfers from Other Funds</b>									
<b>Transfers from Airport Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	9,200	0	0	0	0	9,200
	<b>Transfers from Airport Fund Total</b>	<b>0</b>	<b>0</b>	<b>9,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,200</b>
<b>Transfers from Electric Fund</b>									
TE-05000	Radio Infrastructure Replacement	80,913	0	0	0	0	0	0	0
TE-10001	Utilities Customer Bill System Improvements	73,713	0	0	0	0	0	0	0
	<b>Transfers from Electric Fund Total</b>	<b>154,626</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfers from Fiber Optics Fund</b>									
TE-10001	Utilities Customer Bill System Improvements	565	0	0	0	0	0	0	0
	<b>Transfers from Fiber Optics Fund Total</b>	<b>565</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



# TECHNOLOGY FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Transfers from Gas Fund</b>									
TE-05000	Radio Infrastructure Replacement	80,912	0	0	0	0	0	0	0
TE-10001	Utilities Customer Bill System Improvements	28,391	0	0	0	0	0	0	0
	<b>Transfers from Gas Fund Total</b>	<b>109,303</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transfers from General Fund</b>									
TE-05000	Radio Infrastructure Replacement	479,300	64,000	64,000	0	0	0	0	64,000
	<b>Transfers from General Fund Total</b>	<b>479,300</b>	<b>64,000</b>	<b>64,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64,000</b>
<b>Transfers from Print and Mail Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	9,200	0	0	0	0	9,200
	<b>Transfers from Print and Mail Fund Total</b>	<b>0</b>	<b>0</b>	<b>9,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,200</b>
<b>Transfers from Refuse Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	55,100	0	0	0	0	55,100
TE-10001	Utilities Customer Bill System Improvements	17,231	20,100	0	11,500	11,500	11,500	11,500	46,000
	<b>Transfers from Refuse Fund Total</b>	<b>17,231</b>	<b>20,100</b>	<b>55,100</b>	<b>11,500</b>	<b>11,500</b>	<b>11,500</b>	<b>11,500</b>	<b>101,100</b>
<b>Transfers from Stormwater Management Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	36,700	0	0	0	0	36,700
TE-10001	Utilities Customer Bill System Improvements	3,685	4,300	0	2,600	2,600	2,600	2,600	10,400
	<b>Transfers from Stormwater Management Fund Total</b>	<b>3,685</b>	<b>4,300</b>	<b>36,700</b>	<b>2,600</b>	<b>2,600</b>	<b>2,600</b>	<b>2,600</b>	<b>47,100</b>
<b>Transfers from Utilities Administration Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	587,500	0	0	0	0	587,500
TE-05000	Radio Infrastructure Replacement	0	20,000	20,000	0	0	0	0	20,000
TE-10001	Utilities Customer Bill System Improvements	0	150,600	0	85,900	85,900	85,900	85,900	343,600
	<b>Transfers from Utilities Administration Fund Total</b>	<b>0</b>	<b>170,600</b>	<b>607,500</b>	<b>85,900</b>	<b>85,900</b>	<b>85,900</b>	<b>85,900</b>	<b>951,100</b>
<b>Transfer from Vehicle Replacement Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	64,200	0	0	0	0	64,200
	<b>Transfers from Vehicle Replacement Fund Total</b>	<b>0</b>	<b>0</b>	<b>64,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64,200</b>
<b>Transfers from Wastewater Collection Fund</b>									
TE-05000	Radio Infrastructure Replacement	80,912	0	0	0	0	0	0	0
TE-10001	Utilities Customer Bill System Improvements	9,513	0	0	0	0	0	0	0
	<b>Transfers from Wastewater Collection Fund Total</b>	<b>90,425</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# TECHNOLOGY FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Transfers from Wastewater Treatment Fund</b>									
TE-19001	City Council Chambers Upgrade	0	0	156,100	0	0	0	0	156,100
	<b>Transfers from Wastewater Treatment Fund Total</b>	<b>0</b>	<b>0</b>	<b>156,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>156,100</b>
<b>Transfers from Water Fund</b>									
TE-05000	Radio Infrastructure Replacement	80,912	0	0	0	0	0	0	0
TE-10001	Utilities Customer Bill System Improvements	16,902	0	0	0	0	0	0	0
	<b>Transfers from Water Fund Total</b>	<b>97,814</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Total Transfers from Other Funds</b>	<b>952,949</b>	<b>259,000</b>	<b>1,002,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>1,402,000</b>
<b>Other Revenue</b>									
TE-05000	Radio Infrastructure Replacement: Stanford	0	56,000	86,000	0	0	0	0	86,000
	<b>Other Revenue Total</b>	<b>0</b>	<b>56,000</b>	<b>86,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>86,000</b>
	<b>Total Sources</b>	<b>952,949</b>	<b>315,000</b>	<b>1,088,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>1,488,000</b>
<b>Use of Funds</b>									
<b>Citywide Technology Upgrades and Improvements</b>									
TE-19001	City Council Chambers Upgrade	0	0	1,700,000	0	0	0	0	1,700,000
TE-19000	Enterprise Resource Planning Upgrade	0	277,600	4,672,400	0	0	0	0	4,672,400
TE-13004	Infrastructure Management System	33,918	54,260	46,800	0	0	0	0	46,800
TE-01012	IT Disaster Recovery Plan	17,429	31,100	83,600	0	0	0	0	83,600
TE-05000	Radio Infrastructure Replacement	1,943,544	532,400	354,900	0	0	0	0	354,900
	<b>Total Citywide Technology Upgrades and Improvements</b>	<b>1,994,891</b>	<b>895,360</b>	<b>6,857,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,857,700</b>
<b>Department Technology Upgrades and Improvements</b>									
TE-12001	Development Center Blueprint Technology Enhancement	108,304	63,650	462,814	0	0	0	0	462,814
TE-11001	Library Computer System Software	44,132	1,400	0	0	0	0	0	0
TE-95016	Permit Information Tracking System	12,917	60,442	0	0	0	0	0	0
TE-09000	Public Safety Computer-Aided Dispatch Replacement	0	0	408,000	0	0	0	0	408,000
TE-10001	Utilities Customer Bill System Improvements	2,060	129,000	164,000	100,000	100,000	100,000	100,000	564,000
	<b>Total Department Technology Upgrades and Improvements</b>	<b>167,413</b>	<b>254,492</b>	<b>1,034,814</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>1,434,814</b>
	<b>Total Uses</b>	<b>2,162,304</b>	<b>1,149,852</b>	<b>7,892,514</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>8,292,514</b>

## Citywide Technology Upgrades and Improvements



**Fund:** Technology Fund  
**Category:** Citywide Technology Upgrades and Improvements  
**Project Location:** City Hall  
**Managing Department:** Information Technology  
**Initial Project Start:** Summer 2019  
**Initial Project Completion:** Summer 2020  
**Revised Project Start:**  
**Revised Project Completion:**  
**Project Number:** TE-19001

City Council Chambers

## City Council Chambers Upgrade

### Description

On December 17th, 2018, the City Council approved upgrading the City Council Chambers without using a phased approach as recommended by the Finance Committee. Funding will be used to upgrade outdated electronic equipment that has become unsupportable in City Council Chambers. This will help address technical issues and ensure compliance with Americans with Disabilities Act (ADA) requirements. This project will:

- Replace and upgrade outdated audio/visual equipment and make the City Council Chambers ADA compliant
- Upgrade the City Council Chambers broadcast booth, overhead display equipment, and dais equipment (including a supportable voting system)
- Make the City Council Chambers broadcast booth compliant with ADA and State regulations
- Obtain adequate support, maintenance, and warranty for all equipment
- Integrate the City Hall Lobby Video Wall, Community Meeting Room, and Council Conference Room with new City Council Chambers equipment to enable viewing and/or broadcasting

### Justification

Most of the electronic equipment in the City Council Chambers is obsolete and unsupportable. The City's recent ADA transition plan update identified accessibility deficiencies in the City Council Chambers. The broadcast booth contains some equipment with expired warranties, unused equipment, and cabling that is not well managed. These issues pose potential hazards for the broadcasting operators. The broadcast booth also lacks back-up power supplies, which

could hinder broadcasting and recording of the session. The rear projected overhead display is not clear, presents dissimilar sizes, and can only display two inputs. These issues unnecessarily hinder the City Clerks' administrative function during Council meetings. The existing voting system has been deemed unsupportable and unrepairable by electricians and could stop functioning at any time. The broadcast booth is not currently integrated with the upgraded equipment that has been installed in the Community Meeting Room, Council Conference Room, Flexible Training Room, and several library meeting rooms, which prevents the City from fully utilizing the new capabilities and functionality this upgraded equipment offers.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	0	0	0	782,000	0	0	0	0	782,000	0	782,000
<b>Transfer from Airport Fund</b>	0	0	0	9,200	0	0	0	0	9,200	0	9,200
<b>Transfer from Print &amp; Mail Fund</b>	0	0	0	9,200	0	0	0	0	9,200	0	9,200
<b>Transfer from Refuse Fund</b>	0	0	0	55,100	0	0	0	0	55,100	0	55,100
<b>Transfer From Stormwater Management Fund</b>	0	0	0	36,700	0	0	0	0	36,700	0	36,700
<b>Transfer from Utilities Administration Fund</b>	0	0	0	587,500	0	0	0	0	587,500	0	587,500
<b>Transfer from Vehicle Replacement and Maintenance</b>	0	0	0	64,200	0	0	0	0	64,200	0	64,200
<b>Transfer from Wastewater Treatment Fund</b>	0	0	0	156,100	0	0	0	0	156,100	0	156,100
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,700,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,700,000</b>	<b>0</b>	<b>1,700,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	0	0	0	1,700,000	0	0	0	0	1,700,000	0	1,700,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,700,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,700,000</b>	<b>0</b>	<b>1,700,000</b>

## Operating Impact

Operating costs have not been determined at this time as the RFP has not been released.

## TECHNOLOGY FUND

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Maintenance of Parks and Community Facilities

Goal: C-3

Policy: C-3.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



**Fund:** Technology Fund

**Category:** Citywide Technology Upgrades and Improvements

**Project Location:** Various

**Managing Department:** Information Technology

**Initial Project Start:** Summer 2018

**Initial Project Completion:** Summer 2022

**Revised Project Start:**

**Revised Project Completion:** Summer 2020

**Project Number:** TE-19000

New Financial System

# Enterprise Resource Planning Upgrade

## Description

This project provides funding to upgrade the existing Enterprise Resource Planning (ERP) system and Customer Information System (CIS) to better meet the City's needs.

## Justification

The City's existing ERP system, SAP, was selected in 2002 with the purpose of integrating various business processes and moving towards electronic Government (eGovernment). In Fiscal Year 2003, the implementation of SAP's Enterprise Central Component (ECC 4.6C) core modules was completed and since then the City has been running SAP to support Accounting, Finance, Purchasing, Project Management, Plant Maintenance, Budgeting, Payroll, Human Resource Management, and Service Order Management. In 2009, the City completed a major upgrade to SAP (ECC 6.0). The City also replaced the former utility billing system (Banner) with the implementation of SAP's Customer Relationship Management (CRM) Utilities Customer Electronic Services (also known as My Utilities Account customer portal) and Business Intelligence Systems (BI).

## Supplemental Information

Technology and business needs have changed dramatically since the current ERP solution was selected and implemented. The upgrade of the existing ERP is anticipated to address a number of issues currently facing the City, including the following:

- The City is currently running an old version of SAP which does not support increasing demands in business and technology.



- The City requires a system that is user friendly with faster response times for any add/modify needs.
- The upgraded system will facilitate automation of additional business processes which are not supported in the current software.
- The City anticipates improvements to quality and reliability of information that will enhance decision making and strengthen the reporting capacity of the City in a user-friendly manner.

Funds currently recommended reflect only estimated costs. Once a vendor is selected, full system and implementation costs will be updated.

### Significant Changes

**FY 2020-2024 CIP:** After thorough consideration, it was determined that an upgrade to the current SAP environment would be more appropriate than a complete system replacement at this time. The request for proposal (RFP) was therefore canceled on November 14th, 2018 and the vendors were notified of the cancellation. An upgrade to the current SAP system will avoid the risks, costs, and management challenges associated with migration to a new ERP.

The upgrade cost of the current SAP environment is estimated at \$4.0 million, which includes Financial/Human Resources system software and services, hardware, project staffing and other costs. The scope of this upgrade includes moving from the current SAP ECC 6.0 Enhancement Package (EHP) 2.0 to SAP ECC 6.0 EHP 8.0. The recurring annual SAP licensing cost for EHP 8.0 is estimated at \$0.4 million. The annual licensing cost is approximately \$0.6 million less annually when compared to a new ERP. The difference in cost to implement the upgrade versus a new ERP saves the City approximately \$2.0 million.

With this upgrade, the City will be able to benefit from a more user-friendly interface, mobile friendly workflows and timesheets, and faster and easier access to necessary operational reports enabling data driven decisions. Staff can anticipate tight integration with key external solutions such as Geographic Information System (GIS) Spatial Mapping solution, Smart Water Metering Technologies, and SAP Business Intelligence and reporting solution. While it is expected that all major Financial and Human Resource functions will be maintained within this upgraded SAP, many business processes will see improvements or changes to increase efficiency and improved controls.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	0	1,250,000	277,600	4,672,400	0	0	0	0	4,672,400	0	4,950,000
<b>Total</b>	<b>0</b>	<b>1,250,000</b>	<b>277,600</b>	<b>4,672,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,672,400</b>	<b>0</b>	<b>4,950,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	3,700,000	0	0	0	0	3,700,000	0	3,700,000
Design	0	1,250,000	277,600	972,400	0	0	0	0	972,400	0	1,250,000
<b>Total</b>	<b>0</b>	<b>1,250,000</b>	<b>277,600</b>	<b>4,672,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,672,400</b>	<b>0</b>	<b>4,950,000</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Technology Fund	0	100,000	100,000	100,000	100,000

### Operating Impact

Annual licensing fees of \$0.4 million are anticipated to begin in FY 2021 for this project once the ERP system is upgraded, which is approximately \$0.1 million more than the current licensing costs.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Efficient and Effective Service Delivery

Goal: C-1

Policy: C-1.3

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**



**Fund:** Technology Fund

**Category:** Citywide Technology Upgrades and Improvements

**Project Location:** Various

**Managing Department:** Information Technology

**Initial Project Start:** Summer 2013

**Initial Project Completion:** Summer 2014

**Revised Project Start:**

**Revised Project Completion:** Fall 2020

**Project Number:** TE-13004

### Infrastructure Management System

# Infrastructure Management System

## Description

This project establishes an Enterprise Asset Management System (EAMS) to maintain an up-to-date inventory of the City's infrastructure, its catch-up and keep-up needs, and available funding. Such a management tool will support ongoing staff and Council attention to infrastructure budgeting, planning, and accountability. This system will be integrated with the programs the City now uses to manage infrastructure and finance.

## Justification

As recommended by the Infrastructure Blue Ribbon Commission, an Infrastructure Management System (IMS) is needed to enable staff to monitor facility conditions, forecast maintenance needs, factor inflation, and assemble usage data. An IMS would provide decision makers with invaluable cost and funding data. Currently, the relevant information is not maintained within a single system. Several outside consultants, as well as the City Auditor (2008), have recommended that the City put in place such a system, widely used in industry and government and available commercially.

## Supplemental Information

Based on the results of the needs assessment study, two software applications already in use by the City will be used to form an integrated IMS. One application will be used to maintain an asset inventory and to track maintenance and condition information, while the other will be used to schedule projected capital maintenance needs and to track catch-up and keep-up.

## Significant Changes

**2020-2024 CIP:** Additional work is required for the integrated Infrastructure Management System, such as further professional service hours required for customization and configuration for the two systems that have been identified as the integrated IMS. This CIP is anticipated to close at the end of Fiscal Year 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	167,795	101,060	54,260	46,800	0	0	0	0	46,800	0	268,855
<b>Total</b>	<b>167,795</b>	<b>101,060</b>	<b>54,260</b>	<b>46,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,800</b>	<b>0</b>	<b>268,855</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	167,795	101,060	54,260	46,800	0	0	0	0	46,800	0	268,855
<b>Total</b>	<b>167,795</b>	<b>101,060</b>	<b>54,260</b>	<b>46,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,800</b>	<b>0</b>	<b>268,855</b>

## Operating Impact

No operating costs have been identified after the completion of this project.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Land Use and Community Design

Section: Public Streets and Public Spaces

Goal: L-9

Policy: L-9.11

Program: L9.11.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Category:** Citywide Technology Upgrades and Improvements

**Managing Department:** Information Technology

**Initial Project Completion:** Summer 2015

**Revised Project Start:** Summer 2015

Revised Project Completion: Fall 2020

Project Number: TE-01012

## IT Disaster Recovery

# IT Disaster Recovery Plan

### Description

Provide the means to resume mission critical business operations should any disaster occur that renders the City's primary computer system infrastructure inoperable. The funding within this project allows for the City to deploy appropriate disaster recovery and business continuity solutions.

## Justification

Over the last five years the City has deployed disaster recovery solutions for the City's data and mission critical applications. Remaining funds from this CIP will be used to further enhance the disaster recovery and business continuity solutions.

## Significant Changes

**2020-2024 CIP:** This CIP is anticipated to close in the fall of Fiscal Year 2020.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	463,907	114,714	31,100	83,600	0	0	0	0	83,600	0	578,607
<b>Total</b>	<b>463,907</b>	<b>114,714</b>	<b>31,100</b>	<b>83,600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83,600</b>	<b>0</b>	<b>578,607</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	431,965	114,714	31,100	83,600	0	0	0	0	83,600	0	546,665
<b>Design</b>	31,941	0	0	0	0	0	0	0	0	0	31,941
<b>Total</b>	<b>463,906</b>	<b>114,714</b>	<b>31,100</b>	<b>83,600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83,600</b>	<b>0</b>	<b>578,606</b>

## Anticipated Operating Budget Needs

Fund	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Technology Fund</b>	0	40,000	40,000	40,000	40,000

## Operating Impact

\$40,000 in operating costs starting in FY 2021 to be used for Data Loss Prevention (DLP) tools. DLP is used to ensure that sensitive data is not lost, misused, or accessed by unauthorized users.

**Relationship to Comprehensive Plan****Primary Connection**

Element: Safety

Section: Natural Hazards

Goal: S-2

Policy: S-2.1

**Potential Board/Commission Review:**Planning and Transportation  
Commission**Environmental Impact Analysis:**

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Technology Fund

**Category:** Citywide Technology Upgrades and Improvements

**Project Location:** Various

**Managing Department:** Information Technology

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** TE-05000

Public Safety Radios

# Radio Infrastructure Replacement

## Description

This project funds the transition from the City's legacy analog radio system to the new Silicon Valley Regional Communications System (SVRCS). The City is participating with 14 other local agencies in an effort organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move to a countywide 700 Mhz radio communication system. This project provides funding for the City's share of establishing an interoperable radio communication system within the region and radios for all Palo Alto City users. Upon completion of the project, the law enforcement, fire and rescue service, emergency medical response, and disaster recovery units within the participating agencies will be able to communicate via an integrated voice and data communications system.

## Justification

Communications systems require continued replacement as infrastructure and equipment ages. Within the region, the communications systems have been fragmented. The new SVRCS will provide interoperable communications compliant with Department of Homeland Security communications guidelines.

## Supplemental Information

**2020-2024 CIP:** The infrastructure for the West Cell (location of multiple transmit/receive sites) is close to complete. The City has installed all of the required consoles and base stations. Public Works and Utilities migrated to the new system in November of 2018 and Public Safety and the remaining City radio users will be on the new system in FY 2020.



## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from Other Agencies	N/A	16,000	56,000	86,000	0	0	0	0	86,000	0	N/A
Technology Fund	N/A	687,263	392,400	184,900	0	0	0	0	184,900	0	N/A
Transfer from General Fund	N/A	64,000	64,000	64,000	0	0	0	0	64,000	0	N/A
Transfer from Utilities Administration Fund	N/A	20,000	20,000	20,000	0	0	0	0	20,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>787,263</b>	<b>532,400</b>	<b>354,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>354,900</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	787,263	532,400	354,900	0	0	0	0	354,900	0	N/A
<b>Total</b>	<b>N/A</b>	<b>787,263</b>	<b>532,400</b>	<b>354,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>354,900</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

City departments will fund the maintenance of their department's radios out of their respective departmental operating budgets.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

Utilities Advisory Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

## Department Technology Upgrades and Improvements



**Fund:** Technology Fund

**Category:** Department Technology Upgrades and Improvements

**Project Location:** Various

**Managing Department:** Information Technology

**Initial Project Start:** Summer 2011

**Initial Project Completion:** Spring 2014

**Revised Project Start:**

**Revised Project Completion:** Summer 2021

**Project Number:** TE-12001

Development Center

# Development Center Blueprint Technology Enhancements

## Description

This project will focus on installing an operating electronic permitting system, including the hardware, software, and training for system operations. Project funds may also be used to provide continued enhancement and integration with the City's permitting software Accela. The department, in collaboration with the City Manager's Office and Information Technology Department, may also utilize funds for new emerging technologies, which increase customer service or improve service delivery.

## Justification

This project falls under the scope of the Development Center Blueprint Project that was approved by the City Council in December of 2011 and will enhance the efficiency and effectiveness of the Planning and Development Services Department.

## Supplemental Information

This project has funded many software and customer service based enhancements, which include advances associated with the Department's core software system, Accela, through system upgrades, customized reporting tools, and customer service portals. A mobile application (app) was developed for scheduling building inspections and for inspectors to use in the field for reporting along with an electronic document management system to organize the filing of permits and plans. Remaining projects include implementation of a customer queuing system and electronic plan review.

## Significant Changes

**2020-2024 CIP:** For Fiscal Year 2020, the Department will continue working on transition to electronic plan review, including the hardware, software, and training for system operations as well as a customer queuing system.

**2018-2022 CIP:** The Department anticipates the need to extend the original completion date to allow time to finish projects that are in progress, not yet started, and to accomplish new initiatives. For Fiscal Year 2018, the Department will focus on installing an operating electronic permitting system, including the hardware, software and training for system operations. Some of the other projects that are in progress are the creation of web self-service and publications sites; the development of permit-centric mobile applications; the purchase of field ready hardware and associated data plans to support inspections; and the creation of performance reports/metrics.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	1,211,534	463,650	63,650	462,814	0	0	0	0	462,814	0	1,737,998
<b>Total</b>	<b>1,211,534</b>	<b>463,650</b>	<b>63,650</b>	<b>462,814</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>462,814</b>	<b>0</b>	<b>1,737,998</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	1,180,385	463,650	63,650	462,814	0	0	0	0	462,814	0	1,706,849
<b>Design</b>	31,149	0	0	0	0	0	0	0	0	0	31,149
<b>Total</b>	<b>1,211,534</b>	<b>463,650</b>	<b>63,650</b>	<b>462,814</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>462,814</b>	<b>0</b>	<b>1,737,998</b>

## Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

### Potential Board/Commission Review:

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Technology Fund  
**Category:** Department Technology Upgrades and Improvements  
**Project Location:** Various  
**Managing Department:** Information Technology  
**Initial Project Start:** Summer 2008  
**Initial Project Completion:** Summer 2011  
**Revised Project Start:** Spring 2012  
**Revised Project Completion:** Summer 2020  
**Project Number:** TE-09000

New CAD Console

# Public Safety Computer-Aided Dispatch Replacement

## Description

This project was established to replace the public safety Computer Aided Dispatch (CAD), installed in 1999, as phase one, and replace the legacy Records Management System (RMS) as phase two. The new applications were purchased in partnership with Palo Alto and the cities of Mountain View and Los Altos (Tri-City Consortium). The CAD installation was completed in 2014 and the system is operated over a microwave network with the partner cities. The configuration of the RMS phase continues in partnership with the neighboring agencies. However, the RMS phase has encountered delays due to vendor product development and resource management.

## Justification

The project has improved information sharing between the dispatch centers in Palo Alto, Mountain View, and Los Altos with the implementation of the CAD system in 2014. The purchase and/or sharing of a joint CAD and RMS system will provide some level of consolidation of services but does not require the significant capital investment that a physical consolidation would require. The joint purchase leveraged funds from all three cities to purchase better technology.

## Supplemental Information

This replacement project takes advantage of the foundation of hardware, software, and knowledge in the North County and provides integration across the jurisdictions that will help to improve communication, provide enhanced connectivity, and allow for better coordination of public safety operations in the field. The implementation of the RMS is in process, with completion estimated for Summer 2020.

### Significant Changes

**2020-2024 CIP:** A Termination Notice was provided to the current vendor to terminate the RMS contract amendment. Vendor demos are ongoing to determine a viable solution for the Consortium agencies. The Tri-City Consortium Executive Group will present the prospective solution to the Chiefs for approval.

**2018-2022 CIP:** The RMS portion of the project has taken longer to complete than anticipated due to additional configuration work on the system by the current vendor to meet the Tri-City requirements that are necessary for successful project completion. The three cities have allocated considerable time and resources to the RMS project but issues with the application must be addressed by the vendor before the system can go online.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	991,932	408,000	0	408,000	0	0	0	0	408,000	0	1,399,932
<b>Total</b>	<b>991,932</b>	<b>408,000</b>	<b>0</b>	<b>408,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>408,000</b>	<b>0</b>	<b>1,399,932</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	802,156	408,000	0	408,000	0	0	0	0	408,000	0	1,210,156
<b>Design</b>	189,776	0	0	0	0	0	0	0	0	0	189,776
<b>Total</b>	<b>991,932</b>	<b>408,000</b>	<b>0</b>	<b>408,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>408,000</b>	<b>0</b>	<b>1,399,932</b>

### Operating Impact

This project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustments will be brought forward in future budgets, as necessary.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

#### Potential Board/Commission Review:

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



**Fund:** Technology Fund

**Category:** Department Technology Upgrades and Improvements

**Project Location:** Various

**Managing Department:** Information Technology

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** TE-10001

## Utilities Customer Bill System Improvements

# Utilities Customer Bill System Improvements

## Description

This project provides regulatory enhancements and improved security for the Utilities Billing system. Through the implementation of this recurring project the Utilities Department will be responsive to new legislation and legal requirements. Securing customer sensitive information and complying with Payment Card Industry (PCI) data security standards will continue to be a priority as well.

## Justification

This project provides software system updates to meet mandatory security, regulatory, and governing requirements. This includes reviewing the various Meter-to-Cash business processes, the My Utilities Account online customer portal, reporting tools, bill print software, and the Customer Relationship Management (CRM) solution for the Utilities Billing system. The Enterprise Funds share proportionately in the costs of this project.

## Supplemental Information

During the FY 2016 budget cycle, the ongoing budget for system enhancements was removed in anticipation of the City's Enterprise Resource Planning (ERP) system and Utilities Billing system implementations. Those projects have been delayed and as such, this project will continue to be recurring until the upgrade or replacements are complete. After the systems are implemented, the project will be reevaluated to determine if recurring funding is required.



### Significant Changes

**2020-2024 CIP:** Continuing replacement of the My Utilities Account (MUA) self-service customer portal, initiated in Summer 2017, to provide new online services and functionality. The design and implementation of the portal have taken longer than initially anticipated and the portal is now expected to be fully operational in Summer 2019.

**2019-2023 CIP:** Enhancements to the new customer portal will continue to allow for enhancements to the bill print software and Utilities Billing system, particularly in response to new legislative, regulatory, and security requirements.

**2018-2022 CIP:** A replacement of the My Utilities Account (MUA) self-customer service portal is scheduled to be completed by Summer 2018 and will provide new online self-services and functionality.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Technology Fund</b>	N/A	268,542	(46,000)	164,000	0	0	0	0	164,000	0	N/A
<b>Transfer from Refuse Fund</b>	N/A	20,102	20,100	0	11,500	11,500	11,500	11,500	46,000	0	N/A
<b>Transfer From Stormwater Management Fund</b>	N/A	4,300	4,300	0	2,600	2,600	2,600	2,600	10,400	0	N/A
<b>Transfer from Utilities Administration Fund</b>	N/A	150,598	150,600	0	85,900	85,900	85,900	85,900	343,600	0	N/A
<b>Total</b>	<b>N/A</b>	<b>443,542</b>	<b>129,000</b>	<b>164,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>564,000</b>	<b>0</b>	<b>N/A</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Construction</b>	N/A	102,062	0	0	0	0	0	0	0	0	N/A
<b>Design</b>	N/A	341,480	129,000	164,000	100,000	100,000	100,000	100,000	564,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>443,542</b>	<b>129,000</b>	<b>164,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>564,000</b>	<b>0</b>	<b>N/A</b>

### Operating Impact

Additional annual licensing fees are anticipated to begin in FY 2021 for this project once the MUA is implemented and the Enterprise Resource Planning system is upgraded; however, costs are still being determined. Funding for the additional costs will be recommended for appropriation as part of the next budget cycle.

## TECHNOLOGY FUND

**Relationship to Comprehensive Plan****Primary Connection**

Element: Community Services & Facilities

Section: Service to the Public

Goal: C-2

Policy: C-2.2

**Potential Board/Commission Review:**

Planning and Transportation Commission

Utilities Advisory Commission

**Environmental Impact Analysis:**

This project is categorically exempt from CEQA under section 15301.

# VEHICLE REPLACEMENT FUND

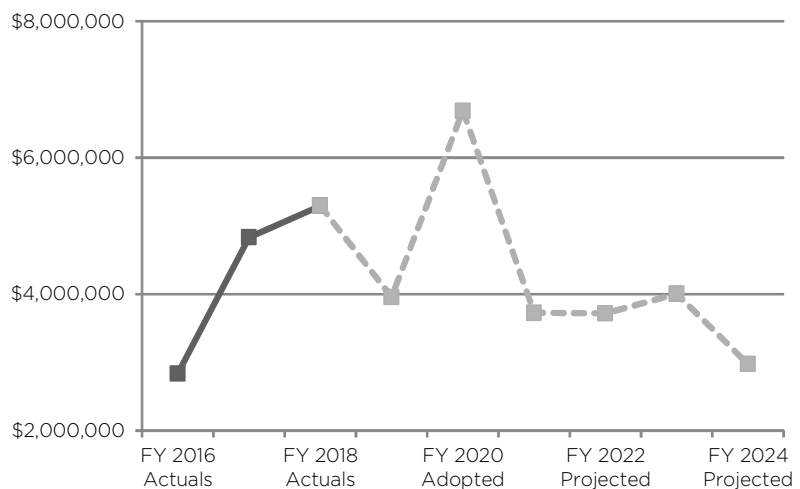
## Overview

Activities related to the replacement, maintenance, and operations of the City's fleet and equipment are accounted for within the Vehicle Replacement and Maintenance Fund (VRF). The VRF Capital Improvement Program (CIP) accounts for activities related to the replacement of the City's fleet and equipment and infrastructure necessary to operate and maintain the fleet and equipment. For detailed information on the maintenance and operation of the fleet, please refer to the Vehicle Replacement and Maintenance Fund section of the Operating Budget. Over the 2020-2024 CIP, approximately 33.5% of the fleet is programmed for replacement at a cost of \$21.1 million, with \$6.7 million allocated in Fiscal Year 2020. Of the \$6.7 million, \$2.9 million is recommended to be reappropriated for the continuation of projects approved by City Council in prior fiscal years. It is important to note that all expenditures in the fund are reimbursed by transfers from the funds benefiting from the services and purchases incurred in the fund. A total of nine capital projects are programmed over the five-year program. The budget for the VRF Capital Improvement Program is divided into two categories: Fleet Infrastructure Improvements and Vehicle and Equipment Replacement.

## Fleet Infrastructure Improvements

The Fleet Infrastructure Improvements category accounts for the repair or improvement of existing systems or structures. Examples of projects previously funded in this category include fuel management software, diesel particulate filters required by Bay Area Air Quality Management District, and new fuel tanks. No projects have been recommended in this category for the 2020-2024 CIP.

Vehicle Fund Capital Expenditures



## Recent Accomplishments

- Installed new hoist in maintenance shop.
- Awarded 3-year contract for Fleet software maintenance/support.
- Evaluated and updated rates to ensure cost-recovery is being achieved for Compressed Natural Gas (CNG), shop and commercial maintenance and repairs, and parts.

## Vehicle and Equipment Replacement

The Vehicle and Equipment Replacement Category accounts for the purchase, repair, and replacement of vehicles/equipment. Over the projected life of the vehicle/equipment, funds are collected in the Vehicle Fund from the department/fund that will utilize the asset so funding will be available to replace the asset when it's reached the end of its useful life. When a vehicle or piece of equipment is estimated to meet replacement criteria and has been reviewed and approved for replacement by the Fleet Review Committee, it is programmed into the Vehicle and Equipment Replacement CIP that corresponds to the year the useful life of the vehicle/equipment will expire.

Key replacements in the 2020-2024 CIP include four ambulances (\$1.3 million); one fire engine (\$0.85 million); 20 marked patrol vehicles (\$0.9 million); two digger derricks (\$0.5 million); one cable puller (\$0.6 million); and two wildland units (\$0.8 million).

## VEHICLE REPLACEMENT FUND

### Infrastructure Inventory

TYPE/GROSS VEHICLE WEIGHT (GVW)	UNLEADED	DIESEL	CNG	HYBRID	ELECTRIC	NO ENGINE TRAILER	TOTAL
Sedans/SUVs	32	-	20	7	4	-	63
Police marked units	24	-	-	-	-	-	24
Motorcycles	4	-	-	-	-	-	4
Scooters	5	-	-	-	1	-	6
Truck/Van <6k GVW <sup>1</sup>	68	-	-	-	-	-	68
Truck/Van 6K-11K GVW <sup>2</sup>	69	4	19	-	3	-	95
Trucks 11K-15K GVW <sup>1</sup>	10	3	-	-	-	-	13
Trucks 15K-26K GVW <sup>1</sup>	5	13	-	-	-	-	18
Dump Truck <11K GVW <sup>1</sup>	19	16	-	-	-	-	35
Large Equip: Boom & crane trucks, aerials	-	15	-	-	-	-	15
Wildland patrol vehicles	3	-	-	-	-	-	3
Water truck	-	2	-	-	-	-	2
Fire safety	-	19	-	-	-	-	19
Sweepers	-	5	-	-	-	-	5
Backhoe, mowers, tractors, forklifts, rollers, air compressors, chippers, trailers <sup>1</sup>	6	51	-	-	4	58	119
Asphalt rollers, water pumps, spray rigs <sup>1</sup>	2	7	-	-	-	4	13
Generators, ditch witches, cable reelers <sup>1</sup>	11	41	4	-	-	-	56
<b>TOTAL</b>	<b>258</b>	<b>176</b>	<b>43</b>	<b>7</b>	<b>12</b>	<b>62</b>	<b>558</b>

<sup>1</sup> Vehicle classification aligned with recommended study results, shifting budgeted inventory within these categories

<sup>2</sup> Budgeted inventory in this category shifted due to restricted availability of fuel types from the manufacturer

### Recent Accomplishments

- Delivered 27 vehicles and 9 pieces of equipment in FY 2019 to maintain safe, reliable, and efficient use of resources.
- Started a pilot program to evaluate the performance of Plug-in Hybrid electric pick-up trucks assigned to field operations in all departments. This pilot will provide assistance in evaluating total cost of ownership, maintenance and repair issues, and the operational compatibility for user departments.

## 2020-2024 Capital Improvement Program

### Recurring Projects

The 2020-2024 CIP includes one recurring project, Emergency Repair and Replacement, providing \$100,000 annually, plus salary and benefits for maintenance staff, to repair and/or replace emergency vehicles/equipment that sustain damage due to accidents or unpreventable failure. This project mitigates impact to service delivery that could occur if these vehicles experienced lengthy times out of service. Since the inception of this project in Fiscal Year 2015, it has funded 35 repairs on vehicles/equipment and four replacements.

### Non-Recurring Projects

The 2020-2024 CIP includes eight projects, with \$20.5 million allocated for vehicle and equipment replacements. All replacements are programmed for vehicles/equipment at the end of their useful life. Criteria for vehicles/equipment replacement include but are not limited to: utilization based on mileage or hours of operation, age, maintenance/repair records, and funding availability. As part of the replacement policy, and wherever possible, electric vehicles are considered first, then vehicles that use alternative fuels.

## Summary of Capital Activity

### VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Source of Funds</b>									
<b>Transfer From the General Fund</b>									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	26,326	0	0	0	0	0	0	0
	<b>Transfer From the General Fund Total</b>	<b>26,326</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Purchase Refund Revenue</b>									
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	13,450	0	0	0	0	0	0	0
	<b>Purchase Refund Revenue Total</b>	<b>13,450</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Total Sources</b>	<b>39,776</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Use of Funds</b>									
<b>Fleet Infrastructure Improvements</b>									
VR-14002	Municipal Services Center Fuel Station Demolition	2,907	0	0	0	0	0	0	0
	<b>Fleet Infrastructure Improvements Total</b>	<b>2,907</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2018 Actuals	FY 2019 Estimate	FY 2020 Adopted	FY 2021	FY 2022	FY 2023	FY 2024	5-Year Total
<b>Vehicle and Equipment Replacement</b>									
VR-15001	Emergency Repair and Replacement	11,149	56,660	113,000	113,000	114,000	114,000	120,000	574,000
VR-15000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015	695,602	0	0	0	0	0	0	0
VR-16000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016	1,820,295	30,348	0	0	0	0	0	0
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017	2,085,122	397,154	249,977	0	0	0	0	249,977
VR-18000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018	680,772	1,630,652	1,103,544	0	0	0	0	1,103,544
VR-19000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019	0	1,842,354	1,749,721	92,000	0	0	0	1,841,721
VR-20000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020	0	0	3,469,000	165,000	97,000	0	0	3,731,000
VR-21000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021	0	0	0	3,357,000	170,000	100,000	0	3,627,000
VR-22000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022	0	0	0	0	3,336,000	175,000	105,000	3,616,000
VR-23000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023	0	0	0	0	0	3,617,000	180,000	3,797,000
VR-24000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2024	0	0	0	0	0	0	2,571,000	2,571,000
	<b>Vehicle and Equipment Replacement Total</b>	<b>5,292,940</b>	<b>3,957,168</b>	<b>6,685,242</b>	<b>3,727,000</b>	<b>3,717,000</b>	<b>4,006,000</b>	<b>2,976,000</b>	<b>21,111,242</b>
	<b>Total Uses</b>	<b>5,295,847</b>	<b>3,957,168</b>	<b>6,685,242</b>	<b>3,727,000</b>	<b>3,717,000</b>	<b>4,006,000</b>	<b>2,976,000</b>	<b>21,111,242</b>



## Vehicle and Equipment Replacement

## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Recurring

**Initial Project Completion:** Recurring

**Project Number:** VR-15001

Marked Police & Fire Vehicle, February 2013

# Emergency Repair and Replacement

## Description

This project provides funding to replace or repair vehicles/equipment that sustain damage due to accidents or unpreventable failure.

## Justification

Service levels are impacted when critical vehicles/equipment such as utility trucks and police sedans experience lengthy down times. Therefore, when damage or failure occurs, these critical vehicles/equipment need to be replaced or repaired quickly to ensure uninterrupted service. In some cases, reserve vehicles/equipment exist; however, it is unrealistic to have a back-up for each vehicle and piece of equipment in the City.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Vehicle Replacement Fund</b>	N/A	115,000	56,660	113,000	113,000	114,000	114,000	120,000	574,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>115,000</b>	<b>56,660</b>	<b>113,000</b>	<b>113,000</b>	<b>114,000</b>	<b>114,000</b>	<b>120,000</b>	<b>574,000</b>	<b>0</b>	<b>N/A</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Other</b>	N/A	115,000	56,660	113,000	113,000	114,000	114,000	120,000	574,000	0	N/A
<b>Total</b>	<b>N/A</b>	<b>115,000</b>	<b>56,660</b>	<b>113,000</b>	<b>113,000</b>	<b>114,000</b>	<b>114,000</b>	<b>120,000</b>	<b>574,000</b>	<b>0</b>	<b>N/A</b>

## Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



DMT generator, March 2015

**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2016

**Initial Project Completion:** Spring 2018

**Revised Project Start:**

**Revised Project Completion:** Spring 2020

**Project Number:** VR-17000

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2017.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps maintain or even increase productivity, and allows for a technologically current fleet.

## Supplemental Information

Funding in this project allows for the following replacements: one fire engine; 12 pickup trucks; 13 vans; one dump truck; one flatbed truck with crane; one aerial truck; seven marked police vehicles; one vacuum/flush truck; three miscellaneous equipment units, and one trailer. Of the 41 vehicles and equipment, 22 support the operations of the General Fund (\$1.9 million) and 19 support the operations of various Enterprise Funds (\$2.1 million). As part of the replacement policy, electric vehicles are considered first, then vehicles that use alternative fuels.

## Significant Changes

**2020-2024 CIP:** Awaiting delivery and outfitting of final vehicle on project list.

## VEHICLE REPLACEMENT FUND

**2019-2023 CIP:** 33 vehicles/equipment have been delivered; one vehicle to order; seven vehicles to arrive by Fall 2018 and outfitting should be completed by Spring 2019. One vehicle was moved to VR-18000.

**2018-2022 CIP:** The project was revised to eliminate two vehicles and add four (CMR 7411 and 8176). In addition, bids for the flatbed truck with crane and 40' aerial crane were higher than estimated (CMR 7486 and CMR 7593). A Combination Vacuum/Flush, was also approved to be replaced. These changes added \$0.8 million to the total project cost. To accommodate the 12-month lead-time for the cranes, the completion date has been extended to Spring 2018.

**2017-2021 CIP:** After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the backlog of replacements from Fiscal Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacements were addressed and funding for all but critical vehicles/equipment scheduled for replacement was set aside in a reserve.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	13,450	0	0	0	0	0	0	0	0	0	13,450
Transfer from Electric Fund	15,426	0	0	0	0	0	0	0	0	0	15,426
Transfer from Gas Fund	15,407	0	0	0	0	0	0	0	0	0	15,407
Transfer from General Fund	26,325	0	0	0	0	0	0	0	0	0	26,325
Transfer from Wastewater Collection Fund	15,406	0	0	0	0	0	0	0	0	0	15,406
Transfer from Wastewater Treatment Fund	15,213	0	0	0	0	0	0	0	0	0	15,213
Transfer from Water Fund	15,407	0	0	0	0	0	0	0	0	0	15,407
Vehicle Replacement Fund	3,316,613	701,014	397,154	249,977	0	0	0	0	249,977	0	3,963,744
<b>Total</b>	<b>3,433,247</b>	<b>701,014</b>	<b>397,154</b>	<b>249,977</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>249,977</b>	<b>0</b>	<b>4,080,378</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	3,433,235	701,014	397,154	249,977	0	0	0	0	249,977	0	4,080,366
<b>Total</b>	<b>3,433,235</b>	<b>701,014</b>	<b>397,154</b>	<b>249,977</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>249,977</b>	<b>0</b>	<b>4,080,366</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair

# VEHICLE REPLACEMENT FUND

needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

<b>Relationship to Comprehensive Plan</b>	<b>Potential Board/Commission Review:</b>
<b>Primary Connection</b>	Fleet Review Committee
Element: Natural Environment	Planning and Transportation Commission
Section: Air Quality	
Goal: N-5	
Policy: N-5.2	
<b>Environmental Impact Analysis:</b>	
This project is expected to have a possible exemption from CEQA under Section 15301.	



CITY OF  
**PALO  
ALTO**

## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund  
**Category:** Vehicle and Equipment Replacement  
**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2017

**Initial Project Completion:** Spring 2019

**Revised Project Start:**

**Revised Project Completion:** Winter 2019

**Project Number:** VR-18000

Freightliner with aerial, February 2012

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2018.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project allows for the following replacements: one sedan; five pickups; eight patrol vehicles; three SUVs; six vans; one aerial truck; three wildland trucks; one dump truck; and seven miscellaneous equipment units. Of the 35 vehicles and pieces of equipment, 22 support the operations in the General Fund (\$1.7 million) and 13 support the operations of various Enterprise Funds (\$1.5 million).

## Significant Changes

**2020-2024 CIP:** One vehicle deferred to FY 2021; 31 vehicles/equipment ordered, delivered and outfitted; awaiting delivery and outfitting of last two vehicles.



## VEHICLE REPLACEMENT FUND

**2019-2023 CIP:** 10 vehicles/equipment have been delivered; 10 vehicles still to be ordered, 15 vehicles are expected to be delivered by Fall 2018 and outfitting on those 15 should be completed by Winter 2019. One vehicle moved to VR-19000.

**2018-2022 CIP:** Current backlog is being addressed. A generator and forklift were taken off the list for this year and five other vehicles were added instead due to maintenance exceeding the surplus value for each vehicle.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	680,772	2,652,228	1,630,652	1,103,544	0	0	0	0	1,103,544	0	3,414,968
<b>Total</b>	<b>680,772</b>	<b>2,652,228</b>	<b>1,630,652</b>	<b>1,103,544</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,103,544</b>	<b>0</b>	<b>3,414,968</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	680,771	2,652,228	1,630,652	1,103,544	0	0	0	0	1,103,544	0	3,414,967
<b>Total</b>	<b>680,771</b>	<b>2,652,228</b>	<b>1,630,652</b>	<b>1,103,544</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,103,544</b>	<b>0</b>	<b>3,414,967</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2018

**Initial Project Completion:** Spring 2020

**Revised Project Start:**

**Revised Project Completion:** Spring 2021

**Project Number:** VR-19000

Ambulance, January 2011

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2019.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project allows for the following replacements: two ambulances; two Compressed Natural Gas (CNG) sedans; eight CNG pickups; eight gasoline pickups; seven patrol vehicles; two SUVs; two dump trucks; one patch truck; seven miscellaneous equipment units; and two sweepers. Of the 41 vehicles and pieces of equipment, 23 support the operations in the General Fund (\$2.1 million) and 18 support the operations of various Enterprise Funds (\$1.3 million).

## Significant Changes

**2020-2024 CIP:** 36 vehicles/equipment were ordered, leaving a remaining five to be ordered; 14 vehicles/equipment were delivered and outfitted, leaving a remaining 27 to be delivered and outfitted. Project completion date extended to FY 2021.

**2019-2023 CIP:** Five trailers were deferred to a future year and nine vehicles were added to the list, including one forklift, one grapppler, one marked Interceptor, one GMC Terrain Code 3, one F-250, two F-150s, and two sweepers. General Fund increased by \$0.2 million. Enterprise Funds increased by \$0.4 million. There was shift in vehicle fuel type due to restricted availability from manufactures on inventory for the 8 CNG F-150 pickups, and therefore they will be replaced with regular fueled pickups.

**2018-2022 CIP:** One patrol vehicle was removed from the Fiscal Year 2019 replacement list.

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Vehicle Replacement Fund</b>	0	3,522,922	1,842,354	1,749,721	92,000	0	0	0	1,841,721	0	3,684,075
<b>Total</b>	<b>0</b>	<b>3,522,922</b>	<b>1,842,354</b>	<b>1,749,721</b>	<b>92,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,841,721</b>	<b>0</b>	<b>3,684,075</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Other</b>	0	3,522,922	1,842,354	1,749,721	92,000	0	0	0	1,841,721	0	3,684,075
<b>Total</b>	<b>0</b>	<b>3,522,922</b>	<b>1,842,354</b>	<b>1,749,721</b>	<b>92,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,841,721</b>	<b>0</b>	<b>3,684,075</b>

## Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

### Relationship to Comprehensive Plan

#### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation

Commission

### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2019

**Initial Project Completion:** Spring 2021

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** VR-20000

Isuzu cab chassis with custom utility body, February 2014

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2020.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project allows for the following replacements: five sedans; one motorcycle; one marked patrol vehicle; 18 pickups; two vans; two dump trucks; one aerial truck; seven miscellaneous equipment units. Of the 37 vehicles and pieces of equipment, 25 support the operations in the General Fund (\$1.5 million) and 12 support the operations of various Enterprise Funds (\$1.8 million).

## Significant Changes

**2020-2024 CIP:** The replacement list is reviewed each year and changes are tracked but not finalized until the year preceding replacement. Changes in the FY 2020 list include the addition

## VEHICLE REPLACEMENT FUND

of six vehicles and the removal of 12 vehicles, bringing the total number of vehicles and pieces of equipment to be replaced to 37 and an overall funding increase of \$31,000.

**2019-2023 CIP:** Five vehicles/pieces of equipment were removed including two sedans, one van, one generator, and one mower; while three were added including one F-150 and two F-350s with utility bodies. General Fund reduced by \$0.3 million. Enterprise funds increased by \$0.2 million.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	3,469,000	165,000	97,000	0	0	3,731,000	0	3,731,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,469,000</b>	<b>165,000</b>	<b>97,000</b>	<b>0</b>	<b>0</b>	<b>3,731,000</b>	<b>0</b>	<b>3,731,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	3,469,000	165,000	97,000	0	0	3,731,000	0	3,731,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,469,000</b>	<b>165,000</b>	<b>97,000</b>	<b>0</b>	<b>0</b>	<b>3,731,000</b>	<b>0</b>	<b>3,731,000</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



Ford F-550 Saw Truck, March 2019

**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2020

**Initial Project Completion:** Spring 2022

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** VR-21000

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2021.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project will allow for the replacement of 34 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2021. Of those vehicles, 22 support the operations of the General Fund (\$1.7 million) and 12 support the operations of various Enterprise Funds (\$1.5 million).

## Significant Changes

**2020-2024 CIP:** The replacement list is reviewed each year and changes are tracked but not finalized until the year preceding replacement. Changes in the FY 2021 list include the addition

## VEHICLE REPLACEMENT FUND

of four vehicles and the removal of eight vehicles, bringing the total number of vehicles and pieces of equipment to be replaced to 34.

**2019-2023 CIP:** Four vehicles/pieces of equipment were removed and six added including two undercover sedans; one pickup truck, one flatbed/crane, one marked police vehicle, and one digger derrick. General Fund reduced by \$0.1 million. Enterprise Funds increased by \$0.7 million.

**2018-2022 CIP:** One patrol vehicle was eliminated from the Fiscal Year 2021 list and one undercover sedan was added.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Vehicle Replacement Fund</b>	0	0	0	0	3,357,000	170,000	100,000	0	3,627,000	0	3,627,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,357,000</b>	<b>170,000</b>	<b>100,000</b>	<b>0</b>	<b>3,627,000</b>	<b>0</b>	<b>3,627,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
<b>Other</b>	0	0	0	0	3,357,000	170,000	100,000	0	3,627,000	0	3,627,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,357,000</b>	<b>170,000</b>	<b>100,000</b>	<b>0</b>	<b>3,627,000</b>	<b>0</b>	<b>3,627,000</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2021

**Initial Project Completion:** Spring 2023

**Revised Project Start:**

**Revised Project Completion:** Spring 2024

**Project Number:** VR-22000

Pierce Heavy Rescue Unit, February 2012

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2022.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project will allow for the replacement of 43 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2022. Of those vehicles, 25 support the operations of the General Fund (\$1.8 million) and 18 support the operations of various Enterprise Funds (\$1.4 million).

## Significant Changes

**2020-2024 CIP:** The replacement list is reviewed each year and changes are tracked but not finalized until the year preceding replacement. Changes in the FY 2022 list include the addition



## VEHICLE REPLACEMENT FUND

of 11 vehicles and the removal of seven vehicles, bringing the total number of vehicles and pieces of equipment to be replaced to 43.

**2019-2023 CIP:** Three vehicles/pieces of equipment were removed from the list and twelve added including two sedans, four pickups, one turf sweeper, two aerials, an undercover sedan, digger derrick, and tow truck. General Funds amount decreased by \$0.2 million. Enterprise Funds increased by \$0.6 million.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	3,336,000	175,000	105,000	3,616,000	0	3,616,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,336,000</b>	<b>175,000</b>	<b>105,000</b>	<b>3,616,000</b>	<b>0</b>	<b>3,616,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	3,336,000	175,000	105,000	3,616,000	0	3,616,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,336,000</b>	<b>175,000</b>	<b>105,000</b>	<b>3,616,000</b>	<b>0</b>	<b>3,616,000</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



Peterbilt Dump Truck, March 2018

**Fund:** Vehicle Replacement & Maintenance Fund

**Category:** Vehicle and Equipment Replacement

**Project Location:** 3201 East Bayshore Road

**Managing Department:** Public Works

**Initial Project Start:** Summer 2022

**Initial Project Completion:** Spring 2024

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** VR-23000

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2023.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project will allow for the replacement of 30 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2023. Of those vehicles, 22 support the operations of the General Fund (\$2.8 million) and eight support the operations of various Enterprise Funds (\$0.6 million).

## Significant Changes

**2020-2024 CIP:** The replacement list is reviewed each year and changes are tracked but not finalized until the year preceding replacement. Changes in the FY 2023 list include the addition

## VEHICLE REPLACEMENT FUND

of seven vehicles and the removal of four vehicles, bringing the total number of vehicles and pieces of equipment to be replaced to 33.

### Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	3,617,000	180,000	3,797,000	0	3,797,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,617,000</b>	<b>180,000</b>	<b>3,797,000</b>	<b>0</b>	<b>3,797,000</b>

### Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	3,617,000	180,000	3,797,000	0	3,797,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,617,000</b>	<b>180,000</b>	<b>3,797,000</b>	<b>0</b>	<b>3,797,000</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.

## VEHICLE REPLACEMENT FUND



**Fund:** Vehicle Replacement & Maintenance Fund  
**Category:** Vehicle and Equipment Replacement  
**Project Location:**

**Managing Department:** Public Works

**Initial Project Start:** Summer 2023

**Initial Project Completion:** Spring 2024

**Revised Project Start:**

**Revised Project Completion:**

**Project Number:** VR-24000

Freightliner FL-70 Aerial, March 2019

# Scheduled Vehicle and Equipment Replacement - Fiscal Year 2024

## Description

This project provides funding for the existing City fleet vehicles and equipment scheduled for replacement in Fiscal Year 2024.

## Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by the City's policy for vehicle replacement, which includes guidelines based on age, mileage accumulation, and obsolescence. Timely replacement of vehicles lowers maintenance costs, helps to maintain or even increase the productivity of client departments, and allows the City to take advantage of new technology. As part of the policy, staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

## Supplemental Information

Funding in this project will allow for the replacement of 12 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2024. Of those vehicles, nine support the operations of the General Fund (\$2.1 million) and three support the operations of various Enterprise Funds (\$0.3 million).

# VEHICLE REPLACEMENT FUND

## Funding Sources Schedule

Funding Source	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	0	2,571,000	2,571,000	0	2,571,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,571,000</b>	<b>2,571,000</b>	<b>0</b>	<b>2,571,000</b>

## Expenditure Schedule

Project Phase	Prior Years	FY 2019 Budget	FY 2019 Est.	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	0	2,571,000	2,571,000	0	2,571,000
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,571,000</b>	<b>2,571,000</b>	<b>0</b>	<b>2,571,000</b>

### Operating Impact

Costs to operate and maintain the City's fleet are budgeted annually in the Vehicle Replacement Fund and allocated to other City departments based on historical maintenance and repair needs. There are no additional operating impacts anticipated from this project and maintenance will be absorbed within the available maintenance schedule and annual operating budget.

#### Relationship to Comprehensive Plan

##### Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-5.2

#### Potential Board/Commission Review:

Fleet Review Committee

Planning and Transportation Commission

#### Environmental Impact Analysis:

This project is expected to have a possible exemption from CEQA under Section 15301.



CITY OF  
**PALO  
ALTO**

# Supplemental Information





CITY OF  
**PALO  
ALTO**



# GLOSSARY

## Key Budget Terms

**Accrual Accounting:** A method of accounting that recognizes expenses when incurred and revenues when earned rather than when payment is made or received

**Adopted Budget:** The budget that is approved and enacted by the City Council annually on or before June 30th.

**Appropriation:** The allocation of an expense budget for a particular project or program usually for a specific period of time.

**Balanced Budget:** A balanced budget exists when total revenues are equal to, or greater than, total expenses.

**Bond:** A debt investment in which an investor loans money to an entity (governmental or otherwise) that borrows the money for a defined period of time at a fixed interest rate to pay for a variety of projects.

**Budget Stabilization Reserve (BSR):** The BSR was established as a prudent measure to maintain the City's fiscal stability in the event that unanticipated events reduce revenue or create obligations that significantly impact the current-year budget. Examples of such events include a downturn in the economy, a natural disaster or actions that may be taken by another governmental agency that reduce revenues and/or increase expenses for the City.

**Capital Budget:** A plan of proposed capital outlays and the means of financing them for the current fiscal period. In a two-year budget, the second year of the Capital Improvement Program is adopted-in-concept.

**Capital Improvement Program (CIP):** The City's plan for current and future projects related to the acquisition, expansion, or rehabilitation of buildings, equipment, parks, streets, and other public infrastructure.

**Capital Projects Fund:** A fund created to account for all resources to be used for the construction or acquisition of designated fixed assets by a governmental unit except those financed by proprietary or fiduciary funds.

**City Manager's Report (CMR):** Staff reports for City Council meetings as well as boards and commissions that are prepared by City staff and submitted through the City Manager's Office.

**Comprehensive Plan:** The Palo Alto Comprehensive Plan contains the City's official policies on land use and community design; transportation; natural environment; safety; community services and facilities; and business and economics. Its focus is on the physical form of the City and is applicable to both public and private properties. The Budget integrates the 2030 Comprehensive Plan into the budget process.

## GLOSSARY

**Cost Accounting:** The branch of accounting that provides for the assembling and recording of all the elements of cost incurred to accomplish a purpose, carry on an activity or operation, or complete a unit of work or a specific job.

**Enterprise Funds:** Funds used to account for services that are provided to the public on a user charge basis, similar to the operation of a commercial business. The City's enterprise funds include the gas, electric, water, fiber optics and wastewater collection and treatment funds.

**Fiduciary Fund:** A fund used to account for assets held by the City acting in a fiduciary capacity for other individuals or entities. These funds are operated to carry out the specific actions required by the trust agreements, ordinances and other governing regulations.

**Fiscal Agent:** A bank or other corporate fiduciary that performs the function of paying, on behalf of the governmental unit, or other debtor, interest on debt or principal of debt when due.

**Fiscal Year:** A 12-month period of time to which the annual budget applies and at the end of which a governmental unit determines its financial position and the results of operations. Palo Alto's fiscal year begins on July 1st and ends on June 30th.

**Fixed Assets:** Assets such as land, structures and improvements, furniture and/or equipment that are expected to last and/or be used for more than one year.

**Full-Time Equivalent (FTE):** Used to quantify staffing hours for permanent and temporary employees. A 1.00 FTE employee works full time; a 0.50 FTE employee works half-time.

**Fund Balance:** An excess of the assets of a fund over its liabilities.

**General Fund:** The primary fund used to account for the City's general purpose revenues such as sales, property, utility users and transient occupancy taxes. General Fund revenues typically pay for citywide services such as public safety, community development, recreation, libraries and parks. The General Fund is distinguished from Special Funds in that the latter are used to account for revenues that have restricted uses (e.g. gas tax funds that must be used for street maintenance or repair).

**Governmental Funds:** A generic classification used to refer to all funds other than proprietary and fiduciary funds. Governmental funds include the general fund, capital fund, special revenue funds and debt service funds.

**Infrastructure Assets:** Roads, bridges, curbs and gutters, streets, sidewalks, drainage systems, and lighting systems installed for the common good.

**Infrastructure Management Plan (IMP):** A portion of the General Fund capital improvement program which focuses on rehabilitating the City's infrastructure. In 1998-99, an outside consultant on the City's infrastructure prepared a report known as the Adamson report. Within this report the City's infrastructure was cataloged and ranked based on when the infrastructure needed to be upgraded or replaced and the cost for each item. At that time, the City Council decided to establish a plan using the Adamson report as a guide for both timeline and cost.

**Internal Service Funds:** These funds provide services to City departments and recover their costs through user charges. For example the Vehicle Replacement Fund is an Internal Service Fund managing the replacement and maintenance of the City fleet.

**Method of Accounting:** The City's General Fund budget is developed using a modified accrual basis of accounting, with revenues being recorded when measurable and available, and expenditures recorded when the liability is incurred. Enterprise Funds and Internal Service Funds are budgeted on a generally accepted accounting principles (GAAP) basis, which for Proprietary Funds is on a full accrual accounting basis.

**Operating Transfer:** Amounts transferred between funds, not considered a revenue or expense. For example, legally authorized transfers from a fund receiving revenue to the fund through which the resources are to be expended.

**Pay-As-You-Go-Basis:** A term used to describe the financial policy of a governmental unit that finances all of its capital outlays from current revenues rather than by borrowing.

**Proposed Budget:** The proposed budget is the budget that is sent to the Finance Committee by the City Manager. The proposed budget, including changes made by the Finance Committee during their review, is reviewed and then adopted by the City Council.

**Proprietary Funds:** A generic classification used to refer to all funds other than governmental funds or fiduciary funds. Proprietary funds include internal service funds and enterprise funds.

**Reimbursements:** Inter-fund transactions that constitute reimbursements to a fund for expenditures or expenses initially made from it but that properly apply to another fund. For example, the Enterprise Funds reimburse the Technology Fund for CIP projects from which the Enterprise Funds benefit.

**Reserve:** Represents the portion of fund balance set aside for financing future financing needs and addressing one-time emergency or unanticipated events.

**Revenues:** Revenues include compensation received by the project for specific services to the public (external revenues), as well as revenues received from other funds (internal revenues).

**Special Revenue Funds:** These funds account for the proceeds derived from specific revenue sources that are legally restricted to expenditures for specified purposes. The Street Improvement Fund (SIF) is a Special Revenue Fund that derives its funding from state gas tax revenues. Capital appropriations from the SIF must be spent on the construction and maintenance of the road network system of the City.



CITY OF  
**PALO  
ALTO**

# PROJECT NAME INDEX

## Numerics

230 kV Electric Intertie ..... 356

## A

Advanced Water Purification Facility ... 556  
 Airfield Electrical Improvements ..... 324  
 Airport Apron Reconstruction ..... 326  
 Airport Facilities Electrical Improvements ...  
 334  
 Airport Layout Plan ..... 336  
 Americans With Disabilities Act Compliance .  
 76  
 Animal Shelter Renovation ..... 78  
 Art In Public Spaces ..... 160  
 Athletic Courts Resurfacing ..... 162  
 Automated External Defibrillator  
 Replacement ..... 144  
 Automated Weather Observation System  
 (AWOS) ..... 338

## B

Baylands Athletic Center 10.5 Acre Expansion  
 Plan ..... 164  
 Baylands Flood Protection Levee  
 Improvements ..... 80  
 Baylands Levee Repair for Public Safety  
 Access ..... 166  
 Benches, Signage, Walkways, Perimeter  
 Landscaping ..... 168  
 Bicycle and Pedestrian Transportation Plan  
 Implementation ..... 254  
 Bol Park Improvements ..... 170  
 Boulware Park Improvements ..... 172  
 Building Systems Improvements ..... 82  
 Byxbee Park Completion ..... 174

## C

California Avenue District Gateway Signs 228  
 Cameron Park Improvements ..... 176  
 Capacitor Bank Installation ..... 358  
 Capital Improvement Fund Administration ..  
 292

Cardiac Monitor Replacement ..... 146  
 Charleston/Arastradero Corridor Project .256  
 Churchill Avenue Enhanced Bikeway ....260  
 Churchill Avenue/Alma Street Railroad  
 Crossing Safety Improvements ..... 262  
 City Bridge Improvements ..... 86  
 City Council Chambers Upgrade ..... 630  
 City Facilities Assessment and Record Plan  
 Management System ..... 88  
 City Facility Parking Lot Maintenance ... 90  
 City Hall Space Planning ..... 92  
 Civic Center Electrical Upgrade & EV Charger  
 Installation ..... 94  
 Civic Center Fire Life Safety Upgrades ... 96  
 Civic Center Waterproofing Study and  
 Repairs ..... 98  
 Coleridge/Cowper/Tennyson 4/12kV  
 Conversion ..... 360  
 Colorado Power Station Equipment Upgrades  
 ..... 362  
 Colorado Substation Site Improvements .364  
 Colorado/Hopkins System Improvement .366  
 Communications System Improvements .368  
 Corporation Way System Upgrades and Pump  
 Station ..... 490  
 Cubberley Building Management Systems ..  
 300  
 Cubberley Community Center Master Plan ..  
 302  
 Cubberley Field Restroom ..... 310  
 Cubberley Repairs ..... 304  
 Cubberley Roof Replacements ..... 306  
 Cubberley Track and Field Replacement . 312  
 Curb and Gutter Repairs ..... 230

## D

Development Center Blueprint Technology  
 Enhancements ..... 646  
 Dog Park Installation and Renovation ... 178  
 Downtown Automated Parking Guidance  
 Systems, Access Controls & Revenue  
 Collection Equip. .... 264  
 Downtown Parking Wayfinding ..... 266

## PROJECT NAME INDEX

### E

East Meadow Circles 4/12kV Conversion 370  
 East Meadow Drive System Upgrades ... 492  
 Edgewood/Wildwood 4kV Tie ..... 372  
 El Camino Median Landscape Improvements  
 232  
 El Camino Real Pedestrian Safety and  
 Streetscape Project ..... 268  
 Electric Customer Connections ..... 352  
 Electric System Improvements ..... 374  
 Electric Utility Geographic Information  
 System ..... 376  
 Embarcadero Road at El Camino  
 Improvements ..... 270  
 Emergency Repair and Replacement ... 660  
 Enterprise Resource Planning Upgrade .. 634  
 Extrication Tool Replacement ..... 148

### F

Facility Interior Finishes Replacement ... 100  
 Facility Relocation for Caltrain Modernization  
 Project ..... 378  
 Fiber Optics Customer Connections .... 448  
 Fiber Optics Network System Improvements  
 442  
 Fiber Optics System Rebuild ..... 444  
 Fire and Utilities Trench Training Facility .102  
 Fire Ringdown System Replacement .... 104  
 Fire Station 1 Improvements ..... 106  
 Fire Station 3 Replacement ..... 108  
 Fire Station 4 Replacement ..... 110  
 Foothills Park Boronda Lake Dock  
 Replacement ..... 180  
 Foothills Park Dam Seepage Investigation and  
 Repairs ..... 182  
 Foothills Park Improvement Project ..... 184  
 Foothills Park, Pearson Arastradero Preserve,  
 and Esther Clark Park Conservation Plan .  
 186

### G

Gas ABS/Tenite Replacement Project ... 472  
 Gas Distribution System Improvements . 474  
 Gas Distribution System Model ..... 476  
 Gas Equipment and Tools ..... 478  
 Gas Main Replacement - Project 23 ..... 464  
 Gas Main Replacement - Project 24 ..... 466  
 Gas Main Replacement - Project 25 ..... 468  
 Gas Meters and Regulators ..... 480  
 Gas System, Customer Connections .... 460  
 Golf Course Net and Artificial Turf

Replacement ..... 188

### H

Headworks Facility Replacement ..... 558  
 Heritage Park Site Amenities Replacement ..  
 190  
 High and Bryant Street Garages  
 Waterproofing and Repairs ..... 112  
 Highway 101 Pedestrian/Bicycle Overpass  
 Project ..... 272  
 Hoover Park Improvements ..... 192  
 Hopkins Substation 4/12kV Conversion .. 380

### I

Infrastructure Management System ..... 638  
 Internal Alarm System Replacement ..... 114  
 Inter-substation Line Protection Relay ... 382  
 IT Disaster Recovery Plan ..... 640

### J

JMZ Renovation ..... 116  
 Johnson Park Renovation ..... 194

### L

Loma Verde Avenue Trunk Line Improvements  
 ..... 494  
 Louis Road System Upgrades ..... 496

### M

Mayfield Reservoir Subgrade and Venting  
 Repair ..... 584  
 Mitchell Park Improvements ..... 196  
 Municipal Service Center A, B, & C Roof  
 Replacement ..... 118  
 Municipal Service Center Lighting,  
 Mechanical, and Electrical Improvements  
 120

### N

New California Avenue Area Parking Garage  
 122  
 New Downtown Parking Garage ..... 124  
 New Laboratory And Environmental Services  
 Building ..... 552  
 New Public Safety Building ..... 126  
 Newell Road/San Francisquito Creek Bridge  
 Replacement ..... 234

### O

Off-Road Pathway Resurfacing And Repair .

198	
Open Space Lakes And Pond Maintenance ..	200
Open Space Trails and Amenities .....	202
Outfall Line Construction .....	560

## P

Park and Open Space Emergency Repairs ...	204
Park Restroom Installation .....	206
Parking District Implementation .....	274
Parking Lot J Elevator Modernization ...	128
Parking Management and System Implementation .....	276
Pearson Arastradero Improvement Project ..	208
Pearson Arastradero Preserve Parking Lot Improvement .....	210
Peers Park Improvements .....	212
Performing Arts Venues Seat Replacement ..	130
Plant Repair, Retrofit, and Equipment Replacement .....	562
Police Video Recording Systems Replacement .....	150
Primary Sedimentation Tank Rehabilitation ..	564
Public Safety Computer-Aided Dispatch Replacement .....	648

## Q

Quarry Road Improvements and Transit Center Access .....	278
--	-----

## R

Radio Infrastructure Replacement .....	642
Railroad Grade Separation and Safety Improvements .....	282
Ramos Park Improvements .....	214
Rebuild Underground District 15 .....	384
Rebuild Underground District 16 .....	386
Rebuild Underground District 20 .....	388
Rebuild Underground District 23 .....	390
Rebuild Underground District 24 .....	392
Rebuild Underground District 25 .....	394
Rebuild Underground District 26 .....	396
Rebuild Underground District 30 .....	398
Reconfigure Quarry Feeders .....	400
Relocate Quarry/Hopkins Substation 60kV Line (A & B) .....	402
Rinconada Park Improvements .....	216

Robles Park Improvements .....	218
Roofing Replacement .....	132
Roth Building Maintenance .....	134
Runway and Taxiway Reconstruction and Drainage Improvements .....	330

## S

Safe Routes To School .....	284
SCADA System Upgrades .....	404
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017 .....	662
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018 .....	666
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019 .....	668
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020 .....	670
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021 .....	672
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2022 .....	674
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2023 .....	676
Scheduled Vehicle and Equipment Replacement - Fiscal Year 2024 .....	678
Seale Park Improvements .....	220
Secondary Treatment Upgrades .....	566
Self-Contained Breathing Apparatus (SCBA) Air Compressor Replacement .....	152
Self-Contained Breathing Apparatus (SCBA) Replacement .....	154
Sewer Lateral/Manhole Rehabilitation and Replacement .....	520
Sewer System, Customer Connections ...	516
Sidewalk Repairs .....	238
Sign Reflectivity Upgrade .....	240
Smart Grid Technology Installation .....	406
Storm Drainage System Replacement And Rehabilitation .....	504
Street Lights Condition Assessment ....	242
Street Lights Improvements .....	244
Street Maintenance .....	246
Substation 60kV Breaker Replacement ..	410
Substation Facility Improvements .....	412
Substation Physical Security .....	414
Substation Protection Improvements ....	416

## T

Thermal Imaging Cameras Replacement ..	156
Thermoplastic Lane Marking and Striping ...	250
Traffic Signal and Intelligent Transportation	

## PROJECT NAME INDEX

Systems .....	286
Transportation and Parking Improvements ..	288
Turf Management Plan .....	222

### U

Underground District 42 - Embarcadero Road, Emerson, Middlefield .....	426
Underground District 43 - Alma/ Embarcadero .....	428
Underground District 46 - Charleston/EI Camino Real .....	430
Underground District 47-Middlefield, Homer, Webster, Addison .....	432
Underground System Rebuild .....	418
University Avenue Parking Improvements	136
Utilities Customer Bill System Improvements	650
Utility Site Security Improvements .....	420

### V

Ventura Buildings Improvements .....	138
--------------------------------------	-----

### W

Wastewater Collection System Rehabilitation/ Augmentation Project 24 .....	522
Wastewater Collection System Rehabilitation/ Augmentation Project 26 .....	524
Wastewater Collection System Rehabilitation/ Augmentation Project 28 .....	526
Wastewater Collection System Rehabilitation/ Augmentation Project 29 .....	530
Wastewater Collection System Rehabilitation/ Augmentation Project 30 .....	532
Wastewater Collection System Rehabilitation/ Augmentation Project 31 .....	534
Wastewater Collection System Rehabilitation/ Augmentation Project 32 .....	536
Wastewater Collection System Rehabilitation/ Augmentation Project 33 .....	538
Wastewater General Equipment and Tools ...	540
Wastewater System Improvements .....	542
Water Distribution System Improvements ...	586
Water General Equipment/Tools .....	588
Water Main Replacement - Project 26 ...	606
Water Main Replacement - Project 27 ...	608
Water Main Replacement - Project 28 ...	610
Water Main Replacement - Project 29 ...	612
Water Main Replacement - Project 30 ...	614

Water Main Replacement - Project 31 ....	616
Water Main Replacement - Project 32 ...	618
Water Meters .....	590
Water Recycling Facilities .....	592
Water Reservoir Coating Improvements	594
Water Service Hydrant Replacement ....	596
Water System Customer Connections ...	580
Water System Supply Improvements ....	598
Water Tank Seismic Upgrade and Rehabilitation .....	600
Water, Gas, Wastewater Office Remodel	140
Water, Gas, Wastewater Utility GIS Data	602
Werry Park Playground Improvements ..	224
West Bayshore Road Pump Station ....	498
West Bayshore Road Trunk Line Improvements .....	500
Wood Pole Replacement .....	422



# PROJECT NUMBER INDEX

## A

AC-18000	130
AC-18001	116
AC-86017	160
AP-16000	326
AP-19000	338
AP-19001	324
AP-20000	334
AP-21000	336
AP-22000	330
AS-10000	292

## C

CB-16001	302
CB-16002	306
CB-17001	304
CB-17002	310
CB-19000	312
CB-19001	300

## E

EL-02010	404
EL-02011	376
EL-04012	420
EL-06001	356
EL-08001	426
EL-10006	392
EL-11003	384
EL-11009	428
EL-11010	432
EL-11014	406
EL-12001	430
EL-13000	372
EL-13002	402
EL-13003	386
EL-14000	360
EL-14002	388
EL-14005	400
EL-15000	366
EL-16000	396
EL-16001	418
EL-16002	358
EL-16003	414

EL-17000	390
EL-17001	370
EL-17002	410
EL-17005	382
EL-17007	378
EL-19000	394
EL-19001	362
EL-19002	364
EL-19003	398
EL-19004	422
EL-20000	380
EL-89028	352
EL-89031	368
EL-89038	416
EL-89044	412
EL-98003	374

## F

FD-14002	104
FD-18000	154
FD-19000	102
FD-20000	146
FD-20001	152
FD-20002	156
FD-21000	144
FD-22000	148
FO-10000	448
FO-10001	442
FO-16000	444

## G

GS-11002	474
GS-13001	464
GS-13002	478
GS-14003	466
GS-14004	476
GS-15000	468
GS-18000	472
GS-80017	460
GS-80019	480

## O

OS-00001	202
OS-00002	200

## PROJECT NUMBER INDEX

OS-09001 .....	198
OS-09002 .....	166
OS-18000 .....	180
OS-18001 .....	210

### P

PD-14000 .....	114
PD-20000 .....	150
PE-08001 .....	216
PE-09003 .....	90
PE-11011 .....	272
PE-12011 .....	234
PE-13011 .....	256
PE-13014 .....	242
PE-13017 .....	232
PE-15001 .....	126
PE-15003 .....	108
PE-15007 .....	124
PE-15011 .....	138
PE-15020 .....	98
PE-16000 .....	170
PE-17004 .....	228
PE-17005 .....	172
PE-17006 .....	80
PE-17010 .....	94
PE-18000 .....	122
PE-18002 .....	112
PE-18004 .....	110
PE-18006 .....	174
PE-18010 .....	196
PE-18012 .....	192
PE-18015 .....	218
PE-18016 .....	96
PE-19000 .....	92
PE-19001 .....	140
PE-19002 .....	78
PE-20000 .....	182
PE-20001 .....	86
PE-20002 .....	88
PE-21000 .....	184
PE-21001 .....	208
PE-21002 .....	194
PE-86070 .....	246
PF-00006 .....	132
PF-01003 .....	82
PF-02022 .....	100
PF-07011 .....	134
PF-14002 .....	106
PF-14003 .....	136
PF-16006 .....	120
PF-17000 .....	118
PF-18000 .....	128

PF-93009 .....	76
PG-06001 .....	162
PG-06003 .....	168
PG-09002 .....	204
PG-14000 .....	214
PG-14001 .....	212
PG-14002 .....	176
PG-14003 .....	220
PG-17001 .....	186
PG-18000 .....	188
PG-18001 .....	178
PG-18002 .....	222
PG-19000 .....	206
PG-19001 .....	164
PG-21000 .....	190
PG-22000 .....	224
PL-00026 .....	284
PL-04010 .....	254
PL-05030 .....	286
PL-12000 .....	288
PL-14000 .....	260
PL-15001 .....	270
PL-15002 .....	264
PL-15003 .....	274
PL-15004 .....	266
PL-16000 .....	278
PL-16002 .....	276
PL-17001 .....	282
PL-18000 .....	268
PL-20000 .....	262
PO-05054 .....	244
PO-11000 .....	240
PO-11001 .....	250
PO-12001 .....	230
PO-89003 .....	238

### S

SD-06101 .....	504
SD-19000 .....	494
SD-20000 .....	498
SD-21000 .....	490
SD-22000 .....	492
SD-23000 .....	500
SD-24000 .....	496

### T

TE-01012 .....	640
TE-05000 .....	642
TE-09000 .....	648
TE-10001 .....	650
TE-12001 .....	646
TE-13004 .....	638

TE-19000 .....	634
TE-19001 .....	630

**V**

VR-15001 .....	660
VR-17000 .....	662
VR-18000 .....	666
VR-19000 .....	668
VR-20000 .....	670
VR-21000 .....	672
VR-22000 .....	674
VR-23000 .....	676
VR-24000 .....	678

**W**

WC-11000 .....	522
WC-13001 .....	524
WC-13002 .....	540
WC-15001 .....	526
WC-15002 .....	542
WC-16001 .....	530
WC-17001 .....	532
WC-19001 .....	534
WC-20000 .....	536
WC-21000 .....	538
WC-80020 .....	516
WC-99013 .....	520
WQ-14002 .....	552
WQ-14003 .....	564
WQ-16002 .....	558
WQ-19000 .....	560
WQ-19001 .....	566
WQ-19002 .....	562
WQ-19003 .....	556
WS-02014 .....	602
WS-07001 .....	592
WS-08001 .....	594
WS-09000 .....	600
WS-11003 .....	586
WS-11004 .....	598
WS-12001 .....	606
WS-13001 .....	608
WS-13002 .....	588
WS-14001 .....	610
WS-15002 .....	612
WS-16001 .....	614
WS-19000 .....	584
WS-19001 .....	616
WS-20000 .....	618
WS-80013 .....	580
WS-80014 .....	596
WS-80015 .....	590



CITY OF  
**PALO  
ALTO**

# AMERICANS WITH DISABILITIES ACT



IN COMPLIANCE WITH  
AMERICANS WITH DISABILITIES ACT (ADA) OF 1990,  
THIS DOCUMENT MAY BE PROVIDED  
IN OTHER ACCESSIBLE FORMATS.

For information contact:  
ADA Coordinator  
City of Palo Alto  
285 Hamilton Ave  
(650) 329-2550



CITY OF  
**PALO  
ALTO**



# PALO ALTO

Spanish explorers named the area for the tall, twin-trunked redwood tree they camped beneath in 1769. Palo Alto incorporated in 1894 and the State of California granted its first charter in 1909. The City has long been known for its innovative people and its exploration of ideas that have changed the world. In Palo Alto, our history has always been about the future.

**CITY OF PALO ALTO**

250 HAMILTON AVENUE,  
PALO ALTO, CA 94301

**P** 650.329.2100

**W** [CITYOFPALOALTO.ORG](http://CITYOFPALOALTO.ORG)