FISCAL YEAR 2017

ADOPTED

CAPITAL BUDGET

PUBLIC TRUST
FUTURE
PARTNERSHIP
IMAGINE
ENTERPRISE
HISTORY
PEOPLE
ENGAGE
LIVABLE
DIVERSITY
PUBLIC SQUARE
DEMOCRACY
COMMUNITY
SUSTAINABLE
INCLUSIVE

CITY OF
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Fiscal Year 2017 Adopted Capital Budget

City Council

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Gregory Scharff, Vice Mayor

Marc Berman

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Kiely Nose, Budget Director, Office of Management and Budget

David Ramberg & Joe Saccio, Assistant Director of Administrative Services

Michael Bruckner, Sr. Management Analyst, Office of Management and Budget

Eric Filseth, 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

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Audrey

INTRODUCTION

CITY OF
PALO
ALTO

TRANSMITTAL LETTER

April 25, 2016

To the Honorable Mayor and City Council:

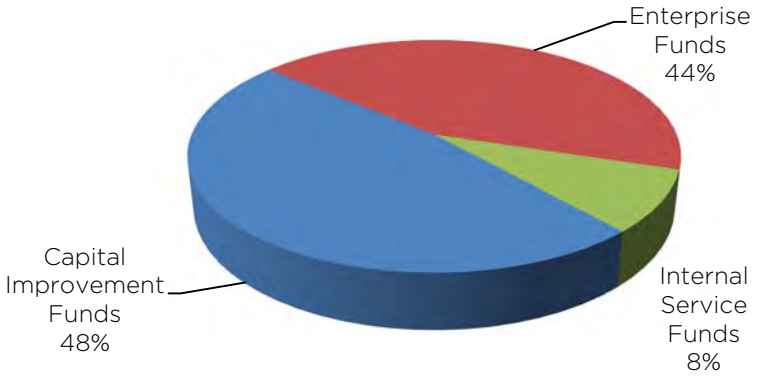
2017 Fiscal Year Capital Budget Transmittal

Dear Mayor and Council Members:

I am pleased to present the FY 2017 Proposed Capital Budget along with the 2017-2021 Proposed 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. The combined FY 2017 Proposed Capital Budget, which includes the General Fund, Cubberley Fund, Enterprise Funds, and Internal Service Funds, is $170.5 million, an increase of $45.8 million or 36.7%, compared to the 2016 Adopted Capital Budget of $124.7 million. The overall 2017-2021 CIP is $639.5 million, an increase of $86.1 million, or 15.5%, compared to the 2016-2020 Adopted CIP of $553.4 million.

The 2017-2021 Proposed CIP Plan was developed in coordination with all City departments responsible for capital projects. The project figures included in the plan include salary and benefit costs where applicable and appropriate. As required by the City Municipal Code, the Planning and Transportation Commission (PTC) is scheduled to review the Proposed CIP on May 11, 2016 and to evaluate the programs compliance with the Comprehensive Plan.

Fiscal Year 2017
Proposed Projects by Fund Type



As identified in previous Capital Improvement Program budgets, the 2017-2021 CIP continues to address the recommendations of the Infrastructure Blue Ribbon Commission (IBRC) to focus on "catch-up" and "keep-up" projects as outlined in their December 2011 Final Report. As a result of IBRC recommendations, the City increased the annual General Fund transfer from $10.0 million in FY 2010 to $14.0 million in FY 2016, in addition to allocating one-time surplus funds identified at fiscal year-end closings to infrastructure projects which has amassed $32.6 million between 2012 and 2015.

Further, as discussed in greater detail in this letter, this 2017-2021 CIP includes a fully-funded Infrastructure Plan as approved by the City Council in June 2014. The plan relies on dedicated reserves from the Stanford University Medical Center Development Agreement Fund, Parks Impact Fees, Downtown Parking In-Lieu funds, and the Capital Infrastructure Reserve. The plan also takes into account the additional 2% Transient Occupancy Tax plus new hotel revenue earmarked for Infrastructure Plan projects. It is important to note, however, that the recent cost estimates for Infrastructure Plan projects, and particularly the New Public Safety Building and adjoining New California Avenue Parking Garage are expected to exceed original estimates. As a result, an additional $30 million in Certificates of Participation may be required to ensure that Infrastructure Plan projects are fully funded. This plan includes the additional $30 million in a reserve for infrastructure plan projects that will be allocated at a later date once final project costs have been determined. The earmarked TOT and new hotel tax revenues are growing sufficiently to pay the additional debt service.

Capital Improvement Fund (General Fund)

Transfers from the General Fund

Traditionally, the Capital Improvement Fund has been supported primarily through a transfer from the General Fund. In fiscal years 2010 and 2011, the General Fund was contributing approximately $10.0 million towards the Capital Improvement Fund. During the FY 2012 budget process -- while the Infrastructure Blue Ribbon Commission was meeting -- it became apparent that additional resources for infrastructure were required. As a result, the base transfer amount of $10.0 million was increased by $1.0 million to approximately $11.0 million. The base transfer level was increased yet again as part of the FY 2013 budget by $2.2 million to $13.2 million, in accordance with the amount indicated in the IBRC Final Report that was required to "keep up" with the City's infrastructure maintenance needs. The base transfer level has increased each year since by an amount equal to the consumer price index.

In addition to this base level of General Fund support, the City Council earmarked the revenues from a voter approved 2 percent Transient Occupancy Tax (TOT) increase plus revenue from new hotels to infrastructure beginning in January 2015. The FY 2016 General Fund transfer to infrastructure includes $5.0 million in TOT revenues. Therefore, in total, the FY 2016 the adopted General Fund transfer to the Capital Improvement Fund was $19.0 million, a $14.0 million base transfer plus the additional $5.0 million transfer from TOT. Beginning with the FY 2017-2021 CIP, the base General Fund transfer is recommended to be reduced by $1.4 million annually in recognition of the fact that the Capital Improvement Fund has adequate resources to address its "catch-up" and "keep-up" needs.

In FY 2017, the total General Fund Transfer is $21.0 million, which includes a $13.0 million base transfer plus an additional $8.0 million in TOT revenues. As discussed in the FY 2017-2026 Long Range Financial Forecast, TOT revenue is expected to grow at a compounded annual growth rate of 3.0 percent, which is lower than the 4.5 percent used in previous forecasts. TOT revenue transfers to the Capital Improvement Fund range from $8.0 million in FY 2017 to an estimated $9.2 million in FY 2021. These revenues have been reserved in the Capital Improvement Fund for Infrastructure Plan projects.

While the base transfer amount was increased as part of the FY 2013 Adopted Budget, this increase allowed only for the City to maintain the infrastructure at a level that would not add to the already sizable "catch-up" backlog, estimated at that time at $41.2 million. In order to address these needs, additional funding was required. In response, based on my recommendation, the City Council authorized General Fund transfers to the Capital Improvement Fund at the end of fiscal years 2012 ($7.6 million), 2013 ($8.9 million), 2014 ($4.0 million) and 2015 ($12.1 million) adding up to $32.6 million. These additional funding transfers have helped in decreasing the "catch-up" backlog; however, a portion of this additional funding has been contributed to new projects not included in the IBRC report such as the California Avenue Streetscape Improvement Project ($4.7 million) and the El Camino Park Playing Fields project ($1.0 million from Capital Improvement Fund).

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 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 the detailed estimates of Infrastructure Plan projects do not include salary and benefits. Recent estimates for Infrastructure Plan projects have increased, mostly attributable to new preliminary estimates of construction cost for the Public Safety Building. To address the anticipated increases in the cost of the Infrastructure Plan, this CIP assumes $30 million in additional Certificates of Participation and are budgeted in a reserve in FY 2019 to account for anticipated increases. Based on known estimates, the total cost of the Infrastructure Plan is $128.8 million ($158.8 million when including the $30 million reserve for anticipated cost increases). Below details the Infrastructure Plan projects:

- A new Public Safety Building ($57.0 million)
- Bicycle Pedestrian Transportation Plan ($20.0 million)
- A new Downtown parking garage ($13.0 million)
- A new California Avenue area parking garage ($9.6 million)
- Replacement of Fire Station 4 ($7.5 million)
- Charleston/Arastradero Corridor Improvements ($7.5 million)
- Replacement of Fire Station 3 ($6.7 million)

- Byxbee Park Completion ($2.8 million)
- Highway 101 Bicycle/Pedestrian Bridge Gap Funding ($4.7 million)
- Infrastructure Contingency Reserve ($30.0 million)

The plan relied upon a variety of funding sources:

- Certificates of Participation (COPs) supported by a two percentage point TOT increase and the construction of new hotels within Palo Alto ($93.3 million)
- Transfers from the Stanford University Medical Center Development Agreement Fund ($34.5 million)
- Infrastructure Reserve ($12.5 million)
- Downtown Parking In-Lieu Fees ($4.0 million)
- Park Impact Fees ($2.8 million)

As discussed earlier, the plan also relies on the 2 percent TOT increase plus revenue from new hotels for infrastructure plan projects and debt service and once the Certificates of Participation are issued, TOT revenues will be allocated to pay for the debt service. It is estimated that the debt service will be approximately $6.7 million in FY 2019. Beginning with the 2016-2021 CIP, all Infrastructure Plan projects were included in the program, with FY 2016 funding for the design of the Public Safety Building ($1.4 million) and the downtown garage ($1.5 million). With the selection of a site in the California Avenue Parking District area for the Public Safety Building, the California Avenue Area Parking Garage project will need to be completed before construction can begin on the Public Safety Building. The FY 2017 budget includes $1.0 million for design of the California Avenue Garage and $8.6 million for construction in FY 2018. Design work is continuing on the Public Safety Building in FY 2017 ($3.6 million) and construction is anticipated to begin in FY 2019. It is anticipated that the project costs for the Public Safety Building and Cal Avenue Garage will likely exceed their original estimates. Therefore, as discussed above, $30 million in additional Certificates of Participation are included in the FY 2017-2021 CIP and are budgeted in an Infrastructure Contingency Reserve. Additional infrastructure plan projects scheduled for FY 2017 include $6.3 million for Fire Station #3 Replacement and $3.4 million for Bike & Pedestrian Plan projects.

The 2016-2020 Adopted Capital Improvement Program included an annual allocation of $1.2 million for the implementation of bicycle boulevard projects, with a reserve of $11.6 million for the Bicycle and Pedestrian Transportation Plan. The Proposed 2017-2021 CIP includes enhanced project funding in all 5 years of the CIP for Bike and Pedestrian Plan projects which utilizes all allocated funding for the Bike and Pedestrian Plan. Projects to be funded out the Bike and Pedestrian Plan capital project scope now includes: the design and construction for the Midtown Connector, Dinah/Summerhill Pedestrian/Bicycle Path, and the Churchill Avenue Enhanced Bikeway. These projects were previously identified in the 2016-2020 CIP as independent of the Bike and Pedestrian Plan; however, after a review of available funds and project priorities, this CIP recommends that the Bike and Pedestrian Plan scope now include these projects.

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. In FY 2015, staff worked with a consulting firm to evaluate the City's existing asset management practices and develop recommendations for implementation of an IMS. The resulting decision is to implement the IMS in phases utilizing two software applications, Maintenance Connection and Questica, both of which the City already uses. Maintenance Connection will be the repository for the infrastructure asset inventory information, while Questica, the City's budget system, will be used for long term capital planning. The combined use of both applications will allow the City to plan for and report on long term capital funding needs and deferred maintenance, or "catch-up" balances for both operating and capital maintenance.

In order to deliver on these planned implementations as well as the need for better reporting on infrastructure both in terms of project updates for the City Council and the public, in FY 2016, the City Council authorized the addition of a 1.0 FTE Project Manager in the Public Works Department to complete implementation of the IMS, provide ongoing system maintenance, and provide regular reporting. Implementation of the IMS began in spring 2016. In the intervening period before finalization of the IMS, staff continues to maintain and update the infrastructure spreadsheet tools that were generated by the IBRC, and that will constitute the initial input to the IMS. Staff has used these spreadsheet tools to guide the CIP's designation of funds for "keep-up", and to continue to fund projects from the backlog of "catch-up".

The December 2011 IBRC Report identified a backlog of "catch-up" projects totaling $41.2 million. The 2017-2021 Proposed CIP includes a total of $21.5 million in catch-up projects, reducing the backlog amount to $19.7 as outlined in the table below.

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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 2017-2021 BACKLOG
Buildings	$5.0 million	$2.2 million	$2.8 million
Cubberley Community Center	$6.9 million	$0.7 million*	$6.2 million
Parks	$14.4 million	$6.5 million	$7.9 million
Surface	$14.9 million	$12.1 million	$2.8 million
TOTAL	**$41.2 million**	**$21.5 million**	**$19.7 million**

The 2017-2021 Proposed Capital Improvement Program proposes significant investments in traffic and transportation initiatives and alternatives that do not yet have a dedicated funding source. Because this was not addressed specifically as part of the IBRC, this CIP allocates resources where funding is available to provide necessary improvements to the City's transportation network and to provide transportation alternatives. This is an interim approach to

addressing transportation issues and is not sustainable without a dedicated revenue stream to adequately fund improvements. A possible alternative to ensure that the City has sufficient resources to provide funding for needed transportation improvements is to explore the potential of a business tax for transportation. The Council has asked staff to provide preliminary poll information results on the feasibility and potential options related to a ballot measure. Staff expects to be back before the Council in early May 2016 to continue discussion on this matter. In addition, the Valley Transportation Agency (VTA) and the County of Santa Clara are considering placement of a County-wide transportation sales tax on the November 2016 ballot, which would include funding for transportation projects in Palo Alto.

Capital Improvement Fund Expenditures

The 2017-2021 Proposed Capital Improvement Program includes ninety-six projects and totals $269.2 million of which $71.9 million is allocated in FY 2017. Of the $71.9 million, $27.6 million is reappropriated from FY 2016 for continuing projects.

New Projects

The FY 2017-2021 Proposed Capital Improvement Program includes a number of new projects. In the Capital Improvement Fund, fourteen new projects are proposed in the following categories:

Parking & Mobility Improvements

Three new projects that will help manage parking and mobility in Palo Alto include Downtown Mobility and Safety Improvements (FY 2017: $563,000; 2017-2021 CIP: $1.4 million), (planning for) the installation of Paid Parking Meters (FY 2018: $1.7 million; 2017-2021 CIP: $2.4 million) and Railroad Grade Separation (FY 2017: $834,000; 2017-2021 CIP: $1.9 million). These projects are designed to help manage parking and traffic demand in the downtown area as well as provide transportation alternatives to help the City achieve its sustainability goals. In addition, a new project to replace the California Avenue District Gateway Signs ($150,000) is included in FY 2017.

Aging and Failing Equipment

Seven projects are proposed to address equipment or infrastructure that is in need of immediate repair. Three of these projects address critical needs at the Children's Theatre, Community Theatre, and Cubberley Theatre and include Performing Arts Visual Venue Soft Goods Replacement (FY 2017: $55,000), Performing Arts Venue Seat Replacement (FY 2018: $75,000), and the Mitchell Park Adobe Creek Bridge Replacement (FY 2017: $250,000). There are also two additional projects for improvements in City Hall Floors 4, & 5 (FY 2017: $750,000). Finally, a new project for the Baylands Flood Protection Levee Improvements was also included in the CIP (FY 2017: $1.0 million).

Parks & Open Space

The 2017-2021 CIP includes funding for three new projects in Parks & Open Space. These include the Foothills Park Improvement Project (FY 2021: $285,000) and the Pearson Atascadero Improvement Project (FY 2021: $306,000). Additional funding has been allocated in FY 2021 for the Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan to provide guidance on wildlife and habitat management, public access and recreation, trails, and interpretive messaging.

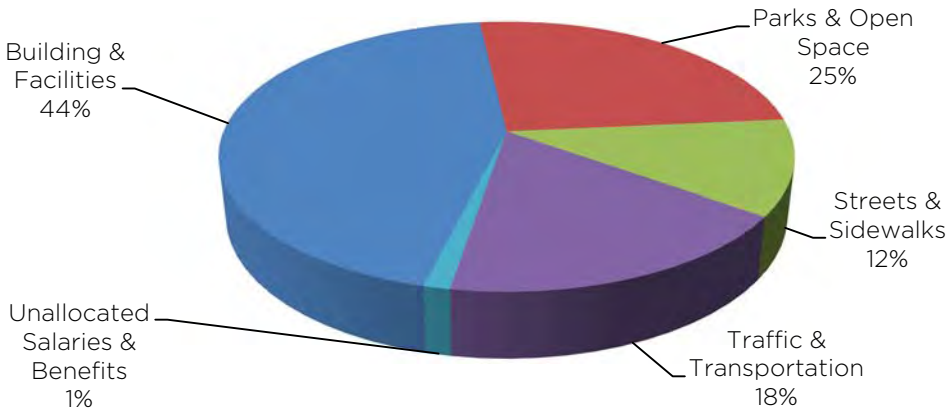
Sustainability/Energy Efficiency

A project to provide Civic Center Electrical Upgrade & EV Charger Installation (FY 2017: $650,000) is programmed in the CIP. A portion of the project is eligible for reimbursement from the Bay Area Air Quality Management District (BAAQMD), while $350,000 had been programmed in FY 2019 as part of the Civic Center Fire Life Safety and Electrical Upgrades. To coincide with the grant funding opportunity, the electrical upgrade is being moved forward to FY 2017. 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 charging stations at City parking garages, including the Civic Center garage.

Highlights by Category

The Capital Improvement Fund budget is divided into five categories: Buildings and Facilities, Parks and Open Space, Streets and Sidewalks, Traffic and Transportation, and Other (Unallocated Salaries and Benefits). Following is a brief summary of project highlights within each of the project categories. Additional detail on each of these categories can be found in the Capital Project Fund Overview section for each of the categories.

Fiscal Year 2017 Proposed
General Fund Projects by Category



Buildings and Facilities

The 2017-2021 Proposed Capital Improvement Program includes projects totaling $120.9 million in this category, with $30.2 million allocated in FY 2017. The majority of this funding is dedicated towards Infrastructure Plan projects ($12.6 million in FY 2017, $87.2 million in all five years of the CIP). Apart from the Infrastructure Plan projects, significant projects include roofing replacements for the MSC ($1.9 million), Lucie Stern Buildings Mechanical and Electrical Upgrades ($1.8 million), and the Baylands Boardwalk Improvement project ($1.4 million).

Parks and Open Space

The 2017-2021 Proposed Capital Improvement Program for this category includes projects totaling $30.7 million, of which $17.5 million is allocated in FY 2017. The Byxbee Park Completion project ($2.8 million) is included in this category, consistent with the Infrastructure Plan. It should be noted that $12.2 million of the total funding for this category represents reappropriations from FY 2016, including the Golf Course Reconfiguration and Baylands Athletic Center Improvement Project ($10.3 million). It is anticipated that this project, originally scheduled to begin construction in FY 2014, will commence in July 2016, if necessary final permits from other agencies can be obtained. Other significant projects in this category, as described in the Capital Project Fund Overview section, include Rinconada Park Improvements ($3.6 million) and Mitchell Park Improvements ($1.5 million). While these projects are already in the pipeline, several other Parks and Open Space in the 2017-2021 CIP have been adjusted to occur in either FY 20 or FY 21 pending final completion of the Park Master Plan.

Streets and Sidewalks

Projects funded in this category total $42.7 million during the Proposed CIP with $10.8 million allocated in FY 2017. The majority of expenditures are directed towards the Street Maintenance program, which remains ahead of schedule towards meeting the City Council's goal of attaining an average citywide Pavement Condition Index score of 85 by 2021. Current estimates call for this goal to be met as early as 2019. Other significant projects include the Sidewalk Repairs project ($10.1 million) and the Newell Road Bridge/San Francisquito Creek Bridge Replacement ($2.5 million: construction and design completely covered by grants).

Traffic and Transportation

The Traffic and Transportation category includes funding totaling $61.3 million during the Proposed 2017-2021 CIP period, with $11.8 million allocated in FY 2017. The $61.3 million in funding reflects a significant increase from the $44.7 million in funding included in the 2016-2020 CIP and includes new parking projects, traffic signal improvements, and adjustments to the Bike & Pedestrian Plan. The majority of this funding in the 2017-2021 CIP is dedicated towards three projects: Highway 101 Pedestrian/Bicycle Overpass Project ($12.0 million), Charleston/Arastradero Corridor Project ($9.6 million), and Bicycle and Pedestrian Transportation Plan Project ($19.1 million). In addition, two parking projects have been added to the 2017-2021 CIP: Paid Parking (FY 2018: $1.7 million; another $600,000 after that for an 2017-2021 CIP total of $2.4

million) and Parking Guidance Systems, Access Controls, and Revenue Collection Equipment (FY 2018: $2.0 million) that are dependent upon rate increases in the City's parking programs as well as potential short-term financing. Should the rate increases not be approved, sufficient funding will not be available to carry out these projects. Furthermore, additional projects were proposed but removed from the 2017-2021 CIP due to insufficient funding. These include Geng Road Improvements (2017-2021 CIP: $1.2 million) and Transit Amenities and Infrastructure Improvements ($150,000 annually; 2017-2021 CIP: $750,000). It is important to note that the IBRC did not include Traffic and Transportation improvements in their review of the City's backlog of infrastructure projects. Without a dedicated stream of revenue for traffic and transportation projects, funding for needed infrastructure, improvements to the City's transportation network may be limited. As stated earlier, Council is exploring other funding options such as the business transportation tax and the County wide sales tax initiative.

Infrastructure Reserve

In addition to the annual transfers from the General Fund, grant reimbursements, bond funds for certain projects, and transfers from other funds are accounted for in the Capital Improvement Fund to support project costs. Additional funding sources for the Capital Improvement Fund in FY 2017, as outlined in the subsequent table, include Interest Income ($1.0 million), Traffic Impact Fees ($0.4 million), Contributions from Local Agencies ($4.1 million), Transfers from the Gas Tax Fund ($1.4 million), Transfers from the Parking Funds ($0.7 million), Transfers from Enterprise and Internal Services Funds ($1.8 million), Transfers from the Stanford University Medical Center Development Agreement Fund ($12.4 million), and Bond proceeds ($6.1 million).

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. The IR is also a significant funding source for the Infrastructure Plan. The plan, as approved by the City Council in June 2014, assumed that funding for a portion of the plan ($12.5 million) would come from the IR. The IR ending balance in FY 2017 is estimated to be $11.6 million which drops significantly to $7.3 million in FY 2018 as Infrastructure Plan projects, most notably the New California Avenue Garage, begin to move into the construction phase. Over the course of the next several years, as Infrastructure Plan progress, staff will closely monitor the IR to ensure sufficient resources are available as a result of cost escalations, scope increases, current prevailing wage requirements, and/or the bidding environment.

Projected Infrastructure Reserve

	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Total
SOURCES						
Capital Improvement Fund Balance, beginning	**50,892,622**	**27,727,295**	**26,769,936**	**60,530,063**	**50,016,325**	**50,892,722**
Revenues						
Transfer from General Fund	20,948,849	21,564,321	22,207,802	22,872,524	23,565,730	111,159,226
Gas Tax	1,400,000	1,400,000	1,400,000	1,370,000	1,370,000	6,940,000
Debt Financing	6,148,437	-	93,316,000	-	-	99,464,437
Impact Fees/In-Lieu Fees	381,050	4,178,361	3,121,808	383,362	325,000	8,389,581
Stanford University Medical Center	12,350,000	5,200,000	11,822,000	1,200,000	-	30,572,000
Federal/State & Local Agencies	4,095,584	1,330,000	9,235,000	2,425,000	385,000	17,470,584
Interest Income	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Transfer from Parking Funds	682,627	4,160,793	294,317	305,779	292,465	5,735,981
Transfer from Other Funds	1,756,107	-	-	-	-	1,756,107
TOTAL SOURCES	99,655,276	66,560,770	169,166,863	90,086,728	76,954,520	337,380,638
USES						
Expenses						
Budgeted CIP Projects	71,914,656	39,790,834	101,971,371	33,404,974	22,149,125	269,230,960
Operating Transfers	13,325	-	-	-	-	13,325
Debt Service	-	-	6,665,429	6,665,429	6,665,429	19,996,287
TOTAL EXPENSES	71,927,981	39,790,834	108,636,800	40,070,403	28,814,554	289,240,572
Reserves						
Infrastructure Plan Reserve	7,098,839	10,372,590	18,441,549	5,381,721	887,602	7,098,839
Infrastructure Plan Contingency	-	-	-	30,000,000	30,000,000	30,000,000
Other Reserves	9,034,014	9,079,659	39,126,081	9,173,291	9,221,304	9,034,014
TOTAL RESERVES	16,132,853	19,452,249	57,567,630	44,555,012	40,108,906	46,132,853
Capital Improvement Fund Unrestricted Balance, ending	11,594,442	7,317,687	2,962,433	5,461,313	8,031,060	8,031,060
TOTAL USES	99,655,276	66,560,770	169,166,863	90,086,728	76,954,520	335,373,525

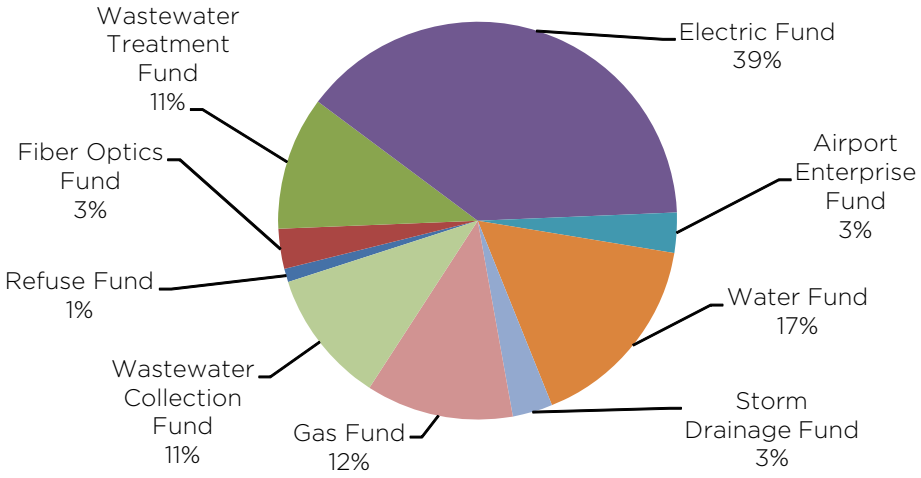
Cubberley Community Center

The 2017-2021 Proposed Capital Improvement Program includes funding for infrastructure improvements at Cubberley Community Center. Funding for Cubberley was not included in the FY 2015-2019 Adopted Capital Improvement Program as the lease terms between the City and the Palo Alto Unified School District were still being negotiated. In November 2014, a change to the lease with the Palo Alto Unified School District was approved, 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. Based on the new amended lease, these funds were transferred into a separate fund beginning in FY 2016 for capital and maintenance needs at the facility. The 2017-2021 Capital Improvement Program includes expenditures of $4.5 million in this fund, with $2.5 million allocated in FY 2017. Major capital projects include the Cubberley Amenities Improvement – (Reserve) ($950,000), Cubberley Roof Replacements ($807,000), and Cubberley Field Restrooms ($285,000).

Enterprise Funds CIP

Each year a significant investment is made from the City's nine Enterprise Funds (Airport, Electric, Fiber Optics, Gas, Refuse, Storm Drainage, Wastewater Collection, Wastewater Treatment, and Water). In FY 2017, a total of $83.7 million will be allocated towards the capital program for the Enterprise Funds, with $304.2 million allocated over the five year period of the CIP, representing 47.6 percent of CIP expenditures for all funds. Of the $83.7 million allocated in FY 2017, $2.5 million is for projects previously approved by the City Council that will be carried over to next FY through adoption of the budget. The Utilities Department manages the Electric, Water, Gas, Fiber Optics, and Wastewater Collection Funds, while the Public Works Department manages the Airport, Refuse, Storm Drainage, and Wastewater Treatment Funds. Following is a brief discussion of the City's largest Enterprise Fund capital improvement programs. Additional information on all of these funds can be found in the fund summary sections of this document.

Fiscal Year 2017 Enterprise Fund Projects by Fund



Electric Fund

The Electric Fund capital program funds improvements such as upgrades to substations, transmission lines, and underground districts. A total of $79.2 million is allocated towards capital infrastructure over the 2017-2021 Proposed CIP, with $21.6 million allocated in FY 2017. Three projects comprise approximately 50.0 percent of the Electric Fund capital program: Electric Customer Connections ($16.7 million), Electric System Improvements ($10.0 million), Smart Grid Technology Installation ($12.9 million).

Gas Fund

Over the 2017-2021 CIP, a total of $31.1 million is allocated for gas infrastructure improvements. The majority of planned capital expenses over this period within the Gas Fund ($20.0 million, 64.1 percent of all funding in the CIP) are for Gas Main Replacements. These projects are part of an ongoing effort to identify and replace aging gas mains in need of repair. Other significant capital investments within the Gas Fund over the five year CIP include Customer Connections ($6.5 million), Gas Meters and Regulators ($1.9 million), and Gas Distribution System Upgrades ($1.2 million).

Storm Drainage Fund

Capital funding for the Storm Drainage Fund only extends to FY 2017, as the storm drainage fee that provides funding for storm related capital improvements is set to sunset in June 2017. In FY 2016, staff hopes to bring forward to the City Council a recommendation asking voters to reauthorize the fee. Once the Council sets the election date and if the fee is reauthorized, future five-year Capital Improvement Programs will include the revenue and related project expenditures. I have appointed an 11-member Blue Ribbon Committee to advise the Council on the future of the City's Storm Drain program. Based on remaining funding from the existing fee, the 2017-2021 Capital Improvement Program includes $7.7 million for storm drain infrastructure improvements, of which the majority is made up of two projects: Matadero Creek Storm Water Pump Station and Trunk Line Improvements ($5.8 million) and ongoing Storm Drain System Replacement and Rehabilitation ($1.8 million). It is anticipated that the seven major projects outlined for the voters as part of the original storm drainage ballot measure will be complete by end of FY 2017, when the current fee expires.

Wastewater Treatment Fund

The Wastewater Treatment Fund accounts for activities related to the replacement and rehabilitation of the City's wastewater treatment plant infrastructure. The 2017-2021 Capital Improvement Program includes expenditures of $141.7 million in this fund, with $29.2 million allocated in FY 2017. While this is a significant investment, it's important to note that 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). Major projects included in the 2017-2021 CIP originated in the Long Range Facilities Plan and the Biosolids Facilities Plan. These include a New Dewatering and Loadout Facility ($25.6 million) and a New Laboratory and Environmental Services Building ($22.1 million). In addition to the partner revenue sharing as outlined above, the State of California provides loans for the financing of these projects. A more detailed discussion is found in the Wastewater Treatment Fund section.

Water Fund

Over the 2017-2021 CIP, a total of $47.4 million is allocated for water infrastructure improvements. Similar to the Gas Fund, the majority of planned capital investments over this period in

the Water Fund are for Water Main Replacements ($33.3 million, 70.1 percent of all funding in the CIP). These projects replace aging water mains in need of repair within the 236-mile water distribution system. Other significant investments over the five year CIP include Customer Connections ($3.7 million), Water Meters ($2.7 million) and Water Service Hydrant Replacement ($2.1 million).

Internal Service Funds

Two of the City's three Internal Service Funds (Vehicle Replacement Fund and the Technology Fund) have capital projects budgeted throughout the 2017-2021 Proposed Capital Improvement Program. The Vehicle Replacement Fund has a total Proposed CIP budget of $22.0 million ($8.9 million in FY 2017), and the Technology Fund has a total Proposed CIP budget of $4.6 million ($3.4 million in FY 2017).

Technology Fund

Technology Fund projects enhance service delivery to the community and to City staff through efficient and effective implementation of information technology solutions. The 2017-2021 Capital Improvement Program includes expenditures of $3.4 million. Significant projects in FY 2017 include Radio Infrastructure Replacement ($1.6 million), Development Center Blueprint Technology Enhancement ($730,000), and Public Safety Computer-Aided Dispatch Replacement ($496,000). The City has addressed a significant portion of its commitment to the Radio Infrastructure Replacement project; however, additional funding will be required as it relates an initiative organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move towards a county-wide 700 Mhz radio communication system. Further information on this project and a plan to address funding needs is included in the Technology Fund section of this document.

Vehicle Replacement Fund

The Vehicle Replacement Fund CIP budget for FY 2017 includes funding for the replacement of City vehicles and equipment. Of the $8.9 million allocated $186,000 is programmed for the Municipal Service Center Fuel Station Demolition project in FY 2017 and $4.9 million is for replacement vehicles previously approved by the City Council that will be carried over to next fiscal year. Due to this significant backlog, staff is only proposing that two vehicles be replaced in FY 2017: the Co-Owned Fire Apparatus Replacement (FY 2017: $631,000) and the replacement of a Flat Bed Crane Truck for the Wastewater Treatment Plant (FY 2017: $320,000)., The remaining balance of FY 2017 replacements of $2.9 million will be set aside in a FY 2017 Vehicle Replacement Reserve until the backlog of replacements has been completed or if a vehicle is identified as an urgent necessity. Staff will continue to work on ways to optimize the size and composition of the vehicle and equipment fleet as well as increase the percentage of the fleet that is electric or runs on alternative fuels. The replacement plan has been reviewed by the internal staff Fleet Review Committee to ensure appropriateness of expenditures.

Project Coordination

As in the past, the City has planned Utility capital projects, such as main replacements, to coincide with street rehabilitation projects.

Conclusion

The Proposed Capital Budget for FY 2017 in the amount of $170.5 million allocates $71.9 million in the General Fund, $2.5 million in the Cubberley Property Infrastructure Fund, $83.8 million in the Enterprise Funds, and $12.3 million in Internal Service Funds. Projects funded in this CIP were selected after a thorough review of priorities, anticipated future needs, and available resources. Further, this CIP incorporates reserves to ensure that resources are available to deliver on the City Council-approved Infrastructure Plan. Addressing the City's infrastructure backlog continues to be a major focus for the community, the City Council, and staff, recognizing not only the practical need of these investments but the symbolic significance of delivering on these priorities that will serve future generations.

In the coming years, major strides will be made to improve the City's infrastructure through the construction of a new Public Safety Building, two new parking garages, two rebuilt fire stations, numerous bicycle and pedestrian transportation plan projects, the projected achievement of the City Council's goal of reaching an average Pavement Condition Index score of 85 for the City's roads, and significant investments at the Regional Water Quality Control Plant.

While these achievements should be celebrated, significant challenges remain ahead. In the Capital Improvement Fund, a backlog of $19.7 million exists for "catch-up" needs. It is anticipated that this backlog will be addressed over time through the annual capital budget process; however, with each passing year the cost of addressing this backlog is expected to rise. Additionally, this budget provides some flexibility for cost escalation and scope changes for the Infrastructure Plan projects, but does not account for projects which may be identified in the Parks Master Plan, or unidentified Traffic and Transportation issues. Besides the cost increase concerns, there are other projects that will require funding in the not too distant future such as the playing fields at the golf course, the 7.7 acres at Foothills Park, and the Cubberley Master Plan. These and any other unfunded projects will require funding plans during a timeframe in which we may face a recession. In addition, the community and Council have great interest in acquiring the Downtown US Post Office, which was recently listed for sale and Council directed staff to place an offer. If the bid is successful, staff would need to reprioritize capital projects currently proposed in the 2017-2021 CIP and will likely delay other projects to accommodate the procurement. The acquisition would need to be financed and the debt service would come from the General Fund Capital Budget until the building is renovated and the Development Center is able to assist with the majority of the annual debt by avoiding the rent at the current leased location across from City Hall.

Furthermore, I am very pleased that over the last four fiscal years over $32 million in excess funds have been transferred from the General Fund Operating Budget to the Capital Improvement Fund to address the City's infrastructure need. The delivery of the ambitious capital program outlined in this report is also highly dependent upon staff capacity. This budget includes the reallocation of staff resources to ensure the timely delivery of capital projects. As the proj-

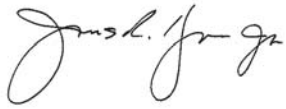
ects outlined in the Infrastructure Plan move through the design process and into the construction phase, further staffing augmentations may be required to ensure projects are delivered timely. Timely delivery of the Infrastructure Plan projects is especially important given the dependency of borrowing strategies to complete the projects.

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 Lalo Perez, Administrative Services Director, Kiely Nose, Budget Director, Brad Eggleston, Assistant Director of Public Works, and their respective teams as well as Michael Bruckner, Senior Management Analyst, who have worked countless hours during evenings and on weekends to develop this budget document as well as department staff who contributed to this budget.

Council Amendments to the Proposed Budget

The proceeding transmittal letter was submitted as part of the Proposed FY 2017 Budget; however, subsequent to this submittal, the Finance Committee and the City Council had a series of Budget Hearings to review and consider the recommendations made by staff. As a result of these hearings, several modifications to the Proposed document were ultimately approved by the City Council as part of the Adoption of the City's FY 2017 Budget, see the Action Minutes from the June 13, 2016 Council Meeting, item number nine, here: http://www.cityofpaloalto.org/civicax/filebank/documents/52916. This Adopted FY 2017-2021 CIP Budget document reflects these changes which are summarized in City Council Staff Report #6932 on the City's website here: http://www.cityofpaloalto.org/civicax/filebank/documents/52691; as well as in an at places memo submitted to the City Council at the June 13, 2016 City Council Meeting, which is on the City's website here: http://www.cityofpaloalto.org/civicax/filebank/documents/52869. The combined FY 2017 Adopted Capital Budget, which includes the General Fund, Cubberley Fund, Enterprise Funds, and Internal Service Funds, is $186.8 million, an increase of $62.1 million or 49.8%, compared to the 2016 Adopted Capital Budget of $124.7 million. The overall 2017-2021 CIP is $664.1 million, an increase of $110.7 million, or 20%, compared to the 2016-2020 Adopted CIP of $553.4 million.

Respectfully Submitted,



James Keene
City Manager

CITY OF
PALO
ALTO

Budget Acknowledgments

Department Budget Coordinators

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Keri Russell (Special Assistance)

Development Services
Jessie Deschamps

Information Technology
Sherrie Wong

Fire
Amber Cameron

Planning & Community Environment
Sherry Nikzat
Chitra Moitra (Special Assistance)

Police
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Sharon Macway (Special Assistance)
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Capital Improvement Fund Review Process

James Keene
Brad Eggleston
Rob de Geus
Hillary Gitelman
Mike Sartor
Ed Shikada

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All artwork produced by children enrolled in Palo Alto Art Center Children's Fine Art camps and classes offered by the Community Services Department. For more information, please visit www.cityofpaloalt.org/gov/depts/csd/artcenter.

CIP ORGANIZATIONAL CHART

Public Works
Managed Projects

CUBBERLEY — 0.15
0.05-Project Manager
0.10-Senior Engineer

STREETS — 6.47
0.25-Admin Associate III
0.10-Assistant Director
1.14-Assoc Engineer
0.23-Engineer
0.68- Inspector, Field Svc
0.30-Management Analyst
0.96-Project Construction Inspector
1.09-Project Engineer
0.15-Project Manager
0.59-Senior Engineer
0.43-Supv Inspector/Surveyor PW
0.55-Surveyor

PARKS AND LANDSCAPE — 3.00
0.25-Admin Associate III
0.10-Assistant Director
0.40-Engineer
0.90-Architect/Park Planner
0.20-Management Analyst
0.30-Project Engineer
0.15-Project Manager
0.70-Senior Project Manager

SIDEWALK— 4.27
0.10-Assistant Director
0.74-Cement Finisher - Lead
0.50-Manager Maintenance Operations
0.20-Senior Engineer
0.20-Supv Inspector/Surveyor PW
0.65-Associate Engineer
0.25-Project Engineer
0.20-Project Manager
0.53-Inspector, Field Svc
0.90-Engineer

STRUCTURES AND GROUNDS — 10.53
0.39-Admin Assoc III
0.28-Assistant Director
0.90-Assoc Engineer
1.27-Engineer
0.29-Management Analyst
4.00-Project Engineer
1.10-Senior Engineer
0.50-Engineer Tech III
0.10 -Facilities Manager
0.55-Project Manager
0.15-Manager Maintenance Operations
0.80-Admin Associate I
0.20-Senior Project Manager

STORM DRAINAGE — 2.17
0.10-Admin Assoc I
0.10-Admin Assoc III
0.80-Engineer
0.10-Management Analyst
0.65-Project Engineer
0.30-Senior Engineer
0.12-Surveyor

VEHICLE FUND — 1.40
0.20-Admin Assoc III
0.15-Assistant Fleet Manager
0.25-Fleet Manager
0.05-Fleet Service Coord
0.10-Motor Equip Mech – Lead
0.60-Motor Equip Mech II
0.05-Project Manager

WASTEWATER TREATMENT— 1.30
0.10-Assistant Manager, WQCP
1.20-Senior Engineer

REFUSE— 0.65
0.35-Environmental Specialist
0.30-Manager, Environ. Control Program

Total: 29.94 FTE

Utilities
Managed Projects

0.45-Asst Director Util Engineering
0.10-Cathodic Protection Tech. Asst
0.10-Cathodic Technician
0.35-Contracts Administrator
0.60-Electric Assistant
1.00-Electric Equipment Operator
1.50-Electric Underground Inspector
1.70-Electric Project Engineer
0.75-Elec Underground Inspector Lead
1.30-Electrician
3.50-Engineer
1.85-Engineering Technician III
1.40-Gas Systems Technician II
2.92-Heavy Equipment Operator
2.52-Heavy Equip Oper/Install Rep
3.25-Inspector, Field Services
7.70-Lineperson/Cable Splicer
2.80-Lineperson/Cable Splicer – Lead
0.10-Metering Technician
0.05-Metering Technician Lead
0.10-Overhead UG Troubleman

1.80-Power Engineer
3.50-Project Engineer
0.40-SCADA Technologist
3.55-Senior Electrical Engineer
4.10-Senior Engineer
0.50-St Light/Traffic/Fiber Lead
0.30-St Light/Traffic/Fiber Tech
0.70-Substation Electrician
0.20-Substation Electrician Lead
0.80-Sup Electrician Project Engineer
5.0-Utility Engineer Estimator
6.88-Utility Install Rep
2.76-Utility Install Rep Lead
0.76-Utility Locator
2.19-Utility Supervisor
0.84-Utilty Install Repair Lead
0.94-Utility Install Repair Welding Cert
1.14-Water Systems Operator

Total: 70.4 FTE

Planning & Community Environment
Managed Projects

TRANSPORTATION PROJECTS
0.30-Chief Transportation Official
0.50-Coordinator Public Works Prj
0.90-Coordinator Transp Systems Mgmt
0.10-Management Analyst
0.57-Management Specialist
0.30-Parking Operations Lead
0.20-Program Assistant II
0.85-Project Engineer
0.05-Project Manager
0.70-Senior Planner
0.90-Traffic Engineering-Lead
0.15-Transportation Planning Manager

Total: 5.52 FTE

Community Services
Managed Projects

PARKS
1.00-Coordinator Public Works Prj

Total: 1.00 FTE

Administrative Services
Managed Projects

0.6-Sr Management Analyst
0.6-Contracts Administrator

Total: 1.20 FTE

FY 2017 POSITION TOTALS
Public Works - 29.94
Planning & Comm. Envmt - 5.52
Administrative Services - 1.20
Community Services - 1.00
Utilities - 70.40
Total Full-time - 108.06

THE BUDGET PROCESS AND DOCUMENT

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 Infrastructure Plan (June 2014).

The review of the capital budget and five-year capital improvement plan 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 2016:

- The Built Environment: Housing, Parking, Livability and Mobility
- Infrastructure Strategy and Implementation
- Healthy City, Healthy Community
- Completion of the Comprehensive Plan update with increased focus from Council

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)
- City Council approved Infrastructure Plan
- City Council's Top Priorities and other City Council direction

- The City's annual General Fund Long Range Financial Forecast
- Service level and infrastructure needs prioritization
- Comprehensive Plan, which contains the City's official policies on land use and community design, transportation, housing, natural environment, business and economics, and community services

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 capital improvement program (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, Planning and Community Environment, 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. 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 Committee. The General Fund CIP Committee consists of senior managers in the Public Works, Community Services, Administrative Services, and Planning and Community Environment departments.

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 PTC's comments 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. Examples include 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 IBRC report and Infrastructure Plan;
- Health and safety implications;
- Historical spending levels; and
- Certainty over the feasibility, scope, and level of resources required.

Discussions on the prioritization of the Fiscal Year 2017-2021 Capital Improvement Fund projects are included in the Transmittal Letter of this document as well as in the Fund Narrative section for the Capital Improvement Fund.

The prioritization of Enterprise Fund CIP projects are established by the department that manages the enterprise fund. Often the prioritization of CIP projects is dictated either by the department's operational needs, funding availability, CIP strategic plan, oversight committee and/or specific 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 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 2016-2020 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 Fiscal Year 2016 but still required for the completion of the project are reflected in 2017. The Adopted Capital Budget includes $79.8 million dollars in funds that have been reappropriated from Fiscal year 2016. 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 fall 2016, all projects will be reviewed to determine if 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 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 cost of a project to be detailed. The information in the project detail pages is discussed in more detail 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.

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	Planning
PO	Public Works Operations
RF	Refuse Fund
SD	Storm Drain Fund
TE	Technology Fund
VR	Vehicle Fund
WC	Wastewater Collection Fund
WQ	Wastewater Treatment Fund
WS	Water Fund

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 – the fund that the project is budgeted in.

Category – describes the type of activity that the project aligns to. The next page 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 – the department 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 "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 – provide 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 in will contribute towards the project. This table also includes prior year revenues, a current year estimate, anticipated funding beyond the five years of the CIP, and total funding 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 CEQA status of the project, and LEED status, if applicable.

CAPITAL FUNDS

Capital Improvement Fund
- Buildings and Facilities
- Parks and Open Space
- Streets and Sidewalks
- Traffic and Transportation
- Unallocated (Salaries and Benefits)

Cubberley Property Infrastructure Fund
- Buildings and Facilities

ENTERPRISE FUNDS

Airport Fund
- Airport Facilities
- Airport Taxiways

Electric Fund
- Capacity Improvements
- Customer Connections
- System Improvements
- Undergrounding Projects

Fiber Optics Fund
- Capacity Improvements
- Customer Connections

Wastewater Collection Fund
- Capacity Improvements
- Customer Connections
- System Improvements

Storm Drainage Fund
- Capacity Improvements
- System Improvements
- System Rehabilitation

Gas Fund
- Capacity Improvements
- Customer Connections
- Gas Main Replacements
- System Improvements

Refuse Fund
- Buildings and Facilities
- Landfill Post-Closure

Water Fund
- Capacity Enhancements
- Customer Connections
- System Improvements
- Water Main Replacements

Wastewater Treatment Fund
- Buildings and Facilities
- System Improvements
- System Rehabilitation

INTERNAL SERVICE FUNDS

Vehicle Replacement Fund
- Fleet Infrastructure Improvements
- Vehicle and Equipment Replacement

Technology Fund
- Citywide Technology Upgrades and Improvements
- Department Technology Upgrades and Improvements

California Society of
Municipal Finance Officers

Certificate of Award

Capital Budgeting Excellence Award
Fiscal Year 2015-2016

Presented to the

City of Palo Alto

For meeting the criteria established to achieve the Capital Budgeting Excellence Award.

February 23, 2016

Jesse Takahashi
CSMFO President

Michael Gomez, Chair
Professional Standards and
Recognition Committee

Dedicated Excellence in Municipal Financial Reporting

FINANCIAL SUMMARY

CITY OF
PALO
ALTO

SUMMARY OF CIP PROGRAM REVENUE

Revenue Source ($000's)	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2018	Fiscal Year 2020	Fiscal Year 2021	Total CIP 2017-2021
Capital Improvement Funds						
Transfer from General Fund	$ 18,486	$ 27,756	$ 24,072	$ 24,737	$ 25,430	$ 120,480
Gas Tax	1,400	1,400	1,400	1,370	1,370	6,940
Debt Financing	6,148	-	93,316	-	-	99,464
Impact Fees/In-Lieu Fees	381	4,178	3,122	383	325	8,390
Stanford University Medical Center	12,350	5,200	11,822	1,200	-	30,572
Federal/State & Local Agencies	4,096	1,330	9,235	2,425	385	17,471
Interest Income	1,000	1,000	1,000	1,000	1,000	5,000
Transfer from Parking Funds	683	4,161	294	306	292	5,736
Transfer from Other Funds	673	1,083	-	-	-	1,756
TOTAL CAPITAL IMPROVEMENT FUNDS	$ 45,217	$ 46,108	$ 144,261	$ 31,421	$ 28,802	$ 295,809
Enterprise Funds						
Utility Fees & Charges	$ 11,127	$ 8,406	$ 4,536	$ 4,609	$ 4,684	$ 33,362
Transfers from Other Funds	517	868	7,045	304	313	9,048
Federal/State & Local Agencies	23,519	30,058	9,618	5,340	54,669	123,203
TOTAL ENTERPRISE FUNDS	$ 35,163	$ 39,332	$ 21,200	$ 10,253	$ 59,666	$ 165,613
Internal Services Funds						
Transfer from General Fund	$ 405	$ 479	$ 64	$ 64	$ 64	$ 1,076
Transfer from Other Funds	780	324	20	20	20	1,163
Other Revenue	114	114	16	16	16	277
TOTAL INTERNAL SERVICE FUNDS	$ 1,299	$ 917	$ 100	$ 100	$ 100	$ 2,517
TOTAL CAPITAL IMPROVEMENT PROGRAM	$ 81,679	$ 86,357	$ 165,561	$ 41,774	$ 88,568	$ 463,939

Transfer From General Fund

Capital projects that do not directly benefit the Enterprise Funds are funded in the Capital Improvement Fund. This fund is primarily supported by an annual transfer from the General Fund, and accounts for capital repairs to the City's roads, parks and open space, and General Fund facilities. In the 2017-2021 CIP, this transfer ranges between $17.6 million and $26.9 million. This figure includes the base General Fund transfer to the capital improvement fund, ranging from $9.6 million in Fiscal Year 2017 to $15.4 million in Fiscal Year 2021. In addition to the base transfer amount, the additional 2 percent Transient Occupancy Tax (TOT) revenue plus new hotels ranges between $8.0 million to $9.2 million. The additional TOT revenue will support budgeted Infrastructure Plan projects with the balance used to support anticipated debt service beginning in Fiscal Year 2019 as a result of expected debt financing for Infrastructure Plan projects. Finally, the amount in the chart above includes the annual transfer to the Cubberley Property Infrastruc-ture Fund of $1.8 million approved in the Cubberley Lease Agreement approved by the City Council in 2015.

Transfers From Enterprise Funds

The City of Palo Alto has nine Enterprise Funds (Airport Fund, Refuse Fund, Storm Drainage Fund, Wastewater Treatment Fund, Electric Fund, Fiber Optics Fund, Gas Fund, Water Fund, and Wastewater Collection Fund). The Airport Fund, Refuse Fund, Storm Drainage Fund, and Wastewater Treatment Fund are sometimes collectively referred to as the Public Works Enterprise Funds, while the Electric Fund, Fiber Optics Fund, Gas Fund, Water Fund, and Wastewater Collection Fund are sometimes collectively referred to as the "Utility Funds." In instances where the Enterprise Funds would benefit from a General Fund project, the Enterprise Funds are charged for their proportional share. Several examples are included in the Fiscal Year 2017-2021 CIP; including the Municipal Services Center Building A, B, and C Roofing Rehabilitation and the Municipal Services Center Building Lighting, Mechanical, and Electrical Improvements. The cost of these projects, programmed for Fiscal Years 2017 and 2018, will be split with the various Enterprise Funds according to the current usage of the space.

Certificates of Participation

The Infrastructure Plan, as approved by the City Council in June 2014, relied upon a borrowing mechanism known as Certificates of Participation (COPs) to fund a portion of the improvements outlined in the plan. By pledging future City revenues (anticipated to be generated by a voter-approved two percentage point transient occupancy tax increase and additional transient occupancy tax proceeds resulting from new hotels within Palo Alto), the City can borrow funds to complete the construction of projects such as the new Public Safety Building, rebuilding Fire Station Number 4, and a new parking Garage in the California Avenue area.

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). A reduction in project funding for Street Maintenance is programmed beginning in Fiscal Year 2020. This reduction is scheduled to coincide with the anticipated completion of the City's goal of reaching a citywide average Pavement Condition Index (PCI) score of 85 by 2021. It is currently assumed that the City will achieve this score by 2019, two years earlier than the stated goal.

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 2017-2021 CIP, one project is supported by Impact Fees: Byxbee Park Completion (PE-18006). This project, and the utilization of Park Impact Fees, was included in the City Council approved

Infrastructure Plan. It is currently anticipated that $2.8 million transfer from the Parks Impact Fee Fund to the Capital Improvement Fund will occur in Fiscal Year 2018 to support the Byxbee Park Completion project.

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 2017, it is anticipated that the City is expected to receive approximately $4.1 million from other agencies in support of CIP projects: $3.0 million from the San Francisquito Creek Joint Powers Authority for the Golf Course Project (PG-13003), $0.4 million from the County of Santa Clara Vehicle Registration Fee, and $0.2 million from Caltrans with an additional $0.5 million from the VTA for the Charleston/Arastradero Corridor Project (PE-13011). In the remaining years of the Capital Improvement Program (Fiscal Years 2018 through 2021) it is anticipated that the City will receive an additional $13.8 million in funds from other agencies for capital projects programmed in the Capital Improvement Fund.

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. Over the course of the 2017-2021 CIP, transfers to the Capital Improvement Fund totaling $30.6 million are anticipated. This funding will support a variety of projects including the Bicycle and Pedestrian Transportation Plan (PL-04010), the New Public Safety Building (PE-15011), the reconstruction of Fire Station 3 (PE-15003) and Fire Station 4 (PE-18004), the New Downtown Garage (PE-15007), and the Charleston Arastradero Corridor Improvements Project (PE-13011). For additional information about the development agreement, please refer to the Special Revenue Funds section of the Fiscal Year 2017 operating budget document.

Parking Funds

Over the 2017-2021 CIP, $5.7 million is expected to be transferred from the City's parking funds for major capital projects that include $2.0 million for the Parking Guidance Systems, Access Controls, and Revenue Collection Equipment (PL-15002) and $1.7 million for Paid Parking (PL-16002) in Fiscal Year 2018. It should be noted that the funding for these projects is contingent upon rate increases for parking permits within the respective parking districts. In Fiscal Year 2017, transfers of $0.7 million are programmed to be transferred from the University Avenue Parking Permit Fund to the Capital Improvement Fund, including $0.6 million to support construction of the Parking Wayfinding Project. Additionally, transfers from the Downtown Parking In-Lieu Fund to the Capital Improvement Fund, totaling $2.7 million are anticipated in the 2017-2021 CIP. This transfer is consistent with the City Council approved Infrastructure Plan and will

support a portion of the costs associated with the construction of a new parking garage in the downtown area.

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 2017 Operating Budget document contains a detailed discussion regarding the Fiscal Year 2017 utility rate increases.

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. For the 2017-2021 CIP, undergrounding projects are planned, and the estimated reimbursements from telecommunication and cable television companies during this period are.
The list of projects funded by user fees and the description of each user fee are summarized in the table on the next page.

Storm Drainage 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. The ballot measure allowed for modest Storm Drainage Fee increases, based on an annual local consumer price index (CPI) or 6 percent, whichever is less. In accordance with the ballot measure, the fee increase for Fiscal Year 2017 is 3.2% based on the CPI.
Storm drain capital improvement projects are only programmed through Fiscal Year 2017, as the monthly storm drainage fee providing revenue for the Storm Drainage Fund capital improvement plan is due to sunset in June 2017. The current storm drain rates were approved by a majority of property owners via a ballot-by-mail process in April 2005. At that time, a new base rate of $10.00 per month was established, 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 percent, whichever is less. The City Council appointed the Storm Drain Oversight Committee to ensure compliance with the provisions of the ballot measure. Under the provisions of the ballot measure, the higher base rate will sunset on June 1, 2017 and revert back to the pre-election rate of $4.25 per month, unless it is reauthorized through a new ballot measure. It is anticipated that a recommendation for storm drain funding beyond Fiscal Year 2017, including a potential ballot measure, will be brought forward for City Council consideration in fall 2016.

Transfers within Enterprise Funds

CIP projects that benefit multiple enterprise funds are funded by the beneficiary funds.

Enterprise Fund	Project Name	User Fee	2017-2021 CIP Plan Revenues	Description
Electric Fund	Electric Customer Connections (EL-89028)	Connection Fees	$8,400,000	Connection fees cover services for installation, transformers, meters for new customer, upgrading of existing customers and temporary service connection. For a list of other services refer to Utility Rate Schedule E-15.
Fiber Optics Fund	Fiber Optic Customer Connections (FO-10000)	Fiber Optic License Fees	$1,000,000	Fiber optic license fees cover installation of fiber optic infrastructure for new service connections. For a list of other services refer to Utility Rate Schedule EDF-1.
Gas Fund	Gas System, Customer Connections (GS-80017)	Connection Fees	$5,399,390	Connection fees 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.
Water Fund	Water System, Customer Connections (WS-80013)	Connection Fees	$4,650,802	Connection fees 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.
Wastewater Collection Fund	Sewer System, Customer Connections (WC-80020)	Connection Fees	$2,091,799	Connection fees 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.

One project is the application of the Geographic Information System (GIS) (WS-02014) that benefit the Water, Gas and Wastewater Collection Funds. The Water Fund hosts the GIS project, and the Gas and Wastewater Collection Fund reimburse the Water Fund for their share of the project cost. A second project is Smart Grid Technology upgrades (EL-11014) that benefits the Electric, Gas, and Water Funds.

Cash Accumulated To Pay For the Landfill Closure and Post-Closure Care Liability

The Cities of Palo Alto, Mountain View and Los Altos, 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. The City of Palo Alto is the owner and the administrator of the Plant. The other partner agencies reimburse the City for their share in the cost of CIP projects.

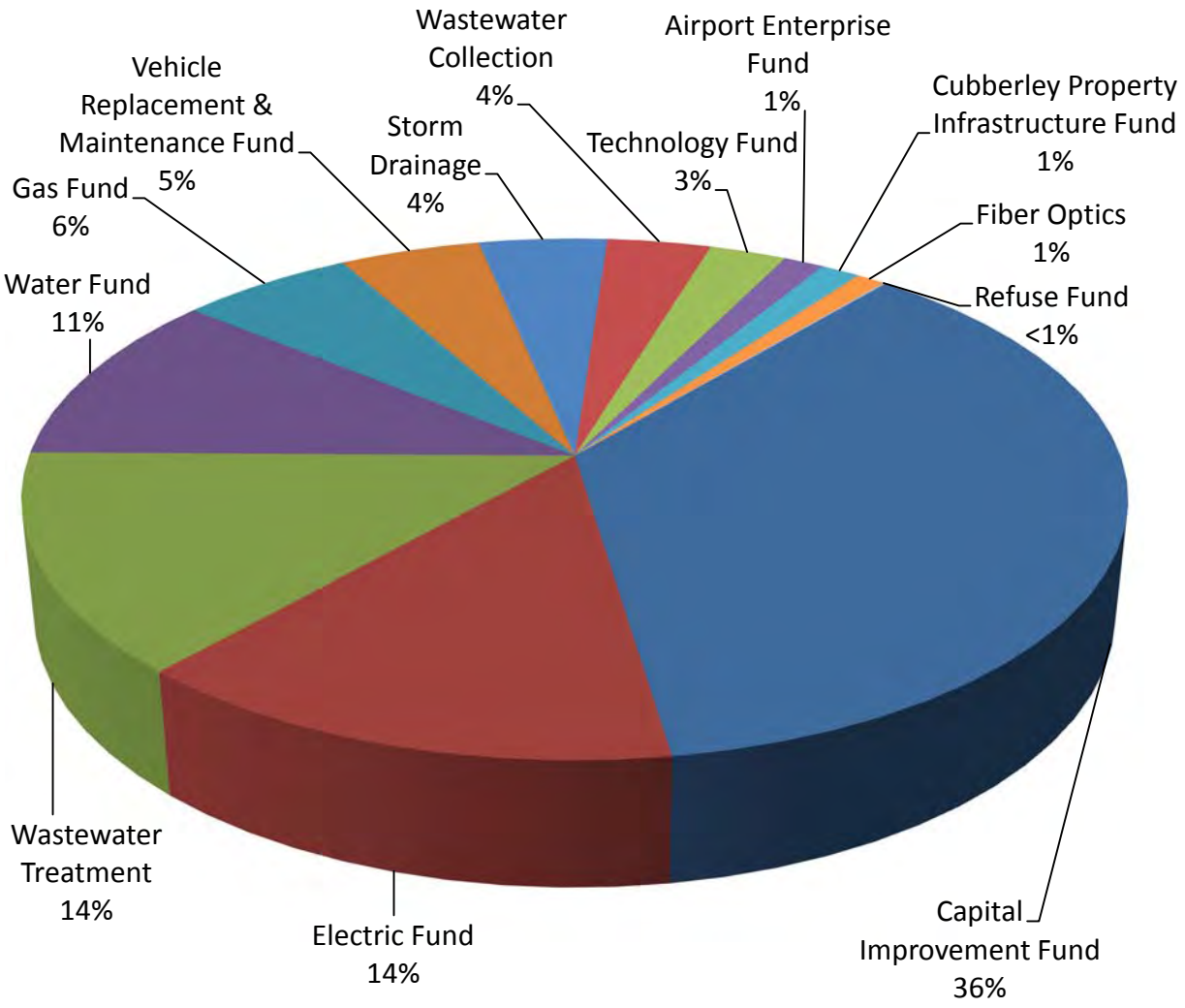
Partner Agencies

The Cities of Palo Alto, Mountain View and Los Altos, 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. The City of Palo Alto is the owner and the administrator of the Plant. The other partner agencies reimburse the City for their share in the cost of CIP projects.

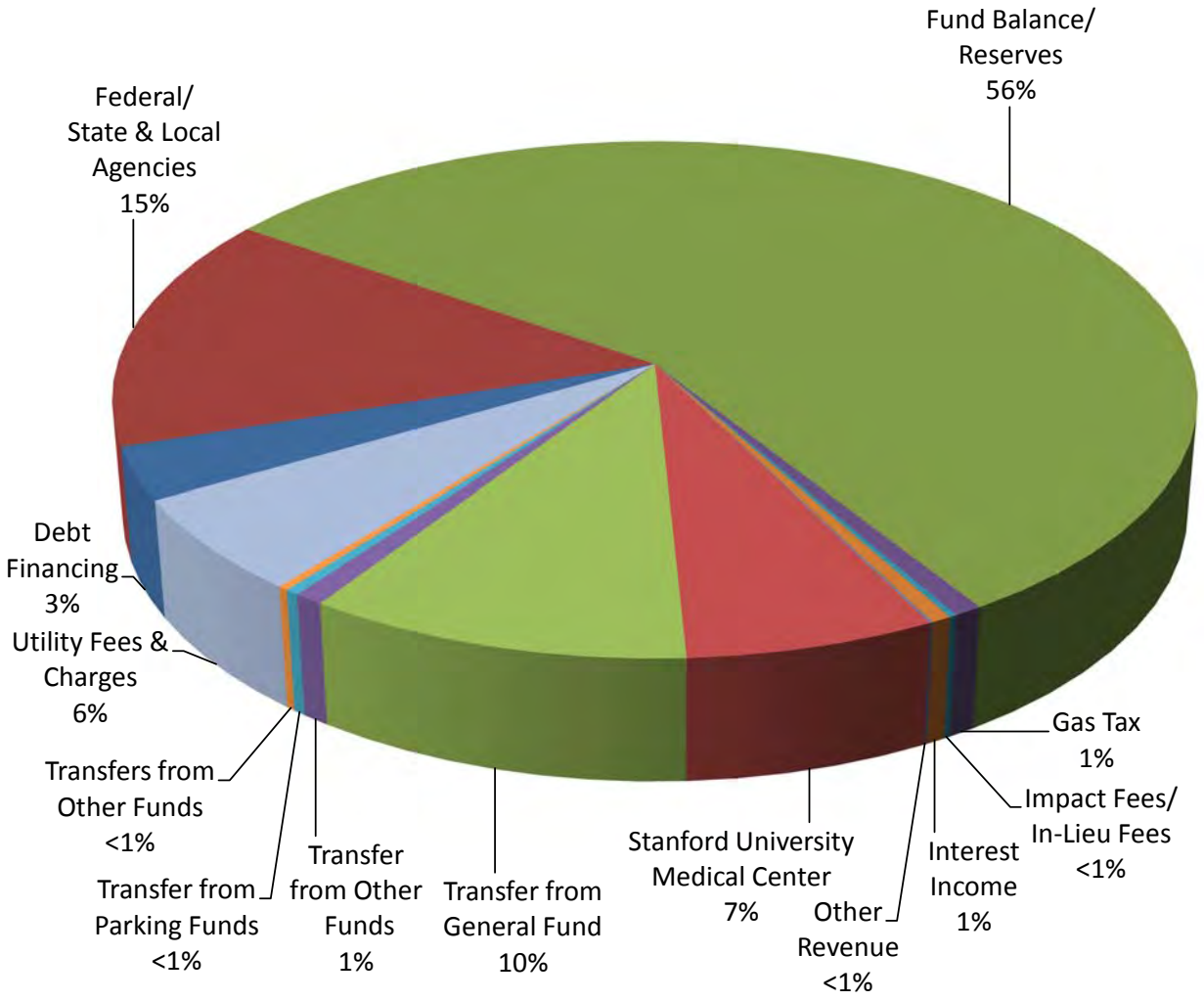
Internal Service Funds

The Technology Fund has eight CIP projects in Fiscal Year 2017 in the total amount of $4.9 million, and the Vehicle Replacement Fund has six CIP projects in Fiscal Year 2017 for $9.0 million; however, due to a backlog in prior year vehicle replacement projects, funding for Scheduled Vehicle and Equipment Replacement – Fiscal Year 2017 in the amount of $3.3 million has been set aside in a reserve until the backlog of replacements has been completed
The General Fund, Capital Projects Fund and Enterprise Funds provide funding for their share of CIP Projects in the Internal Service Funds (ISF) through a cost allocation mechanism.

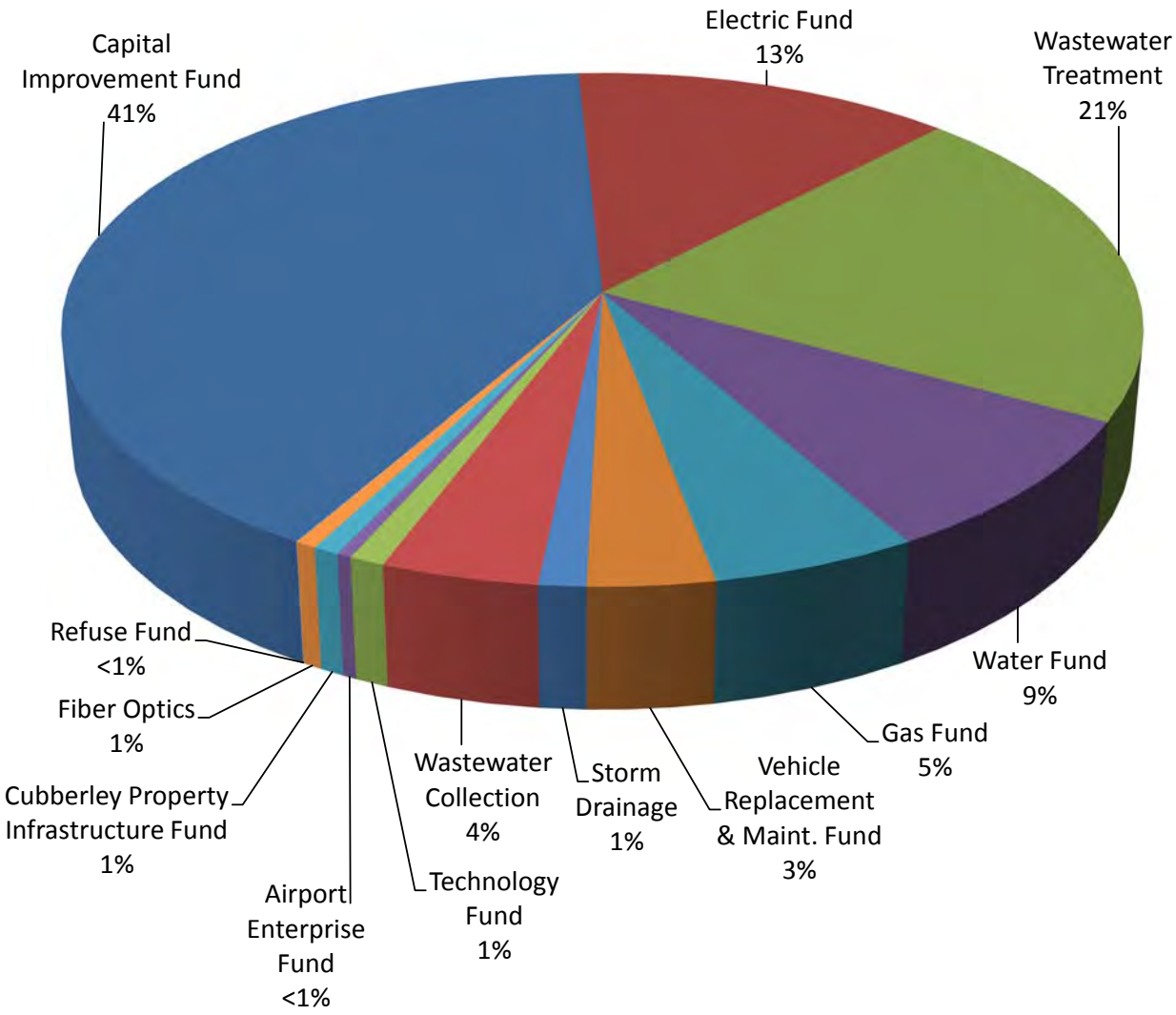
2017 Capital Budget Expenditures - $186.8 Million



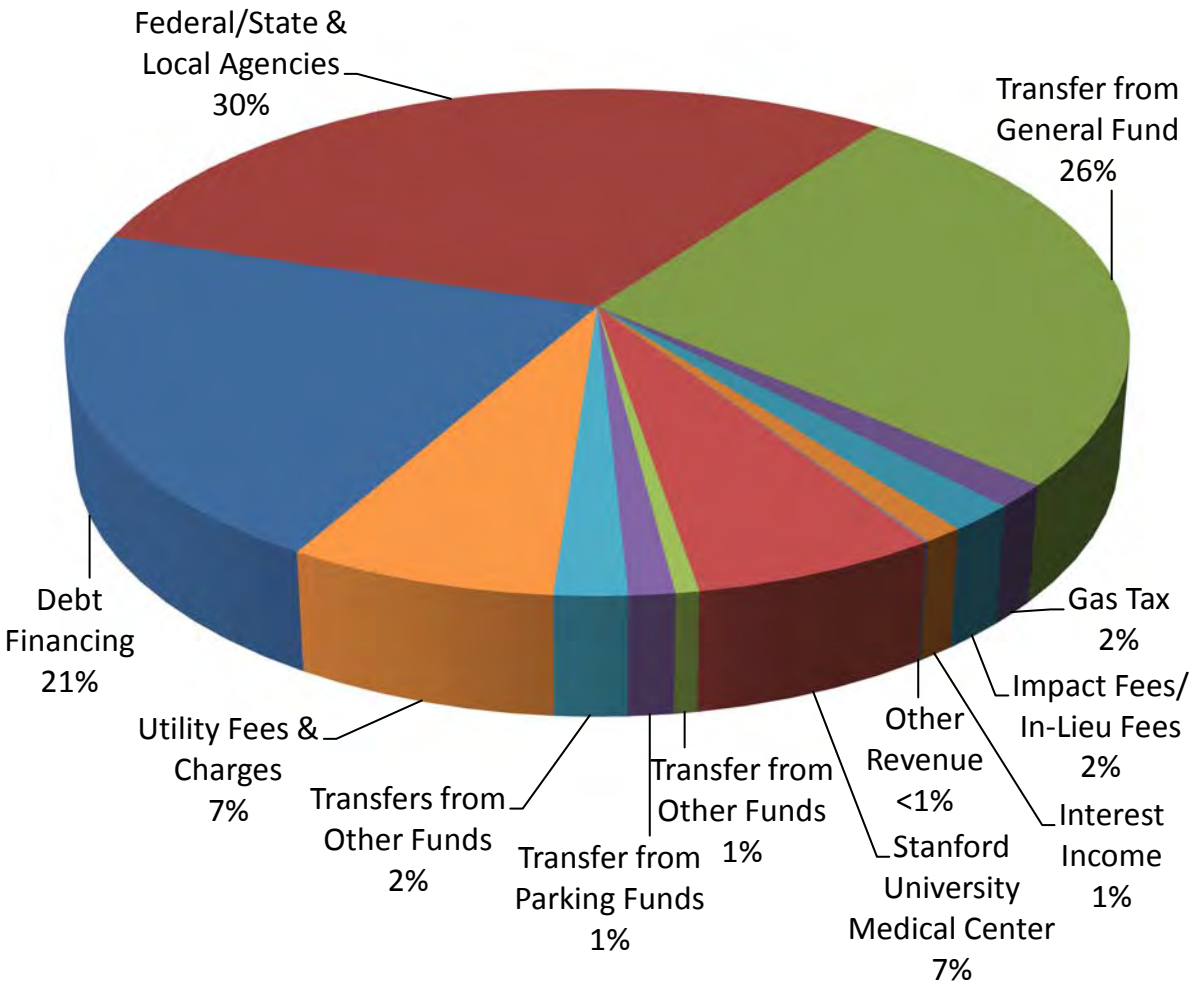
2017 Capital Budget Sources - $186.8 Million



2017-2021 Capital Budget Expenditures - $664.1 Million

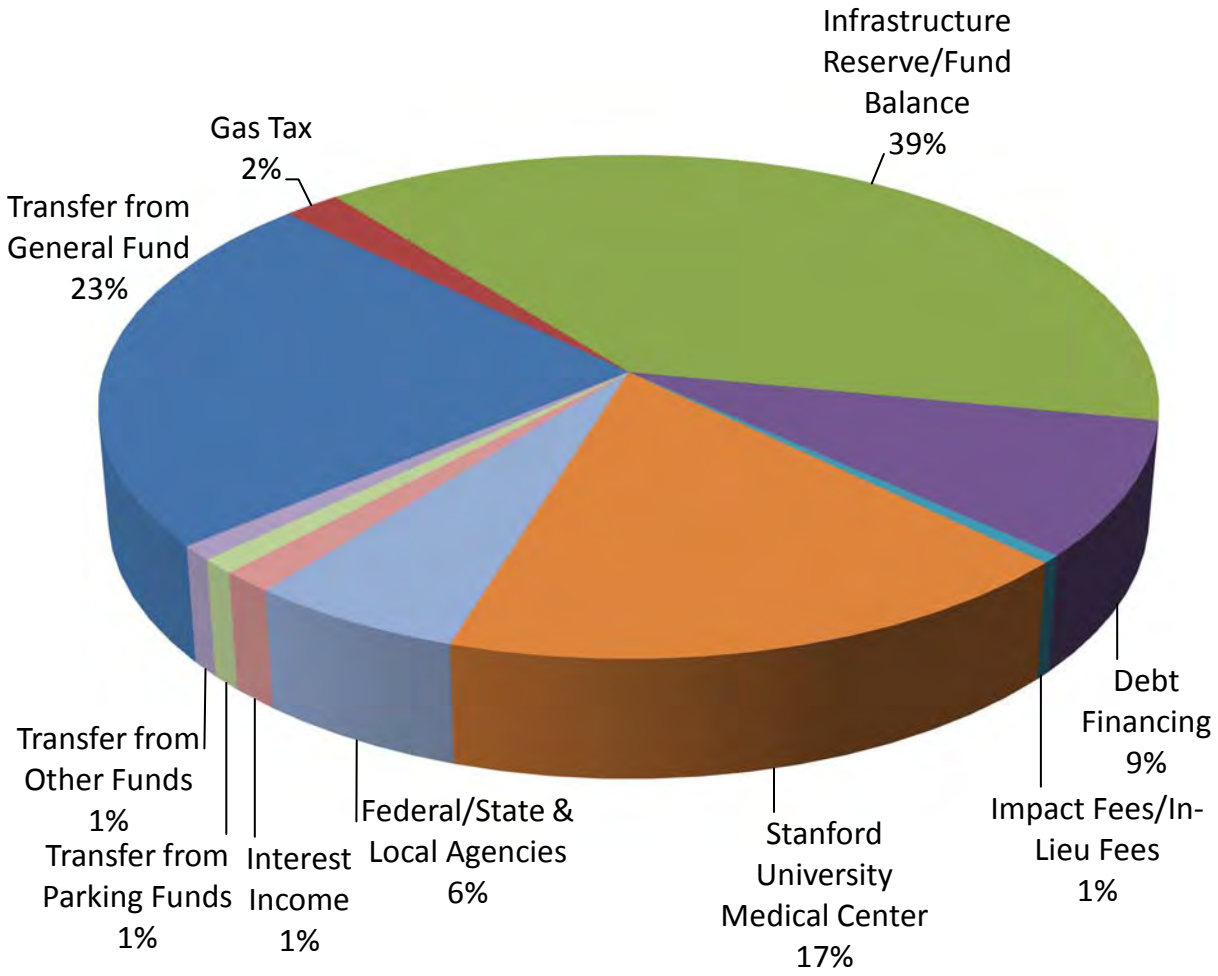


2017-2021 Capital Budget Revenues - $463.9 Million

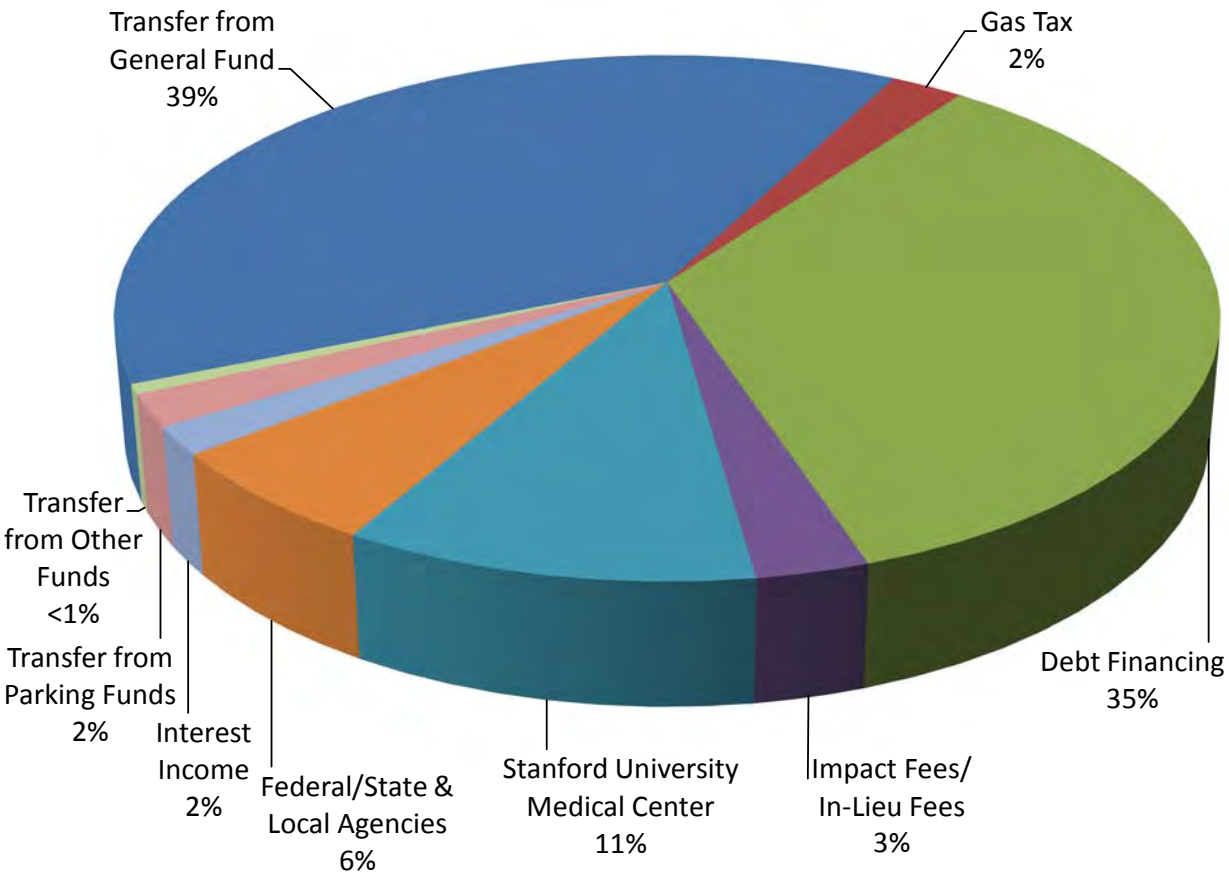


Note: This chart reflects revenues to the Capital Budget over the course of the five year plan. Neither fund balance nor use of reserves to provide funding for projects are reflected.

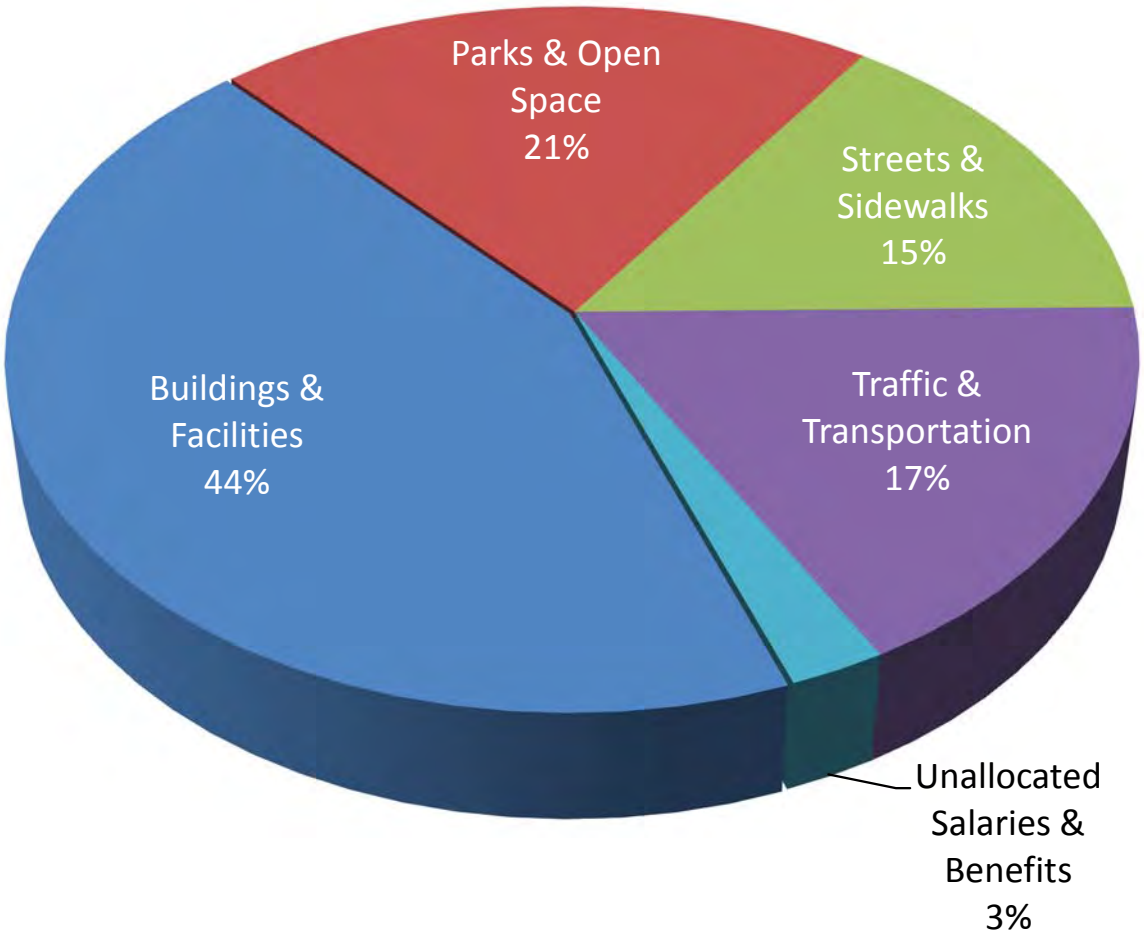
2017 Capital Improvement Fund Sources - $70.7 Million



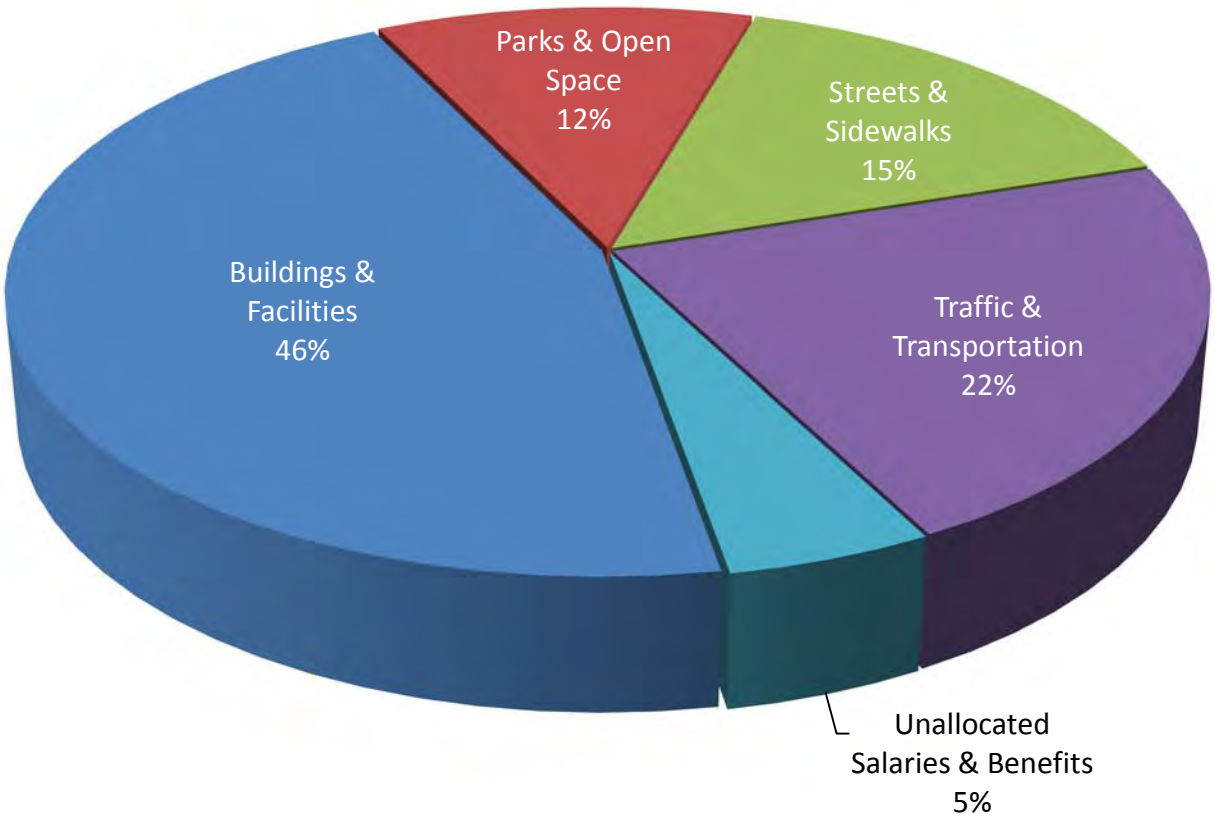
2017-2021 Capital Improvement Fund Revenue - $286.5Million



2017 Capital Improvement Fund Expenditures - $70.7 Million



2017-2021 Capital Improvement Fund Expenditures- $275.8 Million



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. There are, however, special or extraordinary capital improvement projects, refinancing of existing debt, and purchase of major and multiple pieces of equipment in which 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.

	Original Issue Amount	Balance June 30, 2015	Additions	Retirements	Balance June 30, 2016	Current Portion
Governmental Activity Debt:						
General Long Term Obligations:						
2002B Downtown Parking Improvements Certificates of Participation						
4.55-6.00%, due 03/01/2022	$ 3,555	$ 1,285		$ 150	$ 1,135	$ 160
2010A General Obligation Bonds						
2.00-5.00%, due 08/01/2040	55,305	51,470		1,070	50,400	1,110
2013A General Obligation Bonds						
2.00-5.00%, due 08/01/2043	20,695	20,225		380	19,845	390
2011 Golf Course Master Lease-Purchase Agreement						
2.49%, due 09/01/2018	3,222	1,643		395	1,248	406
Add: unamortized premium		4,084		158	3,926	158
Total Governmental Activity Debt	**$82,777**	**$78,707**	**$0**	**$2,153**	**$76,554**	**$2,224**
Business-type Activity Debt:						
Enterprise Long Term Obligations:						
Utility Revenue Bonds,						
1995 Series A, 5.00-6.25%, due 06/01/2020	$ 8,640	$ 2,860		$ 505	$ 2,355	$ 535
1999 Refunding, 3.25-5.25%, due 06/01/2024	17,735	10,345		665	9,680	700
2011 Series A, 3.00-4.00%, due 06/01/2026	17,225	13,320		1,005	12,315	1,045
Water Revenue Bonds						
2009 Series A, 1.80 - 4.65%, due 06/02/2035	35,015	30,700		955	29,745	990
Add: Unamoratized Premiem		840		70	770	70
Energy Tax Credit Bonds						
2007 Series A, 0%, due 12/15/2021	1,500	700		100	600	100
Less: Unamoratized Premiem		(38)		(6)	(32)	(54)
State Water Resources Loan						
2007, 0%, due 6/30/2029	9,000	6,300		450	5,850	450
2009, 2.6%, due 11/30/2030	8,500	7,200		370	6,830	378
Total Business-type Activity Debt	**$97,615**	**$72,227**	**$0**	**$4,114**	**$68,113**	**$4,214**

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 or Certificates of Participation) 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 Council. For all other City funds annual debt service shall not exceed 15 percent of annual operating expenses unless an exception is approved by 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 Financial Advisor to review proposed interest rates and proposed fees.
- Ensuring that the type of debt and debt structure developed ensure 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.
- Using debt 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.

Also, the Chief Financial Officer or Director of Administrative Services, supported by Treasury Division, will periodically evaluate its existing debt and execute re-financings when economically beneficial. A 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 a re-financing is optimal. As a "rule of thumb," a minimum 3 percent net present value savings will be used as a basis to begin re-financing efforts. As with new debt, all refinancings must be approved by Council.

Legal Debt Limit

Based upon the assessed valuation of $27.2 billion for the fiscal year ending June 30, 2015, the City is limited to general obligation indebtedness of $0.95 billion. As of June 30, 2015, the amount of debt applicable to the debt limit is $71.8 million, which is well below its legal debt limit. The debt amount is related to the voter approved general obligation bonds to renovate and build out the City's libraries including the Mitchell Park Library and Community Center.

Debt Obligations

Summaries of City of Palo Alto debt activity for Fiscal Year 2016 are provided in the following section.

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. Principal payments are due annually on March 1 and interest payments semi-annually on March 1 and September 1, and are payable from lease revenues received by the Corporation from the City's available funds.

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 Rinconada (formerly 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 percent to 5 percent, and are payable from property tax revenues.

The pledge of future Net Revenues for the above 2010 and 2013 bonds ends upon repayment of the $50.4 million and $19.9 million principal and $35.7 million and $13.5 million interest as the

remaining debt service on the bonds, which is scheduled to occur in Fiscal Year 2041 and Fiscal Year 2044, respectively. 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 eighteen Fire Department emergency vehicles. Lease proceeds were $3.2 million. Principal payments are due annually on September 1 and interest payments are due semi-annually on September 1 and March 1 at a rate of 2.49 percent, payable from General Fund revenues. As of June 30, 2016, there are $1.3 million in principal and $47,121 in interest outstanding.

1995 Utility Revenue Bonds, Series A

The City issued Utility Revenue Bonds on February 1, 1995 to finance certain extensions and improvements to the City's Storm Drainage and Surface Water System. 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 6.25 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 $2.4 million principal and $379,375 interest as the remaining debt service on the bonds, which is scheduled to occur in 2020.

1999 Utility Revenue and Refunding Bonds, Series A

The City issued Utility Revenue Bonds on June 1, 1999 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 “Storm Drain 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 Storm Drain (25.2 percent). Principal payments are payable annually on June 1, and interest payments semi-annually on June 1 and December 1. A $3.125 million 5.25 percent term bond, and a $5.12 million 5.25 percent term bond are due June 1, 2021 and 2024, respectively. 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 $9.7 million principal and $2.5 million interest as the remaining debt service on the bonds as of June 30, 2016, which is scheduled to occur in 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 $0.6 million remaining debt service on the bonds, which is scheduled to occur in 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 1.80 percent to 5.95 percent. The final debt service payment will be made in 2035. The 2009 were issued as bonds 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 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 are 32 percent of interest payable. 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 the subsidy payments amounting to $534,538, which represents 32.8 percent of the two interest payments due on June 1, 2015 and December 1, 2015.

The pledge of future Net Revenues of the above funds ends upon repayment of the $29.8 million principal and $19.0 million interest as the remaining debt service on the bonds as of June 30, 2016, which is scheduled to occur in June 2035.

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 commence 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, City of Mountain View agreed to finance a portion of the project with a $5 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 $4.8 million principal and $1.0 million in-substance interest as the remaining debt service on the bonds as of June 30, 2016, which is scheduled to occur in 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 $6.8 million principal and $1.5 million interest as the remaining debt service on the bonds as of June 30, 2016, which is scheduled to occur in November 2030.

2011 Utility Revenue Bonds, Series A

On September 22, 2011 the City issued Utility Revenue Bonds to refinance the 2002 Utility revenue bonds which was 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 percent to 4 percent. The Revenue Bonds are secured by net revenues generated by the Water Services and Gas Services Funds.

The pledge of future Net Revenues of the above funds ends upon repayment of the $12.3 million principal and $2.1 million interest as the remaining debt service on the bonds as of June 30, 2016, which is scheduled to occur in 2026.

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CAPITAL FUNDS PROJECTS

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CAPITAL IMPROVEMENT FUND

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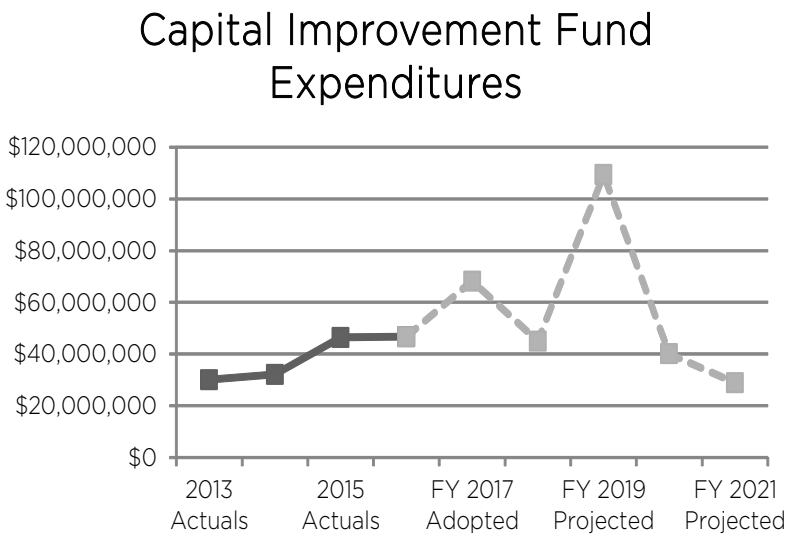
Overview

Capital improvement projects that are not funded by the enterprise/internal service funds are supported by the General Fund and through grants and reimbursements from other agencies. Examples of these projects, which are accounted for within the Capital Improvement Fund, include street maintenance, park improvements, facility improvements to libraries, community centers, and public safety facilities, traffic signals, and sidewalk improvements. For the entire Capital Improvement Fund, over one hundred projects are programmed over the 2017-2021 CIP, with a cumulative total cost of $271.3 million. Of this amount, $68.2 million is approved for Fiscal Year 2017, which includes $29.9 million for the continuation of projects approved by the City Council in prior fiscal years. The budget for the Capital Improvement Fund is broken into four separate categories: Buildings and Facilities, Parks and Open Space, Streets and Sidewalks, and Traffic and Transportation.



Also accounted for within the Capital Improvement Fund is the City Council approved Infrastructure Plan. In the 2016-2020 CIP, the Infrastructure Plan was estimated at $125.8 million. New cost estimates on some of the Infrastructure Plan projects have increased the cost of the plan to $128.8 million over the 2017-2021 CIP. The primary funding source for the Capital Improvement Fund is the annual transfer from the General Fund. In Fiscal Year 2017, this transfer will be $17.6 million, which includes a reduced annual base transfer of $9.6 million and the City Council approved Transient Occupancy Tax transfer of $8.0 million to support the Infrastructure Plan.

The Infrastructure Plan includes the following projects:

- a new public safety building
- two fire station replacements
- a new parking garage in the downtown area
- a new garage in the California Avenue area
- the completion of Byxbee Park
- the Highway 101 Pedestrian Bicycle Bridge
- the Bicycle and Pedestrian Transportation Plan

It is important to note that the cost estimates used to develop the $128.8 million Infrastructure Plan did not include salaries and benefits for City staff as existing staff will be assigned to infrastructure plan projects. Therefore, the costs programmed in this budget for infrastructure plan

projects exceed the amounts approved by the City Council in June 2014. As discussed in the Transmittal Letter, the Infrastructure Plan costs may increase by approximately $30 million. As a result, this funding has been set aside in an Infrastructure Plan Contingency Reserve. Further information on the Infrastructure Plan and the annual transfer from the General Fund to the Capital Improvement Fund is provided in the Transmittal Letter of this budget.

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, discussed elsewhere in this document. The 2017-2021 Capital Improvement Program includes projects totaling $122.3 million, with $29.7 million allocated in Fiscal Year 2017. Of the $29.7 million, over $12 million is 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: New Public Safety Building, Fire Station #3 Replacement, Fire Station #4 Replacement, New Downtown Parking Garage, and New California Avenue Area Parking Garage. These projects account for $94.8 million of the Infrastructure Plan. The total funding amount of $122.3 million for Building and Facilities over the 2017-2021 CIP represents approximately 45 percent 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

Recent Accomplishments

- Certification of the Mitchell Park Library and Community Center, which was opened to the public in November 2014, as the City's first Leadership in Energy and Environmental Design (LEED) platinum project.
- Completion of the Rinconada Pool Locker Room project, which added lockers and renovated the Rinconada Pool changing area, restrooms and showers.
- Completion of the Baylands Boardwalk Feasibility Study, which determined that construction of a new boardwalk is feasible and allowed design of the new boardwalk to commence
- Selection of California Avenue area parking lots C-6 and C-7 as the locations for the new public safety building and California Avenue area parking garage, respectively.

2017-2021 Capital Improvement Program

Recurring Projects

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

- Americans With Disabilities Act Compliance (Fiscal Year 2017: $0.3 million, 2017-2021 CIP: $1.1 million)
- Building Systems Improvements (Fiscal Year 2017: $0.3 million, 2017-2021 CIP: $1.3 million)
- City Facility Parking Lot Maintenance (Fiscal Year 2017: $0.7 million, 2017-2021 CIP: $1.8 million)
- Facility Interior Finishes Replacement (Fiscal Year 2017: $0.5 million, 2017-2021 CIP: $1.3 million)
- Roofing Replacement (Fiscal Year 2017: $0.4 million, 2017-2021 CIP: $2.1 million)
- University Avenue Parking Improvements (Fiscal Year 2017: $0.4 million, 2017-2021 CIP: $0.6 million)

Activities planned for Fiscal Year 2017 under these projects include parking lot resurfacing at California Avenue area Lot 4 (400 block of Cambridge) and Lot 9 (Cambridge/Birch), University Avenue area Lot O (Emerson/High) and Lot F (Florence/Lytton), Fire Station #2, the Golf Course, and Stanford/Palo Alto Playing Fields. Other work includes electrical panel replacement at Fire Station #5, replacement of Building Management System controls for the City Hall chiller, and re-roofing of the Rinconada Pool building and the Rinconada Park Restroom. Funding approved in FY 2016 for renovation of the third floor of City Hall under the Facility Interior Finishes Replacement project has been moved to a new project in Fiscal Year 2017. Finally, the Americans With Disabilities Act Compliance project will complete the update to the City's 20-year old ADA Transition Plan, identifying and planning for upcoming accessibility improvement needs.

Non-Recurring Projects

Design work on the New Public Safety Building, New California Avenue Area Parking Garage, and Fire Station #3 Replacement projects will be a high priority in Fiscal Year 2017. Other significant activities planned for Fiscal Year 2017 include projects at the Baylands Interpretive Center, the Lucie Stern Community Center, and the Ventura Community Center. At the Baylands Interpretive Center, three separate projects (Baylands Boardwalk Improvements, Baylands Nature Interpretive Center Exhibit Improvements, and Baylands Nature Interpretive Center Improvements) are being conducted. Design of a replacement Boardwalk is underway, and construction of the interpretive center improvements is scheduled to be completed in Fiscal Year 2017. Lucie Stern Center improvements include new mechanical systems that will include air conditioning and new electrical systems. Construction of these improvements in Fiscal Year 2016 was delayed while impacts on historic resources were considered, but will be completed in Fiscal Year 2017. Design of mechanical, electrical and accessibility improvements for the Ventura Community Center will be completed in Fiscal Year 2017.

New project funding in Fiscal Year 2017 includes renovations of City Hall floors 3 ($0.44 million), 4 ($0.35 million) and 5 ($0.4 million). These projects will provide updated meeting spaces and office furnishings, while bringing the spaces into compliance with current fire/life safety and

building code requirements. The new Performing Arts Soft Goods Replacement and Performing Arts Seat Replacement projects ($0.13 million total) will replace drapes, stage curtains, fabric backdrops and damaged seats at the Children's Theater, Community Theater, and Cubberley theater to improve the performing spaces and comply with fire codes. Finally, the Civic Center Electrical Upgrade and EV Charger Installation project ($0.65 million) will replaced the aging electrical switchgear and motor control centers, while providing funding for purchase and installation of approximately 43 new Level 2 Electric Vehicle charging stations at City parking garages, including the Civic Center garage. The funding for the electrical upgrade work ($0.35 million) has been moved from a Fiscal Year 2019 project 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.

Parks and Open Space

Maintenance, repair, and replacement of Open Space and Park amenities are managed jointly by the Community Services and Public Works Departments. Generally, Community Services oversees smaller projects as well as recurring projects with Public Works Engineering Services facilitating major one-time projects. The 2017-2021 CIP includes funding totaling $31.2 million in this category, with $13.9 million allocated in Fiscal Year 2017. Of this amount, $12.4 million is for the continuation of projects approved by the City Council in prior fiscal years ($10.2 million of which is for the Golf Course Reconfiguration and Baylands Athletic Center Improvements project).

Infrastructure Inventory - Summary of Parks & Open Space

CLASSIFICATION	QUANTITY
Parks	33
City Open Space/Conservation Lands	4
Parks, Preserves, and Open Space Acreage	8,271
Picnic Areas	39
Athletic Fields	33

Recent Accomplishments

- Renovation of Monroe Park
- Open Space amenities improvements at Foothills Park, Pearson-Arastradero Preserve, and Baylands Preserve
- Tennis court reconstruction at Hoover Park, Weisshaar Park, and Terman Park
- Successful completion of El Camino Park Restoration project and reopening in December 2015

2017-2021 Capital Improvement Program

Recurring Projects

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

- Art in Public Spaces (2017: $0.5 million, 2017-2021 CIP: $2 million)
- Benches, Signage, Fencing, Walkways, and Perimeter Landscaping (2017: $0.2 million, 2017-2021 CIP: $0.8 million)
- Off Road Pathway Resurfacing and Repair (2017: $0.2 million, 2017-2021 CIP: $0.7 million)
- Open Space Lakes and Ponds (2017: $0.07 million, 2017-2021 CIP: $0.2 million)
- Open Space Trails and Amenities (2017: $0.2 million, 2017-2021 CIP: $0.9 million)
- Parks and Open Space Emergency Repairs (2017: $0.1 million, 2017-2021 CIP: $0.4 million)
- Tennis and Basketball Court Resurfacing (2017: $0.5 million, 2017-2021 CIP: $1.4 million)

Funding for the other recurring projects within this category has not significantly changed from levels included in prior years.

Non-Recurring Projects

Significant projects included in this category during the 2017-2021 CIP include the Golf Course Restoration Project and improvements at various parks (Bol, Boulware, Cameron, Hoover, Mitchell, Peers, Ramos, Rinconada, Robles, and Seale). Other investments in open space areas are also included in the CIP plan, such as the Buckeye Creek Hydrology Study, Golf Course Driving Range Net and Artificial Turf Replacement, a Baylands Conservation Plan, and the Byxbee Park Completion project. The Golf Course Restoration Project is now scheduled to be completed in Fiscal Year 2018. The timeline for this project, which will renovate the Municipal Golf Course in accordance with the City Council-approved conceptual plan, has been extended due to difficulties in securing the regulatory permits required for this project. A revised project timeline and the final funding mechanisms were approved by the City Council in June 2016 with a July 1, 2016 begin date. The Buckeye Creek Hydrology Study, will analyze flooding conditions, recommend flood control structures, and provide drainage and erosion control solutions for the creek located within Foothills Park. The study will consider maintenance needs and land stewardship practices, with funding for the study in the amount of $190,000. The Baylands 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, anticipated to cost $330,000, will provide needed information on 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 and type of public art. In Fiscal Year 2018, replacement of the netting and artificial turf of the driving range at the Palo Alto Golf Course is planned based on use expectancy and condition. The replacement cost is estimated at $770,000 with annual operating revenue anticipated to offset the expense. Lastly, the CIP plan includes $3.0 million for the Byxbee Park Completion project. This project, included in the Infrastructure Plan and mostly offset with park impact fees, provides funding for the remaining improvements to Byxbee Park, following the completion of the remaining landfill capping work.

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). A cumulative total of $42.6 million is included in this category within the 2017-2021 CIP, with $10.7 million allocated in Fiscal Year 2017. Of the Fiscal Year 2017 amount, nearly $2 million is 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. The Fiscal Year 2017 Street Maintenance funding level of $6.6 million is more than triple the earlier base budget, and the citywide average PCI goal is expected to be reached in 2019, two years earlier than the initial goal. As a result, beginning in Fiscal Year 2020, Street Maintenance funding is being reduced to $3.7 million. The funding level for Sidewalk Repairs has also increased, with additional funding of $1.0 million per year since Fiscal Year 2013 as recommended by the IBRC. The increased funding has allowed the Sidewalks program to eliminate its accumulation of deferred maintenance or "catch-up" work, and to return to the original 1986 schedule of completing work in all 23 sidewalk "districts" by 2016. The total funding amount of $42.6 million for Streets and Sidewalks represents approximately 16% of the total Capital Improvement Fund CIP.

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

- Increase of the citywide average Pavement Condition Index score to 82 at the end of Calendar Year 2015.
- Completion of rubberized asphalt repaving of 31 blocks of Alma Street and Middlefield road in Fiscal Year 2016.
- Unanimous approval of the conceptual plan line for the Charleston/Arastradero Corridor project by City Council, following a process that included extensive public input.
- Initiation of construction work to complete the cycle of all 23 sidewalk districts by early Fiscal Year 2017. Increased sidewalk repairs funding recommended by the Infrastructure Blue Ribbon Commission has allowed the program to meet the 1986 goal of completing work in all districts within 30 years.

2017-2021 Capital Improvement Program

Recurring Projects

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

- Curb and Gutter Repairs (2017: $0.4 million, 2017-2021 CIP: $1.1 million)
- Sidewalk Repairs (2017: $2.4 million, 2017-2021 CIP: $10.1 million)
- Sign Reflectivity Upgrade (2017: $0.1 million, 2017-2021 CIP: $0.3 million)
- Street Lights Improvements (2017: $0.5 million, 2017-2021 CIP: $1.1 million)
- Street Maintenance (2017: $6.6 million, 2017-2021 CIP: $25.8 million)
- Thermoplastic Lane Marking and Striping (2017: $0.1 million, 2017-2021 CIP: $0.5 million)

Activities for Fiscal Year 2017 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, and will use the additional funding provided for Fiscal Years 2015 through 2017 to finish repaving the remaining 20 blocks of Alma Street and Middlefield Road with ruberrized asphalt. With the 2019 goal of achieving a citywide Pavement Condition Index of 85 approaching, the Street Maintenance project budget is scheduled to be reduced in Fiscal Years 2020 and 2021 to a level sufficient to maintain the new street conditions. Finally, an assessment of the sidewalk repair program will examine potential improvements to the district-based program as the 30-year district cycle is completed.

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 2017. Design of the Charleston/Arastradero Corridor project will be completed, and construction will be initiated on the first phase of the project. The Environmental Impact Report for the Newell Road/San Francisquito Creek Bridge Replacement project will result in selection of a preferred option, and the design will be advanced to 50 percent. Lastly, the Streetlights Condition Assessment project will fulfill the IBRC recommendation that Palo Alto's streetlights be inventoried and assessed, including recommendations for a cost-effective maintenance and replacement program.

Traffic and Transportation

Projects in this category are for the design and implementation of traffic flow enhancements, reduction of single occupancy vehicle trips, improvement of transportation, bicycle and pedestrian safety and mobility, and parking improvements. Planning, design, and construction of Traffic and Transportation projects are managed jointly by the Transportation Division of the Planning and Community Environment Department and the Public Works Department. Over the course of the 2017-2021 CIP, a cumulative total of $61.7 million is programmed, with $12.2 million allocated in Fiscal Year 2017. Of the Fiscal Year 2017 funding included within this category, $2.6 million is for the completion of projects approved by the City Council in prior fiscal years. The overall funding level of $61.7 million for programmed projects represents 23% of the total Capital Improvement Fund CIP.

Recent Accomplishments

- Gunn High School Bike Path access improvements at Georgia Avenue, Paradise Way, and Los Robles Avenue
- New crosswalks at East Meadow Drive and Waverley Street
- New green bicycle lanes on West Meadow Drive and El Camino Way
- Rectangular rapid flashing beacon installation at various crosswalks throughout the city

2017-2021 Capital Improvement Program

Recurring Projects

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

- Bicycle + Pedestrian Transportation Plan (2017: $2.2 million, 2017-2021 CIP: $17.9 million). In Fiscal Year 2017, all or the majority of three CIP projects from prior years will be folded into the Bicycle & Pedestrian Transportation Plan Implementation Project. They are: Churchill Enhanced Bikeway (PL-14000), Midtown Connector (PL-14001) Dinah Summerhill Bicycle/ Pedestrian Path (PL-11001). A new citywide bicycle sharing system will also be implemented under the Bicycle + Pedestrian Transportation Plan Implementation Project.
- Safe Routes to School (2017: $0.5 million, 2017-2021 CIP: $1.4 million)
- Traffic Signal and Intelligent Transportation Systems (2017: $1 million, 2017-2021 CIP: $2.7 million)
- Transportation and Parking Improvements (2017: $0.6 million, 2017-2021 CIP: $2.5 million)

Together, these projects improve transportation and safety and implement the Palo Alto Bicycle + Pedestrian Plan. The Bicycle + Pedestrian Transportation Plan project 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 was included in the Infrastructure Plan, and funded through transfers from the Stanford University Medical Center Development Agreement Fund. As mentioned previously, the 2016-2020 CIP included a reserve of $11.6 million in the Capital Improvement Fund for this project. This reserve will be liquidated beginning with 2017-2021 CIP and funds moved to the Bicycle & Pedestrian Transportation Implementation project during the course of the 5-Year CIP to fund the projects identified within the plan.

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, or design or construction projects not included within the Bicycle + Pedestrian Transportation Plan. There are several significant projects that fall within this category:

- Charleston/Arastradero Corridor Improvements: This project provides funding for the reconfiguration of the Charleston/Arastradero corridor, including engineering design and construction of new landscaped median islands, enhanced bike lanes, new street trees, bulb outs, and lighting. This project, which was only partially funded in the 2015-2019 CIP, is now fully funded as part of the 2017-2021 CIP. The Final design for the corridor will be done in Fiscal Year 2017. (2017: $3.1 million, 2017-2021 CIP: $9.6 million)

- Downtown Automated Parking Guidance Systems: This project includes the design only of automated parking guidance systems for the Downtown lots and garages. The final design for the systems will be completed in Fiscal Year 2017 with planned implementation scheduled in Fiscal Year 2018 pending identification of a funding source. The 2017-2021 CIP assumes a transfer from the University Avenue Parking Permit Fund which is contingent upon rate increases. (2017-2021 CIP: $2.2 million)
- Downtown Mobility and Safety Improvements: This project includes planning, design and construction for improvements in Downtown Palo Alto, including but not limited to installation of separated bikeways, additional bike parking, and traffic signal re-timing and calibration. (2017: $0.6 million, 2017-2021 CIP: $1.4 million)
- Downtown Parking Wayfinding: This project includes design of new parking wayfinding signage and replacements of existing lot, garage and wayfinding signage in the Downtown core. (2017: $0.7 million, 2017-2021 CIP: $1.1 million)
- Embarcadero Road Corridor Improvements: This project includes planning and construction of improvements at Embarcadero road at El Camino Real. Quarry Road Improvements: This project includes planning and construction of improvements at Quarry Road between El Camino Real and Welch Road, and pedestrian and bike improvements and landscaping between the Palo Alto transit center and Quarry road. (2017: $0.6 million, 2017-2021 CIP: $3.7 million)
- Residential Preferential Parking: The project allows for the planning and implementation of additional RPP Districts throughout the city as they become implemented. (2017: $0.3 million)

Summary of Capital Activity

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Beginning Fund Balance									
	Infrastructure Reserve - Beginning Fund Balance	0	52,672,562	6,551,152	11,750,769	7,669,221	2,660,880	5,119,148	33,751,170
	Reserve: Library Bond Proceeds	19,367,999	5,349,000	5,349,000	5,349,000	5,349,000	5,349,000	5,349,000	26,745,000
	Reserve: For Existing Capital Projects (fund balance)	57,841,000	0	29,930,249	0	0	0	0	29,930,249
	Reserve: Infrastructure Plan Contingency	0	0	0	0	0	30,000,000	30,000,000	60,000,000
	Reserve: Golf Course	0	0	1,179,830	0	0	0	0	1,179,830
	Reserve: Roth Building & TDAs	0	0	3,640,132	3,685,014	3,730,659	3,777,081	3,824,291	18,657,177
	Reserve: Infrastructure Plan	0	0	6,081,105	7,098,839	10,372,590	18,441,549	5,381,721	47,375,804
	Total Beginning Fund Balance	**77,208,999**	**58,021,562**	**52,731,468**	**27,883,622**	**27,121,471**	**60,228,510**	**49,674,160**	**217,639,231**

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
General Fund Contributions									
	Annual General Fund Capital Transfer	13,659,022	13,988,157	8,624,849	17,625,321	13,653,802	14,018,524	14,392,730	68,315,226
	Interest Income	1,004,331	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
	Transfer from General Fund - Additional Hotels and 2 % TOT increase	0	7,651,000	7,997,000	8,266,000	8,554,000	8,854,000	9,173,000	42,844,000
	FY 2015 General Fund Surplus	5,087,000	0	0	0	0	0	0	0
	FY 2016 Midyear Adjustments	0	7,019,327	0	0	0	0	0	0
	Total General Fund Contributions	**19,750,353**	**29,658,484**	**17,621,849**	**26,891,321**	**23,207,802**	**23,872,524**	**24,565,730**	**116,159,226**
Project Reimbursements & Fund Transfers									
Transfer from Development Impact Fee									
PE-18006	Byxbee Park Completion	0	0	0	2,800,000	0	0	0	2,800,000
	Total Transfer	**0**	**0**	**0**	**2,800,000**	**0**	**0**	**0**	**2,800,000**
Transfer from Traffic Impact Fee Fund									
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades	840,822	0	381,050	378,361	380,808	383,362	325,000	1,848,581
PL-04010	Bicyle and Pedestrian Plan	0	0	0	0	0	0	0	0
PL-14000	El Camino Real & Churchill Intersection Improvements-Design	307,608	0	0	1,000,000	0	0	0	1,000,000
PL-15001	Embarcadero Road Corridor Improvements	372,281	0	0	0	0	0	0	0
PL-11003	Palo Alto - Traffic Signal Central System Upgrade	364,472	0	0	0	0	0	0	0
	Total Transfer	**1,885,183**	**0**	**381,050**	**1,378,361**	**380,808**	**383,362**	**325,000**	**2,848,581**
Transfer from Gas Tax Fund									
PE-86070	Street Maintenance	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,270,000	1,270,000	6,440,000
PL-00026	Safe Routes To School	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000
PL-12000	Transportation and Parking Improvements	225,000	0	0	0	0	0	0	0
	Total Transfer	**1,625,000**	**1,400,000**	**1,400,000**	**1,400,000**	**1,400,000**	**1,370,000**	**1,370,000**	**6,940,000**
Transfer from University Ave Parking District									
PF-14003	University Avenue Parking Improvements	59,800	87,380	82,676	131,759	23,917	24,563	0	262,915
PF-16004	City Hall Parking Garage LED Lighting	0	245,608	0	0	0	0	0	0
PL-15002	Parking Guidance Systems, Access Controls, and Revenue Collection Equipment	171,760	0	0	2,000,000	0	0	0	2,000,000
PL-16002	Paid Parking	0	0	0	1,700,000	208,000	216,320	224,973	2,349,293
PL-15004	Parking Wayfinding	104,600	0	600,000	60,000	62,400	64,896	67,492	854,788
PL-12000	Transportation and Parking Improvements	400,000	0	0	0	0	0	0	0
	Total Transfer	**736,160**	**332,988**	**682,676**	**3,891,759**	**294,317**	**305,779**	**292,465**	**5,466,996**

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Transfer from California Ave Parking District									
PF-14004	California Avenue Parking District Parking Improvements	0	0	0	119,034	0	0	0	119,034
PE-17004	California Avenue District Gateway Signs	0	0	0	150,000	0	0	0	150,000
	Total Transfer	**0**	**0**	**0**	**269,034**	**0**	**0**	**0**	**269,034**
Transfer from SUMC Fund									
PE-13011	Charleston/Arastradero Corridor Project	0	0	1,550,000	0	0	0	0	1,550,000
PE-15001	New Public Safety Building	0	1,100,000	2,800,000	0	800,000	0	0	3,600,000
PE-15003	Fire Station 3 Replacement	0	0	6,000,000	0	0	0	0	6,000,000
PE-15007	New Downtown Parking Garage	0	0	0	0	9,072,000	0	0	9,072,000
PE-18004	Fire Station 4 Replacement	0	0	0	0	750,000	0	0	750,000
PL-16000	Quarry Road Improvements	0	92,004	800,000	0	0	0	0	800,000
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	1,200,000	1,200,000	1,200,000	5,200,000	1,200,000	1,200,000	0	8,800,000
	Total Transfer	**1,200,000**	**2,392,004**	**12,350,000**	**5,200,000**	**11,822,000**	**1,200,000**	**0**	**30,572,000**
Transfer from Utility Admin Fund									
PF-02022	Facility Interior Finishes Replacement	0	440,000	0	0	0	0	0	0
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	120,926	409,909	0	0	0	0	409,909
PF-17000	Municipal Services Center A, B, & C Roof Replacement	0	0	0	684,000	0	0	0	684,000
	Total Transfer	**0**	**560,926**	**409,909**	**684,000**	**0**	**0**	**0**	**1,093,909**
Transfer from Refuse Fund									
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	28,070	0	0	0	0	0	0
PL-15001	Embarcadero Road Corridor Improvements	0	15,810	0	0	0	0	0	0
PF-17000	Municipal Services Center A, B, & C Roof Replacement	0	0	0	19,000	0	0	0	19,000
	Total Transfer	**0**	**43,880**	**0**	**19,000**	**0**	**0**	**0**	**19,000**
Transfer from Vehicle Maintenance Fund									
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	31,711	263,198	0	0	0	0	263,198
PF-17000	Municipal Services Center A, B, & C Roof Replacement	0	0	0	380,000	0	0	0	380,000
	Total Transfer	**0**	**31,711**	**263,198**	**380,000**	**0**	**0**	**0**	**643,198**
Transfer from Cubberley Infrastructure									
PF-14000	Cubberley Roof Replacements	55,126	0	0	0	0	0	0	0
	Total Transfer	**55,126**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Transfer from University In-Lieu Parking Fund									
PE-15007	New Downtown Parking Garage	0	1,300,000	0	0	2,741,000	0	0	2,741,000
	Total Transfer	**0**	**1,300,000**	**0**	**0**	**2,741,000**	**0**	**0**	**2,741,000**
Bond Proceeds									
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements	0	0	6,148,437	0	0	0	0	6,148,437
	Total Bond Proceeds	**0**	**0**	**6,148,437**	**0**	**0**	**0**	**0**	**6,148,437**
Grants/Other Revenue									
FD-12000	Als Ekg Monitor Replacement: Stanford University	124,841	0	0	0	0	0	0	0
AC-14000	Art Center Auditorium Audio, Visual, And Furnishings: Donation	0	50,000	0	0	0	0	0	0
PE-13011	Charleston/Arastradero Corridor Project: Caltrans Grant	0	0	225,000	225,000	0	0	0	450,000
PE-13011	Charleston/Arastradero Corridor Project: VTA Grant	0	0	500,000	500,000	0	0	0	1,000,000
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation: BAAQMD Grant	0	0	0	220,000	0	40,000	0	260,000
PF-15005	Emergency Facilities Improvement: Insruance Reimbursement	64,762	423,000	0	0	0	0	0	0
FD-14002	Fire Ringdown System Replacement: Stanford University	0	0	24,000	0	0	0	0	24,000
PF-14002	Fire Station 1 Improvements: Other	205	0	0	0	0	0	0	0
PE-18004	Fire Station 4 Replacement: Certificates of Participation	0	0	0	0	1,579,000	0	0	1,579,000
LB-11000	Furniture & Technology For Library Projects: Donation	18,248	0	0	0	0	0	0	0
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements: SF Creek Joint Powers	0	0	2,935,944	0	0	0	0	2,935,944
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements: Soil Imports	995,854	183,976	0	0	0	0	0	0
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project: Grants from OBAG and County for Pedestrian/Bicycle Overpass Project	0	0	0	0	6,350,000	2,000,000	0	8,350,000
PE-18000	New California Avenue Area Parking Garage: Certificates of Participation	0	0	0	0	9,487,000	0	0	9,487,000
PE-15001	New Public Safety Building: Certificates of Participation	0	0	0	0	52,250,000	0	0	52,250,000
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement: Caltrans & Silicon Valley Water	0	0	0	0	2,500,000	0	0	2,500,000
PF-16003	Parking Lot Q Elevator Modernization: Homeowners Association Reimbursement	0	0	25,591	0	0	0	0	25,591
PF-07011	Roth Building Maintenance: Other	0	2,596,000	0	0	0	0	0	0
PL-00026	Safe Routes To School: Other	37,931	0	0	0	0	0	0	0
PE-86070	Street Maintenance: Other	946,421	0	0	0	0	0	0	0
PE-86070	Street Maintenance: Vehcile License Fee	0	385,000	385,000	385,000	385,000	385,000	385,000	1,925,000
PL-05030	Traffic Signal and Intelligent Transportation System Upgrades: Other	(6,718)	0	0	0	0	0	0	0

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
PL-12000	Transportation and Parking Improvements: TDA Grant	97,712	0	0	0	0	0	0	0
Other	Library Bond Funding to be returned to General CIP	0	1,051,500	0	0	0	0	0	0
Other	Infrastructure Contingency Reserve: Certificates of Participation	0	0	0	0	30,000,000	0	0	30,000,000
	Total Grants/Other Revenue	**2,279,257**	**4,689,476**	**4,095,535**	**1,330,000**	**102,551,000**	**2,425,000**	**385,000**	**110,786,535**
	Total Revenue	**27,531,079**	**40,409,469**	**43,352,654**	**44,243,475**	**142,396,927**	**29,556,665**	**26,938,195**	**286,487,916**
	Total Sources	**104,740,078**	**98,431,031**	**96,084,122**	**72,127,097**	**169,518,398**	**89,785,175**	**76,612,355**	**504,127,147**
Use of Funds									
Buildings & Facilities									
PF-93009	Americans With Disabilities Act Compliance	17,087	445,683	367,263	143,471	189,289	191,700	200,368	1,092,091
AC-14000	Art Center Auditorium Audio, Visual, And Furnishings	44,785	195,068	0	0	0	0	0	0
PF-07000	Art Center Electrical and Mechanical Upgrades	3,010	0	0	0	0	0	0	0
PE-14018	Baylands Boardwalk Improvements	14,266	74,277	422,191	0	1,000,000	0	0	1,422,191
PE-17006	Baylands Flood Protection Levee Improvements	0	0	1,000,000	0	0	0	0	1,000,000
AC-14001	Baylands Nature Interpretive Center Exhibit Improvements	0	0	56,000	0	0	0	0	56,000
PE-15029	Baylands Nature Interpretive Center Facility Improvements	21,266	191,641	676,546	0	0	0	0	676,546
PF-01003	Building Systems Improvements	85,326	405,836	310,481	238,599	241,801	245,090	301,948	1,337,919
PE-17004	California Ave District Gateway Signs	0	0	0	150,000	0	0	0	150,000
PF-14004	California Avenue Parking District Parking Improvements	0	175,333	29,600	138,582	0	0	0	168,182
AC-09001	Children's Theatre Replacement And Expansion	97,001	0	0	0	0	0	0	0
PE-09003	City Facility Parking Lot Maintenance	330,703	74,015	607,594	80,652	361,845	662,056	78,138	1,790,285
PE-12017	City Hall First Floor Renovations	2,849,495	963,474	161,995	0	0	0	0	161,995
PE-17002	City Hall Floor 3 Remodel	0	0	440,000	0	0	0	0	440,000
PE-17008	City Hall Floor 4 Remodel	0	0	350,000	0	0	0	0	350,000
PE-17009	City Hall Floor 5 Remodel	0	0	400,000	0	0	0	0	400,000
PF-16004	City Hall Parking Garage LED Lighting	0	20,608	225,000	0	0	0	0	225,000
PE-17010	Civic Center Electrical Upgrade & EV Charger Installation	0	0	650,000	0	0	0	0	650,000
PE-18016	Civic Center Fire Life Safety and Electrical Upgrades	0	0	0	142,884	763,439	161,823	0	1,068,146
PF-01002	Civic Center Infrastructure Improvements	42,329	0	0	0	0	0	0	0
PE-15020	Civic Center Waterproofing Study and Repairs	0	39,048	243,113	0	0	0	0	243,113
PF-11001	Council Chamber Carpet Replacement	80,000	0	0	0	0	0	0	0
PF-14000	Cubberley Roof Replacements	333,909	0	0	0	0	0	0	0

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
PE-09005	Downtown Library Improvements	0	40,889	0	0	0	0	0	0
PF-15005	Emergency Facilities Improvement	64,762	185,238	0	0	0	0	0	0
PF-02022	Facility Interior Finishes Replacement	398,707	98,065	499,795	195,766	214,289	166,700	225,368	1,301,918
FD-14002	Fire Ringdown System Replacement	0	0	157,500	0	0	0	0	157,500
PF-14002	Fire Station 1 Improvements	6,709	105,357	379,020	0	0	0	0	379,020
PE-15003	Fire Station 3 Replacement	0	811,308	6,352,703	55,803	0	0	0	6,408,506
PE-18004	Fire Station 4 Replacement	0	0	0	0	905,526	6,988,799	0	7,894,325
FD-13000	Foothills Fire Cameras	0	0	65,000	0	0	0	0	65,000
PF-05003	Foothills Park Interpretive Center Improvements	82,980	0	0	0	0	0	0	0
LB-11000	Furniture & Technology For Library Projects	1,092,122	190,695	0	0	0	0	0	0
PD-14000	Internal Alarm System Replacement	0	0	78,000	0	0	0	0	78,000
PE-09010	Library & Community Center - Temporary Facilities	15,580	9,935	117,155	0	0	0	0	117,155
PE-14015	Lucie Stern Buildings Mechanical and Electrical Upgrades	97,217	112,376	2,817,970	0	0	0	0	2,817,970
PE-09006	Mitchell Park Library and Community Center	6,000,980	439,266	2,883,927	0	0	0	0	2,883,927
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements	0	41,215	1,433,328	0	0	0	0	1,433,328
PF-17000	Municipal Services Center A, B, & C Roof Replacement	0	0	0	1,942,328	0	0	0	1,942,328
PE-18000	New California Avenue Area Parking Garage	0	0	1,371,572	8,983,526	0	0	0	10,355,098
PE-15007	New Downtown Parking Garage	0	182,778	1,420,977	120,977	11,919,829	44,404	0	13,506,187
PE-15001	New Public Safety Building	0	1,118,935	3,213,712	173,089	50,177,763	3,160,324	0	56,724,888
AC-09002	New Sound System For Lucie Stern Community Theatre	86,017	0	0	0	0	0	0	0
PG-09003	Park Maintenance Shop Remodel	0	88,419	6,000	0	0	0	0	6,000
PF-16003	Parking Lot Q Elevator Modernization	0	20,608	150,000	0	0	0	0	150,000
AC-18000	Performing Arts Venue Seat Replacement	0	0	0	75,000	0	0	0	75,000
AC-17000	Performing Arts Visual Venues Soft Goods Replacement	0	0	55,000	0	0	0	0	55,000
PE-98020	Public Safety Building Project	35,378	0	0	0	0	0	0	0
PE-11000	Rinconada Library New Construction and Improvements	10,041,940	309,762	1,025,278	0	0	0	0	1,025,278
PF-15000	Rinconada Pool Locker Room	265	441,215	0	0	0	0	0	0
PF-00006	Roofing Replacement	20,412	564,951	356,735	706,942	249,289	451,700	370,368	2,135,034
PF-07011	Roth Building Maintenance	8,375	4,313	45,888	0	0	0	0	45,888
PF-04000	Security System Improvements	0	59,768	0	0	0	0	0	0
PE-13012	Structural Assessment of City Bridges	848	185,393	0	0	0	0	0	0
PE-11012	Temporary Main Library	59,239	8,900	88,116	0	0	0	0	88,116
PF-14003	University Avenue Parking Improvements	19,211	52,741	447,687	131,759	23,917	24,563	0	627,926
PE-15011	Ventura Buildings Improvements	0	58,485	779,328	40,600	0	0	0	819,928
	Total Building & Facilities	**21,949,919**	**7,715,595**	**29,684,474**	**13,319,978**	**66,046,987**	**12,097,159**	**1,176,190**	**122,324,788**

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Parks & Open Space									
AC-86017	Art In Public Spaces	104,228	75,890	534,423	212,470	880,700	240,012	125,958	1,993,563
PG-17000	Baylands Comprehensive Conservation Plan	0	0	330,000	0	0	0	0	330,000
OS-09002	Baylands Emergency Access Levee Repair	300	0	265,602	0	0	0	0	265,602
PE-15028	Baylands Levee Improvements Feasibility	58,500	441,500	0	0	0	0	0	0
PG-06003	Benches, Signage, Walkways, Perimeter Landscaping	94,783	113,343	245,951	150,000	150,000	150,000	150,000	845,951
PE-16000	Bol Park Improvements	0	0	0	0	0	275,132	0	275,132
PE-17005	Boulware Park Improvements	0	0	45,000	0	0	50,666	400,000	495,666
PE-13008	Bowden Park Improvements	72,434	350,405	0	0	0	0	0	0
PG-15000	Buckeye Creek Hydrology Study	0	0	190,382	0	0	0	0	190,382
PE-18006	Byxbee Park Completion	0	0	0	0	2,636,252	354,019	0	2,990,271
PE-13020	Byxbee Park Trails	65,493	249,932	19,183	0	0	0	0	19,183
PG-14002	Cameron Park Improvements	0	0	0	0	0	159,994	0	159,994
PE-13005	City Hall/King Plaza Landscape	38,965	114,026	0	0	0	0	0	0
PG-13002	El Camino Park Playing Fields And Amenities	31,296	0	0	0	0	0	0	0
PE-13016	El Camino Park Restoration	2,038,013	3,694,648	0	0	0	0	0	0
PE-12012	Eleanor Pardee Park Improvements	539	31,597	0	0	0	0	0	0
PE-21000	Foothills Park Improvement Project	0	0	0	0	0	0	285,423	285,423
PG-17001	Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive Conservation Plan	0	0	0	0	0	0	300,000	300,000
PO-12003	Foothills Wildland Fire Mitigation Program	5,000	36,498	0	0	0	0	0	0
PG-18000	Golf Course Net and Artificial Turf Replacement	0	0	0	770,000	0	0	0	770,000
PG-12002	Golf Course Tree Maintenance	33,182	0	0	0	0	0	0	0
PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements	104,440	125,106	10,291,001	0	0	0	0	10,291,001
PE-13010	Greer Park Renovations	10,505	258,076	0	0	0	0	0	0
PE-18012	Hoover Park Improvements	0	0	49,335	0	0	0	530,804	580,139
PG-11000	Hopkins Park Improvements (Formerly Pe-07001)	82,500	0	0	0	0	0	0	0
PE-14010	Latp Site Dev Preparation And Security Improve	1,541	0	0	0	0	0	0	0
PE-12013	Magical Bridge Playground	3,051,114	180,511	0	0	0	0	0	0
PE-17000	Mitchell Park Adobe Creek Bridge Replacement	0	0	250,000	0	0	0	0	250,000
PE-18010	Mitchell Park Improvements	0	0	0	0	74,110	1,408,311	0	1,482,421
PG-11002	Monroe Park Improvements (Formerly Pe-11003)	7,700	270,998	0	0	0	0	0	0
OS-09001	Off-Road Pathway Resurfacing And Repair	159,545	143,056	199,080	121,143	121,713	122,300	123,192	687,428
OS-00002	Open Space Lakes And Pond Maintenance	17,584	24,591	65,409	45,000	45,000	45,000	45,000	245,409
OS-00001	Open Space Trails and Amenities	170,594	383,385	235,859	175,000	175,000	175,000	175,000	935,859
PE-15022	Palo Alto Community Gardens Irrigation System	8,832	228,520	0	0	0	0	0	0
PG-09002	Park and Open Space Emergency Repairs	69,196	69,828	111,157	75,000	75,000	75,000	75,000	411,157
PE-17001	Park Restroom Installation and Renovation	0	0	0	0	0	0	0	0

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
PF-12001	Parks And Pwd Trees Work Space Imprv	796	0	0	0	0	0	0	0
PE-13003	Parks, Trails, Open Space, & Recreation Master Plan	354,084	259,797	0	0	0	0	0	0
PE-21001	Pearson Atascadero Improvement Project	0	0	0	0	0	0	306,595	306,595
PG-14001	Peers Park Improvements	0	0	0	0	0	229,019	0	229,019
PG-14000	Ramos Park Improvements	0	0	0	199,019	0	0	0	199,019
PE-08001	Rinconada Park Improvements	4,325	0	0	3,616,080	0	0	0	3,616,080
PE-12003	Rinconada Park Master Plan and Design	63,013	151,800	5,429	0	0	0	0	5,429
PE-18015	Robles Park Improvements	0	0	0	0	0	0	755,722	755,722
PG-12004	Sarah Wallis Park Improvements	0	16,998	48,002	0	0	0	0	48,002
PG-11003	Scott Park Improvements (Formerly Pe-11004)	73,967	25,415	0	0	0	0	0	0
PG-14003	Seale Park Improvements	0	0	0	354,019	0	0	0	354,019
PG-12001	Stanford/Palo Alto Playing Fields Netting	0	0	50,000	0	0	0	0	50,000
PG-13001	Stanford/Palo Alto Playing Fields Soccer Turf Replacement	7,238	999,305	493,437	0	0	0	0	493,437
PG-06001	Tennis and Basketball Court Resurfacing	10,965	362,790	497,460	215,000	215,000	215,000	215,000	1,357,460
	Total Parks & Open Space	**6,740,672**	**8,608,015**	**13,926,710**	**5,932,731**	**4,372,775**	**3,499,453**	**3,487,694**	**31,219,363**
Streets and Sidewalks									
PO-12001	Curb and Gutter Repairs	367,695	204,669	447,063	172,364	174,317	176,324	179,377	1,149,445
PL-11001	Dinah Summerhill Pedestrian/Bicycle Path	0	2,411	113,641	0	0	0	0	113,641
PE-13017	El Camino Median Landscape Improvements	4,786	34,208	326,445	0	0	0	776,000	1,102,445
PE-12011	Newell Road/San Francisquito Creek Bridge Replacement	57,415	946,570	25,000	2,500,000	0	0	0	2,525,000
PL-11003	Palo Alto - Traffic Signal Central System Upgrade	364,472	0	0	0	0	0	0	0
PO-89003	Sidewalk Repairs	2,714,017	3,127,568	2,437,177	1,900,327	1,905,466	1,910,743	1,918,772	10,072,485
PO-11000	Sign Reflectivity Upgrade	17,475	97,525	94,411	50,000	50,000	50,000	50,000	294,411
PO-05054	Street Lights Improvements	61,434	95,248	467,982	164,484	164,875	165,276	165,887	1,128,504
PE-86070	Street Maintenance	5,228,421	11,579,218	6,634,615	5,762,280	5,779,638	3,778,078	3,805,201	25,759,812
PE-13014	Streetlights Condition Assessment	1,686	250,286	5,078	0	0	0	0	5,078
PO-11001	Thermoplastic Lane Marking and Striping	75,696	101,313	128,652	83,250	83,472	83,702	84,050	463,126
PE-16002	Traffic Circle Improvements	648	100,000	0	0	0	0	0	0
	Total Streets and Sidewalks	**8,893,745**	**16,539,016**	**10,680,064**	**10,632,705**	**8,157,768**	**6,164,123**	**6,979,287**	**42,613,947**
Traffic and Transportation									
PL-04010	Bicycle and Pedestrian Plan-Implementation Project	626,746	2,051,940	2,242,795	3,666,422	3,673,079	3,680,002	4,681,321	17,943,619
PL-11002	California Avenue- Transit Hub Corridor Project	5,597,473	466,946	199,705	0	0	0	0	199,705
PE-13011	Charleston/Arastradero Corridor Project	525,247	1,028,537	3,128,332	160,476	3,164,809	3,169,259	0	9,622,876
PL-14000	Churchill Avenue Enhanced Bikeway	39,108	129,790	106,529	1,037,670	39,177	0	0	1,183,376
PL-15002	Downtown Automated Parking Guidance Systems, Access Controls, and Revenue Collection Equipment	0	62,036	129,724	2,030,045	31,247	0	0	2,191,016

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
PL-16001	Downtown Mobility and Safety Improvements	0	0	563,143	815,669	68,296	0	0	1,447,108
PL-16002	Downtown Parking Management & System Implementation	0	0	0	1,722,970	231,889	241,164	250,811	2,446,834
PL-15004	Downtown Parking Wayfinding	18,365	60,711	657,600	93,359	97,093	100,977	105,016	1,054,045
PL-15001	Embarcadero Road at El Camino Real Improvements	4,750	815,024	570,112	1,293,662	1,795,409	47,225	0	3,706,408
PE-11011	Highway 101 Pedestrian/Bicycle Overpass Project	640,516	1,737,360	338,385	331,125	11,340,065	0	0	12,009,575
PL-14001	Midtown Connector	114,667	58,766	210,218	0	0	0	0	210,218
PL-16000	Quarry Road Improvements	0	92,004	822,007	22,887	0	0	0	844,894
PL-17001	Railroad Grade Separation	0	0	834,696	1,036,084	37,527	0	0	1,908,307
PL-15003	Residential Preferential Parking	0	368,500	330,045	31,247	0	0	0	361,292
PL-00026	Safe Routes To School	92,728	247,271	463,376	217,246	221,936	226,814	231,886	1,361,258
PL-05030	Traffic Signal and Intelligent Transportation System	783,214	1,139,064	985,497	416,030	419,671	423,458	427,397	2,672,053
PL-12000	Transportation and Parking Improvements	369,366	471,518	574,472	451,667	460,734	470,163	554,970	2,512,006
	Total Traffic and Transportation	**8,812,180**	**8,729,467**	**12,156,636**	**13,326,559**	**21,580,932**	**8,359,062**	**6,251,401**	**61,674,590**
Unallocated Salaries and Benefits									
AS-10000	Salaries and Benefits - Capital Improvement Fund CIP Projects	22,000	2,076,773	1,739,291	1,793,653	2,465,997	3,325,789	4,380,511	13,499,674
	Total Unallocated Salaries and Benefits	**22,000**	**2,076,773**	**1,739,291**	**1,793,653**	**2,465,997**	**3,325,789**	**4,380,511**	**13,499,674**
	Total Project Expenses	**46,418,516**	**43,668,866**	**68,187,175**	**45,005,626**	**102,624,459**	**33,445,586**	**22,275,083**	**271,332,362**
Operating Transfers Out									
PL-15002	University Ave Parking District	300,000	0	0	0	0	0	0	0
Other	Parking In-Lieu Fund: Repayment	0	2,030,697	0	0	0	0	0	0
PF-16006	Municipal Service Center Lighting, Mechanical, and Electrical Improvements: Reapayment	0	0	13,325	0	0	0	0	13,325
	Total Transfer	**300,000**	**2,030,697**	**13,325**	**0**	**0**	**0**	**0**	**13,325**
Debt Service									
	Certificates of Participation	0	0	0	0	6,665,429	6,665,429	6,665,429	19,996,287
	Total Debt Service	**0**	**0**	**0**	**0**	**6,665,429**	**6,665,429**	**6,665,429**	**19,996,287**
	Total Expenses	**46,718,516**	**45,699,563**	**68,200,500**	**45,005,626**	**109,289,888**	**40,111,015**	**28,940,512**	**291,341,974**
Reserves									
	Reserve: Instrastructure Contingency	0	0	0	0	30,000,000	30,000,000	30,000,000	90,000,000
	Reserve: For Existing Capital Projects (fund balance)	0	29,930,249	0	0	0	0	0	0
	Reserve: Library Bond Proceeds	5,349,000	5,349,000	5,349,000	5,349,000	5,349,000	5,349,000	5,349,000	26,745,000

CAPITAL IMPROVEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
	Reserve: Golf Course	0	1,179,830	0	0	0	0	0	0
	Reserve: Roth Building & TDAs	0	3,640,132	3,685,014	3,730,659	3,777,081	3,824,291	3,872,304	18,889,350
	Reserve: Infrastructure Plan	0	6,081,105	7,098,839	10,372,590	18,441,549	5,381,721	887,602	42,182,301
	Total Reserves	**5,349,000**	**46,180,316**	**16,132,853**	**19,452,249**	**57,567,630**	**44,555,012**	**40,108,906**	**177,816,651**
	Total Ending Fund Balance (Infrastructure Reserve)	**52,672,562**	**6,551,152**	**11,750,769**	**7,669,221**	**2,660,880**	**5,119,148**	**7,562,937**	**34,968,522**
	Total Uses	**104,740,078**	**98,431,031**	**96,084,122**	**72,127,097**	**169,518,398**	**89,785,175**	**76,612,355**	**504,127,147**

City of Palo Alto

2017-2021 Proposed Capital Improvement Program, General Fund

Note: Project locations are approximate

Buildings and Facilities

1	AC-14001	Baylands Nature Interpretive Center Improvements
2	AC-17000	Performing Arts Visual Venues Soft Goods Replacement
3	AC-18000	Performing Arts Venue Seat Replacement
4	PD-14000	Internal Alarm System Replacement
5	PE-09006	Mitchell Park Library and Community Center
6	PE-11000	Rinconada Library New Construction and Improvements
7	PE-11012	Temporary Main Library
8	PE-12017	City Hall First Floor Renovations
9	PE-14015	Lucie Stern Buildings Mechanical and Electrical Upgrades
10	PE-14018	Baylands Boardwalk Improvements
11	PE-15001	New Public Safety Building
12	PE-15003	Fire Station 3 Replacement
13	PE-15007	New Downtown Parking Garage
14	PE-15011	Ventura Buildings Improvements
15	PE-15020	Civic Center Waterproofing Study and Repairs
16	PE-15029	Baylands Nature Interpretive Center Facility Improvements
17	PE-17002	City Hall Floor 3 Remodel
18	PE-17004	California Avenue District Gateway Signs
19	PE-17006	Baylands Flood Protection Levee Improvements
20	PE-17008	City Hall Floor 4 Remodel
21	PE-17009	City Hall Floor 5 Remodel
22	PE-17010	Civic Center Elec Upgrade & EV Charger Installation
23	PE-18000	New California Avenue Area Parking Garage
24	PE-18004	Fire Station 4 Replacement
25	PE-18016	Civic Center Fire Life Safety and Electrical Upgrades
26	PF-07011	Roth Building Maintenance
27	PF-14002	Fire Station 1 Improvements
28	PF-14004	California Avenue Parking District Parking Improvements
29	PF-16003	Parking Lot Q Elevator Modernization
30	PF-16004	City Hall Parking Garage LED Lighting
31	PF-16006	MSC, Mechanical, and Electrical Improvements
32	PF-17000	Municipal Services Center A, B, & C Roof Replacement
33	PE-15007	New Downtown Parking Garage

Parks and Open Space

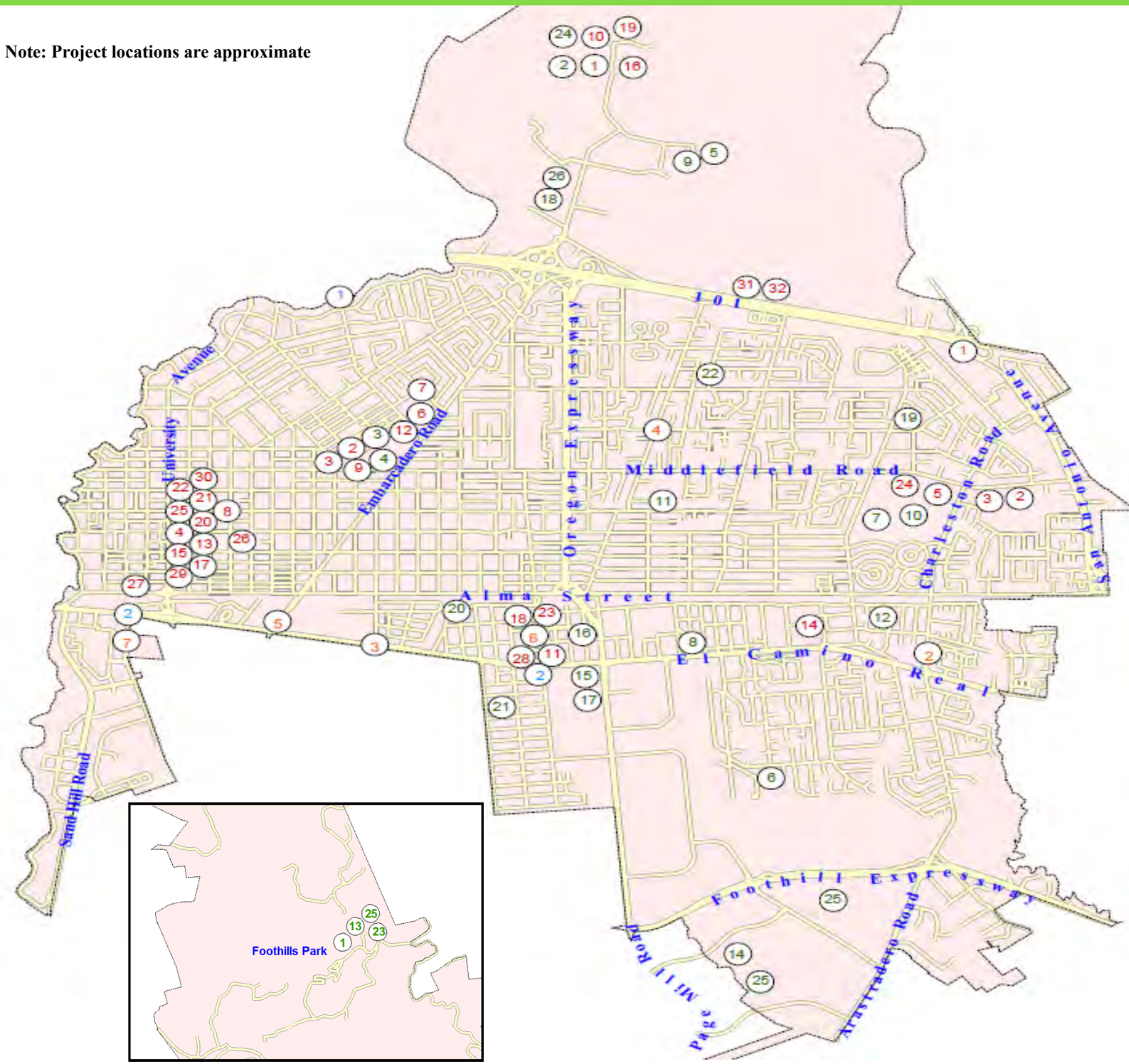
1	OS-00002	Open Space Lakes and Pond Maintenance
2	OS-09002	Baylands Emergency Access Levee Repair
3	PE-08001	Rinconada Park Improvements
4	PE-12003	Rinconada Park Master Plan and Design
5	PE-13020	Byxbee Park Trails
6	PE-16000	Bol Park Improvements
7	PE-17000	Mitchell Park Adobe Creek Bridge Replacement
8	PE-17005	Boulware Park Improvements
9	PE-18006	Byxbee Park Completion
10	PE-18010	Mitchell Park Improvements
11	PE-18012	Hoover Park Improvements
12	PE-18015	Robles Park Improvements
13	PE-21000	Foothills Park Improvement Project
14	PE-21001	Pearson Arastradero Improvement Project
15	PG-12001	Stanford/Palo Alto Playing Fields Netting
16	PG-12004	Sarah Wallis Park Improvements
17	PG-13001	Stanford/Palo Alto Playing Fields Soccer Turf Replace
18	PG-13003	Golf Reconfiguration & Baylands Athletic Center Improvements
19	PG-14000	Ramos Park Improvements
20	PG-14001	Peers Park Improvements
21	PG-14002	Cameron Park Improvements
22	PG-14003	Seale Park Improvements
23	PG-15000	Buckeye Creek Hydrology Study
24	PG-17000	Baylands Comprehensive Conservation Plan
25	PG-17001	Foothills Park, Pearson Arastradero Preserve & Esther Clark
26	PG-18000	Golf Course Net and Artificial Turf Replacement

Streets and Sidewalks

1	PE-12011	Newell Road/San Francisquito Creek Bridge Replace
2	PE-13017	El Camino Median Landscape Improvements

Traffic and Transportation

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-14001	Midtown Connector
5	PL15001	Embarcadero Road at El Camino Real Improvements
6	PL-15002	Downtown Automated Parking Guidance Systems, Access Controls and Revenue Collections Equipment
7	PL-16000	Quarry Road Improvements and Transit Center Access



CITY OF
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Buildings and Facilities

Palo Alto Airport Terminal, January 2015

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

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 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

Projects identified for upcoming work include:

Fiscal Year 2017: ADA Transition Plan completion; Restroom Upgrades at Children's Theatre

Fiscal Year 2018: Restroom Upgrades at Ventura Community Center

Fiscal Year 2019: Accessibility Upgrades at Foothills Park

Fiscal Year 2020: Restroom Upgrades at Community Theater

Fiscal Year 2021: To be determined

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	670,618	445,683	367,263	143,471	189,289	191,700	200,368	1,092,091	0	N/A
Total	**N/A**	**670,618**	**445,683**	**367,263**	**143,471**	**189,289**	**191,700**	**200,368**	**1,092,091**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	606,715	445,683	367,263	143,471	189,289	191,700	200,368	1,092,091	0	N/A
Design	N/A	63,903	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**670,618**	**445,683**	**367,263**	**143,471**	**189,289**	**191,700**	**200,368**	**1,092,091**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Access

Goal: C-5

Policy: C-32

Program: C-27

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Environmental Impact Analysis:

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

Baylands Boardwalk, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 2775 Embarcadero Way

Managing Department: Public Works
IBRC Reference: Catch-up

Initial Project Start: Spring 2015
Initial Project Completion: Fall 2015

Revised Project Start:
Revised Project Completion: Spring 2019

Project Number: PE-14018

Baylands Boardwalk Improvements

Description

This project provides funding for design and construction of a replacement boardwalk at the Baylands Nature Interpretive Center.

Justification

The Baylands Nature Interpretive Center serves 80,000 visitors annually, approximately 2,900 of whom are elementary school students. The Baylands Interpretive Center Boardwalk provides a unique opportunity for visitors to view a pristine salt marsh habitat that is home to the endangered clapper rail and salt marsh harvest mouse. In 2014, the boardwalk was closed due to safety concerns. In order to reopen the boardwalk, safety issues and structural improvements need to be addressed.

Supplemental Information

A structural feasibility study has been completed. The feasibility study concluded that the existing boardwalk can be replaced, and informed stability needs, slope and landing improvements, plank replacement and interpretive information nodes replacement.

Before construction can begin, various regulatory permits are expected to be needed for construction of improvements. The lead time for permit approval may be significant and is being evaluated during the feasibility study process. Agencies from whom permits are needed may include United Stated Fish and Wildlife Services, Army Corps of Engineers, and San Francisco Bay Conservation and Development Commission.

Significant Changes

2017-2021 CIP: Project schedule revised to include design and construction phases. Design and construction budget added through Fiscal Year 2016 Council action included in project budget.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	14,266	96,468	74,277	422,191	0	1,000,000	0	0	1,422,191	0	1,510,734
Total	**14,266**	**96,468**	**74,277**	**422,191**	**0**	**1,000,000**	**0**	**0**	**1,422,191**	**0**	**1,510,734**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	50,000	0	0	0	1,000,000	0	0	1,000,000	0	1,000,000
Design	14,266	46,468	74,277	422,191	0	0	0	0	422,191	0	510,734
Total	**14,266**	**96,468**	**74,277**	**422,191**	**0**	**1,000,000**	**0**	**0**	**1,422,191**	**0**	**1,510,734**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

CEQA review will be required

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto Baylands

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017

Revised Project Start:
Revised Project Completion:

Project Number: PE-17006

Baylands Flood Protection Levee Improvements

Description

This project provides funding for design of improvements to the existing network of flood protection levees in the Palo Alto Baylands between San Francisquito Creek and Mountain View. The project will be designed to provide 1% (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 Francisquito Creek Joint Powers Authorityís (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. Funding for project design is being requested at this time. Construction funding will likely be sought through a regional ballot measure for a special tax or assessment in the affected communities.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	1,000,000	0	0	0	0	1,000,000	0	1,000,000
Total	**0**	**0**	**0**	**1,000,000**	**0**	**0**	**0**	**0**	**1,000,000**	**0**	**1,000,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	1,000,000	0	0	0	0	1,000,000	0	1,000,000
Total	**0**	**0**	**0**	**1,000,000**	**0**	**0**	**0**	**0**	**1,000,000**	**0**	**1,000,000**

Operating Impact

No changes to City operating expenses are anticipated as a result of this project, since the existing levees are and the improved levees will be maintained by the Santa Clara Valley Water District.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Natural Hazards

Goal: N-10

Policy: N-52

Program: N-76

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 may require environmental review

Baylands Nature Interpretive Center, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Baylands Nature Interpretive Center

Managing Department: Community Services
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Summer 2017

Revised Project Start:
Revised Project Completion:

Project Number: AC-14001

Baylands Nature Interpretive Center Exhibit Improvements

Description

This project provides funding to replace worn out or non-functioning exhibits at the aging Baylands Nature Interpretive Center including signage and graphics to make the facility more visible and usable for science programs, public use, and facility rentals.

Justification

The Baylands Interpretive Center facility serves approximately 129 classes and camps, 3,000 elementary students, and 80,000 visitors annually. The number of annual visitors increased with the opening of an adjacent Eco Center building operated by the Environmental Volunteers. Exhibit improvements are needed to effectively serve these visitor levels.

Supplemental Information

Replacement of exhibits will be completed in coordination with the Baylands Nature Interpretive Center Facility Improvements project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	56,000	0	56,000	0	0	0	0	56,000	0	56,000
Total	**0**	**56,000**	**0**	**56,000**	**0**	**0**	**0**	**0**	**56,000**	**0**	**56,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	56,000	0	56,000	0	0	0	0	56,000	0	56,000
Total	**0**	**56,000**	**0**	**56,000**	**0**	**0**	**0**	**0**	**56,000**	**0**	**56,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is expected to be categorically exempt from CEQA under Section 15301.

Baylands Nature Interpretive Center, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Baylands Nature Interpretive Center

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Spring 2015
Initial Project Completion: Spring 2016

Revised Project Start: Winter 2015
Revised Project Completion: Spring 2017

Project Number: PE-15029

Baylands Nature Interpretive Center Facility Improvements

Description

This project provides funding for renovation improvements to the Baylands Nature Interpretive Center including replacement of decking, railing, structural framing members, exterior wood siding, flooring, cabinetry, and/or doors and restrooms.

Justification

Due to its age and exposure to the elements, the Baylands Nature Interpretive Center is in need of structural and maintenance improvements. These improvements will enhance public use and afford opportunities for science programs and facility rentals.

Supplemental Information

The potential need for regulatory permits is being evaluated during the design phase. Relocation of classes to an alternative site will be required during the construction phase.

Significant Changes

2017-2021 CIP: This project has been determined to be subject to CEQA, resulting in an extension of the schedule and increased design costs. Additional construction budget has been added to provide funding for ADA restroom renovations needs identified during the design phase.

2016-2020 CIP: Project schedule revised to include design and construction phases and earlier start for the design phase.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	21,265	546,187	191,641	676,546	0	0	0	0	676,546	0	889,452
Total	**21,265**	**546,187**	**191,641**	**676,546**	**0**	**0**	**0**	**0**	**676,546**	**0**	**889,452**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	505,000	191,641	606,546	0	0	0	0	606,546	0	798,187
Design	21,265	41,187	0	70,000	0	0	0	0	70,000	0	91,265
Total	**21,265**	**546,187**	**191,641**	**676,546**	**0**	**0**	**0**	**0**	**676,546**	**0**	**889,452**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

CEQA review will be required

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

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

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

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 allows upgrades to the electrical systems 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 are requiring the need for the installation of card access and camera systems. This project also provides funding for replacement of unforeseen equipment failures. As equipment is upgraded, 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 2017: Electrical panel replacement at Fire Station #5, installation of six new card access doors at the MSC, replacement of BMS controls for City Hall chiller, City Hall elevator improvements, and replacement of the domestic water control system at City Hall

Fiscal Year 2018: Installation of HVAC equipment in the Art Center basement and replacement of BMS controls as Lucie Stern Community Theatre.

Fiscal Year 2019: Replacement of BMS controls at MSC-Building B and Boiler replacement at Utility Control Center.

Fiscal Year 2020: LED lighting upgrades in City Parks and BMS controls for the Utility Control Center.

Fiscal Year 2021: Pool heaters (4ea), roof top heating units, larger exhaust fans, and dehumidifiers.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	405,836	405,836	310,481	238,599	241,801	245,090	301,947	1,337,918	0	N/A
Total	**N/A**	**405,836**	**405,836**	**310,481**	**238,599**	**241,801**	**245,090**	**301,947**	**1,337,918**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	405,836	405,836	310,481	238,599	241,801	245,090	301,947	1,337,918	0	N/A
Total	**N/A**	**405,836**	**405,836**	**310,481**	**238,599**	**241,801**	**245,090**	**301,947**	**1,337,918**	**0**	**N/A**

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 annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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: California Avenue District

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion:

Project Number: PE-17004

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 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

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from California Ave. Parking Permit Fund	0	0	0	0	150,000	0	0	0	150,000	0	150,000
Total	**0**	**0**	**0**	**0**	**150,000**	**0**	**0**	**0**	**150,000**	**0**	**150,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	125,000	0	0	0	125,000	0	125,000
Design	0	0	0	0	25,000	0	0	0	25,000	0	25,000
Total	**0**	**0**	**0**	**0**	**150,000**	**0**	**0**	**0**	**150,000**	**0**	**150,000**

Operating Impact

This project is not anticipated to impact operating costs.

Relationship to Comprehensive Plan

Primary Connection

Element: Business & Economics

Section: Centers

Goal: B-5

Policy: B-19

Program: B-11

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.

Ted Thompson Garage, January 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various locations within the California Avenue Parking District area

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: PF-14004

California Avenue Parking District Parking Improvements

Description

This project provides funding for parking improvements in the California Avenue parking district such as parking lot resurfacing, striping and signage; parking structure painting or staining; electrical system upgrades needed to support improved lighting, security, parking, fountains and/or other systems; and replacement or rehabilitation of parking lot signs.

Justification

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

Supplemental Information

The project is dependent on the availability of funding in the California Avenue Parking Permit Fund. The current fund balance is sufficient to repave all the parking lots that require maintenance in the district. Projects are planned for Fiscal Year 2017, for the resurfacing and restriping of Lots 4 (400 block of Cambridge) and 9 (Cambridge/Birch).

Significant Changes

2017-2021 CIP: Paving work for Lots 6 and 7 has been canceled due to the Public Safety Building Project and associated parking garage. Lots 1 (200 block of Cambridge), 2 (300 block of Cambridge) and 8 (Sherman/El Camino Real) were paved in Fiscal Year 2016. The remaining parking lots will be paved in Fiscal Year 2017.

2016-2020 CIP: Paving Work for Lot 7 has been postponed until Fiscal Year 2016, when the California Avenue Streetscape Project will be completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	204,933	175,333	29,600	19,548	0	0	0	49,148	0	N/A
Transfer from California Ave. Parking Permit Fund	N/A	0	0	0	119,034	0	0	0	119,034	0	N/A
Total	**N/A**	**204,933**	**175,333**	**29,600**	**138,582**	**0**	**0**	**0**	**168,182**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	204,933	175,333	29,600	138,582	0	0	0	168,182	0	N/A
Total	**N/A**	**204,933**	**175,333**	**29,600**	**138,582**	**0**	**0**	**0**	**168,182**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Parking

Goal: T-8

Policy: T-47

Program: T-52

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.

Lucie Stern Parking Lot, February 2015

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

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 their useful life.

Supplemental Information

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

Fiscal Year 2017: Palo Alto Airport, Fire Station 2, Golf Course and Stanford/Palo Alto Soccer Fields

Fiscal Year 2018: Fire Station 1 and Ventura Community Center

Fiscal Year 2019: Lucie Stern Community Center & Junior Museum, Midtown Shopping Center and Pearson Arastradero Preserve Parking Lot

Fiscal Year 2020: Baylands Athletic Center and Foothills Park Parking Lot

Fiscal Year 2021: Fire Station #8

Significant Changes

2017-2021 CIP: Animal Shelter parking lot work has been deleted until decisions are made regarding that site. Golf Course parking lot work has been deferred to Fiscal Year 2018 to coor-

dinate with the Golf Course project. The Airport parking lot will be funded through the Airport Fund.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	656,631	74,015	607,594	80,652	361,845	662,056	78,138	1,790,285	0	N/A
Total	**N/A**	**656,631**	**74,015**	**607,594**	**80,652**	**361,845**	**662,056**	**78,138**	**1,790,285**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	646,520	74,015	597,210	69,988	350,893	650,808	66,440	1,735,339	0	N/A
Design	N/A	10,111	0	10,384	10,664	10,952	11,248	11,697	54,945	0	N/A
Total	**N/A**	**656,631**	**74,015**	**607,594**	**80,652**	**361,845**	**662,056**	**78,137**	**1,790,284**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

City Hall Remodel, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 250 Hamilton Avenue, Palo Alto, CA 94301

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Summer 2011
Initial Project Completion: Summer 2013

Revised Project Start: Summer 2014
Revised Project Completion: Spring 2016

Project Number: PE-12017

City Hall First Floor Renovations

Description

This project provided funding for upgrades to the Council Conference Room, Human Resources Conference Room, Lobby and elevator cabs in City Hall.

Justification

Supplemental Information

This project's primary construction phase is complete and is in post-construction mode. The project is providing funding for City Hall lobby carpeting and furniture installations.

Significant Changes

2014: Project construction bid exceeded expectations. Budget was amended to fund the short-fall and the source of funds was revised to include equitable contributions from benefitting Enterprise Funds, Internal Service Funds, and Community Center Development Impact Fee funds.

2016-2020 CIP: Wayfinding (signage) Phase construction and warranty phase to be completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	2,849,494	1,125,469	963,474	161,995	0	0	0	0	161,995	0	3,974,963
Total	**2,849,494**	**1,125,469**	**963,474**	**161,995**	**0**	**0**	**0**	**0**	**161,995**	**0**	**3,974,963**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,783,790	1,125,469	963,474	161,995	0	0	0	0	161,995	0	3,909,259
Design	65,704	0	0	0	0	0	0	0	0	0	65,704
Total	**2,849,494**	**1,125,469**	**963,474**	**161,995**	**0**	**0**	**0**	**0**	**161,995**	**0**	**3,974,963**

Relationship to Comprehensive Plan

Primary Connection

Relationship to Comprehensive Plan

Secondary Connection

Policy: C-24

Environmental Impact Analysis:

This project is categorically exempt from CEQA under Section 15301

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 250 Hamilton Avenue

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2018

Revised Project Start:
Revised Project Completion:

Project Number: PE-17002

City Hall Floor 3 Remodel

Description

This project provides funding for improvements to the Utility Department administrative offices on the third floor of City Hall. The project will include items such as new carpet, wall reconfiguration, kitchenette, cabinets, paint, soundproofing, fixed office furniture, doors, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements. Overhead lighting will also be evaluated for conversion to LED for more efficiency and brightness.

Justification

Office workspaces in City Hall are being reconfigured, upgraded and modernized for current business trends that use less paper, less storage, less compartmentalization, more openness, and more collaboration.

Supplemental Information

Renovation of the 3rd floor conference room, office furnishings and carpet was previously programmed in CIP PF-02022 for Fiscal Year 2016 with an offsetting transfer from the Utilities Administration Fund, but was not implemented due to lack of project management resources. The PF-02022 funding has been moved to this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	440,000	0	0	0	0	440,000	0	440,000
Total	**0**	**0**	**0**	**440,000**	**0**	**0**	**0**	**0**	**440,000**	**0**	**440,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	440,000	0	0	0	0	440,000	0	440,000
Total	**0**	**0**	**0**	**440,000**	**0**	**0**	**0**	**0**	**440,000**	**0**	**440,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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: 250 Hamilton Avenue

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2018

Revised Project Start:
Revised Project Completion:

Project Number: PE-17008

City Hall Floor 4 Remodel

Description

This project provides funding for improvements to the Administrative Services Department (ASD) offices on the fourth floor of City Hall. The project will include items such as new carpet, wall reconfiguration, cabinets, paint, soundproofing, fixed office furniture, doors, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements. Additionally, the project will include provisions for a secure and separate area for the Payroll Division of ASD. Overhead lighting will also be evaluated for conversion to LED for more efficiency and brightness.

Justification

Office workspaces in City Hall are being reconfigured, upgraded and modernized for current business trends that use less paper, less storage, less compartmentalization, more openness, and more collaboration.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	350,000	0	0	0	0	350,000	0	350,000
Total	**0**	**0**	**0**	**350,000**	**0**	**0**	**0**	**0**	**350,000**	**0**	**350,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	350,000	0	0	0	0	350,000	0	350,000
Total	**0**	**0**	**0**	**350,000**	**0**	**0**	**0**	**0**	**350,000**	**0**	**350,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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: 250 Hamilton Avenue

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2018

Revised Project Start:
Revised Project Completion:

Project Number: PE-17009

City Hall Floor 5 Remodel

Description

This project provides funding for improvements to the Planning and Community Environment (PCE) Department offices on the fifth floor of City Hall. The project will include items such as new carpet, wall reconfiguration, kitchenette, cabinets, paint, soundproofing, fixed office furniture, doors, and associated fire/life safety, mechanical, electrical, and plumbing code compliance requirements. Overhead lighting will also be evaluated for conversion to LED for more efficiency and brightness.

Justification

Office workspaces in City Hall are being reconfigured, upgraded and modernized for current business trends that use less paper, less storage, less compartmentalization, more openness, and more collaboration.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	400,000	0	0	0	0	400,000	0	400,000
Total	**0**	**0**	**0**	**400,000**	**0**	**0**	**0**	**0**	**400,000**	**0**	**400,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	400,000	0	0	0	0	400,000	0	400,000
Total	**0**	**0**	**0**	**400,000**	**0**	**0**	**0**	**0**	**400,000**	**0**	**400,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Civic Center Level C, January 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 250 Hamilton Avenue

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2016

Revised Project Start: Summer 2016
Revised Project Completion: Fall 2017

Project Number: PF-16004

City Hall Parking Garage LED Lighting

Description

This project provides funding to replace the existing fluorescent lighting in City Hall Parking Garage Levels A, B, and C with new LED lighting. The Public Works and Utilities Departments are coordinating on this project.

Justification

The replacement of fluorescent lighting with new LED lighting will reduce energy costs.

Supplemental Information

This project is supported via a funding transfer from the University Avenue Parking Permit Fund to the Capital Improvement Fund.

Significant Changes

2017-2021 CIP: Project schedule extended due to staffing constraints.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	(225,000)	225,000	0	0	0	0	225,000	0	0
Transfer from University Ave. Parking Permit Fund	0	245,608	245,608	0	0	0	0	0	0	0	245,608
Total	**0**	**245,608**	**20,608**	**225,000**	**0**	**0**	**0**	**0**	**225,000**	**0**	**245,608**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	245,608	20,608	225,000	0	0	0	0	225,000	0	245,608
Total	**0**	**245,608**	**20,608**	**225,000**	**0**	**0**	**0**	**0**	**225,000**	**0**	**245,608**

Anticipated Operating Budget Needs

Fund	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Capital Improvement Fund	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)

Operating Impact

This project is anticipated to impact operating expenses in the future. The figures detailed in the table above represent current estimates for savings on electricity due to the greater efficiency of the LED lighting. On an annualized basis, savings on maintenance costs due to the longer lifespan of LED lighting is counterbalanced by the higher cost of the LED units. These costs will be reviewed throughout the construction of the project. Adjustments may be brought forward for City Council consideration upon completion of the project.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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: Civic Center Building, various

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017

Revised Project Start:
Revised Project Completion:

Project Number: PE-17010

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 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 to be 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 purchase 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 and Electrical Upgrades to this new project, while approximately 90 percent of the Electric Vehicle charger costs are expected to be reimbursed by Bay Area Air Quality Management District grants. A portion of the grant reimbursement if deferred for three years to allow demonstration of compliance with grant usage criteria.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	390,000	0	0	0	0	390,000	0	390,000
Revenue from Other Agencies	0	0	0	0	220,000	0	40,000	0	260,000	0	260,000
Total	**0**	**0**	**0**	**390,000**	**220,000**	**0**	**40,000**	**0**	**650,000**	**0**	**650,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	600,000	0	0	0	0	600,000	0	600,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**650,000**	**0**	**0**	**0**	**0**	**650,000**	**0**	**650,000**

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. Staff is researching the potential of adding fee mechanisms to the new charges and bring forward a fee policy to the City Council for approval.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-40

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Civic Center Fire Life Safety and Electrical Upgrades, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Civic Center Building

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Summer 2018
Initial Project Completion: Spring 2019

Revised Project Start:
Revised Project Completion:

Project Number: PE-18016

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.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	142,884	763,439	161,823	0	1,068,146	0	1,068,146
Total	**0**	**0**	**0**	**0**	**142,884**	**763,439**	**161,823**	**0**	**1,068,146**	**0**	**1,068,146**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	635,916	161,823	0	797,739	0	797,739
Design	0	0	0	0	142,884	127,523	0	0	270,407	0	270,407
Total	**0**	**0**	**0**	**0**	**142,884**	**763,439**	**161,823**	**0**	**1,068,146**	**0**	**1,068,146**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Civic Center Parking Garage, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 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: Summer 2018

Project Number: PE-15020

Civic Center Waterproofing Study and Repairs

Description

This project provides funding for a condition assessment of the Civic Center plaza deck structural system and to perform non-destructive testing. The structural assessment will provide short, medium and long-term repair options to protect the structural system, and will include a cost/benefit analysis, conceptual drawings and recommendations for improvements. The structural assessment is anticipated to be complete in calendar year 2016, and short term repairs are anticipated to commence in Fiscal Year 2017.

Justification

Previous studies indicated that the Civic Center Plaza deck needs extensive repair, however no timeline was identified. A timeframe for completing short, medium and long term repairs is necessary to prioritize the most critical needs. The goal is to assess the current structural conditions that may have changed since the last time a study was done, approximately ten years ago.

Supplemental Information

Funding for repairs is not yet budgeted pending the study results.

Significant Changes

2017-2021 CIP: Project deferred by six months due to workload of other projects in progress.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	203,096	39,048	243,113	0	0	0	0	243,113	0	282,161
Total	**0**	**203,096**	**39,048**	**243,113**	**0**	**0**	**0**	**0**	**243,113**	**0**	**282,161**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	203,096	39,048	243,113	0	0	0	0	243,113	0	282,161
Total	**0**	**203,096**	**39,048**	**243,113**	**0**	**0**	**0**	**0**	**243,113**	**0**	**282,161**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Police Women's Locker room, January 2015

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

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.

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 2017: Police Department A-level restroom/shower/locker room remodel; 6th floor office furniture

Fiscal Year 2018: Lucie Stern Community Center

Fiscal Year 2019: Police Department 1st Floor

Fiscal Year 2020: Municipal Services Center Building A, Parks Department and Stores

Fiscal Year 2021: Golf Course Club House Restrooms and 18th hole bathroom

Significant Changes

2017-2021 CIP: Funding for the City Hall 3rd floor project has been moved to a separate, stand-alone CIP project. The $440,000 transfer from the Utilities Administration Fund is being reallocated for this project. The transfer occurred in Fiscal Year 2016. The Facilities Interior Finishes Replacement project budget reappropriation was reduced by $440,000 to offset the reduction in the transfer.

2016-2020 CIP: The Police Department A-Level restroom/shower/locker room project has been moved from Fiscal Year 2015 to Fiscal Year 2016. A project to update the Civic Center 3rd floor with new meeting spaces and office space furnishings, concurrent with the previously planned carpet replacement on the 3rd floor, has been added to Fiscal Year 2016. Funding for the estimated $440,000 cost of the Civic Center 3rd floor work is being provided by the Utilities Enterprise Funds. A review of project prioritization has resulted in moving the Lucie Stern Community Theater carpet replacement to Fiscal Year 2018 and removal of work at Fire Stations 3 and 4 due to their planned replacements through the Council Infrastructure Plan.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	393,204	(341,935)	499,795	195,766	214,289	166,700	225,368	1,301,918	0	N/A
Transfer from Utilities Administration Fund	N/A	440,000	440,000	0	0	0	0	0	0	0	N/A
Total	**N/A**	**833,204**	**98,065**	**499,795**	**195,766**	**214,289**	**166,700**	**225,368**	**1,301,918**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	833,204	98,065	499,795	195,766	214,289	166,700	225,368	1,301,918	0	N/A
Total	**N/A**	**833,204**	**98,065**	**499,795**	**195,766**	**214,289**	**166,700**	**225,368**	**1,301,918**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Palo Alto Fire Engine

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Citywide

Managing Department: Fire
IBRC Reference: New

Initial Project Start: Winter 2013
Initial Project Completion: Summer 2015

Revised Project Start: Winter 2014
Revised Project Completion: Summer 2017

Project Number: FD-14002

Fire Ringdown System Replacement

Description

This project funds the replacement of the current Fire Department Ringdown System. Ringdown systems provide an audible alert of a call for service in the fire stations.

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 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.

Supplemental Information

A portion of this project is anticipated to be reimbursed by Stanford University.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	157,500	0	133,500	0	0	0	0	133,500	0	133,500
Revenue from Other Agencies	0	0	0	24,000	0	0	0	0	24,000	0	24,000
Total	**0**	**157,500**	**0**	**157,500**	**0**	**0**	**0**	**0**	**157,500**	**0**	**157,500**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	157,500	0	157,500	0	0	0	0	157,500	0	157,500
Total	**0**	**157,500**	**0**	**157,500**	**0**	**0**	**0**	**0**	**157,500**	**0**	**157,500**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Natural Hazards

Goal: N-10

Policy: N-53

Potential Board/Commission Review:

Architectural Review Board

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: Summer 2017

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.

Significant Changes

2017-2021 CIP: The schedule is 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. Addition of windows in the concrete walls requires 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	7,528	319,377	105,357	379,020	0	0	0	0	379,020	0	491,905
Total	**7,528**	**319,377**	**105,357**	**379,020**	**0**	**0**	**0**	**0**	**379,020**	**0**	**491,905**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	7,262	319,377	0	140,000	0	0	0	0	140,000	0	147,262
Design	266	0	105,357	239,020	0	0	0	0	239,020	0	344,643
Total	**7,528**	**319,377**	**105,357**	**379,020**	**0**	**0**	**0**	**0**	**379,020**	**0**	**491,905**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Efficient Service Delivery

Goal: C-1

Policy: C-2

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

Fire Station 3

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:
Revised Project Completion:

Project Number: PE-15003

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, having 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	896,488	811,308	352,703	55,803	0	0	0	408,506	0	1,219,814
Transfer from Stanford University Medical Ctr Fund	0	0	0	6,000,000	0	0	0	0	6,000,000	0	6,000,000
Total	**0**	**896,488**	**811,308**	**6,352,703**	**55,803**	**0**	**0**	**0**	**6,408,506**	**0**	**7,219,814**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	52,908	811,308	6,352,703	55,803	0	0	0	6,408,506	0	7,219,814
Design	0	843,580	0	0	0	0	0	0	0	0	0
Total	**0**	**896,488**	**811,308**	**6,352,703**	**55,803**	**0**	**0**	**0**	**6,408,506**	**0**	**7,219,814**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

This project may require a CEQA environmental assessment.

Fire Station 4, April 2015

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: Spring 2018
Revised Project Completion: Spring 2021

Project Number: PE-18004

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, having 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	(1,423,474)	6,988,799	0	5,565,325	0	5,565,325
Other	0	0	0	0	0	2,329,000	0	0	2,329,000	0	2,329,000
Total	**0**	**0**	**0**	**0**	**0**	**905,526**	**6,988,799**	**0**	**7,894,325**	**0**	**7,894,325**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	6,988,799	0	6,988,799	0	6,988,799
Design	0	0	0	0	0	905,526	0	0	905,526	0	905,526
Total	**0**	**0**	**0**	**0**	**0**	**905,526**	**6,988,799**	**0**	**7,894,325**	**0**	**7,894,325**

Operating Impact

The project is anticipated to impact operating expenses in the future. As these costs are quantified, adjustment will be brought forward in future budgets, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project may require a CEQA environmental assessment.

Foothills Park

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Various

Managing Department: Fire
IBRC Reference: New

Initial Project Start: Summer 2013
Initial Project Completion: Summer 2014

Revised Project Start: Spring 2015
Revised Project Completion: Summer 2016

Project Number: FD-13000

Foothills Fire Cameras

Description

This project provides funding for the installation of Thermal Imaging Infrared Long Range Cameras for the detection of fires and heat signatures in the Palo Alto and Stanford foothills. The detection of any heat signature beyond a set point would send an alarm to the Palo Alto dispatch center triggering a response by the Fire Department to investigate.

Justification

The cameras will allow for early detection and quick response. The January 2011 Fire Services Utilization and Resources Study report noted that the Wildland region around Fire Station 8 should be monitored with infrared technology. This is life safety equipment that replaces aging, less effective equipment.

Significant Changes

2016-2020 CIP: Project schedule revised to reflect continuation of the project. The project had been delayed while the the Fire Department waited for more advanced camera technology to become more affordable prior to initiating this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	65,000	0	65,000	0	0	0	0	65,000	0	65,000
Total	**0**	**65,000**	**0**	**65,000**	**0**	**0**	**0**	**0**	**65,000**	**0**	**65,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	65,000	0	65,000	0	0	0	0	65,000	0	65,000
Total	**0**	**65,000**	**0**	**65,000**	**0**	**0**	**0**	**0**	**65,000**	**0**	**65,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Natural Hazards

Goal: N-10

Policy: N-53

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

Current Internal Alarm System Control Panel

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Palo Alto City Hall

Managing Department: Police
IBRC Reference: New

Initial Project Start: Winter 2013
Initial Project Completion: Summer 2014

Revised Project Start: Spring 2016
Revised Project Completion: Winter 2017

Project Number: PD-14000

Internal Alarm System Replacement

Description

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

Justification

The City's current 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 would replace the outdated system with a modern, reliable alarm system.

Significant Changes

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

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

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	78,000	0	78,000	0	0	0	0	78,000	0	78,000
Total	**0**	**78,000**	**0**	**78,000**	**0**	**0**	**0**	**0**	**78,000**	**0**	**78,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	78,000	0	78,000	0	0	0	0	78,000	0	78,000
Total	**0**	**78,000**	**0**	**78,000**	**0**	**0**	**0**	**0**	**78,000**	**0**	**78,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Cubberley Auditorium, September 2009

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 4000 Middlefield Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Winter 2009
Initial Project Completion: Winter 2013

Revised Project Start:
Revised Project Completion: Spring 2016

Project Number: PE-09010

Library & Community Center - Temporary Facilities

Description

This project provided funding for temporary facilities during improvements at Mitchell Park Library.

Justification

Not applicable.

Supplemental Information

This project is complete. Remaining funding in the project will be used to defease (retire) Measure N library bonds.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	15,579	127,090	9,935	117,155	0	0	0	0	117,155	0	142,669
Total	**15,579**	**127,090**	**9,935**	**117,155**	**0**	**0**	**0**	**0**	**117,155**	**0**	**142,669**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	15,579	127,090	9,935	117,155	0	0	0	0	117,155	0	142,669
Total	**15,579**	**127,090**	**9,935**	**117,155**	**0**	**0**	**0**	**0**	**117,155**	**0**	**142,669**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Lucie Stern Community Center, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 1305 Middlefield Road

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Summer 2012
Initial Project Completion: Summer 2016

Revised Project Start:
Revised Project Completion: Spring 2017

Project Number: PE-14015

Lucie Stern Buildings Mechanical and Electrical Upgrades

Description

This project provides funding to replace and upgrade mechanical and/or electrical systems, fire/life safety and finishes as necessary at Lucie Stern Children's Theatre; Lucie Stern Theatre and Scene Shop; and Lucie Stern Community Center. The systems will meet current code and user needs, and optimize operational and energy efficiency.

Justification

The existing elements are old and/or in poor condition. These improvements provide for rehabilitation of the structure and systems to meet the needs and safety of theatre staff and the public. The project will replace the existing system at Lucie Stern Community Center with a full heating, ventilation and air conditioning system.

Supplemental Information

Consultant services will be used to evaluate existing systems, provide conceptual and final design and produce construction documents. This CIP consolidates the funding of four former CIP projects: Children's Theater Fire/Life Safety Upgrade, Children's Theatre Improvements, Lucie Stern Mechanical System Upgrade, and Lucie Stern Theatre Electrical Systems Replacement. Management of the improvements as a single project allows for greater efficiency and coordination, minimizing disruption to community center activities.

Significant Changes

2017-2021 CIP: Final construction documents were delayed to address Historic Resources Board concerns, extending the project completion to Spring 2017.

2016-2020 CIP: Additional funds in the amount of $300,000 to support the construction of the added fire/life safety system design scope are included.

Fiscal Year 2014: The overall design contract was amended in late 2013 to include the design of fire/life safety system upgrades for Lucie Stern Community Theatre and Lucie Stern Community Center.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	316,902	2,930,346	112,376	2,817,970	0	0	0	0	2,817,970	0	3,247,248
Total	**316,902**	**2,930,346**	**112,376**	**2,817,970**	**0**	**0**	**0**	**0**	**2,817,970**	**0**	**3,247,248**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	2,930,346	112,376	2,817,970	0	0	0	0	2,817,970	0	2,930,346
Design	316,902	0	0	0	0	0	0	0	0	0	316,902
Total	**316,902**	**2,930,346**	**112,376**	**2,817,970**	**0**	**0**	**0**	**0**	**2,817,970**	**0**	**3,247,248**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Local Landuse and Growth Management

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Environmental Impact Analysis:

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

Mitchell Park Library October 2014

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3700 Middlefield Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Summer 2009
Initial Project Completion: Summer 2011

Revised Project Start:
Revised Project Completion: Fall 2014

Project Number: PE-09006

Mitchell Park Library and Community Center

Description

This project provided funding for the design and construction of the Mitchell Park Library and Community Center.

Justification

Not applicable.

Supplemental Information

This project is complete. Remaining funding in the project will be used to defease (retire) Measure N library bonds.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	47,225,389	3,323,193	439,266	2,883,927	0	0	0	0	2,883,927	0	50,548,582
Total	**47,225,389**	**3,323,193**	**439,266**	**2,883,927**	**0**	**0**	**0**	**0**	**2,883,927**	**0**	**50,548,582**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	42,172,549	3,323,193	439,266	2,883,927	0	0	0	0	2,883,927	0	45,495,742
Design	4,758,071	0	0	0	0	0	0	0	0	0	4,758,071
Other	294,769	0	0	0	0	0	0	0	0	0	294,769
Total	**47,225,389**	**3,323,193**	**439,266**	**2,883,927**	**0**	**0**	**0**	**0**	**2,883,927**	**0**	**50,548,582**

Relationship to Comprehensive Plan

Primary Connection

Policy: C-22

Program: C-20

Municipal Services Center Building C, March 2015

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:

Project Number: PF-16006

Municipal Service Center Lighting, Mechanical, and Electrical Improvements

Description

This project provides for the replacement of original mechanical and electrical systems and lighting installed in 1966 in the Municipal Service Center's 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 Municipal Service Center (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 Fund, and Utilities Fund will reimburse the Capital Improvement Fund for a portion of this project, as fund-related operations benefit from the building improvements.

Significant Changes

2017-2021 CIP: Additional funding of $400,000 added for Building C office space renovation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	226,508	(139,492)	773,546	0	0	0	0	773,546	0	634,054
Refuse Fund	0	0	28,070	(18,277)	0	0	0	0	(18,277)	0	9,793
Transfer from Refuse Fund	0	28,070	0	4,952	0	0	0	0	4,952	0	4,952
Transfer from Utilities Administration Fund	0	120,926	120,926	409,909	0	0	0	0	409,909	0	530,835
Transfer from Vehicle Replacement and Maintenance	0	31,711	0	51,147	0	0	0	0	51,147	0	51,147
Vehicle Replacement Fund	0	0	31,711	212,051	0	0	0	0	212,051	0	243,762
Total	**0**	**407,215**	**41,215**	**1,433,328**	**0**	**0**	**0**	**0**	**1,433,328**	**0**	**1,474,543**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,067,328	0	0	0	0	1,067,328	0	1,067,328
Design	0	407,215	41,215	366,000	0	0	0	0	366,000	0	407,215
Total	**0**	**407,215**	**41,215**	**1,433,328**	**0**	**0**	**0**	**0**	**1,433,328**	**0**	**1,474,543**

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 annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Municipal Services Center Building C Roof, January 2015

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 2017
Revised Project Completion: Summer 2018

Project Number: PF-17000

Municipal Services Center A, B, & C Roof Replacement

Description

This project provides funding for a fluid, reinforced water proofing 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 prior to the roofing system deteriorating further, failing, and causing structural damage to the building. 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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	859,328	0	0	0	859,328	0	859,328
Transfer from Refuse Fund	0	0	0	0	19,000	0	0	0	19,000	0	19,000
Transfer from Utilities Administration Fund	0	0	0	0	684,000	0	0	0	684,000	0	684,000
Transfer from Vehicle Replacement and Maintenance	0	0	0	0	380,000	0	0	0	380,000	0	380,000
Total	**0**	**0**	**0**	**0**	**1,942,328**	**0**	**0**	**0**	**1,942,328**	**0**	**1,942,328**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	1,942,328	0	0	0	1,942,328	0	1,942,328
Total	**0**	**0**	**0**	**0**	**1,942,328**	**0**	**0**	**0**	**1,942,328**	**0**	**1,942,328**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

California Avenue, March 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Parking Lot C-7

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2017
Initial Project Completion: Fall 2020

Revised Project Start: Spring 2016
Revised Project Completion: Summer 2018

Project Number: PE-18000

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 a retail component, and stacked parking will also be evaluated.

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	1,371,572	8,983,526	(9,487,000)	0	0	868,098	0	868,098
Other	0	0	0	0	0	9,487,000	0	0	9,487,000	0	9,487,000
Total	**0**	**0**	**0**	**1,371,572**	**8,983,526**	**0**	**0**	**0**	**10,355,098**	**0**	**10,355,098**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	99,383	8,884,143	0	0	0	8,983,526	0	8,983,526
Design	0	0	0	1,272,189	99,383	0	0	0	1,371,572	0	1,371,572
Total	**0**	**0**	**0**	**1,371,572**	**8,983,526**	**0**	**0**	**0**	**10,355,098**	**0**	**10,355,098**

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: Transportation

Section: Parking

Goal: T-8

Policy: T-45

Program: T-52

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Hamilton Avenue/Waverley Street, March 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: TBD

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Spring 2015
Initial Project Completion: Fall 2018

Revised Project Start:
Revised Project Completion: Fall 2020

Project Number: PE-15007

New Downtown Parking Garage

Description

This project provides funding for a new public parking garage in the University Avenue commercial area. The preferred location has been identified as Lot D at the corner of Waverley Street and Hamilton Avenue. An alternate location, Lot G behind the Post Office is also investigated. The project will also 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 2019, a transfer of $2.7 million from the University In-Lieu Parking Fund is scheduled to occur for a portion of the construction of the new garage. It is anticipated that once a specific site is identified, the title of this project will be refined.

Significant Changes

2017-2021 CIP: Construction funding moved to Fiscal Year 2019.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	182,778	(1,117,222)	1,420,977	120,977	106,829	44,404	0	1,693,187	0	575,965
Other	0	1,300,000	1,300,000	0	0	2,741,000	0	0	2,741,000	0	4,041,000
Transfer from Stanford University Medical Ctr Fund	0	0	0	0	0	9,072,000	0	0	9,072,000	0	9,072,000
Total	**0**	**1,482,778**	**182,778**	**1,420,977**	**120,977**	**11,919,829**	**44,404**	**0**	**13,506,187**	**0**	**13,688,965**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	(100,000)	100,000	0	11,919,829	44,404	0	12,064,233	0	11,964,233
Design	0	1,482,778	282,778	1,320,977	120,977	0	0	0	1,441,954	0	1,724,732
Total	**0**	**1,482,778**	**182,778**	**1,420,977**	**120,977**	**11,919,829**	**44,404**	**0**	**13,506,187**	**0**	**13,688,965**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Palo Alto Police Department, April 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: Parking Lot C-6

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Spring 2015
Initial Project Completion: Fall 2020

Revised Project Start:
Revised Project Completion:

Project Number: PE-15001

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 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 with adjustments for current and future projected program needs during the Infrastructure Blue Ribbon Commission process.

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, having a high likelihood of being fully operational after a major disaster such as a significant earthquake.

Supplemental Information

The new Public Safety Building is part of the Council Infrastructure Plan, and has been identified by the City Council as the top priority within the Plan. The majority of the expenses will be financed using Certificates of Participation with TOT (hotel tax revenues) to pay the debt service.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	264,108	18,935	413,712	173,089	(2,872,237)	3,160,324	0	874,888	0	893,823
Other	0	0	0	0	0	52,250,000	0	0	52,250,000	0	52,250,000
Transfer from Stanford University Medical Ctr Fund	0	1,100,000	1,100,000	2,800,000	0	800,000	0	0	3,600,000	0	4,700,000
Total	**0**	**1,364,108**	**1,118,935**	**3,213,712**	**173,089**	**50,177,763**	**3,160,324**	**0**	**56,724,888**	**0**	**57,843,823**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	50,177,763	3,160,324	0	43,338,087	0	53,338,087
Design	0	1,364,108	1,118,935	3,213,712	173,089	0	0	0	3,386,801	0	4,505,736
Total	**0**	**1,364,108**	**1,118,935**	**3,213,712**	**173,089**	**50,177,763**	**3,160,324**	**0**	**56,724,888**	**0**	**57,843,823**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Parks Maintenance Shop

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 3201 East Bayshore Road, Palo Alto, CA 94303

Managing Department: Community Services
IBRC Reference: N/A

Initial Project Start: Spring 2011
Initial Project Completion: Spring 2014

Revised Project Start: Fall 2015
Revised Project Completion: Fall 2015

Project Number: PG-09003

Park Maintenance Shop Remodel

Description

This project renovates and remodels the Park Maintenance Shop for safety, efficiency, and employee effectiveness. The remodel involves replacing chain-link fence separations with framed walls, the creation of organized work rooms for equipment repair, providing for the secure storage of tools and equipment, and provides for an area where employees can conduct safety meetings.

Justification

The Park Maintenance Shop is a poorly organized grouping of areas separated by chain-link walls. Inadequate task lighting makes it difficult to properly repair small engines and equipment. The current meeting area is inadequate for weekly safety presentations. There is inadequate room for storage of tools and supplies. Because there is no centralized work bench area, the efficiency of tool and equipment repair is hampered. The remaining project funding will be used to complete the equipment storage area, which will be completed by October 2015.

Supplemental Information

This project will also result in significant energy saving from improved insulation and control of space heating.

Significant Changes

This project was used for the design phase, and the project transitioned to PF-12001 (Parks and Public Works Tree Work Space Improvements), which covered the construction phase. PF-12001 was originally slated to start in Fiscal Year 2012 but actually started midway through Fiscal Year

2014. The project construction was completed right around January 2014. Additional funding in this project will be designated for an equipment storage area.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	94,419	88,419	6,000	0	0	0	0	6,000	0	94,419
Total	**0**	**94,419**	**88,419**	**6,000**	**0**	**0**	**0**	**0**	**6,000**	**0**	**94,419**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	94,419	88,419	6,000	0	0	0	0	6,000	0	94,419
Total	**0**	**94,419**	**88,419**	**6,000**	**0**	**0**	**0**	**0**	**6,000**	**0**	**94,419**

Operating Impact

This project will also result in significant energy saving from improved insulation and control of space heating. As these costs are quantified, adjustments may be brought forward in future budget cycles.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Lot Q elevator, January 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: High & Alma

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2016

Revised Project Start: Spring 2016
Revised Project Completion: Fall 2017

Project Number: PF-16003

Parking Lot Q Elevator Modernization

Description

This project provides funding to modernize the existing elevator at Parking Lot Q. The modernization consists of upgrading the interior of the elevator, elevator control interface, and call buttons, and to meet current ADA standards.

Justification

The Parking Lot Q elevator is currently having many maintenance issues and does not conform to current ADA standards. The cost of modernizing and upgrading the elevator is expected to reduce ongoing maintenance expenses.

Supplemental Information

It is anticipated that 15% of the cost of this project will be reimbursed by the homeowners association that utilizes this elevator and is consistent with the agreement between the City and the homeowners association.

Significant Changes

2017-2021 CIP: Project delayed due to staffing constraints

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	145,017	20,608	124,409	0	0	0	0	124,409	0	145,017
Other	0	25,591	0	25,591	0	0	0	0	25,591	0	25,591
Total	**0**	**170,608**	**20,608**	**150,000**	**0**	**0**	**0**	**0**	**150,000**	**0**	**170,608**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	170,608	20,608	150,000	0	0	0	0	150,000	0	170,608
Total	**0**	**170,608**	**20,608**	**150,000**	**0**	**0**	**0**	**0**	**150,000**	**0**	**170,608**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Children's Theatre, January 2016

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:
Revised Project Completion:

Project Number: AC-18000

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 Theatre, Community Theatre, and Cubberley Theatre.

Justification

Damaged or non-functioning seats at the City's three theatre sites are due for replacement based on their age and/or condition.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	75,000	0	0	0	75,000	0	75,000
Total	**0**	**0**	**0**	**0**	**75,000**	**0**	**0**	**0**	**75,000**	**0**	**75,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	75,000	0	0	0	75,000	0	75,000
Total	**0**	**0**	**0**	**0**	**75,000**	**0**	**0**	**0**	**75,000**	**0**	**75,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Children's Theatre, January 2016

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 2016
Initial Project Completion: Summer 2017

Revised Project Start:
Revised Project Completion:

Project Number: AC-17000

Performing Arts Venues Soft Goods Replacement

Description

This project provides funding for the replacement of existing soft fabric goods in three City performing arts venues and to bring the goods in the facilities up to fire code. The soft goods must be flame-retardant with up-to-date flame certification in the Children's Theatre, Community Theatre and Cubberley Theatre. Soft goods refer to theatre drapes, stage curtains, and fabric backdrops.

Justification

Soft goods at these sites are due for replacement based on their age, condition and/or fire code.

Supplemental Information

The City has three performing arts venues: Children's Theatre, Community Theatre, and Cubberley Theatre.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	55,000	0	0	0	0	55,000	0	55,000
Total	**0**	**0**	**0**	**55,000**	**0**	**0**	**0**	**0**	**55,000**	**0**	**55,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	55,000	0	0	0	0	55,000	0	55,000
Total	**0**	**0**	**0**	**55,000**	**0**	**0**	**0**	**0**	**55,000**	**0**	**55,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Rinconada Library, February 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 1213 Newell Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Summer 2010
Initial Project Completion: Spring 2014

Revised Project Start:
Revised Project Completion: Fall 2014

Project Number: PE-11000

Rinconada Library New Construction and Improvements

Description

This project provided funding for the renovation of the Rinconada Library.

Justification

Not applicable.

Supplemental Information

This project is complete. Remaining funding in the project will be used to defease (retire) Measure N library bonds.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	24,265,060	1,335,040	309,762	1,025,278	0	0	0	0	1,025,278	0	25,600,100
Total	**24,265,060**	**1,335,040**	**309,762**	**1,025,278**	**0**	**0**	**0**	**0**	**1,025,278**	**0**	**25,600,100**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	20,884,841	1,335,040	309,762	1,025,278	0	0	0	0	1,025,278	0	22,219,881
Design	3,380,218	0	0	0	0	0	0	0	0	0	3,380,218
Total	**24,265,059**	**1,335,040**	**309,762**	**1,025,278**	**0**	**0**	**0**	**0**	**1,025,278**	**0**	**25,600,099**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-22

Fire Station 2, January 2015

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

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 2017: Rinconada Pool and Rinconada Park Restroom/Snack Bar

Fiscal Year 2018: Ventura Units 1 and 2

Fiscal Year 2019: Animal Services and Baylands Athletic Center Restroom

Fiscal Year 2020: Lucie Stern Community Center

Fiscal Year 2021: Ventura Unit #3

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	719,358	564,951	356,735	706,942	249,289	451,700	370,368	2,135,034	0	N/A
Total	**N/A**	**719,358**	**564,951**	**356,735**	**706,942**	**249,289**	**451,700**	**370,368**	**2,135,034**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	719,358	564,951	356,735	706,942	249,289	451,700	370,368	2,135,034	0	N/A
Total	**N/A**	**719,358**	**564,951**	**356,735**	**706,942**	**249,289**	**451,700**	**370,368**	**2,135,034**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Parks and Recreation Commission

Environmental Impact Analysis:

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

Roth Building, January 2015

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 300 Homer

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Summer 2006
Initial Project Completion: Spring 2007

Revised Project Start:
Revised Project Completion: Fall 2017

Project Number: PF-07011

Roth Building Maintenance

Description

This project provides for window repair, waterproofing of the building foundation walls, installation of electrical service to the building and a new ventilation system. 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 of the building. 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	15,240	50,201	2,313	45,888	0	0	0	0	45,888	0	63,441
Other	0	0	2,000	0	0	0	0	0	0	0	2,000
Total	**15,240**	**50,201**	**4,313**	**45,888**	**0**	**0**	**0**	**0**	**45,888**	**0**	**65,441**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	15,240	50,201	4,313	45,888	0	0	0	0	45,888	0	65,441
Total	**15,240**	**50,201**	**4,313**	**45,888**	**0**	**0**	**0**	**0**	**45,888**	**0**	**65,441**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

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.

Fund: Capital Improvement Fund
Category: Buildings and Facilities
Project Location: 1313 Newell Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start:
Initial Project Completion:

Revised Project Start:
Revised Project Completion:

Project Number: PE-11012

Temporary Main Library

Description

This project provided funding for the design and construction of the Temporary Main Library.

Justification

Not applicable.

Supplemental Information

This project is complete. Remaining funding in the project will be used to defease Measure N library bonds.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	59,238	97,016	8,900	88,116	0	0	0	0	88,116	0	156,254
Total	**59,238**	**97,016**	**8,900**	**88,116**	**0**	**0**	**0**	**0**	**88,116**	**0**	**156,254**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	58,200	97,016	8,900	88,116	0	0	0	0	88,116	0	155,216
Design	1,037	0	0	0	0	0	0	0	0	0	1,037
Total	**59,237**	**97,016**	**8,900**	**88,116**	**0**	**0**	**0**	**0**	**88,116**	**0**	**156,253**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Lot N, January 2015

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

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; 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 2017: Resurface and restripe Lots O (Emerson/High) and F (Florence/Lytton)

Fiscal Year 2018: Resurface and restripe Lots K (Lytton/Waverley) and C (Ramona/Lytton)

Fiscal Year 2019-2021: Projects have not yet been identified

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	330,372	(34,639)	365,011	0	0	0	0	365,011	0	N/A
Transfer from University Ave. Parking Permit Fund	N/A	87,380	87,380	82,676	131,759	23,917	24,563	0	262,915	0	N/A
Total	**N/A**	**417,752**	**52,741**	**447,687**	**131,759**	**23,917**	**24,563**	**0**	**627,926**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	417,752	52,741	447,687	131,759	23,917	24,563	0	627,926	0	N/A
Total	**N/A**	**417,752**	**52,741**	**447,687**	**131,759**	**23,917**	**24,563**	**0**	**627,926**	**0**	**N/A**

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: Transportation

Section: Parking

Goal: T-8

Policy: T-47

Program: T-52

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.

Ventura Community Center, February 2015

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: Spring 2016
Revised Project Completion: Spring 2017

Project Number: PE-15011

Ventura Buildings Improvements

Description

This project provides funding to replace or upgrade the mechanical and electrical systems and provide accessibility improvements to the facility. To comply with 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, 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

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

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	148,483	58,485	779,328	40,600	0	0	0	819,928	0	878,413
Total	**0**	**148,483**	**58,485**	**779,328**	**40,600**	**0**	**0**	**0**	**819,928**	**0**	**878,413**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	90,000	0	89,330	40,600	0	0	0	129,930	0	129,930
Design	0	58,483	58,485	689,998	0	0	0	0	689,998	0	748,483
Total	**0**	**148,483**	**58,485**	**779,328**	**40,600**	**0**	**0**	**0**	**819,928**	**0**	**878,413**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

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Parks and Open Space

Brilliance, by Joe O'Connell and Blessing Hancock

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

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.

Significant Changes

Prior to Fiscal Year 2015, the one percent for public art was included in the budget for each applicable project. Beginning in Fiscal Year 2015, this 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	367,994	75,890	534,423	212,470	880,700	240,012	125,958	1,993,563	0	N/A
Total	**N/A**	**367,994**	**75,890**	**534,423**	**212,470**	**880,700**	**240,012**	**125,958**	**1,993,563**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	359,716	75,890	534,423	212,470	880,700	240,012	125,958	1,993,563	0	N/A
Other	N/A	8,278	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**367,994**	**75,890**	**534,423**	**212,470**	**880,700**	**240,012**	**125,958**	**1,993,563**	**0**	**N/A**

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. This level of funding may be reviewed in light of increased funding for public art resulting from the public art ordinance, and adjustments to the maintenance allocation may be brought forward for City Council consideration in future years, if appropriate.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-72

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

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

Baylands, July 2014

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Baylands Nature Preserve

Managing Department: Community Services
IBRC Reference: Catch-up

Initial Project Start: Fall 2016
Initial Project Completion: Winter 2018

Revised Project Start:
Revised Project Completion:

Project Number: PG-17000

Baylands Comprehensive Conservation Plan

Description

This project provides funding for a conservation plan that will examine the native vegetation, wildlife habitat resources, and wildlife-appropriate public access for the entire Baylands, including Byxbee Park. This plan will provide needed information on best areas to maintain as wildlife habitat and appropriate areas to develop trails or other recreation amenities; provide a design overlay for appropriate types and locations of public art in the Baylands; and a design for interpretive messaging throughout the Baylands. The plan seeks to optimize opportunities for low impact recreation ensuring that these are compatible with the Baylands Master Plan direction for a passive park and nature preserve. The Conservation Plan will also provide input to the Byxbee Park Completion project, design of which is scheduled to begin in Fiscal Year 2018.

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. With the many changes taking place in the environmentally significant area, it is important to have a holistic vision for the corridor that will balance the diverse needs of stakeholders.

Supplemental Information

A prior project to create a Baylands Comprehensive Conservation Plan was initiated in June 2006 but due to funding cuts the project was not completed. This project will involve hiring a consultant to complete the plan.

Significant Changes

2017-2021 CIP: Additional funding of $60,000 has been added to include design for interpretive messaging and design overlay for appropriate types and locations of public art.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	330,000	0	0	0	0	330,000	0	330,000
Total	**0**	**0**	**0**	**330,000**	**0**	**0**	**0**	**0**	**330,000**	**0**	**330,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	330,000	0	0	0	0	330,000	0	330,000
Total	**0**	**0**	**0**	**330,000**	**0**	**0**	**0**	**0**	**330,000**	**0**	**330,000**

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: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-2, N-3

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

Baylands Levee, January 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Harbor Road near the Baylands Nature Center

Managing Department: Community Services
IBRC Reference: New

Initial Project Start: Spring 2012
Initial Project Completion: Summer 2014

Revised Project Start:
Revised Project Completion: Fall 2017

Project Number: OS-09002

Baylands Emergency Access Levee Repair

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.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	54,398	265,602	0	265,602	0	0	0	0	265,602	0	320,000
Total	**54,398**	**265,602**	**0**	**265,602**	**0**	**0**	**0**	**0**	**265,602**	**0**	**320,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	54,398	265,602	0	265,602	0	0	0	0	265,602	0	320,000
Total	**54,398**	**265,602**	**0**	**265,602**	**0**	**0**	**0**	**0**	**265,602**	**0**	**320,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-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.

Greer Park, January 2015

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-06003

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 these various sites are due for replacement or upgrade based on their age and/or condition.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	209,294	113,343	245,951	150,000	150,000	150,000	150,000	845,951	0	N/A
Total	**N/A**	**209,294**	**113,343**	**245,951**	**150,000**	**150,000**	**150,000**	**150,000**	**845,951**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	209,294	113,343	245,951	150,000	150,000	150,000	150,000	845,951	0	N/A
Total	**N/A**	**209,294**	**113,343**	**245,951**	**150,000**	**150,000**	**150,000**	**150,000**	**845,951**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-26

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Bol Park, February 2015

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:
Revised Project Completion:

Project Number: PE-16000

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. 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

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	275,132	0	275,132	0	275,132
Total	**0**	**0**	**0**	**0**	**0**	**0**	**275,132**	**0**	**275,132**	**0**	**275,132**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	217,400	0	217,400	0	217,400
Design	0	0	0	0	0	0	57,732	0	57,732	0	57,732
Total	**0**	**0**	**0**	**0**	**0**	**0**	**275,132**	**0**	**275,132**	**0**	**275,132**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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.

Boulware Park, February 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 410 Fernando Ave.

Managing Department: Public Works
IBRC Reference: Catch-up

Initial Project Start: Fall 2017
Initial Project Completion: Fall 2018

Revised Project Start: Fall 2020
Revised Project Completion: Fall 2021

Project Number: PE-17005

Boulware Park Improvements

Description

This project provides funding for improvements to the existing children's playground, lighting and site amenities, and accessibility upgrades. 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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	45,000	0	0	50,666	400,000	495,666	0	495,666
Total	**0**	**0**	**0**	**45,000**	**0**	**0**	**50,666**	**400,000**	**495,666**	**0**	**495,666**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	25,333	400,000	425,333	0	425,333
Design	0	0	0	45,000	0	0	25,333	0	70,333	0	70,333
Total	**0**	**0**	**0**	**45,000**	**0**	**0**	**50,666**	**400,000**	**495,666**	**0**	**495,666**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24,C-26, C-32

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Buckeye Creek, December 2014

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park

Managing Department: Community Services
IBRC Reference: Catch-up

Initial Project Start: Summer 2015
Initial Project Completion: Fall 2016

Revised Project Start:
Revised Project Completion: Spring 2017

Project Number: PG-15000

Buckeye Creek Hydrology Study

Description

This project will fund a study to analyze flooding conditions and to recommend flood control structures that provide both drainage and erosion control solutions for Buckeye Creek. The project will consider maintenance needs and land stewardship practices, and will include outreach to stakeholders. Drainage system improvements may include new culverts, gabions and native plant riparian re-vegetation.

Justification

Buckeye Creek originates in Foothills Park and flows to Los Trancos Creek. During heavy storms, the creek overflows and undercuts banks causing erosion, heavy siltation and damage to adjacent roads, utilities and park facilities.

Original gabions and check dams installed after the 1983 El Nino floods are failing and causing additional erosion. Annual maintenance costs have increased to repair repeated flood damage.

Supplemental Information

The Infrastructure Blue Ribbon Commission recommended a hydrology study be conducted to determine the hydrologic conditions and recommendations to reduce creek sedimentation and erosion. Based on the findings of the study, future funding may be proposed for construction of improvements.

The hydrology study is a critical precursor to decisions regarding the future use of the 7.7 acres of park land at Foothills Park. On February 24, 2015, the Parks and Recreation Commission recommended to Council that the Buckeye Creek hydrology study should be completed before

making any recommendations on how to use the 7.7 acre parcel. The recommendations on how to best address the hydrology challenges may alter the City's decision on use of the land.

Significant Changes

2017-2021 CIP: Project completion of study now moved to Spring 2017.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	149,180	0	190,382	0	0	0	0	190,382	0	190,382
Total	**0**	**149,180**	**0**	**190,382**	**0**	**0**	**0**	**0**	**190,382**	**0**	**190,382**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	44,180	0	190,382	0	0	0	0	190,382	0	190,382
Other	0	105,000	0	0	0	0	0	0	0	0	0
Total	**0**	**149,180**	**0**	**190,382**	**0**	**0**	**0**	**0**	**190,382**	**0**	**190,382**

Operating Impact

Impact to operating expenses is dependent upon pending recommendations from the study.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-2, N-3

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-2

Policy: N-11

Environmental Impact Analysis:

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

Byxbee Park , March 2015

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:
Revised Project Completion:

Project Number: PE-18006

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	74,015	116,252	0	0	190,267	0	190,267
Other	0	0	0	0	2,800,000	0	0	0	2,800,000	0	2,800,000
Total	**0**	**0**	**0**	**0**	**2,874,015**	**116,252**	**0**	**0**	**2,990,267**	**0**	**2,990,267**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	2,520,000	0	0	2,520,000	0	2,520,000
Design	0	0	0	0	354,015	116,252	0	0	470,267	0	470,267
Total	**0**	**0**	**0**	**0**	**354,015**	**2,636,252**	**0**	**0**	**2,990,267**	**0**	**2,990,267**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2375 Embarcadero Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Summer 2012
Initial Project Completion: Spring 2015

Revised Project Start: Summer 2012
Revised Project Completion: Spring 2016

Project Number: PE-13020

Byxbee Park Trails

Description

This project provides funding for park amenities in the recently capped Phase IIC, the last area of the 126 acre landfill to be filled and capped. Amenities include signage, benches, vegetative islands and dual use pathways connected to the existing trail system.

Justification

The Byxbee Park Conceptual Plan calls for vegetation and a trail system, allowing safe public access that doesnít impact the wildlife and ensures that regulatory requirements related to the capped landfill can be met. Landfill maintenance staff will construct new trails, expanding access to Byxbee Park Hills and linking the park together.

Supplemental Information

This project will generate and provide interim park concepts and a park improvement ordinance. A consultant will provide necessary design services through preparation of construction documents. A park improvement ordinance for the improvements identified by the Byxbee Park Conceptual Plan was approved by Council.

Significant Changes

2017-2021 CIP: Project completion extended one year due to extension in original schedule for finalizing landfill capping.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	65,492	269,115	249,932	19,183	0	0	0	0	19,183	0	334,607
Total	**65,492**	**269,115**	**249,932**	**19,183**	**0**	**0**	**0**	**0**	**19,183**	**0**	**334,607**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,485	269,115	249,932	19,183	0	0	0	0	19,183	0	270,600
Design	64,007	0	0	0	0	0	0	0	0	0	64,007
Total	**65,492**	**269,115**	**249,932**	**19,183**	**0**	**0**	**0**	**0**	**19,183**	**0**	**334,607**

Operating Impact

This project is anticipated to increase operating expenses for park maintenance.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-26

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-3

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project is categorically exempt from CEQA under Section 15301.

Cameron Park, January 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Cameron Park

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: Summer 2020

Project Number: PG-14002

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	159,994	0	159,994	0	159,994
Total	**0**	**0**	**0**	**0**	**0**	**0**	**159,994**	**0**	**159,994**	**0**	**159,994**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	141,997	0	141,997	0	141,997
Design	0	0	0	0	0	0	17,997	0	17,997	0	17,997
Total	**0**	**0**	**0**	**0**	**0**	**0**	**159,994**	**0**	**159,994**	**0**	**159,994**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Foothills Park Orchard Glen picnic area, January 2016

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park

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 Improvement Project

Description

This project provides funding to install new irrigation for the 15 acres of grass meadow at Foothills Park and to replace the bridge to Sunfish Island in the park.

Justification

The irrigation system is over 25 years old and needs to be upgraded to address increased maintenance as the system has aged, and to install more efficient equipment to reduce water needs. Turf will be reduced in certain areas to help conserve water and reduce the amount of mowed turf. The Sunfish Island Bridge (located at Boronda Lake) is in disrepair and needs to be replaced.

Supplemental Information

Replacement of the irrigation system has a high potential to significantly reduce water use.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	0	285,423	285,423	0	285,423
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**285,423**	**285,423**	**0**	**285,423**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	285,423	285,423	0	285,423
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**285,423**	**285,423**	**0**	**285,423**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Policy: C-26

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

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

Pearson-Arastradero Preserve, January 2016

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

Foothills Park, Pearson Arastradero Preserve, and Esther Clark Park Comprehensive 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

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	300,000	300,000	0	300,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**300,000**	**300,000**	**0**	**300,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	300,000	300,000	0	300,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**300,000**	**300,000**	**0**	**300,000**

Operating Impact

This project may result in recommendations that impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-2

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-3

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

Golf Course Net and Artificial Turf

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Palo Alto Municipal Golf Course

Managing Department: Community Services
IBRC Reference: Keep-up

Initial Project Start: Spring 2018
Initial Project Completion: Summer 2018

Revised Project Start:
Revised Project Completion:

Project Number: PG-18000

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 use expectancy of nine to ten years, replacement is projected to be needed in 2018. 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	770,000	0	0	0	770,000	0	770,000
Total	**0**	**0**	**0**	**0**	**770,000**	**0**	**0**	**0**	**770,000**	**0**	**770,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	745,000	0	0	0	745,000	0	745,000
Design	0	0	0	0	25,000	0	0	0	25,000	0	25,000
Total	**0**	**0**	**0**	**0**	**770,000**	**0**	**0**	**0**	**770,000**	**0**	**770,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Palo Alto Golf Course, March 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 1875 Embarcadero Road

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2012
Initial Project Completion: Spring 2015

Revised Project Start: Summer 2012
Revised Project Completion: Fall 2017

Project Number: PG-13003

Golf Reconfiguration & Baylands Athletic Center Improvements

Description

This project provides funding for the renovation of the Municipal Golf Course in accordance with the Council-approved conceptual plan. The project includes less turf, raising the elevation of the course with imported soil, replacement of the irrigation and drainage systems and space for athletic fields.

Justification

The need for this project was triggered by the San Francisquito Creek flood control improvements being implemented by the Creek Joint Powers Authority, which will encroach on the existing golf course. This creates an opportunity to resolve existing issues with the golf course, including the deteriorated irrigation system, high water consumption, poor soil, and the shortage of playing fields in Palo Alto. The course design will accentuate the natural Baylands setting and is expected to attract new users, increasing revenue.

Supplemental Information

The project will be partially funded through the San Francisquito Creek JPA ($3.0 million) as mitigation for the impacts of its flood control project. The balance of the project cost will be financed through certificates of participation (COPs) issued by the city and repaid via golf course revenues over a period of 20 years. A financial analysis prepared by the National Golf Foundation projected revenues from the improved golf course will support repayment of the COPs.

Significant Changes

2016-2020 CIP: Timeline extended to reflect full delay in construction phase due to difficulties in securing regulatory permits for the project. Additionally, project was reduced by $24,450, which represents the amount that was previously budgeted for public art. In Fiscal Year 2015, the City Council approved a new Public Art policy, which dedicated an amount equal to one percent of capital projects, with certain exclusions, for public art. Public Art expenses are accounted for within the Art in Public Places capital project. The reduction of $24,450 represents the amount that was previously earmarked in this project for public art. Public Art funding of approximately $100,000 (representing one percent of the total anticipated cost for this project) was added to the Art in Public Places project as part of this budget.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	878,867	151,896	(58,870)	1,206,620	0	0	0	0	1,206,620	0	2,026,617
Other	0	10,264,211	183,976	9,084,381	0	0	0	0	9,084,381	0	9,268,357
Total	**878,867**	**10,416,107**	**125,106**	**10,291,001**	**0**	**0**	**0**	**0**	**10,291,001**	**0**	**11,294,974**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	6,339	10,416,107	125,106	10,291,001	0	0	0	0	10,291,001	0	10,422,446
Design	872,528	0	0	0	0	0	0	0	0	0	872,528
Total	**878,867**	**10,416,107**	**125,106**	**10,291,001**	**0**	**0**	**0**	**0**	**10,291,001**	**0**	**11,294,974**

Operating Impact

Maintenance of the golf course is budgeted in the Community Services Department. It is anticipated that the complete reconstruction of the golf course on a smaller footprint with less turf and a more efficient irrigation system will reduce maintenance costs (particularly water costs) and extend the useful life of this asset. There will be cost savings while the golf course is closed for construction and ongoing savings once the new upgraded course is opened for public play. The cost to operate and maintain the golf course will be reviewed annually, and any incremental savings will be proposed each year through the annual budget process.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-8

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

An Environmental Impact Report has been completed for this project.

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Hoover Park, February 2015

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 2020
Revised Project Completion: Winter 2021

Project Number: PE-18012

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 are 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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	49,335	0	0	0	530,804	580,139	0	580,139
Total	**0**	**0**	**0**	**49,335**	**0**	**0**	**0**	**530,804**	**580,139**	**0**	**580,139**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	425,000	425,000	0	425,000
Design	0	0	0	49,335	0	0	0	105,804	155,139	0	155,139
Total	**0**	**0**	**0**	**49,335**	**0**	**0**	**0**	**530,804**	**580,139**	**0**	**580,139**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-1

Policy: C-4

Program: C-24

Potential Board/Commission Review:

Parks and Recreation 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: Mitchell Park

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Summer 2017

Revised Project Start:
Revised Project Completion:

Project Number: PE-17000

Mitchell Park Adobe Creek Bridge Replacement Project

Description

This project provides funding to replace the existing bridge over Adobe Creek in Mitchell Park.

Justification

Since the completion of the Magical Bridge Playground, the Adobe Creek Bridge in Mitchell Park has seen continued increased use. The bridge acts as the main link between the surrounding neighborhoods, schools and Mitchell Park and is an integral component of the safe routes to school path system.

Supplemental Information

Upgrades made to the pathway on either side of the bridge to meet ADA standards for the Magical Bridge Playground were completed last year. The new pathways leading to the existing bridge were installed at a 10 foot width to increase capacity and safety of the walkway. The current bridge is only 5 feet wide, creating safety issues for both bikes and pedestrians. An initial study performed on the bridge during the design of the Magical Bridge Playground recommended replacement of the bridge to meet current ADA standards. The existing bridge foundations can be utilized by a new bridge, reducing the overall costs of installation. The bridge currently serves over 200 children and commuters daily who use the bridge to access the several schools around Mitchell Park, the Magical Bridge Playground, and the Mitchell Park Library and Community Center.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	250,000	0	0	0	0	250,000	0	250,000
Total	**0**	**0**	**0**	**250,000**	**0**	**0**	**0**	**0**	**250,000**	**0**	**250,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	200,000	0	0	0	0	200,000	0	200,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**250,000**	**0**	**0**	**0**	**0**	**250,000**	**0**	**250,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-26

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Access

Goal: C-5

Policy: C-32

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

Mitchell Park, February 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Mitchell Park

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Fall 2018
Initial Project Completion: Summer 2019

Revised Project Start: Summer 2019
Revised Project Completion: Summer 2021

Project Number: PE-18010

Mitchell Park Improvements

Description

This project provides funding for repair and replacement of equipment and amenities through 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.

Significant Changes

2016-2020 CIP: Based on the IBRC keep-up schedule for the park, irrigation renovations, turf restoration and park amenities replacement have been 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 has been adjusted accordingly.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	74,110	1,408,311	0	1,482,421	0	1,482,421
Total	**0**	**0**	**0**	**0**	**0**	**74,110**	**1,408,311**	**0**	**1,482,421**	**0**	**1,482,421**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	1,132,200	0	1,132,200	0	1,132,200
Design	0	0	0	0	0	74,110	276,111	0	350,221	0	350,221
Total	**0**	**0**	**0**	**0**	**0**	**74,110**	**1,408,311**	**0**	**1,482,421**	**0**	**1,482,421**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

This project may be subject to CEQA review.

Byxbee Park pole field, January 2015

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

Off-Road Pathway Resurfacing And Repair

Description

This project provides funding for the maintenance of Palo Alto's 9-mile 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. The project does not create new offroad trails. 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. This project will ensure safe, even, and handicapped accessible surfaces for pedestrians, cyclists, and skaters. Repair of uneven trail surfaces will greatly reduce accidents.

Supplemental Information

Work programmed for this project includes pathway resurfacing for the following locations:

Fiscal Year 2018: Baylands Pathway

Fiscal Years 2019-2021: Projects have not yet been identified

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	321,549	143,056	199,080	121,143	121,713	122,300	123,192	687,428	0	N/A
Total	**N/A**	**321,549**	**143,056**	**199,080**	**121,143**	**121,713**	**122,300**	**123,192**	**687,428**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	182,000	0	0	0	0	0	0	0	0	N/A
Construction	N/A	139,549	143,056	199,080	121,143	121,713	122,300	123,192	687,428	0	N/A
Total	**N/A**	**321,549**	**143,056**	**199,080**	**121,143**	**121,713**	**122,300**	**123,192**	**687,428**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-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.

Boronda Lake, January 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Foothills Park Boronda Lake

Managing Department: Community Services
IBRC Reference: Keep-up

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: OS-00002

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 has been converted to annual recurring status, rather than past practice of receiving additional funding every other year. The change will address 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	45,000	24,591	65,409	45,000	45,000	45,000	45,000	245,409	0	N/A
Total	**N/A**	**45,000**	**24,591**	**65,409**	**45,000**	**45,000**	**45,000**	**45,000**	**245,409**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	45,000	24,591	65,409	45,000	45,000	45,000	45,000	245,409	0	N/A
Total	**N/A**	**45,000**	**24,591**	**65,409**	**45,000**	**45,000**	**45,000**	**45,000**	**245,409**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1 and N-12

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Baylands Bench, January 2015

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	389,244	383,385	235,859	175,000	175,000	175,000	175,000	935,859	0	N/A
Total	**N/A**	**389,244**	**383,385**	**235,859**	**175,000**	**175,000**	**175,000**	**175,000**	**935,859**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	389,244	383,385	235,859	175,000	175,000	175,000	175,000	935,859	0	N/A
Total	**N/A**	**389,244**	**383,385**	**235,859**	**175,000**	**175,000**	**175,000**	**175,000**	**935,859**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-3

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Briones Park, January 2015

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

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	30,985	28,466	(28,466)	0	0	0	0	(28,466)	0	N/A
Design	N/A	75,000	41,362	139,623	75,000	75,000	75,000	75,000	439,623	0	N/A
Total	**N/A**	**105,985**	**69,828**	**111,157**	**75,000**	**75,000**	**75,000**	**75,000**	**411,157**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	105,985	69,828	111,157	75,000	75,000	75,000	75,000	411,157	0	N/A
Total	**N/A**	**105,985**	**69,828**	**111,157**	**75,000**	**75,000**	**75,000**	**75,000**	**411,157**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation 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: Pearson Arastradero Preserve

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Summer 2020
Initial Project Completion: Fall 2021

Revised Project Start:
Revised Project Completion:

Project Number: PE-21001

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 bride 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.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	0	306,595	306,595	0	306,595
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**306,595**	**306,595**	**0**	**306,595**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	273,226	273,226	0	273,226
Design	0	0	0	0	0	0	0	33,369	33,369	0	33,369
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**306,595**	**306,595**	**0**	**306,595**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Access

Policy: C-32

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

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

Peers Park, January 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Peers Park

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: Summer 2020

Project Number: PG-14001

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	229,019	0	229,019	0	229,019
Total	**0**	**0**	**0**	**0**	**0**	**0**	**229,019**	**0**	**229,019**	**0**	**229,019**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	220,257	0	220,257	0	220,257
Design	0	0	0	0	0	0	8,762	0	8,762	0	8,762
Total	**0**	**0**	**0**	**0**	**0**	**0**	**229,019**	**0**	**229,019**	**0**	**229,019**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Ramos Park, January 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: Ramos Park

Managing Department: Community Services
IBRC Reference: Catch-up

Initial Project Start: Summer 2015
Initial Project Completion: Summer 2015

Revised Project Start: Summer 2017
Revised Project Completion: Spring 2018

Project Number: PG-14000

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

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

2016-2020 CIP: The project completion orginally referred only to the pre-design phase and has been modified to represent completion of the full project, including construction.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	175,000	0	0	199,019	0	0	0	199,019	0	199,019
Total	**0**	**175,000**	**0**	**0**	**199,019**	**0**	**0**	**0**	**199,019**	**0**	**199,019**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	175,000	0	0	190,257	0	0	0	190,257	0	190,257
Design	0	0	0	0	8,762	0	0	0	8,762	0	8,762
Total	**0**	**175,000**	**0**	**0**	**199,019**	**0**	**0**	**0**	**199,019**	**0**	**199,019**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Rinconada Park February 2015

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: Summer 2019

Project Number: PE-08001

Rinconada Park Improvements

Description

This project provides funding for upgrades to safety, site amenities, pool and playground facilities, irrigation, drainage and accessibility at Rinconada Park. The funding is expected to provide for implementation of improvements outlined by the Rinconada Park Master Plan that relate to current deferred maintenance items at the park, such as installing wider pathways rather than repairing the existing pathways.

Justification

Funding is needed to implement the first, short-term phase of the Rinconada Park Master Plan that will focus on deferred maintenance items and related improvements. The Master Plan is currently under environmental review and will be brought to the City Council for approval upon completion of the environmental review process.

Supplemental Information

The funding provided for construction of improvements in Fiscal Year 2017 may be adjusted in future CIPs once the Rinconada Park Master Plan has been finalized and approved.

Significant Changes

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 Master Plan and environmental review, which is currently underway. 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 Master Plan and the Parks Master Plan are completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	6,916	1,271	0	0	3,616,080	0	0	0	3,616,080	0	3,622,996
Total	**6,916**	**1,271**	**0**	**0**	**3,616,080**	**0**	**0**	**0**	**3,616,080**	**0**	**3,622,996**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,271	0	0	3,184,449	0	0	0	3,184,449	0	3,184,449
Design	6,916	0	0	0	431,631	0	0	0	431,631	0	438,547
Total	**6,916**	**1,271**	**0**	**0**	**3,616,080**	**0**	**0**	**0**	**3,616,080**	**0**	**3,622,996**

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 annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-20

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Rinconada Park Master Plan, February 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 777 Embarcadero Road

Managing Department: Public Works
IBRC Reference: N/A

Initial Project Start: Spring 2012
Initial Project Completion: Spring 2013

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: PE-12003

Rinconada Park Master Plan and Design

Description

This project provides funding for the development of a master plan for Rinconada Park. The process is two-fold and includes an Urban Planning or Landscape Architecture firm engaging stakeholders in addressing usage and facility needs and a study to assess existing and future transportation, parking and traffic needs as well as providing a conceptual plan, guidelines and design for landscaping, wayfinding systems and pedestrian roadway crossings.

Justification

Rinconada is a regional park, but due to its location adjacent to so many other highly frequented facilities, including Lucie Stern Community Center and Theatre, Childrens Theatre, Childrenís Library, Junior Museum & Zoo, Rinconada Pool, the tennis courts, Fire Station 3, Rinconada Library, Art Center and Walter Hayes Elementary School, the development of a master plan incorporating surrounding facilities is essential in ensuring the park continues to thrive and serve the community.

Significant Changes

2016-2020 CIP: In response to the recommendations made by the Rinconada Park Master Plan, an environmental assessment was requested by the Planning and Community Environment Department (PCE) to review the potential impacts of all improvements, including the proposed rebuilding of the Junior Museum & Zoo. Council approved a Budget Amendment Ordinance for $114,565 to fund the environmental assessment. One half of the funding for the environmental

assessment is being provided by the Friends of the Junior Museum and Zoo. The project schedule has been extended to reflect the delay to the completion of the Master Plan.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	339,126	157,229	151,800	5,429	0	0	0	0	5,429	0	496,355
Total	**339,126**	**157,229**	**151,800**	**5,429**	**0**	**0**	**0**	**0**	**5,429**	**0**	**496,355**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	87,584	0	0	0	0	0	0	0	0	0
Design	339,126	69,645	151,800	5,429	0	0	0	0	5,429	0	496,355
Total	**339,126**	**157,229**	**151,800**	**5,429**	**0**	**0**	**0**	**0**	**5,429**	**0**	**496,355**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Local Landuse and Growth Management

Goal: L-2

Policy: L-10

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Robles Park, February 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 4116 Park Blvd

Managing Department: Public Works
IBRC Reference: Keep-up

Initial Project Start: Fall 2018
Initial Project Completion: Summer 2019

Revised Project Start: Summer 2020
Revised Project Completion: Winter 2021

Project Number: PE-18015

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.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	755,722	0	755,722	0	755,722
Total	**0**	**0**	**0**	**0**	**0**	**0**	**755,722**	**0**	**755,722**	**0**	**755,722**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	619,018	0	619,018	0	619,018
Design	0	0	0	0	0	0	136,704	0	136,704	0	136,704
Total	**0**	**0**	**0**	**0**	**0**	**0**	**755,722**	**0**	**755,722**	**0**	**755,722**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-1

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation 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: Sarah Wallis Park - 202 Ash Street 94306

Managing Department: Community Services
IBRC Reference: New

Initial Project Start: Spring 2012
Initial Project Completion:

Revised Project Start:
Revised Project Completion: Winter 2016

Project Number: PG-12004

Sarah Wallis Park Improvements

Description

This project will provide upgrades and renovations for safety and accessibility improvements at Sarah Wallis Park. Funding for this project will focus on pathway repair, turf replacement, irrigation, benches, and ADA accessibility.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	65,000	16,998	48,002	0	0	0	0	48,002	0	65,000
Total	**0**	**65,000**	**16,998**	**48,002**	**0**	**0**	**0**	**0**	**48,002**	**0**	**65,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	65,000	16,998	48,002	0	0	0	0	48,002	0	65,000
Total	**0**	**65,000**	**16,998**	**48,002**	**0**	**0**	**0**	**0**	**48,002**	**0**	**65,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Seale Park, February 2015

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 3100 Stockton Pl

Managing Department: Community Services
IBRC Reference: Keep-up

Initial Project Start: Summer 2018
Initial Project Completion: Winter 2018

Revised Project Start: Summer 2019
Revised Project Completion: Summer 2020

Project Number: PG-14003

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	0	0	0	354,019	0	354,019	0	354,019
Total	**0**	**0**	**0**	**0**	**0**	**0**	**354,019**	**0**	**354,019**	**0**	**354,019**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	320,257	0	320,257	0	320,257
Design	0	0	0	0	0	0	33,762	0	33,762	0	33,762
Total	**0**	**0**	**0**	**0**	**0**	**0**	**354,019**	**0**	**354,019**	**0**	**354,019**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Stanford-Palo Alto Playing Fields

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2700 El Camino Real

Managing Department: Community Services
IBRC Reference: Keep-up

Initial Project Start: Fall 2012
Initial Project Completion: Spring 2013

Revised Project Start: Spring 2015
Revised Project Completion: Summer 2016

Project Number: PG-12001

Stanford/Palo Alto Playing Fields Netting

Description

This project provides funding to add additional netting to prevent soccer balls from going over the fence into the parking lot of the adjacent property at 650 Page Mill Road. Although there is netting behind the soccer goal areas, there is still a gap of approximately 160 feet without netting in the area between the two soccer fields. This area serves as a warm up and practice area and is heavily used.

Justification

The adjacent property manager has complained of repeated issues with soccer balls coming over the existing fence and damaging vehicles. There are also safety concerns with children running through the parking lot searching for soccer balls kicked over the fence. Landscaping and irrigation have also been damaged as soccer players walk through landscaped areas of the parking lot to retrieve soccer balls.

Significant Changes

2017-2021 CIP: Project completion previously delayed due to staff need to focus on other projects. Now project to add netting is anticipated to be completed in Summer 2016 in coordination with a turf replacement project at the same location.

2016-2020 CIP: Project schedule delayed due to staff focusing on higher priority projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	50,000	0	50,000	0	0	0	0	50,000	0	50,000
Total	**0**	**50,000**	**0**	**50,000**	**0**	**0**	**0**	**0**	**50,000**	**0**	**50,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	50,000	0	50,000	0	0	0	0	50,000	0	50,000
Total	**0**	**50,000**	**0**	**50,000**	**0**	**0**	**0**	**0**	**50,000**	**0**	**50,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-26

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Environmental Impact Analysis:

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

Stanford/Palo Alto Playing Fields

Fund: Capital Improvement Fund
Category: Parks and Open Space
Project Location: 2700 El Camino Real

Managing Department: Community Services
IBRC Reference: Keep-up

Initial Project Start: Summer 2013
Initial Project Completion: Summer 2015

Revised Project Start: Summer 2016
Revised Project Completion: Fall 2016

Project Number: PG-13001

Stanford/Palo Alto Playing Fields Soccer Turf Replacement

Description

This project provides funding for replacement of synthetic turf at the Stanford/Palo Alto Playing Fields.

Justification

The Stanford/Palo Alto Playing Fields accommodate year round play with lighting. Since the complex was built in 2006, it has been in high demand and is used by youth and adult leagues as well as walk-on play. In order to ensure safe playing conditions, the two soccer fields are scheduled for turf replacement in Fiscal Year 2015 and Fiscal Year 2016.

Supplemental Information

The turf has a typical lifespan of eight to ten years.

Significant Changes

2017-2021 CIP: The project's initiation and completion has been delayed due to staffing resources and availability of materials. Completion is anticipated to be Summer 2016.

2016-2020 CIP: The project's initiation, originally planned for Summer 2013, was delayed due to staffing resources. As a result, both of the playing fields will now be replaced in a single phase rather than two separate phases as previously scheduled. The project's completion season of Summer 2015 remains unchanged.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	7,237	1,492,742	999,305	493,437	0	0	0	0	493,437	0	1,499,979
Total	**7,237**	**1,492,742**	**999,305**	**493,437**	**0**	**0**	**0**	**0**	**493,437**	**0**	**1,499,979**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,257	1,492,742	999,305	493,437	0	0	0	0	493,437	0	1,494,999
Design	4,980	0	0	0	0	0	0	0	0	0	4,980
Total	**7,237**	**1,492,742**	**999,305**	**493,437**	**0**	**0**	**0**	**0**	**493,437**	**0**	**1,499,979**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

Rinconada Tennis Courts, February 2015

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

Tennis and Basketball Court Resurfacing

Description

This project provides funding for tennis and basketball court repair and resurfacing in various Palo Alto parks.

Justification

Tennis and basketball courts 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 2017: Mitchell Park tennis courts reconstruction (courts 5-7)

Fiscal Year 2018: Mitchell Park handball resurfacing and Mitchell Park paddle tennis resurfacing

Fiscal Year 2019: Rinconada Park tennis courts reconstruction (all courts)

Fiscal Year 2020: Basketball court resurfacing: Briones Park, Johnson Park and Terman Park

Fiscal Year 2021: Tennis courts at Terman Park, and Weisshaar Park

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	645,250	362,790	497,460	215,000	215,000	215,000	215,000	1,357,460	0	N/A
Total	**N/A**	**645,250**	**362,790**	**497,460**	**215,000**	**215,000**	**215,000**	**215,000**	**1,357,460**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	645,250	362,790	497,460	215,000	215,000	215,000	215,000	1,357,460	0	N/A
Total	**N/A**	**645,250**	**362,790**	**497,460**	**215,000**	**215,000**	**215,000**	**215,000**	**1,357,460**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

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Streets and Sidewalks

Byron Street (1200 Block), January 2013

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

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	483,655	204,669	447,063	172,364	174,317	176,324	179,377	1,149,445	0	N/A
Total	**N/A**	**483,655**	**204,669**	**447,063**	**172,364**	**174,317**	**176,324**	**179,377**	**1,149,445**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	476,216	204,669	439,424	164,518	166,260	168,049	170,771	1,109,022	0	N/A
Design	N/A	7,439	0	7,639	7,846	8,057	8,275	8,606	40,423	0	N/A
Total	**N/A**	**483,655**	**204,669**	**447,063**	**172,364**	**174,317**	**176,324**	**179,377**	**1,149,445**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: City Structure

Goal: L-3

Policy: L-17

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.

Dinah Summerhill Easement

Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Wilkie Way to the Redwood Gate Development

Managing Department: Planning and Community Environment
IBRC Reference: N/A

Initial Project Start: Summer 2011
Initial Project Completion: Summer 2011

Revised Project Start: Summer 2016
Revised Project Completion: Winter 2016

Project Number: PL-11001

Dinah Summerhill Pedestrian/Bicycle Path

Description

This project will construct a pedestrian/bicycle path on a public easement on the pan handle parcel of the Dinah's Hotel property. The path would provide access from Wilkie Way to the Redwood Gate development for connectivity to the public park. Improvements shall include an approximately 15′ wide by 130′ long path for bike and pedestrian access. Improvements also include fencing and landscaping. Landscaping shall include oak trees to be planted so as to prevent future vehicle access.

Justification

City Council directed staff to design and construct a pathway on the public easement on September 14, 2009 when the property was rezoned to allow use of the parcel for public access. The path would provide pedestrian and bicycle access from Wilkie Way to the public park that is located within the adjacent Redwood Gate residential development.

Supplemental Information

2017-2021 CIP: Further project costs have been accounted for in the Bike and Pedestrian Transportation Plan Implementation capital project (PL-04010).

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	116,052	2,411	113,641	0	0	0	0	113,641	0	116,052
Total	**0**	**116,052**	**2,411**	**113,641**	**0**	**0**	**0**	**0**	**113,641**	**0**	**116,052**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	116,052	2,411	113,641	0	0	0	0	113,641	0	116,052
Total	**0**	**116,052**	**2,411**	**113,641**	**0**	**0**	**0**	**0**	**113,641**	**0**	**116,052**

Operating Impact

This project may impact operating expenses in future years. As the impacts are better defined, operating impacts will be reviewed and adjustments may be brought forward as part of the annual budget process, as necessary.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-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.

El Camino Median Landscape Improvements March 2015

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 2016
Revised Project Completion: Fall 2022

Project Number: PE-13017

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. In Fiscal Year 2017, improvements will address three medians from Cambridge Avenue to Grant Avenue. The Fiscal Year 2021 improvements will address medians from City limits to University Avenue, and from Page Mill Road to Arastradero Road.

Because the medians are not currently irrigated, this project will result in increased water usage. Prior to commencing with the improvements, the project will be considered in the context of

the City's actions to reduce water use in response to the drought, which may result in a project delay or cancellation of the project.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	4,785	360,653	34,208	326,445	0	0	0	776,000	1,102,445	0	1,141,438
Total	**4,785**	**360,653**	**34,208**	**326,445**	**0**	**0**	**0**	**776,000**	**1,102,445**	**0**	**1,141,438**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	284,752	34,208	326,445	0	0	0	776,000	1,102,445	0	1,136,653
Design	4,785	75,901	0	0	0	0	0	0	0	0	4,785
Total	**4,785**	**360,653**	**34,208**	**326,445**	**0**	**0**	**0**	**776,000**	**1,102,445**	**0**	**1,141,438**

Anticipated Operating Budget Needs

Fund	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Capital Improvement Fund	680	680	330	330	330

Operating Impact

This project is anticipated to impact operating expenses in the future. The costs detailed in the table above represent current estimates for annually increased water usage and maintenance of the median landscaping for the Cambridge Avenue to Grant Avenue medians; however these costs will be reviewed throughout the construction of the project. Adjustments may be brought forward for City Council consideration upon completion of the project.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Open Space

Goal: N-1

Policy: N-1

Program: N-1

Potential Board/Commission Review:

Architectural Review Board

Environmental Impact Analysis:

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

Newell Road Bridge, Febraury 2015

Fund: Capital Improvement Fund
Category: Streets and Sidewalks
Project Location: Newell Rd at SF Creek

Managing Department: Public Works
IBRC Reference: New

Initial Project Start: Spring 2012
Initial Project Completion: Spring 2015

Revised Project Start:
Revised Project Completion: Fall 2018

Project Number: PE-12011

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 up to the estimated 1% (100-year) San Francisquito Creek flow rate; site and safety distances for vehicle traffic; 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, neither pedestrians nor bicyclists can safely cross the existing bridge.

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.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	605,836	946,570	946,570	25,000	0	0	0	0	25,000	0	1,577,406
Revenue from the State of California	0	0	0	0	0	2,500,000	0	0	2,500,000	0	2,500,000
Total	**605,836**	**946,570**	**946,570**	**25,000**	**0**	**2,500,000**	**0**	**0**	**2,525,000**	**0**	**4,077,406**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	548,422	946,570	946,570	0	2,500,000	0	0	0	2,500,000	0	3,994,992
Design	57,414	0	0	25,000	0	0	0	0	25,000	0	82,414
Total	**605,836**	**946,570**	**946,570**	**25,000**	**2,500,000**	**0**	**0**	**0**	**2,525,000**	**0**	**4,077,406**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-1

Policy: T-25

Program: L-72

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.

Middlefield Road (1500 Block), January 2013

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

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.

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 will be completed by the end of 2016. A sidewalk program assessment to evaluate options for improving the city's Sidewalk Repair Program will be completed in Fiscal Year 2017, and will offer suggestions for establishing goals and priorities related to repairs and replacements throughout the city.

Significant Changes

2016-2020 CIP: This project originally included salary and benefits for all in-house crews that maintained sidewalks as part of the sidewalk program. Salary and benefit costs for 3.46 FTEs were transferred to the General Fund operating budget in Fiscal Year 2016 to better differentiate between maintenance and capital costs. However, 1.92 FTEs still remain.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	3,669,422	3,127,568	2,437,177	1,900,327	1,905,466	1,910,743	1,918,773	10,072,486	0	N/A
Total	**N/A**	**3,669,422**	**3,127,568**	**2,437,177**	**1,900,327**	**1,905,466**	**1,910,743**	**1,918,773**	**10,072,486**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	3,652,421	3,127,568	2,419,718	1,882,396	1,887,051	1,891,831	1,899,105	9,980,101	0	N/A
Design	N/A	17,001	0	17,459	17,931	18,415	18,912	19,668	92,385	0	N/A
Total	**N/A**	**3,669,422**	**3,127,568**	**2,437,177**	**1,900,327**	**1,905,466**	**1,910,743**	**1,918,773**	**10,072,486**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-21

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.

Traffic sign, April 2015

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

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) has 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	141,936	97,525	94,411	50,000	50,000	50,000	50,000	294,411	0	N/A
Total	**N/A**	**141,936**	**97,525**	**94,411**	**50,000**	**50,000**	**50,000**	**50,000**	**294,411**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	141,936	97,525	94,411	50,000	50,000	50,000	50,000	294,411	0	N/A
Total	**N/A**	**141,936**	**97,525**	**94,411**	**50,000**	**50,000**	**50,000**	**50,000**	**294,411**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Design of Buildings Public Places

Goal: L-9

Policy: L-50

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

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.

East Bayshore Road street lights, February 2015

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

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 Public Works Department.

Supplemental Information

The Streetlight Condition Assessment project (PE-13014), is expected to be complete in 2016 and will result in recommendations for replacement of streetlights. Where desired, efforts to match existing will be made.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	399,127	95,248	467,982	164,484	164,875	165,276	165,887	1,128,504	0	N/A
Total	**N/A**	**399,127**	**95,248**	**467,982**	**164,484**	**164,875**	**165,276**	**165,887**	**1,128,504**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	399,127	95,248	467,982	164,484	164,875	165,276	165,887	1,128,504	0	N/A
Total	**N/A**	**399,127**	**95,248**	**467,982**	**164,484**	**164,875**	**165,276**	**165,887**	**1,128,504**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-66

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.

Curtner Avenue (300 Block), February 2015

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

Street Maintenance

Description

This project provides funding for annual resurfacing, slurry seal, crack seal, and reconstruction of various city streets.

Justification

The Pavement Maintenance Management System (PMMS) is used to identify streets requiring maintenance (based on the biannual 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. The approved funding level in this CIP is expected to result in reaching that goal by 2019. At the end of Fiscal Year 2016, the average PCI is expected to be 83.

Supplemental Information

The Fiscal Year 2015-2019 CIP budget for this project included new funding of $2.3 million that is being used between Fiscal Year 2015 and Fiscal Year 2017 for the design and accelerated repaving of Middlefield Road and Alma Street. The list of streets to be included in this project will be prioritized and coordinated with Utilities Department projects and the 2012 Bicycle and Pedestrian Transportation Plan. The current base funding level of $5.1 million per year (not inclusive of salary and benefit costs) for Street Maintenance is nearly triple the funding level prior to Council's establishment of the citywide PCI goal. This project is partially funded by revenues from gas taxes and vehicle registration fees.

Significant Changes

2017-2021 CIP: With the PCI goal of 85 expected to be achieved in 2019, the Fiscal Year 2020 and Fiscal Year 2021 funding has been reduced to $3.1 million in project funds, a level estimated

to be sufficient to maintain the new PCI level. These funding levels may be adjusted based on additional information and modeling.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	9,943,850	9,894,218	4,949,615	4,077,280	4,094,638	2,123,078	2,150,201	17,394,812	0	N/A
Other	N/A	385,000	385,000	385,000	385,000	385,000	385,000	385,000	1,925,000	0	N/A
Transfer from Gas Tax Fund	N/A	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,270,000	1,270,000	6,440,000	0	N/A
Total	**N/A**	**11,628,850**	**11,579,218**	**6,634,615**	**5,762,280**	**5,779,638**	**3,778,078**	**3,805,201**	**25,759,812**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	11,468,847	11,579,218	6,455,758	5,579,943	5,593,728	3,588,499	3,660,039	24,877,967	0	N/A
Design	N/A	160,003	0	178,857	182,337	185,910	189,579	145,162	881,845	0	N/A
Total	**N/A**	**11,628,850**	**11,579,218**	**6,634,615**	**5,762,280**	**5,779,638**	**3,778,078**	**3,805,201**	**25,759,812**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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.

Streetlight, Guinda Street, November 2014

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 2016
Revised Project Completion: Fall 2016

Project Number: PE-13014

Streetlights 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 cityís streetlight infrastructure. The assessment will also consider appropriate recommendations for streetlights determined to be historic, or in neighborhoods with unique streetlights.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	1,686	255,364	250,286	5,078	0	0	0	0	5,078	0	257,050
Total	**1,686**	**255,364**	**250,286**	**5,078**	**0**	**0**	**0**	**0**	**5,078**	**0**	**257,050**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	255,364	250,286	5,078	0	0	0	0	5,078	0	255,364
Design	1,686	0	0	0	0	0	0	0	0	0	1,686
Total	**1,686**	**255,364**	**250,286**	**5,078**	**0**	**0**	**0**	**0**	**5,078**	**0**	**257,050**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Local Landuse and Growth Management

Goal: L-9

Policy: L-79

Program: L-79

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.

Park and Oxford lane lines, February 2015

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	146,932	101,313	128,652	83,250	83,472	83,702	84,050	463,126	0	N/A
Total	**N/A**	**146,932**	**101,313**	**128,652**	**83,250**	**83,472**	**83,702**	**84,050**	**463,126**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	146,932	101,313	128,652	83,250	83,472	83,702	84,050	463,126	0	N/A
Total	**N/A**	**146,932**	**101,313**	**128,652**	**83,250**	**83,472**	**83,702**	**84,050**	**463,126**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-66

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.

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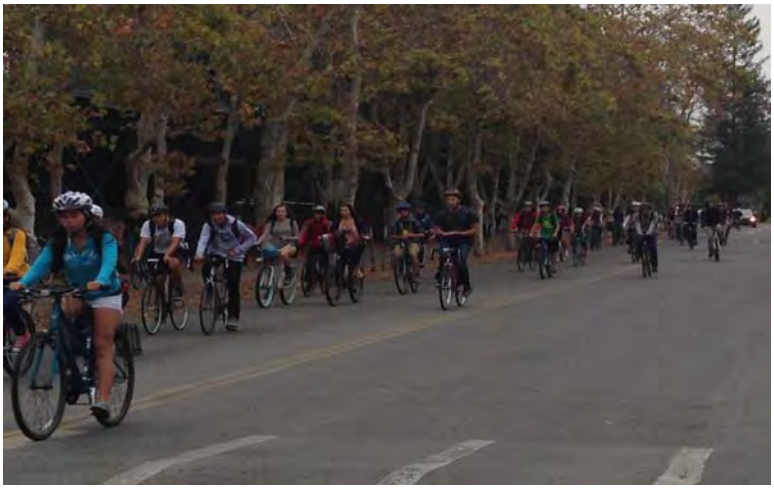
Traffic and Transportation



Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Various

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: PL-04010

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 a citywide bicycle sharing system in accordance with the Palo Alto Bicycle and Pedestrian Transportation Plan, which was adopted by City Council in 2012. This project includes two projects that were formerly listed as separate CIP Projects: CIP Projects PL-14001, Midtown Connector, and PL-11001, Dinah Summerhill Pedestrian/Bicycle Path. Effective Fiscal Year 2017, these projects are included as part of this CIP.

The Dinah Summerhill project includes construction of pedestrian/bicycle path on a public easement on the pan handle parcel of the Dinah's Hotel property. The path would provide access from Wilkie Way to the Redwood Gate development for connectivity to the public park. Improvements shall include an approximately 15′ wide by 130′ long path for bike and pedestrian access. Improvements also include fencing and landscaping. Landscaping shall include oak trees to be planted so as to prevent future vehicle access.

The Midtown Connector project includes construction of a new shared-use path along the levees of the Matadero Creek between Waverley Street and Greer Road as well as a study/master plan of improvements between Alma Street and US 101.

Justification

Projects as 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 routes and provide better commute alternatives.

Supplemental Information

Funding for implementation of the Palo Alto Bicycle and Pedestrian Transportation Plan is provided through the Council Infrastructure Plan.

The following projects are currently in the planning phase:

Churchill Avenue Enhanced Bikeway Phase 2East Meadow Drive Separated Bikeway

Citywide Bicycle Sharing System

Greer Road Bicycle Boulevard

Homer Avenue-Channing Avenue Enhanced Bikeway

Midtown Connector

The following projects are currently in the final design phase:

Amarillo Avenue-Moreno Avenue Bicycle Boulevard

Bryant Street Bicycle Boulevard Extension

Bryant Street Bicycle Boulevard Update

Churchill Avenue Enhanced Bikeway Phase 1

Louis Road-Montrose Avenue Bicycle Boulevard

Maybell Avenue Bicycle Boulevard

Park Boulevard-Wilkie Way Bicycle Boulevard

Ross Road Bicycle Boulevard

The following projects are currently in the construction phase:

Churchill Avenue Enhanced Bikeway Phase 0

Dinah-Summerhill Pedestrian/Bicycle Path (additional funding via a reappropriation in the original project can be seen in project PL-11001 as well)

Significant Changes

2017-2021 CIP: This project is funded by a transfer from the Stanford University Medical Center Fund to the Capital Improvement Fund. Funding for this Bike and Pedestrian Plan Implementation is included in a reserve for Infrastructure Plan projects. Since Fiscal Year 2016, several additional projects have been added to this CIP, including citywide bicycle sharing system, Dinah

Summerhill Pedestrian/Bicycle Path, East Meadow Drive Separated Bikeway, and Midtown Connector.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	1,734,714	851,940	1,042,795	(1,533,578)	2,473,079	2,480,002	4,681,321	9,143,619	0	N/A
Transfer from Stanford University Medical Ctr Fund	N/A	1,200,000	1,200,000	1,200,000	5,200,000	1,200,000	1,200,000	0	8,800,000	0	N/A
Total	**N/A**	**2,934,714**	**2,051,940**	**2,242,795**	**3,666,422**	**3,673,079**	**3,680,002**	**4,681,321**	**17,943,619**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	2,934,714	2,051,940	2,242,795	3,666,422	3,673,079	3,680,002	4,681,321	17,943,619	0	N/A
Total	**N/A**	**2,934,714**	**2,051,940**	**2,242,795**	**3,666,422**	**3,673,079**	**3,680,002**	**4,681,321**	**17,943,619**	**0**	**N/A**

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: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-19

Relationship to Comprehensive Plan

Secondary Connection

Section: Local Landuse and Growth Management

Goal: L-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.

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Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location:

Managing Department: Planning and Community Environment
IBRC Reference: N/A

Initial Project Start: Winter 2010
Initial Project Completion:

Revised Project Start:
Revised Project Completion: Winter 2016

Project Number: PL-11002

California Avenue - Transit Hub Corridor Project

Description

The California Avenue Transit Hub Corridor Streetscape Improvements Project provides for streetscape and utility improvements along California Avenue, between El Camino Real and the California Avenue Caltrain Station. Improvements include sidewalk widening to accommodate wider pedestrian walking and dwelling areas, new landscaping and streetscape furniture, new streetlights and pedestrian scale lighting, traffic calming treatments, a reduction from four lanes to two lanes of travel, and improvements to the Park Boulevard Plaza.

Justification

Funding was approved to be appropriated from FY2016 expenditure savings.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	5,597,473	666,651	466,946	199,705	0	0	0	0	199,705	0	6,264,124
Total	**5,597,473**	**666,651**	**466,946**	**199,705**	**0**	**0**	**0**	**0**	**199,705**	**0**	**6,264,124**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	5,593,337	666,651	0	0	0	0	0	0	0	0	5,593,337
Design	4,135	0	466,946	199,705	0	0	0	0	199,705	0	670,786
Total	**5,597,472**	**666,651**	**466,946**	**199,705**	**0**	**0**	**0**	**0**	**199,705**	**0**	**6,264,123**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-2

Policy: T-5

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.

Charleston-Arastradero, Arastradero at Clemo, January 2013

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:
Revised Project Completion: Spring 2020

Project Number: PE-13011

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 will be explored. The conceptual design and CEQA review for the entire corridor was completed in Fall 2015 and NEPA is expected to be complete in Summer 2016. Final design for the corridor will be done in Fiscal Year 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 segments starting with Arastradero (El Camino Real to Foothill Expressway) and Charleston (Fabian to Alma Street).

Supplemental Information

The Charleston/Arastradero Corridor project is included in the Council Infrastructure Plan. The Charleston/Arastradero Corridor Plan was adopted by City Council in January 2003. The Plan addresses pedestrian crossing safety, bicycle travel safety, motor vehicle speeding, more even and efficient motor vehicle traffic flow, and Corridor streetscape. Council approved the permanent retention of the new lane configurations on Charleston in 2008 and on Arastradero in 2012. Council approved the concept plan line and CEQA addendum in September 2015.

The Fiscal Year 2017 and Fiscal Year 2018 costs are offset by grant proceeds: a $450,000 Caltrans Safe Routes to School (SR2S) grant, awarded in 2012, and a $1 million Valley Transportation Authority - Vehicle Emissions Reductions Based at Schools (VERBS) grant, awarded in 2013.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	664,783	1,028,537	1,028,537	853,332	0	2,600,285	3,169,259	0	6,622,876	0	8,316,196
Other	0	0	0	500,000	500,000	0	0	0	1,000,000	0	1,000,000
Revenue from the State of California	0	0	0	225,000	225,000	0	0	0	450,000	0	450,000
Transfer from Stanford University Medical Ctr Fund	0	0	0	1,550,000	0	0	0	0	1,550,000	0	1,550,000
Total	**664,783**	**1,028,537**	**1,028,537**	**3,128,332**	**725,000**	**2,600,285**	**3,169,259**	**0**	**9,622,876**	**0**	**11,316,196**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	899,757	1,028,537	3,000,000	0	3,000,000	3,000,000	0	9,000,000	0	10,028,537
Design	664,783	128,780	0	128,332	160,476	164,809	169,259	0	622,876	0	1,287,659
Total	**664,783**	**1,028,537**	**1,028,537**	**3,128,332**	**160,476**	**3,164,809**	**3,169,259**	**0**	**9,622,876**	**0**	**11,316,196**

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: Transportation

Section: Bicycling and Walking

Goal: T-4

Policy: T-25

Program: T-33

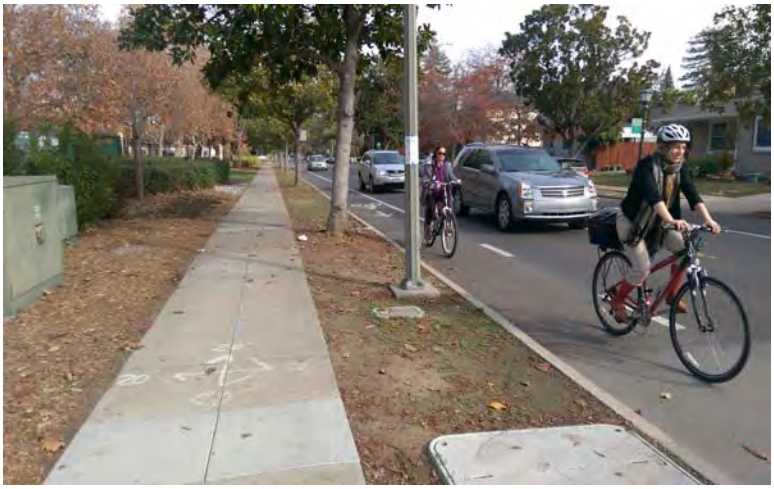
Potential Board/Commission Review:

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: Traffic and Transportation
Project Location: El Camino Real & Churchill Avenue

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Fall 2013
Initial Project Completion: Fall 2015

Revised Project Start:
Revised Project Completion: Fall 2017

Project Number: PL-14000

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 and an improved bicycle connection to the Bryant Street Bicycle Boulevard east of Alma Street.

Justification

Priority project within the Palo Alto Bicycle + Pedestrian Transportation Plan. Specifically, 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.

Supplemental Information

In prior years, this project was funded only for design. This project is funded by Transportation Impact fees through transfer to the Capital Improvement Fund. Additional funding for this project is in PL-04010, Bicycle and Pedestrian Transportation Plan Implementation.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	39,108	236,319	129,790	106,529	37,670	39,177	0	0	183,376	0	352,274
Transfer from Traffic Impact Fee Fund	0	0	0	0	1,000,000	0	0	0	1,000,000	0	1,000,000
Total	**39,108**	**236,319**	**129,790**	**106,529**	**1,037,670**	**39,177**	**0**	**0**	**1,183,376**	**0**	**1,352,274**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	39,108	0	129,790	106,529	1,037,670	39,177	0	0	1,183,376	0	1,352,274
Design	0	236,319	0	0	0	0	0	0	0	0	0
Total	**39,108**	**236,319**	**129,790**	**106,529**	**1,037,670**	**39,177**	**0**	**0**	**1,183,376**	**0**	**1,352,274**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-28

Program: T-38

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-5

Policy: T-33

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: Downtown

Managing Department: Planning and Community Environment
IBRC Reference:

Initial Project Start: Summer 2015
Initial Project Completion: Summer 2018

Project Number: PL-15002

Downtown Automated Parking Guidance Systems, Access Controls and Revenue Collection Equipment

Description

This project addresses infrastructure and capital improvements for downtown 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 both the, PL-15004, Downtown Parking Wayfinding project and the Downtown Parking Management Study that is scheduled to be completed at the end of 2016. There are currently three different automated parking guidance systems under consideration as part of this project:

Facility Count: The lowest cost option, this system uses sensors at garage or parking lot entrances and displays either total count of vehicles in the facility or a simple 'Open/Full' status.

Level and Zone Count: This system builds on to the facility count system and uses additional sensors to provide counts by garage level.

Single Space Detection with Individual Indicator Lights: This system provides the highest level of customer service, and track occupancy by space using ceiling mounted detection sensors in conjunction with LED lights mounted above each space that indicate type of space (available, occupied, permit, public, handicapped, valet, etc.).

Justification

This project is identified in both the City's Comprehensive Plan and the Transportation Nexus Study as a means to reduce congestion and air quality impacts resulting from motorists searching for vacant parking spaces.

Significant Changes

2017-2021 CIP: Changes in Fiscal Year 2017 are due to progress on this project. As the project moves from planning into implementation, costs will increase. Funding for this project will be from anticipated paid parking revenues.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	191,760	62,036	129,724	30,045	31,247	0	0	191,016	0	N/A
Other	N/A	0	0	0	2,000,000	0	0	0	2,000,000	0	N/A
Total	**N/A**	**191,760**	**62,036**	**129,724**	**2,030,045**	**31,247**	**0**	**0**	**2,191,016**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	191,760	62,036	129,724	2,030,045	31,247	0	0	2,191,016	0	N/A
Total	**N/A**	**191,760**	**62,036**	**129,724**	**2,030,045**	**31,247**	**0**	**0**	**2,191,016**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Parking

Goal: T-8

Policy: T-47

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:

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Fall 2016
Initial Project Completion: Fall 2018

Revised Project Start:
Revised Project Completion:

Project Number: PL-16001

Downtown Mobility and Safety Improvements

Description

This project includes planning, design and construction of multi-modal safety improvements in Downtown Palo Alto, including, but not limited to, installation of countdown pedestrian signal heads and ADA-accessible vibra-tactile push buttons, installation or separated bikeways, addition of bicycle parking, traffic signal retiming and coordination, installation of transit amenities, and enhanced bicycle and pedestrian access to the Palo Alto Transit Center. This project will begin with a collaborative study of the existing mobility and safety challenges and opportunities in Downtown Palo Alto. Subsequent phases of the project will include the development of various innovative project alternatives, testing of the alternatives using tactical urbanism demonstrations and pilots, performance monitoring, a robust public engagement process, and installation of permanent improvements.

Justification

This project will enhance safety of pedestrian, bicyclists, and motorists and is in keeping with Comprehensive Plan goals.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	563,143	815,669	68,296	0	0	1,447,108	0	1,447,108
Total	**0**	**0**	**0**	**563,143**	**815,669**	**68,296**	**0**	**0**	**1,447,108**	**0**	**1,447,108**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	313,143	815,669	68,296	0	0	1,197,108	0	1,197,108
Design	0	0	0	250,000	0	0	0	0	250,000	0	250,000
Total	**0**	**0**	**0**	**563,143**	**815,669**	**68,296**	**0**	**0**	**1,447,108**	**0**	**1,447,108**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-1

Policy: T-1

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-6

Policy: T-39

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

The scope of this project will be determined during the planning and design phases. The level of environmental analysis required is undetermined at this time.

Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location:

Managing Department: Planning and Community Environment
IBRC Reference:

Initial Project Start: Summer 2016
Initial Project Completion: Winter 2017

Project Number: PL-16002

Downtown Parking Management Study Implementation

Description

This project includes implementation and installation of equipment to implement the outcomes of the paid parking study for downtown.

Justification

As part of the integrated strategy to address Downtown traffic and parking concerns, staff conducted a comprehensive study of parking management strategies, including paid parking for the Downtown core. The study included an evaluation of how to best use the Cityís existing parking supply and recommended comprehensive paid parking strategies in Downtown Palo Alto.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	0	0	0	22,970	23,889	24,844	25,838	97,541	0	N/A
Other	N/A	0	0	0	1,700,000	208,000	216,320	224,973	2,349,293	0	N/A
Total	**N/A**	**0**	**0**	**0**	**1,722,970**	**231,889**	**241,164**	**250,811**	**2,446,834**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	0	1,722,970	231,889	241,164	250,811	2,446,834	0	N/A
Total	**N/A**	**0**	**0**	**0**	**1,722,970**	**231,889**	**241,164**	**250,811**	**2,446,834**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Parking

Goal: T-8

Policy: T-3

Program: T-49

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Parking

Goal: T-8

Policy: T-2, T-45, T-49

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:

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion:

Project Number: PL-15004

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 of 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 several types of real-time parking availability displays. The different types of signs to be installed as part of this project include:

Directional signs: direct customers toward parking facilities

Lot Identification Banners: identiify a particular lot via a banner attached to an existing light pole

Garage Identification Signs: identify a particular garage via a sign mounted to the exterior of the garage

Pylons: visible/architectural markers that show parking facility information

Rules/regulation Signs: depicts hours, permit/hourly parking regulatory information

The combination of the visually appealing parking brand with an improved, comprehensive approach to wayfinding placement will help guide visitors, residents, and employees more easily to off-street parking 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 both the City's Comprehensive Plan and the Transportation Nexus Study 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.

Significant Changes

2017-2021 CIP: Funding in earlier fiscal years has been directed toward identifying locations of new wayfinding and garage/lot signage to guide motorists to parking facilities in the Downtown area, design of signage for all locations, including the lots and garages themselves as well as wayfinding (directional) signs, and development of an identifiable Palo Alto parking brand that can be incorporated in signage.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	86,235	60,711	57,600	33,359	34,693	36,081	37,524	199,257	0	259,968
Transfer from University Ave. Parking Permit Fund	0	0	0	600,000	60,000	62,400	64,896	67,492	854,788	0	854,788
Total	**0**	**86,235**	**60,711**	**657,600**	**93,359**	**97,093**	**100,977**	**105,016**	**1,054,045**	**0**	**1,114,756**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	60,711	657,600	93,359	97,093	100,977	105,016	1,054,045	0	1,114,756
Design	0	86,235	0	0	0	0	0	0	0	0	0
Total	**0**	**86,235**	**60,711**	**657,600**	**93,359**	**97,093**	**100,977**	**105,016**	**1,054,045**	**0**	**1,114,756**

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

Goal: T-8

Policy: T-47

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: Embarcadero Road

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start:
Initial Project Completion:

Revised Project Start:
Revised Project Completion:

Project Number: PL-15001

Embarcadero Road at El Camino Real Improvements (formerly Embarcadero Road Corridor Improvements)

Description

This project includes planning, design and construction of bicycle, pedestrian and traffic circulation improvements along Embarcadero Road between Bryant Street and El Camino Real. Improvements being considered include better bicycle and pedestrian connection to the Bryant Street Bicycle Boulevard, safety improvements at High Street, dedicated bikeways between the Caltrain Path and the Stanford Perimeter Trail, a protected intersection for bicyclists at El Camino Real, roadway operational improvements, including new turn lanes, 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.

Supplemental Information

Phase One of the Embarcadero Road at El Camino Real Improvements project was completed at the end of 2015. This included the upgrade of the traffic signal equipment at the high school/ shopping center driveway and at the pedestrian crossing in front of the shopping center.

Significant Changes

2017-2021 CIP: This project is currently in the final design phase. After several community meetings and the development of various design alternatives, the project scope and planning level cost estimate for construction have increased significantly.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	4,750	808,016	795,697	570,112	1,293,662	1,795,409	47,225	0	3,706,408	0	4,506,855
Transfer from General Fund	0	0	19,327	0	0	0	0	0	0	0	19,327
Total	**4,750**	**808,016**	**815,024**	**570,112**	**1,293,662**	**1,795,409**	**47,225**	**0**	**3,706,408**	**0**	**4,526,182**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	470,250	815,024	291,983	1,293,662	1,795,409	47,225	0	3,428,279	0	4,271,432
Design	4,750	337,766	0	278,129	0	0	0	0	278,129	0	254,750
Total	**4,750**	**808,016**	**815,024**	**570,112**	**1,293,662**	**1,795,409**	**47,225**	**0**	**3,706,408**	**0**	**4,526,182**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-28

Program: T-38

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-33

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.

Bike path along E. Bayshore, Feb. 2015

Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Hwy 101 corridor north of the San Antonio Road 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 2019

Project Number: PE-11011

Highway 101 Pedestrian/Bicycle Overpass Project

Description

This project provides funding for a new pedestrian/bicycle bridge across Highway 101 at Adobe Creek. The City conducted a design competition that resulted in three innovative designs. Following the competition, the City Council ceased negotiations to pursue an RFP to continue with design. Completion of the CEQA and NEPA documents and design is anticipated to begin in Spring 2016 and construction on the bridge will start in early 2018.

Justification

The bridge 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. A Santa Clara County - Recreation Trails Program grant, awarded to the City in November 2012, will provide $4 Million for the project. An additional $4.0 million will be provided by a grant from One Bay Area Grant (OBAG) Program and $350,000 in Regional Improvement Program funds. Construction is anticipated from Fiscal Years 2018 through 2019. The OBAG grant fund was extended to Fiscal Year 2017. At the time of the printing of this document the availability of grant revenue is currently under review.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	1,519,466	1,437,360	1,737,360	338,385	331,125	2,990,065	0	0	3,659,575	0	6,916,401
Other	0	300,000	0	0	0	6,350,000	2,000,000	0	8,350,000	0	8,350,000
Total	**1,519,466**	**1,737,360**	**1,737,360**	**338,385**	**331,125**	**9,340,065**	**2,000,000**	**0**	**12,009,575**	**0**	**15,266,401**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	129,929	1,118,215	0	247,983	331,125	11,340,065	0	0	11,919,173	0	12,049,102
Design	1,389,537	619,145	1,737,360	90,402	0	0	0	0	90,402	0	3,217,299
Total	**1,519,466**	**1,737,360**	**1,737,360**	**338,385**	**331,125**	**11,340,065**	**0**	**0**	**12,009,575**	**0**	**15,266,401**

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: Transportation

Section: City Structure

Goal: T-3

Policy: T-14

Program: T-19

Potential Board/Commission Review:

Architectural Review Board

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be subject to CEQA and NEPA environmental assessment.

Along Matadero Creek, April 2015

Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Between Alma and 101

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Summer 2013
Initial Project Completion: Summer 2017

Revised Project Start:
Revised Project Completion: Fall 2019

Project Number: PL-14001

Midtown Connector

Description

The purpose of the Midtown Connector Project is to establish an east-west bicycle and pedestrian connection through the Midtown neighborhood between the west side of the Caltrain tracks and Alma Street to the east side of the US 101 freeway that serves to extend and connect recreational resources and provide improved active transportation options for both City residents and users of the Stanford University campus.

Justification

The adopted Palo Alto Bicycle + Pedestrian Transportation Plan identifies the Matadero Creek channel levees and a number of other on-street bicycle routes through the Midtown neighborhood of Palo Alto. The plan identifies bicycle and pedestrian connections across the barriers of Alma Street and the Caltrain tracks and US 101 freeway as key objectives. Providing safer and more comfortable connections for bicyclists and pedestrians is a key objective of the plan.

Supplemental Information

This project has been incorporated into PL-04010, Bicycle + Pedestrian Implementation Project.

Significant Changes

2017-2021 CIP: In mid-2015, a preliminary constructability review indicated that constraints along the Matadero Creek channel may limit the feasibility of a public access trail on large segments of the corridor. Staff received council direction to continue the with the feasibility study in November 2015.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	114,666	268,984	58,766	210,218	0	0	0	0	210,218	0	383,650
Total	**114,666**	**268,984**	**58,766**	**210,218**	**0**	**0**	**0**	**0**	**210,218**	**0**	**383,650**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	268,984	58,766	210,218	0	0	0	0	210,218	0	268,984
Study	114,666	0	0	0	0	0	0	0	0	0	114,666
Total	**114,666**	**268,984**	**58,766**	**210,218**	**0**	**0**	**0**	**0**	**210,218**	**0**	**383,650**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

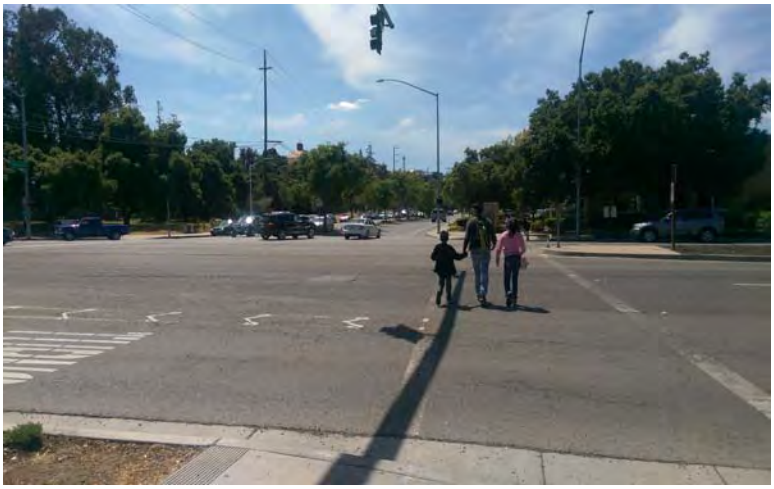
Policy: T-20

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:

Managing Department: Planning and Community Environment
IBRC Reference:

Initial Project Start: Winter 2016
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion:

Project Number: PL-16000

Quarry Road Improvements and Transit Center Access

Description

This project includes 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. It also includes improvements to the bicycle and pedestrian connection between the Palo Alto Transit Center and the intersection at El Camino Real and Quarry Road, including development of passive green space, installation of lighting, and landscaping.

Justification

The August 2011 Development Agreement between Stanford Hospitals and Clinics, the Lucille Salter Packard Childrenís 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.

Supplemental Information

This project is funded by the Stanford University Medical Center Development Agreement funds through transfer to the Capital Improvement Fund.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	0	0	0	22,007	22,887	0	0	0	44,894	0	44,894
Transfer from Stanford University Medical Ctr Fund	0	0	92,004	800,000	0	0	0	0	800,000	0	892,004
Total	**0**	**0**	**92,004**	**822,007**	**22,887**	**0**	**0**	**0**	**844,894**	**0**	**936,898**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	92,004	822,007	22,887	0	0	0	844,894	0	936,898
Total	**0**	**0**	**92,004**	**822,007**	**22,887**	**0**	**0**	**0**	**844,894**	**0**	**936,898**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Roadworks

Goal: T-4

Policy: T-25

Program: T-33

Environmental Impact Analysis:

May Require Environmental Review

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Citywide

Managing Department: Planning and Community Environment
IBRC Reference: New

Initial Project Start: Summer 2016
Initial Project Completion: Summer 2018

Project Number: PL-17001

Railroad Grade Separation

Description

This project will 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 Rail Committeeís work and coordinate the requested circulation study, community engagement efforts, and subsequent tasks needed to advance the Cityís goal of grade separating railroad crossings in Palo Alto.

Supplemental Information

This project is in the planning stage.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	0	0	834,696	1,036,084	37,527	0	0	1,908,307	0	N/A
Total	**N/A**	**0**	**0**	**834,696**	**1,036,084**	**37,527**	**0**	**0**	**1,908,307**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	800,000	1,000,000	0	0	0	1,800,000	0	N/A
Design	N/A	0	0	34,696	36,084	37,527	0	0	108,307	0	N/A
Total	**N/A**	**0**	**0**	**834,696**	**1,036,084**	**37,527**	**0**	**0**	**1,908,307**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-6

Policy: T-39

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-6

Policy: T-40

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

This project includes the completion of the necessary environmental analysis.

Fund: Capital Improvement Fund
Category: Traffic and Transportation
Project Location: Citywide

Managing Department: Planning and Community Environment
IBRC Reference: N/A

Initial Project Start:
Initial Project Completion:

Project Number: PL-15003

Residential Preferential Parking

Description

In response to increasing concern that non-resident parking in residential neighborhoods was negatively impacting the quality of life, City Council approved a City-wide Residential Preferential Parking (RPP) ordinance to establish uniform procedures to implement RPP districts. The first district, located in areas surrounded the Downtown core was introduced in 2015 and modified in early 2016. This project will fund the introduction of additional RPP programs throughout the City, through the process outlined in the RPP ordinance.

Justification

Implementing RPP is a parking management strategy; it regulates parking where previously parking has been unregulated. Parking management strategies are critical to maximizing the use of existing parking supply and prioritizing the ìright space for the right useî concept; RPP prioritizes parking on residential streets for residents. Implementation of an RPP program is consistent with the Cityís three-pronged approach aimed at addressing traffic and parking demand, and is also consistent with Comprehensive Plan goals.

Significant Changes

2017-2021 CIP: Budget is being increased to respond to requests from neighborhoods for implementation of RPP districts in their areas.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	368,500	368,500	330,045	31,247	0	0	0	361,292	0	N/A
Total	**N/A**	**368,500**	**368,500**	**330,045**	**31,247**	**0**	**0**	**0**	**361,292**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	368,500	368,500	300,045	31,247	0	0	0	331,292	0	N/A
Design	N/A	0	0	30,000	0	0	0	0	30,000	0	N/A
Total	**N/A**	**368,500**	**368,500**	**330,045**	**31,247**	**0**	**0**	**0**	**361,292**	**0**	**N/A**

Operating Impact

The Downtown RPP, and other City parking programs, are expected to have staff impacts. In Fiscal Year 2016, the Planning and Community Development Department is requesting a Parking Operations Lead position to manage parking and Transportation Demand Management programs.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Parking

Goal: T-8

Policy: T-47

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: Streets on Suggested Walk and Roll Routes for PAUSD schools
Managing Department: Planning and Community Environment
IBRC Reference: Keep-up
Initial Project Start: Recurring
Initial Project Completion: Recurring
Project Number: PL-00026

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 Typical capital improvements include traffic calming devices, enhanced crosswalks, and improved signage along suggested routes to school. In Fiscal Year 2017, traffic calming projects from prior years will continue and traffic studies will be pursued for locations in need of traffic calming and other safety countermeasures.

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.

Supplemental Information

A few of the recent accomplishments of this project include:

Gunn High School Bike Path access improvements at Georgia Avenue, Paradise Way and Los Robles Avenue

New crosswalks at East Meadow Drive and Waverly Street

New green bicycle lanes on West Meadow Drive and El Camino Way

Rectangular rapid flashing beacon installation at various crosswalks throughout the city

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	442,910	147,271	363,376	117,246	121,936	126,814	131,886	861,258	0	N/A
Transfer from Gas Tax Fund	N/A	100,000	100,000	100,000	100,000	100,000	100,000	100,000	500,000	0	N/A
Total	**N/A**	**542,910**	**247,271**	**463,376**	**217,246**	**221,936**	**226,814**	**231,886**	**1,361,258**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	462,910	247,271	428,376	182,246	186,936	191,814	231,886	1,221,258	0	N/A
Design	N/A	80,000	0	35,000	35,000	35,000	35,000	0	140,000	0	N/A
Total	**N/A**	**542,910**	**247,271**	**463,376**	**217,246**	**221,936**	**226,814**	**231,886**	**1,361,258**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-22

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Bicycling and Walking

Goal: T-3

Policy: T-14

Program: T-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: Various

Managing Department: Planning and Community Environment
IBRC Reference: Keep-up

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: PL-05030

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. The project replaces the remaining 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

A few of the recent accomplishments of this project include:

Addition of adaptive traffic signal technology along Sand Hill Road

Addition of adaptive traffic signal technology along San Antonio Road

Installation of advanced traffic detection video cameras along Middlefield Road

Upgrade of rectangular rapid flashing beacons at crosswalks and speed feedback signs

Adding bicycle detection at various signalized intersections

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	1,913,088	1,139,064	604,447	37,669	38,863	40,096	102,397	823,472	0	N/A
Transfer from Traffic Impact Fee Fund	N/A	0	0	381,050	378,361	380,808	383,362	325,000	1,848,581	0	N/A
Total	**N/A**	**1,913,088**	**1,139,064**	**985,497**	**416,030**	**419,671**	**423,458**	**427,397**	**2,672,053**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,677,032	1,139,064	955,497	386,030	389,671	393,458	427,397	2,552,053	0	N/A
Design	N/A	30,000	0	30,000	30,000	30,000	30,000	0	120,000	0	N/A
Planning and Engineering	N/A	206,056	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**1,913,088**	**1,139,064**	**985,497**	**416,030**	**419,671**	**423,458**	**427,397**	**2,672,053**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-28

Program: T-38

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-6

Policy: T-39

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: Various

Managing Department: Planning and Community Environment
IBRC Reference: Keep-up

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: PL-12000

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 Strategic 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:

Reconfiguration of the approach lanes on Arastradero Road at Foothill Expressway

Improvements to the intersection of Embarcadero Road at Middlefield Road

Minor parking modifications in neighborhoods to improve access and mobility

Crosswalk improvements throughout the city

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	371,965	471,518	574,472	451,667	460,734	470,163	554,970	2,512,006	0	N/A
Transfer from Gas Tax Fund	N/A	231,076	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**603,041**	**471,518**	**574,472**	**451,667**	**460,734**	**470,163**	**554,970**	**2,512,006**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	528,041	471,518	499,472	376,667	385,734	395,163	554,970	2,212,006	0	N/A
Design	N/A	75,000	0	75,000	75,000	75,000	75,000	0	300,000	0	N/A
Total	**N/A**	**603,041**	**471,518**	**574,472**	**451,667**	**460,734**	**470,163**	**554,970**	**2,512,006**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-28

Program: T-38

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Traffic Safety

Goal: T-4

Policy: T-25

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.

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Unallocated Salaries and Benefits

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

Salaries and Benefits - Capital Improvement Fund CIP Projects

Description

This project provides funding for the estimated salaries and benefit costs of City staff assigned to manage the General Fund Capital Improvement program.

Justification

Salaries and benefits costs of City staff assigned to manage CIP projects are an associated costs in the completion of CIP projects. As such, these costs are capitalized and are added to the total costs of a project.

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. At the end of each fiscal year, any unused balance will be returned to the Infrastructure Reserve.

Significant Changes

2016-2020 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Capital Improvement Fund	N/A	2,042,568	2,076,773	1,739,291	1,588,086	2,465,997	3,325,789	4,380,511	13,499,674	0	N/A
Total	**N/A**	**2,042,568**	**2,076,773**	**1,739,291**	**1,588,086**	**2,465,997**	**3,325,789**	**4,380,511**	**13,499,674**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	7,150	0	0	0	0	0	0	0	0	N/A
Other	N/A	2,035,418	2,076,773	1,739,291	1,588,086	2,465,997	3,325,789	4,380,511	13,499,674	0	N/A
Total	**N/A**	**2,042,568**	**2,076,773**	**1,739,291**	**1,588,086**	**2,465,997**	**3,325,789**	**4,380,511**	**13,499,674**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

N/A

Primary Connection

N/A

Environmental Impact Analysis:

N/A

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CUBBERLEY PROPERTY INFRASTRUCTURE FUND

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Overview

The Cubberley Property Infrastructure Fund accounts for expenditures related to the maintenance and renovation of the Cubberley property. In the 2014 lease agreement between the City of Palo Alto and the Palo Alto Unified School District, the parties agreed to dedicate approximately $1.86 million annually for repairing, renovating and/or improving the Cubberley site, which is jointly owned by the City and PAUSD.

Built in 1955, Cubberley High School was closed in 1979. Due to budget constraints resulting from the passage of Proposition 13 and declining enrollment, PAUSD was forced to close additional schools and sell school properties. One of those properties was the site of Terman Middle School, which the City of Palo Alto acquired, while PAUSD retained ownership of Cubberley. 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 dedicated towards the maintenance and renovation of the Cubberley site.

Fiscal Year 2017 is the second year that the city has approved expenses in this fund through the budget process. It is important to note that new funding was not allocated for infrastructure improvements at Cubberley in the Fiscal Year 2015-2019 Capital Improvement Program, as the city and PAUSD were negotiating the terms of a new lease at the time. With the new lease agreement approved by the City Council in 2014, funding is now included for improvements on the site.

Buildings and Facilities

The budget for the Cubberley Property Infrastructure Fund Capital Improvement Program is currently accounted for in the Buildings and Facilities category, which includes projects that improve the facilities on the Cubberley Community Center campus. Additional categories may be established in future years, once needs are identified through the master plan process.

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	23
Dance studios	3
Schools	2
Childcare facilities	2
Nonprofit community organi-zations	4

Recent Accomplishments

- Completion of roof replacements for Building S and Building L
- Completion of improvements to 18 artist studios
- Restoration of the auditorium following the closure of the Temporary Mitchell Library

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects scheduled at this time.

Non-Recurring Projects

For the 2017-2021 Capital Improvement Program, $4.5 million is budgeted, with $2.5 million allocated in Fiscal Year 2017 for five projects.

- Cubberley Community Center Master Plan (Fiscal Year 2017: $0.3 million)
- Cubberley Roofing Replacements projects (Fiscal Year 2017: $0.8 million; 5-year CIP: $2.7 million)
- Cubberley Field Restrooms (Fiscal Year 2017: $0.3 million)
- Cubberley Amenities Improvements - (Reserve) (Fiscal Year 2017: $1.0 million
- Cubberley Repairs (Fiscal Year 2017: $0.3 million).

Summary of Capital Activity

CUBBERLEY PROPERTY INFRASTRUCTURE FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Beginning Fund Balance									
	Beginning Fund Balance	0	876,998	2,249,987	1,609,431	2,872,639	4,307,599	5,710,147	2,249,987
	Total Beginning Fund Balance	**0**	**876,998**	**2,249,987**	**1,609,431**	**2,872,639**	**4,307,599**	**5,710,147**	**2,249,987**
Transfers from the General Fund									
	General Fund Annual Capital Transfer	932,124	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	1,864,248	9,321,240
	Total Transfers	**932,124**	**1,864,248**	**1,864,248**	**1,864,248**	**1,864,248**	**1,864,248**	**1,864,248**	**9,321,240**
	Total Sources	**932,124**	**2,741,246**	**4,114,235**	**3,473,679**	**4,736,887**	**6,171,847**	**7,574,395**	**11,571,227**
Use of Funds									
Buildings and Facilities									
CB-16001	Cubberley Community Center Master Plan	0	200,778	212,414	64,099	0	0	0	276,513
CB-16002	Cubberley Roof Replacements	0	290,481	807,390	536,941	429,288	461,700	510,000	2,745,319
CB-17001	Cubberley Repairs	0	0	250,000	0	0	0	0	250,000
	Buildings and Facilities Total	**0**	**491,259**	**1,269,804**	**601,040**	**429,288**	**461,700**	**510,000**	**3,271,832**
Parks and Open Space									
CB-17002	Cubberley Field Restrooms	0	0	285,000	0	0	0	0	285,000
CB-17000	Cubberley Amenities Improvements - (Reserve)	0	0	950,000	0	0	0	0	950,000
	Parks and Open Space Total	**0**	**0**	**1,235,000**	**0**	**0**	**0**	**0**	**1,235,000**
Other									
	Transfer to the Capital Improvement Fund	55,126	0	0	0	0	0	0	0
	Other Expenses Total	**55,126**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Total Expenses	**55,126**	**491,259**	**2,504,804**	**601,040**	**429,288**	**461,700**	**510,000**	**4,506,832**

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Buildings and Facilities

Cubberley Community Center, February 2015

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: Summer 2016
Revised Project Completion: Fall 2018

Project Number: CB-16001

Cubberley Community Center Master Plan

Description

This project provides funding to develop a master plan for the future of 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 new lease with Palo Alto Unified School District (PAUSD).

Justification

The City owns 8 acres of 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 rental income from tenant organizations is significant.

Supplemental Information

The Cubberley Community Advisory Committee (CCAC) Report recommended that a community needs assessment and 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	200,778	200,778	212,414	64,099	0	0	0	276,513	0	477,291
Total	**0**	**200,778**	**200,778**	**212,414**	**64,099**	**0**	**0**	**0**	**276,513**	**0**	**477,291**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	200,778	200,778	212,414	64,099	0	0	0	276,513	0	477,291
Total	**0**	**200,778**	**200,778**	**212,414**	**64,099**	**0**	**0**	**0**	**276,513**	**0**	**477,291**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

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: Cubberley Property Infrastructure Fund
Category: Buildings and Facilities
Project Location: 4000 Middlefield Road

Managing Department: Public Works

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017

Revised Project Start:
Revised Project Completion:

Project Number: CB-17001

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

The Cubberley Community Center Master Plan will establish the long term vision for the future use of the Cubberley complex. In advance of the Master Plan, this project allows minor improvements to occur that will address safety concerns, functionality of building systems, and aesthetics.

Supplemental Information

Work scheduled to begin in Fiscal Year 2017 includes replacement of three boilers that support the radiant floor heating systems in Wings C and K.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	0	0	250,000	0	0	0	0	250,000	0	250,000
Total	**0**	**0**	**0**	**250,000**	**0**	**0**	**0**	**0**	**250,000**	**0**	**250,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	250,000	0	0	0	0	250,000	0	250,000
Total	**0**	**0**	**0**	**250,000**	**0**	**0**	**0**	**0**	**250,000**	**0**	**250,000**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

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

Cubberley Wing P, January 2015

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 Roof Replacements

Description

This project provides funding to replace or restore failing roofs at the Cubberley Community Center. In some instances, a full replacement is necessary. In lieu of replacing the entire roof, a more cost effective roof restoration process is planned where feasible. A fluid applied, reinforced waterproofing system will be applied over the existing roof. This roofing system also meets current cool roofing codes to optimize energy efficiency.

Justification

Most of the existing mineral cap roofs at Cubberley have exceeded their useful lives and are in poor condition. This project provides the means to rehabilitate existing roofs prior to significant failures that can cause structural damage to buildings.

Supplemental Information

Facilities scheduled for re-roofing with a fluid applied system or for major repairs are:

Fiscal Year 2017: Cubberley Multi-Purpose Wing

Fiscal Year 2018: Cubberley Pavilion Wing

Fiscal Year 2019: Cubberley Wing

Fiscal Year 2020: Cubberley Wing T1 and T2

Fiscal Year 2021: Cubberley Wing J and K

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	N/A	413,215	290,481	807,390	536,941	429,288	461,700	510,000	2,745,319	0	N/A
Total	**N/A**	**413,215**	**290,481**	**807,390**	**536,941**	**429,288**	**461,700**	**510,000**	**2,745,319**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	413,215	290,481	807,390	536,941	429,288	461,700	510,000	2,745,319	0	N/A
Total	**N/A**	**413,215**	**290,481**	**807,390**	**536,941**	**429,288**	**461,700**	**510,000**	**2,745,319**	**0**	**N/A**

Operating Impact

The project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Architectural Review Board

Historic Resources Board

Environmental Impact Analysis:

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

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Parks and Open Space

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: Fall 2019

Revised Project Start:
Revised Project Completion:

Project Number: CB-17000

Cubberley Amenities Improvements - (Reserve)

Description

This project provides funding for renovations of existing community recreational amenities at the Cubberley facility which include: tennis courts, playing fields, a gymnasium, an activity room, and a dance studio.

Justification

Pending the completion of the Cubberley Community Center Master Plan, funding may be required to improve existing recreation facilities at the Cubberley site. As project costs become more refined, recommendations will be brought forth to the City Council.

Supplemental Information

The funding for this project is being placed in a reserve pending completion of the Cubberley Community Center Master Plan.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	0	0	950,000	0	0	0	0	950,000	0	950,000
Total	**0**	**0**	**0**	**950,000**	**0**	**0**	**0**	**0**	**950,000**	**0**	**950,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	900,000	0	0	0	0	900,000	0	900,000
Design	0	0	0	50,000	0	0	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**950,000**	**0**	**0**	**0**	**0**	**950,000**	**0**	**950,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Goal: C-4

Policy: C-24

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Access

Goal: C-5

Policy: C-32

Program: C-27

Potential Board/Commission Review:

Parks and Recreation Commission

Environmental Impact Analysis:

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

Cubberley Fields, February 2016

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:
Revised Project Completion:

Project Number: CB-17002

Cubberley Field Restroom

Description

This project provides the installation of restroom at the Cubberley Community Center Fields. The restroom may be prefabricated.

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

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Cubberley Property Infrastructure Fund	0	0	0	285,000	0	0	0	0	285,000	0	285,000
Total	**0**	**0**	**0**	**285,000**	**0**	**0**	**0**	**0**	**285,000**	**0**	**285,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	250,000	0	0	0	0	250,000	0	250,000
Design	0	0	0	35,000	0	0	0	0	35,000	0	35,000
Total	**0**	**0**	**0**	**285,000**	**0**	**0**	**0**	**0**	**285,000**	**0**	**285,000**

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: Parks and Public Facilities

Goal: C-4

Policy: C-26

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-27

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.

ENTERPRISE FUND PROJECTS

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AIRPORT FUND

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Overview

The Airport Fund Capital Improvement Program (CIP) accounts for activities related to the construction and replacement of the airport's infrastructure necessary to operate and maintain the airport. The Palo Alto Airport (PAO) is a federally obligated airport which receives federal funds for airport operations and capital improvement projects. The Federal Aviation Administration (FAA) established grant assurances to which airport operators must adhere in order to receive federal funds. For detailed information on the maintenance and operations of the airport, please refer to the Adopted Operating Budget.

For the 2017-2021 CIP, as has been past practice, only one year of expenditures are shown with Fiscal Year 2017 projects totaling $2.6 million. It is important to note that the FAA provides grants to public agencies for the planning and development of public-use airports and reimburses up to 90% of the cost of eligible projects. Staff intends to continue applying to the FAA for grant 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 CIP is broken into two separate categories: Airport Apron, Runway, and Taxiways, and Airport Facilities.

Airport Apron, Runway and Taxiways

This Airport Apron, Runway, and Taxiways category accounts for the design and construction of improvements and enhancements to the airport apron, runways, and taxiways 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 pavements. Based on visual inspection, the average apron PCI value is 36, which indicates full pavement reconstruction.

Infrastructure Inventory - Summary of Airport Taxiways

CLASSIFICATION	QUANTITY	DESCRIPTION
Apron or Ramp	1	468 tie down spots
Runway	1	2443 x 70 feet
Taxiway	5	4 connector taxiways1 parallel taxiway

*City operates 362 of the tie-down spots. The remaining 106 tie-down spots and 62 hangars are operated by the two fixed base operators (FBOs) until their leases expire in 2017.

Recent Accomplishments

- The airport has received all of the $452,792 in FAA grant funding for the Apron and Taxi Lane Repair project
- Awarded an FAA grant for the design of the Airport Apron Reconstruction project

- Defunded the Capital Improvement Program Airfield Electrical Evaluation/Study project AP-16001 and returned a total amount of $15,431 to the Airport Fund. The FAA acknowledged this work is incidental to the Apron Reconstruction project, thus requested the City submit a grant application to include the electrical evaluation study in Phase 1B of the Apron Reconstruction. The application was submitted in December 2015.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects scheduled at this time.

Non-Recurring Projects

The 2017-2021 CIP in this category ($739,953) includes two phases of the Airport Apron Reconstruction project in Fiscal Year 2017; Phase 1A ($254,974) and Phase 1B ($484,979).

Phase 1A includes 30% schematic plans for reconstruction of the entire apron. In addition, plans and specifications will be prepared for the first two construction phases of the project. The estimated pavement reconstruction area is 38 acres. 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. Construction costs and associated grant reimbursements for the multi-phased apron reconstruction project will be budgeted in future years. It should be noted that, as part of the Fiscal Year 2016 Adopted Operating Budget, an annual allocation of $50,000 was adopted for day-to-day pavement maintenance activities at the airport.

Phase 1B includes the electrical evaluation study, complete design for the second two phases of construction and bidding services. The design packages will include a single design report and complete final plans and specifications for the areas recommended in the programmatic planning report (as part of Phase 1A).

Airport Facilities

The Airport Facilities category accounts for buildings, security systems, parking lot and all other infrastructure improvements. Currently all structures, with the exception of the terminal, are leased by the City to Fixed Base Operators and maintenance is the responsibility of the lessor. During calendar year 2017, these leases will expire and dependent upon the agreements with future lessors the City may become responsible for maintenance of some or all of these buildings.

Infrastructure Inventory - Summary of Airport Facilities

CLASSIFICATION	QUANTITY	DESCRIPTION
Terminal Building	1	Trailer
Hangars	12	Large Conventional Box Hangar
Hangars	2	Small Conventional Box Hangar
Hangars	45	Small Nested T-Hangar
Hangars	3	Large Multi-Aircraft Conventional

*All of the 62 hangars are operated by the two fixed base operators (FBOs) until their lease expires in 2017.

Recent Accomplishments

- Awarded an FAA grant for the Wildlife Hazard Mitigation Plan project
- Applied for an FAA grant for the design and construction of the Airport Perimeter Fence project

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects scheduled at this time.

Non-Recurring Projects

The 2017-2021 CIP in this category ($1,847,117) includes two non-recurring projects in this category: the Wildlife Hazard Management Plan ($23,415) and the Airport Perimeter Fence ($1,823,702) projects.

The Wildlife Hazard Plan will identify measures to reduce the threat of aircraft wildlife interactions and follows the results of the Wildlife Hazard Assessment conducted under the direction of the Caltrans Division of Aeronautics, funded by the FAA and completed in February 2015. The need for a Wildlife Hazard Assessment was identified by the FAA based on the number of annual operations and based aircraft. In 2014, there were a total of three wildlife strikes at the Palo Alto Airport recorded by the FAA database, which identified the species as an unknown small bird, gull, and Canada goose. A wildlife strike is defined as a conflict between aircraft and wildlife and these types of incidents are increasing due in part to increased air traffic and wildlife populations in urban areas.

The need for the Airport Perimeter Fence project was based on two areas of the airport being identified by the FAA as unsafe due to runway incursions, requiring immediate mitigation. This fencing project satisfies the FAA's initiative to enhance runway safety, mitigating those risks by securing the airport perimeter and preventing unauthorized access to the airport runway.

Summary of Capital Activity

AIRPORT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Revenue from Federal Government									
AP-16001	Airfield Electrical Evaluation/Study	0	111,074	0	0	0	0	0	0
AP-16003	Airport Perimeter Fence	0	161,854	1,528,324	0	0	0	0	1,528,324
AP-16000	Airport Apron Reconstruction	0	256,611	644,251	0	0	0	0	644,251
AP-15003	Apron and Taxi Lane Repair	299,664	186,337	0	0	0	0	0	0
AP-16002	Wildlife Hazard Plan	0	30,600	5,400	0	0	0	0	5,400
	Federal Government Total	**299,664**	**746,476**	**2,177,975**	**0**	**0**	**0**	**0**	**2,177,975**
	Total Sources	**299,664**	**746,476**	**2,177,975**	**0**	**0**	**0**	**0**	**2,177,975**
Use of Funds									
Airprort Apron, Runways, and Taxiways									
AP-16000	Airport Apron Reconstruction	0	285,123	739,953	0	0	0	0	739,953
AP-15003	Apron and Taxi Lane Repair	332,959	207,041	0	0	0	0	0	0
	Airport Apron, Runways, and Taxiways	**332,959**	**492,164**	**739,953**	**0**	**0**	**0**	**0**	**739,953**
Airport Facilities									
AP-16001	Airfield Electrical Evaluation/Study	0	123,415	0	0	0	0	0	0
AP-16003	Airport Perimeter Fence	0	179,838	1,823,702	0	0	0	0	1,823,702
AP-16002	Wildlife Hazard Plan	0	40,000	23,415	0	0	0	0	23,415
	Airport Facilities Total	**0**	**343,253**	**1,847,117**	**0**	**0**	**0**	**0**	**1,847,117**
	Total Uses	**332,959**	**835,417**	**2,587,070**	**0**	**0**	**0**	**0**	**2,587,070**

Airport Apron, Runways, and Taxiways

Airport Apron, July 2013

Fund: Airport Enterprise Fund
Category: Airport Apron, Runways, and Taxiways
Project Location: Palo Alto Airport

Managing Department: Public Works

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2021

Revised Project Start:
Revised Project Completion:

Project Number: AP-16000

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. The City conducted a Pavement Management Study in Fiscal Year 2015 to determine pavement condition index (PCI) and to assist in prioritization of pavement improvement projects. The need to reconstruct the aircraft parking apron is critical to airport safety. Based on visual inspection, using pavement condition index (PCI) criteria, the average apron PCI value is 36, which indicates a need for full pavement reconstruction.

Supplemental Information

This project is being implemented in multiple phases. Design commenced in 2016 and will continue in to Fiscal Year 2017. Construction Phase I Project Schedule: Project bids open by May 2017; Project awarded July 2017; Phase I construction complete March 2018.

FAA grants will fund 90% of design and construction costs. Staff will pursue other funding opportunities to offset the City obligation for the remaining 10% where available. The construction costs for Phase 1 estimated to be $1.7 million and the total project costs estimated at $12 million. 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 Palo Alto Airport will rank high in eligibility for grant funding of this project.

Significant Changes

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	285,123	28,512	95,702	0	0	0	0	95,702	0	124,214
Revenue from the Federal Government	0	0	256,611	644,251	0	0	0	0	644,251	0	900,862
Total	**0**	**285,123**	**285,123**	**739,953**	**0**	**0**	**0**	**0**	**739,953**	**0**	**1,025,076**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	285,123	285,123	739,953	0	0	0	0	739,953	0	1,025,076
Total	**0**	**285,123**	**285,123**	**739,953**	**0**	**0**	**0**	**0**	**739,953**	**0**	**1,025,076**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15301.

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Airport Facilities

Airport Perimeter Fence, January 2016

Fund: Airport Enterprise Fund
Category: Airport Facilities
Project Location: 1925 Embarcadero Road

Managing Department: Public Works

Initial Project Start: Spring 2016
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion:

Project Number: AP-16003

Airport Perimeter Fence

Description

This project provides funding for replacing perimeter fencing and gates surrounding the Palo Alto Airport boundaries to prevent unauthorized access to the airport runway in accordance with Federal and State standards.

Justification

Two areas of the airport were identified by the Federal Aviation Administration (FAA) as unsafe due to runway incursions, requiring immediate mitigation. This fencing project satisfies the FAA's initiative to enhance runway safety, mitigating those risks by securing the airport perimeter.

Supplemental Information

Approximately 90% of this project is anticipated to be reimbursed by the FAA. A grant application was submitted to the FAA for this project in December 2015. If accepted by the FAA, staff will bring a resolution to council to accept the grant offer letter in Spring 2016.

Significant Changes

2017-2021 CIP: Additional funding added for the completion of design phase.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	17,984	17,984	295,378	0	0	0	0	295,378	0	313,362
Revenue from the Federal Government	0	161,854	161,854	1,528,324	0	0	0	0	1,528,324	0	1,690,178
Total	**0**	**179,838**	**179,838**	**1,823,702**	**0**	**0**	**0**	**0**	**1,823,702**	**0**	**2,003,540**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	1,823,702	0	0	0	0	1,823,702	0	1,823,702
Design	0	179,838	179,838	0	0	0	0	0	0	0	179,838
Total	**0**	**179,838**	**179,838**	**1,823,702**	**0**	**0**	**0**	**0**	**1,823,702**	**0**	**2,003,540**

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: Parks and Public Facilities

Goal: C-4

Policy: C-25

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Local Landuse and Growth Management

Goal: L-1

Policy: L-1

Program: L-2B

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Environmental Impact Analysis:

May Require Environmental Review

Geese on runway, January 2015

Fund: Airport Enterprise Fund
Category: Airport Facilities
Project Location: Palo Alto Airport

Managing Department: Public Works

Initial Project Start: Summer 2015
Initial Project Completion: Fall 2016

Revised Project Start:
Revised Project Completion:

Project Number: AP-16002

Wildlife Hazard Plan

Description

This project provides funding for the development of a Wildlife Hazard Management Plan (WHMP). The WHMP identifies the specific actions the airport will take to mitigate the risk of wildlife strikes on or near the airport. A wildlife strike is defined as a conflict between aircraft and wildlife.

Justification

The Federal Aviation Administration (FAA) maintains a comprehensive program to address wildlife hazards and requires airport sponsors to maintain a safe operating environment which includes conducting Wildlife Hazard Assessments (WHA) and preparing Wildlife Hazard Management Plans (WHMP). A Wildlife Hazard Assessment was completed in February 2015. The next step, a Wildlife Hazard Management Plan, is especially important given the airport's proximity to the bay and large number of aircraft operations each year.

Supplemental Information

Approximately 90% of this project will be reimbursed by the Federal Aviation Administration (FAA). A grant application was submitted to and accepted by the FAA, staff brought a resolution to Council to accept the FAA's grant offer letter in June 2015.

Significant Changes

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Airport Fund	0	27,415	9,400	18,015	0	0	0	0	18,015	0	27,415
Revenue from the Federal Government	0	36,000	30,600	5,400	0	0	0	0	5,400	0	36,000
Total	**0**	**63,415**	**40,000**	**23,415**	**0**	**0**	**0**	**0**	**23,415**	**0**	**63,415**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	63,415	6,000	17,415	0	0	0	0	17,415	0	23,415
Design	0	0	34,000	6,000	0	0	0	0	6,000	0	40,000
Total	**0**	**63,415**	**40,000**	**23,415**	**0**	**0**	**0**	**0**	**23,415**	**0**	**63,415**

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: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Parks and Recreation Commission

Planning and Transportation Commission

Environmental Impact Analysis:

This project may be exempt from CEQA under Section 15301.

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ELECTRIC FUND

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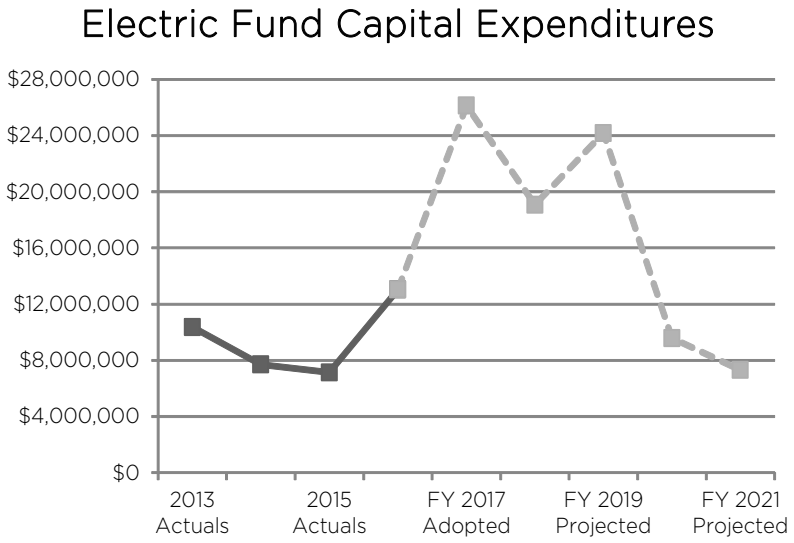
Overview

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 2017-2021 Capital Improvement Program (CIP), approximately $86.3 million is programmed, with $26.1 million budgeted in Fiscal Year 2017, of which $6.2 million is reappropriated funds from Fiscal Year 2016. Overall, a total of 44 projects are programmed over the 5 year CIP.

Major projects funded in the 2017-2021 Adopted CIP include Electric Customer Connections ($17.2 million), Electric System Improvements ($10.3 million), Smart Grid Technology Installation ($13 million), and Electric Pole Replacements for Fiber to the Home ($8 million). The budget for the Electric Fund CIP is broken into three separate categories: Customer Connections, System Improvements, and Undergrounding Projects.



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	175.21 miles
Overhead Secondary Distribution	93.77 miles
Underground Secondary Distribution	74 miles

Customer Connections

As customers continually change their electric power needs 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 the largest project within the Electric Fund ($3.6 million in Fiscal Year 2017, $17.2 million over the 2017-2021 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 electric service, need temporary power for construction, or require other services. 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.

Recent Accomplishments

- In Fiscal Year 2015 the Utilities Electric Division completed over 286 customer service projects with a total cost of $1.9 million and revenue of $1.4 million.

2017-2021 Capital Improvement Program

Recurring Projects

The Electric Customer Connections project, described above, is the only recurring project in this category.

Non-Recurring Projects

There are no non-recurring projects under this category however, discussed in the System Improvements category are projects whose plans have been submitted to the City for review and engineering:

- VA Hospital Load Expansion (Fiscal Year 2017: $3.0 million; 5-Year CIP: $5.0 million)
- Stanford Load Expansion (Fiscal Year 2017: $0.5 million; 5-Year CIP: $0.5 million)
- Electric Pole Replacements for Fiber to the Home or Google Fiber (Fiscal Year 2017: $5.0 million; 5-Year CIP: $8.0 million)

System Improvements

Necessary elements in ensuring reliable electric service to City of Palo Alto residents and customers include the replacement of electric system components before they reach their end of life and the installation of 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 standard, 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 2017-2021 CIP includes total funding of $59.1 million in this category, with $20.7 million allocated in Fiscal Year 2017. Significant projects in this category include Electric Distribution Sys-

tem Improvements ($10.3 million), Smart Grid Technology Installation ($13 million), and various projects to rebuild underground districts and substation components.

Recent Accomplishments

- Rebuilt the electric underground system in several locations along San Antonio Road between East Charleston Road and Middlefield Road, including Green House Condo area
- Upgraded the servers and software dedicated to the Supervisory Control and Data Acquisition System (SCADA) used to monitor the electric, water, and gas utility distribution systems
- Added security cameras at two electric substations
- Upgraded protective relays for Quarry substation
- Completed installation of new primary electric service to facilitate Stanford Hospital upgrades; and replacement of primary cables that were reaching the end of their useful life on two Quarry Feeders feeding the hospital.
- Completed replacement of 40 wood poles identified to be unsafe for its intended purpose and workers.
- Completed 25 other system improvement projects dealing with replacement of deteriorated facilities or to improve system operation and reliability.

2017-2021 Capital Improvement Program

Recurring Projects

A total of $17.9 million is programmed for System Improvements recurring projects in the 2017-2021 CIP, with $4.8 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Communication System Improvements (Fiscal Year 2017: $0.3 million; 5-Year CIP: $0.7 million)
- Electric Distribution System Improvements (Fiscal Year 2017: $2.3 million; 5-Year CIP: $10.3 million)
- Electric Utility GIS (Fiscal Year 2017: $0.4 million; 5-Year CIP: $1 million)
- SCADA System Upgrades (Fiscal Year 2017: $0.3 million; 5-Year CIP: $0.5 million)
- Smart Grid Technology Installation (Fiscal Year 2017: $0.8 million; 5-Year CIP: $13 million)
- Substation Facility Improvements (Fiscal Year 2017: $0.4 million; 5-Year CIP: $1.2 million)
- Substation Protection Improvements (Fiscal Year 2017: $0.7 million; 5-Year CIP: $1.9 million)
- Underground System Rebuild (Fiscal Year 2017: $0.4 million; 5-Year CIP: $1.8 million)

Non-Recurring Projects

A total of $41.2 million is allocated in the 2017-2021 CIP for non-recurring System Improvement projects. Over $6 million is for the continuation of projects approved by the City Council in prior years. New projects are recommended as within this category, including the following:

- Rebuild Underground District 23 (5-Year CIP: $0.8 million)

- East Meadow Circle 4/12kV Conversion (Fiscal Year 2017: $0.1 million; 5-Year CIP: $1.8 million)
- Substation Break Replacement (Fiscal Year 2017: $0.2 million, 5-Year CIP: $0.6 million)
- 60kV Relay Replacement (Fiscal Year 2017: $0.2 million, 5-Year CIP: $0.5 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 Utilities 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. During the 2017-2021 Capital Improvement Program period, $9.9 million is allocated for Undergrounding Projects, with $1.8 million allocated in Fiscal Year 2017.

Recent Accomplishment

- Underground District 47 – Completed the installation of underground substructures (conduits and boxes) in the area bounded by Middlefield Road/Addison Avenue/Cowper Street/Homer Avenue.
- Underground District 46 - Completed preliminary designs for undergrounding electric lines.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects under this category.

Non-Recurring Projects

A total of $9.9 million is allocated in the 2017-2021 CIP for non-recurring Undergrounding projects, with $1.8 million allocated in Fiscal Year 2017. All of the funds for the projects were approved by the City Council in prior years. Significant projects in this category include the following:

- Underground District 42 ($2.3 million), which will underground overhead utility facilities in the area near Embarcadero Road/Emerson Street/Middlefield Road
- Underground District 43 ($2.7 million) which will underground overhead utility facilities in the area along Alma Street and Embarcadero Road
- Underground District 46 ($0.7 million), which will underground overhead utility facilities in the area near El Camino Real/Arastradero Road/West Charleston Road
- Facility Relocation for Caltrain Modernization Project ($2.7 million), which will allow for the relocation of overhead Utility Electric and Fiber Optic lines to provide adequate clearance from new electric lines.

Summary of Capital Activity

ELECTRIC FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Transfers from Other Funds									
Gas Fund									
EL-11014	Smart Grid Technology	0	0	136,335	300,000	3,375,000	0	0	3,811,335
	Total Gas Tax Fund Transfers	**0**	**0**	**136,335**	**300,000**	**3,375,000**	**0**	**0**	**3,811,335**
Water Fund									
EL-11014	Smart Grid Technology	0	0	136,335	300,000	3,375,000	0		3,811,335
	Total Water Fund Transfers	**0**	**0**	**136,335**	**300,000**	**3,375,000**	**0**	**0**	**3,811,335**
	Total Transfers from Other Funds	**0**	**0**	**272,670**	**600,000**	**6,750,000**	**0**	**0**	**7,622,670**
Reimbursement from Customers, Telephone, and Cable Television Companies									
EL-98003	Electric System Improvements	(19,289)	250,000	190,000	200,000	210,000	210,000	210,000	1,020,000
EL-89028	Electric Customer Connections	1,429,428	2,160,800	1,650,000	1,650,000	1,700,000	1,700,000	1,700,000	8,400,000
EL-17006	Electric Pole Replacements for FTTP	0	0	4,000,000	2,400,000	0	0	0	6,400,000
EL-17004	Stanford - Customer Load Requirements	0	0	400,000	0	0	0	0	400,000
EL-17003	VA Hospital - Customer Load Requirements	0	0	2,400,000	1,600,000	0	0	0	4,000,000
	Reimbursement from Customers, Telephone, and Cable Television Companies Total	**1,410,139**	**2,410,800**	**8,640,000**	**5,850,000**	**1,910,000**	**1,910,000**	**1,910,000**	**20,220,000**
	Total Sources	**1,410,139**	**2,410,800**	**8,912,670**	**6,450,000**	**8,660,000**	**1,910,000**	**1,910,000**	**27,842,670**
Use of Funds									
Customer Connections									
EL-89028	Electric Customer Connections	1,701,435	3,702,859	3,642,000	3,219,888	3,335,804	3,455,893	3,580,305	17,233,890
	Customer Connections Total	**1,701,435**	**3,702,859**	**3,642,000**	**3,219,888**	**3,335,804**	**3,455,893**	**3,580,305**	**17,233,890**
System Improvements									
EL-06001	230 Kv Electric Intertie	46,155	7,000	173,360	0	0	0	0	173,360
EL-10008	Advanced Metering Infrastructure (AMI) System	9,783	436	0	0	0	0		0
EL-16002	Capacitor Bank Installation	0	0	350,000		0	0	0	350,000
EL-14000	Coleridge/Cowper/Tennyson 4/12Kv Conversion	0	0	0	120,000	400,000	0	0	520,000
EL-15000	Colorado/Hopkins System Improvement	0	0	825,000	750,000	0	0	0	1,575,000
EL-89031	Communications System Improvements	68,437	19,940	287,759	100,000	100,000	100,000	100,000	687,759

ELECTRIC FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
EL-08000	East Charleston 4/12Kv Conversion	322,725	60,861	0	0	0	0	0	0
EL-17001	East Meadow Circles 4/12Kv Conversion	0	0	50,000	1,750,000	0	0	0	1,800,000
EL-13000	Edgewood/Wildwood 4Kv Tie	0	0		50,000	400,000	0	0	450,000
EL-05000	El Camino Underground Rebuild	57,389	0	0	0	0	0	0	0
EL-17006	Electric Pole Replacement for FTTP	0	0	5,000,000	3,000,000	0	0	0	8,000,000
EL-15001	Electric Substation Battery Replacement	0	257,883	142,117	0	0	0	0	142,117
EL-98003	Electric System Improvements	2,005,036	4,149,933	2,300,000	2,000,000	2,000,000	2,000,000	2,000,000	10,300,000
EL-02011	Electric Utility Geographic Information System	67,135	0	365,000	165,000	165,000	165,000	165,000	1,025,000
EL-04010	Foothills System Rebuild	0	0	0	0	0	0	0	0
EL-12002	Hanover 22 - Transformer Replacement	0	0	0	0	0	0	0	0
EL-17005	HCB Pilot Wire Relay Replacement	0	0	167,000	167,000	167,000	0	0	501,000
EL-11004	Hewlett Subdivision Rebuild Los Trancos Road	0	0	0	0	0	0	0	0
EL-14004	Maybell 1&2 4/12Kv Conversion	255,478	3,277	185,372	0	0	0	0	185,372
EL-09000	Middlefield Underground Rebuild	29,906	378,021	0	0	0	0	0	0
EL-11007	Rebuild Greenhouse Condo Area	307,473	26,118	0	0	0	0	0	0
EL-12000	Rebuild Underground District 12	424,351	0	0	0	0	0	0	0
EL-11003	Rebuild Underground District 15	4,812	0	451,615	0	0	0	0	451,615
EL-13003	Rebuild Underground District 16	0	0	300,000	0	0	0	0	300,000
EL-11006	Rebuild Underground District 18	49,413	468,542	0	0	0	0	0	0
EL-11008	Rebuild Underground District 19	2,602	86,609	12,262	0	0	0	0	12,262
EL-14002	Rebuild Underground District 20	0	0	950,000	500,000	500,000	0	0	1,950,000
EL-17000	Rebuild Underground District 23	0	0	0	200,000	600,000	0	0	800,000
EL-10006	Rebuild Underground District 24	226,746	760,593	1,075,560	0	0	0	0	1,075,560
EL-19000	Rebuild Underground District 25	0	0	0	0	50,000	500,000	0	550,000
EL-16000	Rebuild Underground District 26	0	110,000	0	0	650,000	0	0	650,000
EL-14005	Reconfigure Quarry Feeders	69,169	94,418	786,364	0	0	0	0	786,364
EL-13002	Relocate Quarry/Hopkins Substation 60Kv Line (A & B)	0	0	0	100,000	750,000	0	0	850,000
EL-13006	Sand Hill/Quarry Road 12Kv Tie	4,374	25,867	157,259	0	0	0	0	157,259
EL-02010	SCADA System Upgrades	64,226	141,699	300,000	60,000	65,000	65,000	65,000	555,000
EL-11014	Smart Grid Technology Installation	65,625	114,114	781,766	1,000,000	11,250,000	0	0	13,031,766
EL-17004	Stanford University Customer Load Requirements	0	0	500,000	0	0	0	0	500,000
EL-10009	Street Light System Conversion Project	666,918	0	30,000	0	0	0	0	30,000
EL-17002	Substation 60Kv Breaker Replacement			150,000	150,000	150,000	150,000	0	600,000
EL-89044	Substation Facility Improvements	258,214	6,027	399,243	195,000	195,000	200,000	200,000	1,189,243
EL-89038	Substation Protection Improvements	232,348	337,709	731,812	300,000	300,000	300,000	300,000	1,931,812
EL-16003	Substation Security	0	50,000	200,000	0	0	0	0	200,000
EL-16001	Underground System Rebuild	0	200,000	400,000	300,000	350,000	350,000	350,000	1,750,000
EL-13008	Upgrade Electric Estimating System	0	20,000	128,650	0	0	0	0	128,650
EL-17008	Utility Control Center Upgrades	0	0	400,000	0	0	0	0	400,000

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
EL-04012	Utility Site Security Improvements	31,126	524,148	50,000	50,000	300,000	50,000	50,000	500,000
EL-17003	VA Hospital Customer Load Requirements	0	0	3,000,000	2,000,000	0	0	0	5,000,000
EL-09004	West Charleston/Wilkie to South City Limit 4/12 Kv Conversion	701	0	0	0	0	0	0	0
	System Improvements Total	**5,270,142**	**7,843,195**	**20,650,139**	**12,957,000**	**18,392,000**	**3,880,000**	**3,230,000**	**59,109,139**
Undergrounding Projects									
EL-17007	Facility Relocation for Caltrain Modernization Project	0	0	150,000	2,550,000	0	0	0	2,700,000
EL-13007	Underground Distribution System Security	8,638	0	290,534	300,000	300,000	0	0	890,534
EL-08001	Underground District 42 - Embarcadero Road, Emerson, Middlefield	0	0	0	50,000	2,000,000	250,000	0	2,300,000
EL-11009	Underground District 43 - Alma/Embarcadero	0	0		0	150,000	2,000,000	500,000	2,650,000
EL-12001	Underground District 46 - Charleston/El Camino Real	3,535	33,846	650,966	0	0	0	0	650,966
EL-11010	Underground District 47 - Middlefield, Homer, Webster, Addison	195,283	1,454,487	744,038	0	0	0	0	744,038
	Undergrounding Projects Total	**207,456**	**1,488,333**	**1,835,538**	**2,900,000**	**2,450,000**	**2,250,000**	**500,000**	**9,935,538**
	Total Uses	**7,179,033**	**13,034,387**	**26,127,677**	**19,076,888**	**24,177,804**	**9,585,893**	**7,310,305**	**86,278,567**

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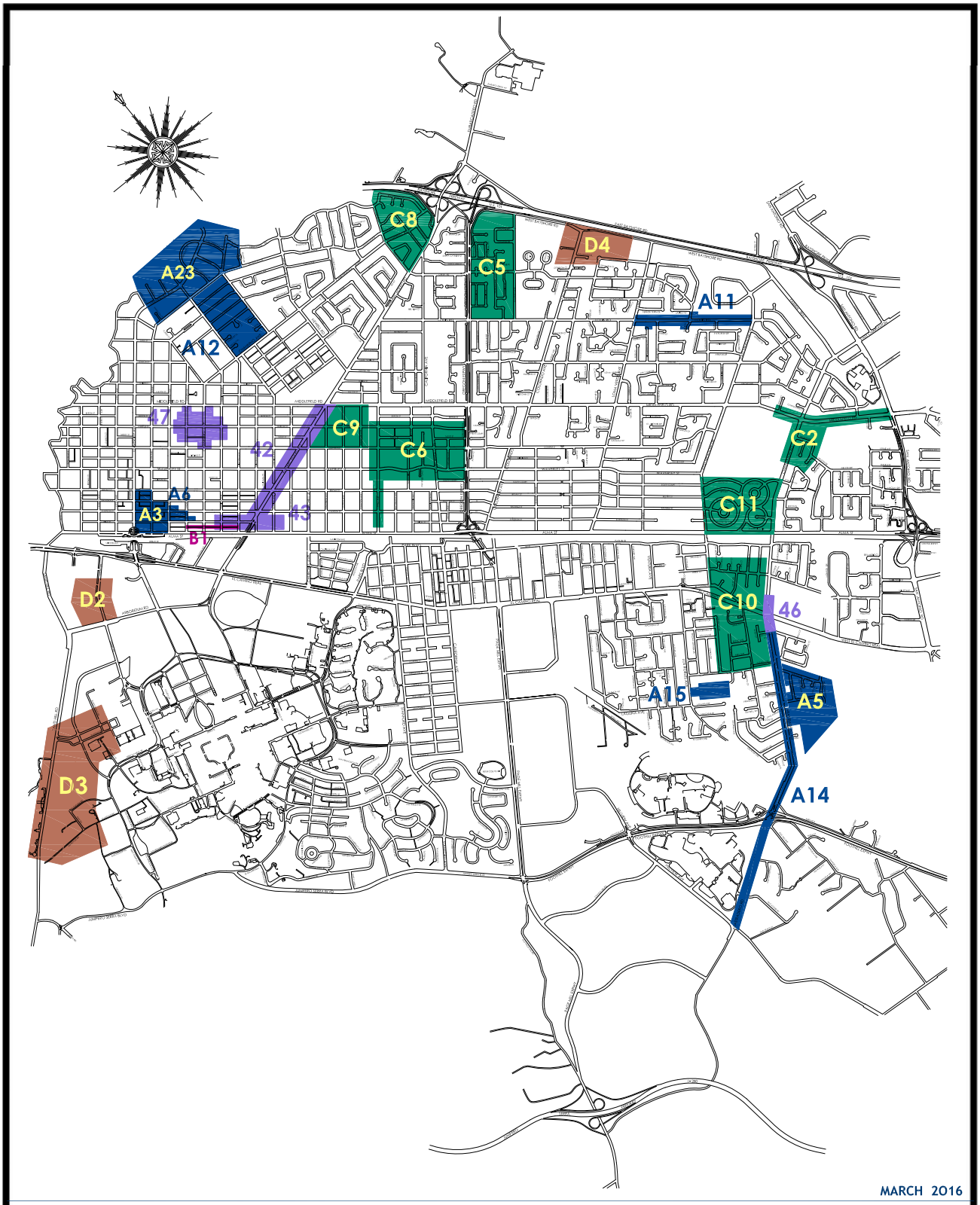


MARCH 2016

LEGEND

42 PROPOSED UNDERGROUND PROJECTS

42	UG DISTRICT #42	(08001)	2017-2019
43	UG DISTRICT #43	(11009)	2018-2020
46	UG DISTRICT #46	(12001)	2015-2017
47	UG DISTRICT #47	(11010)	2011-2017

A PROPOSED UNDERGROUND REBUILD

A3	REBUILD U.G. DISTRICT #24	(10006)	2008-2016
A5	REBUILD U.G. DISTRICT #15	(11003)	2015-2016
A6	REBUILD U.G. DISTRICT #19	(10008)	2008-2016
A11	REBUILD U.G. DISTRICT #16	(13003)	2017-2018
A12	REBUILD U.G. DISTRICT #20	(14002)	2017-2019
A14	REBUILD U.G. DISTRICT #26	(16000)	2016-2017
A15	REBUILD U.G. DISTRICT #25	(19000)	2019-2020
A23	REBUILD U.G. DISTRICT #23	(17000)	2018-2019

B PROPOSED 60KV SYSTEM REBUILD

B1	RELOCATE QR/HO 60KV LINE (LANE A & B)	(13002)	2018-2019

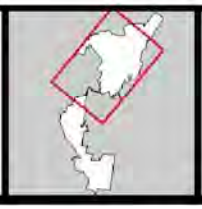
C PROPOSED 4/12KV CONVERSION

C2	E. CHARLESTON 4/12KV CUTOVER	(08000)	2008-2015
C5	ST. FRANCIS/ OREGON/ AMARILLO/ LOUIS 4/12KV	(11002)	2017-2018
C6	SEALE / WAVERLEY 4/12KV	(11000)	2016-2017
C8	EDGEWOOD / WILDWOOD 4/12KV	(13000)	2018-2020
C9	COLERIDGE/ COWPER/ TENNYSON 4/12KV	(14000)	2017-2019
C10	MAYBELL 1&2 CONVERSION	(14004)	2015-2016
C11	EAST MEADOW CIRCLES 4/12KV	(17001)	2017-2018

D PROPOSED SYSTEM IMPROVEMENT

D2	RECONFIGURE QUARRY FEEDERS	(14005)	2014-2016
D3	QUARRY CIRCUIT TIES	(13006)	2014-2015
D4	COLORADO / HOPKINS SYSTEM IMPROVEMENT	(15001)	2015-2018
D5	UNDERGROUND SYSTEM REBUILD - VARIOUS AREAS	(16001)	2016-2020
D6	CAPACITOR BANK INSTALLATION - VARIOUS AREAS	(16002)	2016-2017
D7	SUBSTATION SECURITY - VARIOUS AREAS	(16003)	2016-2018
D8	60KV BREAKER REPLACEMENT - VARIOUS AREAS	(17002)	2017-2020
D9	HCB RELAY REPLACEMENTS - VARIOUS AREAS	(17005)	2017-2019
D10	POLE REPLACEMENTS FOR FTTH - VARIOUS AREAS	(17006)	2017-2018

The City of Palo Alto



ELECTRIC FUND 2017-2021 CAPITAL IMPROVEMENT PROGRAM

This map is a product of the City of Palo Alto GIS

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Customer Connections

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 Troubleman installing an electric meter to provide service to a customer

Electric Customer Connections

Description

This project allows for the installation of services, transformers, and meters for new customers; upgrading of existing services; temporary service connections; and overhead and underground extensions for new or existing customers.

Justification

The project provides funding for the connection of new customers and the upgrading of 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	3,248,565	1,542,059	1,992,000	1,569,888	1,635,804	1,755,893	1,880,305	8,833,890	0	N/A
Other	N/A	1,550,000	2,160,800	1,650,000	1,650,000	1,700,000	1,700,000	1,700,000	8,400,000	0	N/A
Total	**N/A**	**4,798,565**	**3,702,859**	**3,642,000**	**3,219,888**	**3,335,804**	**3,455,893**	**3,580,305**	**17,233,890**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	4,798,565	3,702,859	3,642,000	3,219,888	3,335,804	3,455,893	3,580,305	17,233,890	0	N/A
Total	**N/A**	**4,798,565**	**3,702,859**	**3,642,000**	**3,219,888**	**3,335,804**	**3,455,893**	**3,580,305**	**17,233,890**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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System Improvements

Possible electric substation connection point to existing 60 kV system

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: Spring 2017

Project Number: EL-06001

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 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 - $50 million and could be shared with both Stanford and SLAC/DOE. If this project is cancelled, 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 that can serve it during emergencies, such as the plane crash in 2010 that impacted electric power to the entire city.

Significant Changes

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 of these two entities is necessary for this project to move forward.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	260,304	80,360	7,000	173,360	0	0	0	0	173,360	0	440,664
Total	**260,304**	**80,360**	**7,000**	**173,360**	**0**	**0**	**0**	**0**	**173,360**	**0**	**440,664**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	208,243	80,360	7,000	173,360	0	0	0	0	173,360	0	388,603
Design	52,060	0	0	0	0	0	0	0	0	0	52,060
Total	**260,303**	**80,360**	**7,000**	**173,360**	**0**	**0**	**0**	**0**	**173,360**	**0**	**440,663**

Operating Impact

Projected net annual savings resulting from the interconnection fee reduction will be approximately $2,000,000 based on projected energy purchases and the price difference between 115 kV and 230 kV service. Lower voltage services are more expensive than higher voltage services.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Capacitor Bank

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: Spring 2017

Project Number: EL-16002

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 the power that it draws from the mains 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. In order 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. This project will increase the Power Factor to meet the current requirements and it is anticipated that the installation of the Capacitor Bank will allow for the Power Factor to be sufficient for the next 7 years.

Significant Changes

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	75,000	0	350,000	0	0	0	0	350,000	0	350,000
Total	**0**	**75,000**	**0**	**350,000**	**0**	**0**	**0**	**0**	**350,000**	**0**	**350,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	350,000	0	0	0	0	350,000	0	350,000
Design	0	75,000	0	0	0	0	0	0	0	0	0
Total	**0**	**75,000**	**0**	**350,000**	**0**	**0**	**0**	**0**	**350,000**	**0**	**350,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Environmental Impact Analysis:

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

Overhead crews working on overhead lines

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:
Revised Project Completion: Spring 2018

Project Number: EL-14000

Coleridge/Cowper/Tennyson 4/12kV Conversion

Description

The project will convert the primary electric distribution system in the Coleridge/Cowper/Tennyson area from 4 kV to 12 kV.

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 4kV to 12 kV conversions in adjacent areas, this area, now at 4kV, needs to be converted to 12kV so that adequate circuit connections can be restored to allow customers to be switched from one circuit to another during normal or emergency conditions. This will improve operating flexibility of the system and service reliability to customers in this area. In addition, there is equipment in the area that has reached the end of its useful life and needs to be replaced. Converting to 12 kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	120,000	400,000	0	0	520,000	0	520,000
Total	**0**	**0**	**0**	**0**	**120,000**	**400,000**	**0**	**0**	**520,000**	**0**	**520,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	120,000	400,000	0	0	520,000	0	520,000
Total	**0**	**0**	**0**	**0**	**120,000**	**400,000**	**0**	**0**	**520,000**	**0**	**520,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric Substation obscured by trees

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Hopkins and Colorodo Substations

Managing Department: Utilities

Initial Project Start: Spring 2015
Initial Project Completion: Spring 2018

Revised Project Start:
Revised Project Completion: Spring 2019

Project Number: EL-15000

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 Hopkins and Colorado substations and adjacent substations.

Justification

Transformers at both 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 ties to other substations, so there is no backup to serve customers should there be a catastrophic problem at Hopkins.

Supplemental Information

To accommodate the replacement of this equipment, the ability to serve projected future electrical load projections, and provide back up service to Hopkins, this project will evaluate solutions to best solve the multitude of issues. Funding for Fiscal Year 2016 is for engineering only. Budget requests for future years is an estimate based currently available information.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	75,000	0	825,000	750,000	0	0	0	1,575,000	0	1,575,000
Total	**0**	**75,000**	**0**	**825,000**	**750,000**	**0**	**0**	**0**	**1,575,000**	**0**	**1,575,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	825,000	750,000	0	0	0	1,575,000	0	1,575,000
Design	0	75,000	0	0	0	0	0	0	0	0	0
Total	**0**	**75,000**	**0**	**825,000**	**750,000**	**0**	**0**	**0**	**1,575,000**	**0**	**1,575,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Traffic/Fiber technicians repairing the city fiber optic cables

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

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	207,699	19,940	287,759	100,000	100,000	100,000	100,000	687,759	0	N/A
Total	**N/A**	**207,699**	**19,940**	**287,759**	**100,000**	**100,000**	**100,000**	**100,000**	**687,759**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	207,699	19,940	287,759	100,000	100,000	100,000	100,000	687,759	0	N/A
Total	**N/A**	**207,699**	**19,940**	**287,759**	**100,000**	**100,000**	**100,000**	**100,000**	**687,759**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

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:

Project Number: EL-17001

East Meadow Circles 4/12kV Conversion

Description

The project will convert the primary electric distribution system in the East Charleston/Alma Street/East Meadow Drive/Middlefield Road area from 4 kV to 12 kV.

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 4kV to 12 kV conversions in adjacent areas, this area, now at 4kV, needs to be converted to 12kV so that adequate circuit connections can be restored to allow customers to be switched from one circuit to another during normal or emergency conditions. This will improve operating flexibility of the system and service reliability to customers in this area. In addition, there is equipment in the area that has reached the end of its useful life and needs to be replaced. Converting to 12 kV will eliminate the need to replace this equipment as it is not needed at that voltage level.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000
Total	**0**	**0**	**0**	**50,000**	**1,750,000**	**0**	**0**	**0**	**1,800,000**	**0**	**1,800,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	50,000	1,750,000	0	0	0	1,800,000	0	1,800,000
Total	**0**	**0**	**0**	**50,000**	**1,750,000**	**0**	**0**	**0**	**1,800,000**	**0**	**1,800,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric linemen working on overhead electric connection

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:
Revised Project Completion: Spring 2019

Project Number: EL-13000

Edgewood/Wildwood 4 kV Tie

Description

This project will install new overhead wire to connect the HO-3 and HO-7 electric feeders 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 4 kV feeders are converted to 12 kV, the 4 kV 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 Hopkins substation, this project will construct a tie between the HO-3 and HO-7 feeders.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	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
Total	**0**	**0**	**0**	**0**	**50,000**	**400,000**	**0**	**0**	**450,000**	**0**	**450,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	400,000	0	0	400,000	0	400,000
Design	0	0	0	0	50,000	0	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**0**	**50,000**	**400,000**	**0**	**0**	**450,000**	**0**	**450,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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: Summer 2017
Initial Project Completion: Summer 2018

Revised Project Start:
Revised Project Completion:

Project Number: EL-17006

Electric Pole Replacements for FTTP

Description

City of Palo Alto Utilities staff has had several meetings with Google regarding their interest in Palo Alto for their new internet service product, Google Fiber. Google intends to start construction in those neighborhoods with electric utility poles in Palo Alto where they can attach the fiber optic cable. This work will significantly impact the workload for Utilities' administrative, engineering, and operations staff.

Justification

Google Fiber requires deploying fiber optic cable throughout the City of Palo Alto attaching to utility poles and also some pulled into underground conduit. This project requires the Electric Utility to replace about 20% of its poles to accommodate the proposed services. Currently, Google has an aggressive schedule of submitting permit applications in February 2016, requesting to attach to electric utility poles and to start construction by Spring 2016. The current staffing levels of administrative, engineering, and operations employees in Utilities cannot support Googleís project and meet their project schedule, while maintaining normal CPA new customer, CIP, and maintenance jobs. Utilities staff is proposing a new budget for 3 years to allow for temporary staff recruitment or issuing an RFP to contract a firm to provide the necessary services.

Supplemental Information

Google will reimburse the City of Palo Alto for a majority of the costs for this project, but the City will incur some costs to correct existing conditions on the poles. Staff has provided a preliminary estimate for revenue, but the exact amount is not known at this time.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	1,000,000	600,000	0	0	0	1,600,000	0	1,600,000
Revenue from Other Agencies	0	0	0	4,000,000	2,400,000	0	0	0	6,400,000	0	6,400,000
Total	**0**	**0**	**0**	**5,000,000**	**3,000,000**	**0**	**0**	**0**	**8,000,000**	**0**	**8,000,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Planning and Engineering	0	0	0	5,000,000	3,000,000	0	0	0	8,000,000	0	8,000,000
Total	**0**	**0**	**0**	**5,000,000**	**3,000,000**	**0**	**0**	**0**	**8,000,000**	**0**	**8,000,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Program: C-12

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

May Require Environmental Review

Band of batteries used in electric substations for electric system protective relays

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Electric Substation

Managing Department: Utilities

Initial Project Start: Fall 2015
Initial Project Completion: Summer 2015

Revised Project Start:
Revised Project Completion: Winter 2016

Project Number: EL-15001

Electric Substation Battery Replacement

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 replace the batteries in all 9 of the City's electric substations. The batteries are used to provide uninterruptible power to protective relays, breakers, metering, and SCADA equipment.

Justification

The electric substations are the link between the transmission and distribution systems. At the substations, voltage levels are converted and distribution feeders branch out to provide power throughout the city. In the substations are racks of batteries used to power substation equipment. These batteries have a typical useful life of 20 years and the existing batteries were installed between 1992-1997 and have reached, or are reaching, the end of their useful life.

Supplemental Information

The batteries are a key element to keeping the equipment in the substations operating as designed. Over the past year there have been 9 (out of 360) failures of individual battery units. This is an increase from the prior year and may indicate that battery failures may increase as they age. Failure of the batteries would cause equipment to not operate when required and affect the operation and monitoring of the electric system and electric system reliability, impacting public and worker safety and extending the duration of outages.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	400,000	257,883	142,117	0	0	0	0	142,117	0	400,000
Total	**0**	**400,000**	**257,883**	**142,117**	**0**	**0**	**0**	**0**	**142,117**	**0**	**400,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	400,000	257,883	142,117	0	0	0	0	142,117	0	400,000
Total	**0**	**400,000**	**257,883**	**142,117**	**0**	**0**	**0**	**0**	**142,117**	**0**	**400,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric crews working in an underground vault terminating cables

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 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 Revenues includes reimbursements from the telephone company for work performed on their behalf by City.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	4,567,340	3,899,933	2,110,000	1,800,000	1,790,000	1,790,000	1,790,000	9,280,000	0	N/A
Other	N/A	180,000	250,000	190,000	200,000	210,000	210,000	210,000	1,020,000	0	N/A
Total	**N/A**	**4,747,340**	**4,149,933**	**2,300,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**10,300,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	4,747,340	4,149,933	2,300,000	2,000,000	2,000,000	2,000,000	2,000,000	10,300,000	0	N/A
Total	**N/A**	**4,747,340**	**4,149,933**	**2,300,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**10,300,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

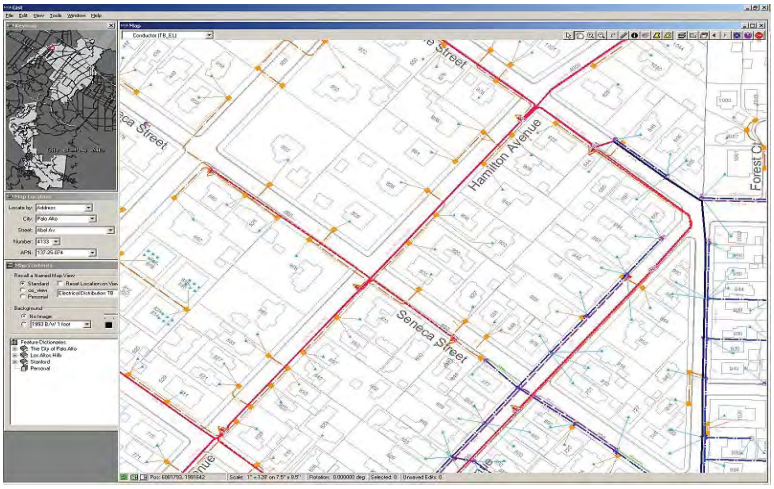
Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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



View of City of Palo Alto GIS System

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Software maintenance & update

Managing Department: Utilities

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: EL-02011

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 which 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, and anticipated system upgrades.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	462,168	0	365,000	165,000	165,000	165,000	165,000	1,025,000	0	N/A
Total	**N/A**	**462,168**	**0**	**365,000**	**165,000**	**165,000**	**165,000**	**165,000**	**1,025,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	462,168	0	365,000	165,000	165,000	165,000	165,000	1,025,000	0	N/A
Total	**N/A**	**462,168**	**0**	**365,000**	**165,000**	**165,000**	**165,000**	**165,000**	**1,025,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Governance

Section: Public Participation

Goal: G-1

Policy: G-3

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-1

Policy: T-3

Program: T-10

Potential Board/Commission Review:

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:

Project Number: EL-17005

HCB Pilot Wire Relay Replacement

Description

This project funds the replacement of existing HCB pilot 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 HCB pilot 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 winter 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

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000
Total	**0**	**0**	**0**	**167,000**	**167,000**	**167,000**	**0**	**0**	**501,000**	**0**	**501,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	167,000	167,000	167,000	0	0	501,000	0	501,000
Total	**0**	**0**	**0**	**167,000**	**167,000**	**167,000**	**0**	**0**	**501,000**	**0**	**501,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Goal: N-9

Policy: N-44

Program: N-63

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

El Camino Way at James

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Maybell Avenue and El Camino Real between El Camino Way and Arastradero

Managing Department: Utilities

Initial Project Start: Spring 2014
Initial Project Completion:

Revised Project Start:
Revised Project Completion: Summer 2016

Project Number: EL-14004

Maybell 1&2 4/12kV Conversion

Description

This project will convert the Maybell substation circuit 1 & 2 from 4kV to 12kV and remove the remaining 4kV equipment at Maybell. This covers the remaining area to be converted at Maybell Substation including the areas around Maybell Avenue and El Camino Real between El Camino Way and Arastradero.

Justification

The existing 4kV distribution system at Maybell has been converted to 12kV as the distribution facilities in areas have been rebuilt. This remaining area needs to be converted to 12kV so that adequate circuit ties are maintained to ensure high levels of service reliability to customers. This will also allow for the removal of deteriorating facilities at Maybell Substation reducing maintenance and operating requirements.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	261,350	188,649	3,277	185,372	0	0	0	0	185,372	0	449,999
Total	**261,350**	**188,649**	**3,277**	**185,372**	**0**	**0**	**0**	**0**	**185,372**	**0**	**449,999**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	209,080	188,649	3,277	185,372	0	0	0	0	185,372	0	397,729
Design	52,270	0	0	0	0	0	0	0	0	0	52,270
Total	**261,350**	**188,649**	**3,277**	**185,372**	**0**	**0**	**0**	**0**	**185,372**	**0**	**449,999**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Underground transformer and cable after years of service

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:
Revised Project Completion: Summer 2017

Project Number: EL-11003

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 cable, 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 that rebuilding be performed on the facilities.

Significant Changes

2017-2021 CIP: Shifting project priorities and the loss of Engineering staff have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	29,463	451,615	0	451,615	0	0	0	0	451,615	0	481,078
Total	**29,463**	**451,615**	**0**	**451,615**	**0**	**0**	**0**	**0**	**451,615**	**0**	**481,078**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	23,570	451,615	0	451,615	0	0	0	0	451,615	0	475,185
Design	5,892	0	0	0	0	0	0	0	0	0	5,892
Total	**29,462**	**451,615**	**0**	**451,615**	**0**	**0**	**0**	**0**	**451,615**	**0**	**481,077**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric crews installing new underground cables

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:

Project Number: EL-13003

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 cable, 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 that rebuilding be performed on the facilities.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	300,000	0	0	0	0	300,000	0	300,000
Total	**0**	**0**	**0**	**300,000**	**0**	**0**	**0**	**0**	**300,000**	**0**	**300,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	300,000	0	0	0	0	300,000	0	300,000
Total	**0**	**0**	**0**	**300,000**	**0**	**0**	**0**	**0**	**300,000**	**0**	**300,000**

Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	Utilities Advisory Commission
Element: Natural Environment	
Section: Energy	
Goal: N-9	
Policy: N-44	

Environmental Impact Analysis:

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

Electric crews installing new underground cables

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Forest, Waverley, Addison, and Alma in downtown Palo Alto

Managing Department: Utilities

Initial Project Start: Fall 2009
Initial Project Completion: Summer 2010

Revised Project Start: Spring 2014
Revised Project Completion: Winter 2016

Project Number: EL-11008

Rebuild Underground District 19

Description

This project will rebuild and replace the underground electric system in Underground District 19. Work will include the replacement of deteriorated electrical cable, 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 Underground District 19 was installed in 1979. Although typical cable and equipment expected life is 30 years when conditions are ideal, due to most of the equipment and cables operating in standing water during winter, its useful service life is compromised and failures could begin to occur prematurely. The water reduces the life of the equipment and connections and requires that the system be rebuilt. The Underground District 19 is bounded by Forest, Waverley, Addison, and Alma in downtown Palo Alto.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	62,415	98,871	86,609	12,262	0	0	0	0	12,262	0	161,286
Total	**62,415**	**98,871**	**86,609**	**12,262**	**0**	**0**	**0**	**0**	**12,262**	**0**	**161,286**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	49,931	98,871	86,609	12,262	0	0	0	0	12,262	0	148,802
Design	12,483	0	0	0	0	0	0	0	0	0	12,483
Total	**62,414**	**98,871**	**86,609**	**12,262**	**0**	**0**	**0**	**0**	**12,262**	**0**	**161,285**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Utility Engineer planning out the next underground rebuild project

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:

Project Number: EL-14002

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 cable, 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 in winter. The water reduces the life of the equipment and electrical connections and requires that rebuilding be performed on the facilities.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	950,000	500,000	500,000	0	0	1,950,000	0	1,950,000
Total	**0**	**0**	**0**	**950,000**	**500,000**	**500,000**	**0**	**0**	**1,950,000**	**0**	**1,950,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	950,000	500,000	500,000	0	0	1,950,000	0	1,950,000
Total	**0**	**0**	**0**	**950,000**	**500,000**	**500,000**	**0**	**0**	**1,950,000**	**0**	**1,950,000**

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	**Secondary Connection**	Utilities Advisory Commission
Element: Natural Environment	Element: Land Use and Community Design	
Section: Energy	Section: Public Ways	
Goal: N-9	Goal: L-9	
Policy: N-44	Policy: L-79	
	Program: L-81	

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: 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:

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 cable, 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. Installation of new equipment will bring the electrical system up to current construction standards.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	200,000	600,000	0	0	800,000	0	800,000
Total	**0**	**0**	**0**	**0**	**200,000**	**600,000**	**0**	**0**	**800,000**	**0**	**800,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Planning and Engineering	0	0	0	0	200,000	600,000	0	0	800,000	0	800,000
Total	**0**	**0**	**0**	**0**	**200,000**	**600,000**	**0**	**0**	**800,000**	**0**	**800,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80, L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

University Avenue (part of Underground District 24 where underground electric facilities will be replaced)

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: Fall 2016

Project Number: EL-10006

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 cable, 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 in 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 and reliable electric power is critical to the businesses in the area.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	865,047	1,836,153	760,593	1,075,560	0	0	0	0	1,075,560	0	2,701,200
Total	**865,047**	**1,836,153**	**760,593**	**1,075,560**	**0**	**0**	**0**	**0**	**1,075,560**	**0**	**2,701,200**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	692,037	1,836,153	760,593	1,075,560	0	0	0	0	1,075,560	0	2,528,190
Design	173,009	0	0	0	0	0	0	0	0	0	173,009
Total	**865,046**	**1,836,153**	**760,593**	**1,075,560**	**0**	**0**	**0**	**0**	**1,075,560**	**0**	**2,701,199**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

Orme Street (part of Underground District 25)

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:

Project Number: EL-19000

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	0	50,000	500,000	0	550,000	0	550,000
Total	**0**	**0**	**0**	**0**	**0**	**50,000**	**500,000**	**0**	**550,000**	**0**	**550,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	500,000	0	500,000	0	500,000
Design	0	0	0	0	0	50,000	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**0**	**0**	**50,000**	**500,000**	**0**	**550,000**	**0**	**550,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Arastradero Road (part of Underground District 26)

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:
Revised Project Completion: Spring 2017

Project Number: EL-16000

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 (transfomers, junctions, ect.) were installed in subsurface enclosures that have standing water, garden chemicals, oil, or other corrosive materials that impact equipment life.

Significant Changes

2017-2021 CIP: Shifting project priorities and the loss of Engineering staff have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	750,000	110,000	0	0	650,000	0	0	650,000	0	760,000
Total	**0**	**750,000**	**110,000**	**0**	**0**	**650,000**	**0**	**0**	**650,000**	**0**	**760,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	750,000	110,000	0	0	650,000	0	0	650,000	0	760,000
Total	**0**	**750,000**	**110,000**	**0**	**0**	**650,000**	**0**	**0**	**650,000**	**0**	**760,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Substation crews installing underground facilities

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: Spring 2017

Project Number: EL-14005

Reconfigure Quarry Feeders

Description

This project includes the reconfiguration of how distribution circuits are connected to each substation transformer at Quarry Substation. The circuits will be more evenly divided between the 4 transformers at this substation to provide greater operating flexibility during outages.

Justification

Quarry Substation serves the Stanford Mall/Hospital area along with a majority of the University Avenue downtown area. It has four substation transformers and ten circuits emanate from the substation to serve different areas. Two transformers have four circuits each while 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

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	149,672	380,782	94,418	786,364	0	0	0	0	786,364	0	1,030,454
Total	**149,672**	**380,782**	**94,418**	**786,364**	**0**	**0**	**0**	**0**	**786,364**	**0**	**1,030,454**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	119,737	380,782	94,418	786,364	0	0	0	0	786,364	0	1,000,519
Design	29,934	0	0	0	0	0	0	0	0	0	29,934
Total	**149,671**	**380,782**	**94,418**	**786,364**	**0**	**0**	**0**	**0**	**786,364**	**0**	**1,030,453**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric linement working on 60 kV overhead lines

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:
Revised Project Completion:

Project Number: EL-13002

Relocate Quarry/Hopkins Substation 60 kV 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 60 kV 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	100,000	750,000	0	0	850,000	0	850,000
Total	**0**	**0**	**0**	**0**	**100,000**	**750,000**	**0**	**0**	**850,000**	**0**	**850,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	750,000	0	0	750,000	0	750,000
Design	0	0	0	0	100,000	0	0	0	100,000	0	100,000
Total	**0**	**0**	**0**	**0**	**100,000**	**750,000**	**0**	**0**	**850,000**	**0**	**850,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Cable installation at Quarry Substation

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Along Welch Road and Sand Hill Road

Managing Department: Utilities

Initial Project Start: Spring 2013
Initial Project Completion: Winter 2014

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: EL-13006

Sand Hill / Quarry 12kV Tie

Description

This project will install new wire to connect circuits QR-24 and QR-27 in the Sand Hill/Quarry area.

Justification

One of the principles of distribution system design is to connect electric distribution circuits so that they have the ability to transfer load (i.e. customers) from one circuit to the other during normal or emergency conditions. There are limited ties for these two circuits to other circuits from the Quarry Substation, limiting the capability to transfer loads during normal or emergency conditions.

Supplemental Information

The project will increase system operating flexibility and improve system reliability in the event of a feeder outage by installing new wire and reconfiguring/reconstructing the electric distribution system on Welch Road/Sand Hill Road.

Significant Changes

The installation of the new wires were delayed as they are dependent upon the updates to the Quarry Substation were completed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	25,522	183,126	25,867	157,259	0	0	0	0	157,259	0	208,648
Total	**25,522**	**183,126**	**25,867**	**157,259**	**0**	**0**	**0**	**0**	**157,259**	**0**	**208,648**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	20,418	183,126	25,867	157,259	0	0	0	0	157,259	0	203,544
Design	5,103	0	0	0	0	0	0	0	0	0	5,103
Total	**25,521**	**183,126**	**25,867**	**157,259**	**0**	**0**	**0**	**0**	**157,259**	**0**	**208,647**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

SCADA Technologist configuring SCADA software

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 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 in Fiscal Year 2017 will be necessary to keep the hardware and software current, to handle the ever increasing demands on the system and maintain manufacturer/industry support. In addition, the Water-Gas-Wastewater SCADA that was newly integrated into the Electric SCADA system has placed additional burden on the system.

Supplemental Information

Annual budget amounts are for minor system upgrades/replacements. Full system upgrades are on a 3 to 4 year cycle.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	187,490	141,699	300,000	60,000	65,000	65,000	65,000	555,000	0	N/A
Total	**N/A**	**187,490**	**141,699**	**300,000**	**60,000**	**65,000**	**65,000**	**65,000**	**555,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	187,490	141,699	300,000	60,000	65,000	65,000	65,000	555,000	0	N/A
Total	**N/A**	**187,490**	**141,699**	**300,000**	**60,000**	**65,000**	**65,000**	**65,000**	**555,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Relationship to Comprehensive Plan

Secondary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-1

Policy: T-3

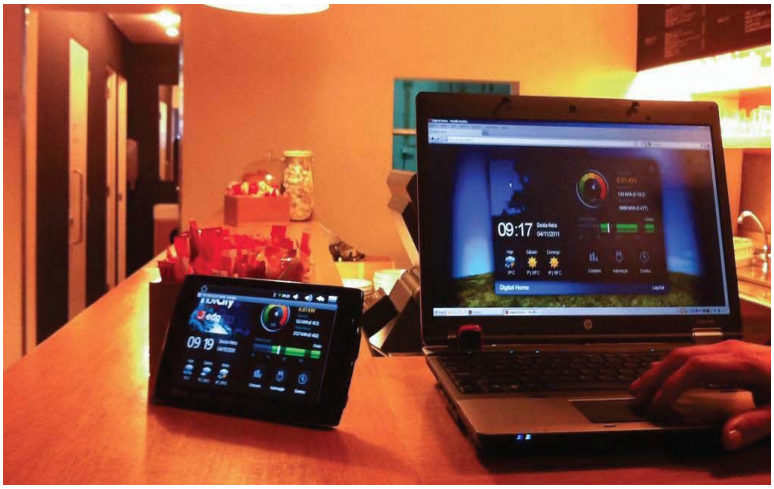
Program: T-10

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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



Sample of energy use information that could be available to customers

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-11014

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 dealing with: 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	377,661	114,114	509,096	400,000	4,500,000	0	0	5,409,096	0	N/A
Transfer from Gas Fund	N/A	0	0	136,335	300,000	3,375,000	0	0	3,811,335	0	N/A
Transfer from Water Fund	N/A	0	0	136,335	300,000	3,375,000	0	0	3,811,335	0	N/A
Total	**N/A**	**377,661**	**114,114**	**781,766**	**1,000,000**	**11,250,000**	**0**	**0**	**13,031,766**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	377,661	114,114	781,766	1,000,000	11,250,000	0	0	13,031,766	0	N/A
Total	**N/A**	**377,661**	**114,114**	**781,766**	**1,000,000**	**11,250,000**	**0**	**0**	**13,031,766**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-1

Policy: T-3

Program: T-10

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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: Stanford Medical facilities and the Stanford Shopping Center

Managing Department: Utilities

Initial Project Start: Summer 2017
Initial Project Completion: Winter 2017

Revised Project Start:
Revised Project Completion:

Project Number: EL-17004

Stanford - Customer Load Requirements

Description

This project allows for the installation of new primary conduits, vaults, cables and equipment to serve new customer demands in the Quarry Road/Welch Road/Sand Hill Road area.

Justification

The recent expansion of the Stanford Medical facilities and the Stanford Shopping Center has exhausted the existing facilities of Quarry Road Substation to serve any new customers in the Quarry Road/Welch Road/ Sand Hill Road area. This project will provide for new primary feeder outlets which will provide ample capability to serve both existing and new customers for the next 5 years.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	100,000	0	0	0	0	100,000	0	100,000
Revenue from Other Agencies	0	0	0	400,000	0	0	0	0	400,000	0	400,000
Total	**0**	**0**	**0**	**500,000**	**0**	**0**	**0**	**0**	**500,000**	**0**	**500,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	500,000	0	0	0	0	500,000	0	500,000
Total	**0**	**0**	**0**	**500,000**	**0**	**0**	**0**	**0**	**500,000**	**0**	**500,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-63

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electrician working on a streetlight

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Fall 2010
Initial Project Completion: Spring 2012

Revised Project Start: Fall 2011
Revised Project Completion: Spring 2017

Project Number: EL-10009

Street Light System Conversion Project

Description

In October of 2008 Staff worked with citizen groups, such as the Community Environmental Action Partnership and others, to locate a residential neighborhood in which to test and compare LED street light technologies in Fiscal Year 2010. After installation and evaluation of the pilot installation Council approved moving forward with the replacement of the remaining streetlight fixtures with LED light technology.

The city completed replacement of all "Cobrahead" type fixtures in 2014. This left approximately 1,200 decorative lights to be replaced in phase IV. Staff will work with vendors, the Planning Department, and residents to determine if there are feasible LED replacements for these remaining lights and based on these findings may replace additional fixtures in 2016.

Justification

The advancement of LED lighting technology has resulted in the capability to provide lighting comparable to the existing lights while achieving a 40-50% energy savings with a three times longer replacement cycle. Over time the cost of LED fixtures has also decreased improving the economic justification for replacement.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	666,918	66,468	0	30,000	0	0	0	0	30,000	0	696,918
Total	**666,918**	**66,468**	**0**	**30,000**	**0**	**0**	**0**	**0**	**30,000**	**0**	**696,918**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	533,534	66,468	0	30,000	0	0	0	0	30,000	0	563,534
Design	133,383	0	0	0	0	0	0	0	0	0	133,383
Total	**666,917**	**66,468**	**0**	**30,000**	**0**	**0**	**0**	**0**	**30,000**	**0**	**696,917**

Operating Impact

Expected energy savings of 40-50% and extends the product life expectancy by 3 times the incandescent lights.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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: Summer 2020

Revised Project Start:
Revised Project Completion:

Project Number: EL-17002

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 due circuit breakers that are reaching 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, damage to the breaker, and a prolonged electric outage. These circuit breakers are integral and critical cornerstones of the electric utility transmission system. The project will be a 10 year program replacing 1-2 breakers per year.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000
Total	**0**	**0**	**0**	**150,000**	**150,000**	**150,000**	**150,000**	**0**	**600,000**	**0**	**600,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	150,000	150,000	150,000	150,000	0	600,000	0	600,000
Total	**0**	**0**	**0**	**150,000**	**150,000**	**150,000**	**150,000**	**0**	**600,000**	**0**	**600,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric Substation transformer and bus structure

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

Substation Facility Improvements

Description

This project involves several improvements to each of the 9 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	410,270	6,027	399,243	195,000	195,000	200,000	200,000	1,189,243	0	N/A
Total	**N/A**	**410,270**	**6,027**	**399,243**	**195,000**	**195,000**	**200,000**	**200,000**	**1,189,243**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	410,270	6,027	399,243	195,000	195,000	200,000	200,000	1,189,243	0	N/A
Total	**N/A**	**410,270**	**6,027**	**399,243**	**195,000**	**195,000**	**200,000**	**200,000**	**1,189,243**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

Electric Substation used to distribute power to City of Palo Alto customers

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

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 substation 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 the 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 (reduction in outage durations).

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	619,521	337,709	731,812	300,000	300,000	300,000	300,000	1,931,812	0	N/A
Total	**N/A**	**619,521**	**337,709**	**731,812**	**300,000**	**300,000**	**300,000**	**300,000**	**1,931,812**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	619,521	337,709	731,812	300,000	300,000	300,000	300,000	1,931,812	0	N/A
Total	**N/A**	**619,521**	**337,709**	**731,812**	**300,000**	**300,000**	**300,000**	**300,000**	**1,931,812**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Substation perimeter wall providing security for the enclosed equipment

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:
Revised Project Completion: Winter 2018

Project Number: EL-16003

Substation 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. Staff will issue a Professional Services request for proposal with construction, if warranted and approved, to follow.

Justification

The recent 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

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	50,000	50,000	200,000	0	0	0	0	200,000	0	250,000
Total	**0**	**50,000**	**50,000**	**200,000**	**0**	**0**	**0**	**0**	**200,000**	**0**	**250,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	200,000	0	0	0	0	200,000	0	200,000
Planning and Engineering	0	50,000	50,000	0	0	0	0	0	0	0	50,000
Total	**0**	**50,000**	**50,000**	**200,000**	**0**	**0**	**0**	**0**	**200,000**	**0**	**250,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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

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, i.e. not part of an Underground District. Work will include the replacement of deteriorated electrical cable, 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. 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 that rebuilding be performed on 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	300,000	200,000	400,000	300,000	350,000	350,000	350,000	1,750,000	0	N/A
Total	**N/A**	**300,000**	**200,000**	**400,000**	**300,000**	**350,000**	**350,000**	**350,000**	**1,750,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	300,000	200,000	400,000	300,000	350,000	350,000	350,000	1,750,000	0	N/A
Total	**N/A**	**300,000**	**200,000**	**400,000**	**300,000**	**350,000**	**350,000**	**350,000**	**1,750,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

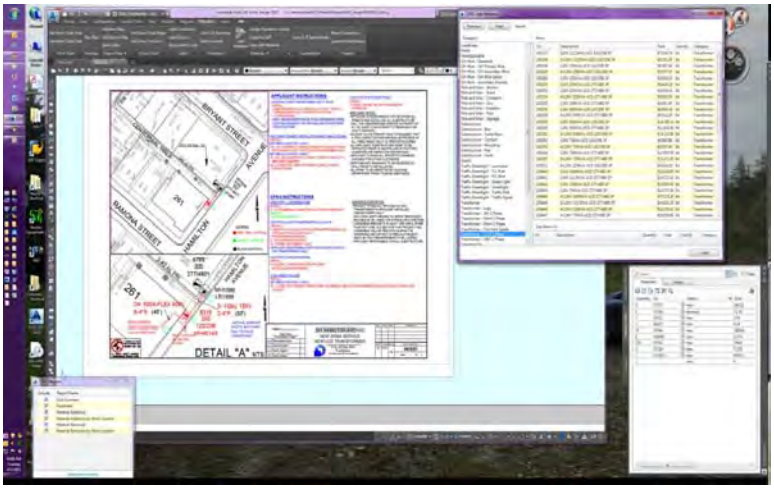
Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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



Screenshot of software used to prepare project estimates

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Software maintenance & update

Managing Department: Utilities

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: EL-13008

Upgrade Electric Estimating System

Description

This project will upgrade the existing Electric estimating software used for preparing job estimates by integrating engineering analysis, adding predefined standards and templates, and by integrating documentation, materials ordering, and work management functions.

Justification

The existing Electric estimating software does not integrate the materials requisition, engineering calculation, labor requirements, and drawing functions necessary to produce an estimate. The integration of these functions will reduce the time needed to prepare estimates and improve the accuracy and consistency of the engineering drawings, material lists, and map updates.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	148,650	20,000	128,650	0	0	0	0	128,650	0	N/A
Total	**N/A**	**148,650**	**20,000**	**128,650**	**0**	**0**	**0**	**0**	**128,650**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Planning and Engineering	N/A	148,650	20,000	128,650	0	0	0	0	128,650	0	N/A
Total	**N/A**	**148,650**	**20,000**	**128,650**	**0**	**0**	**0**	**0**	**128,650**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

System Operator overseeing electric distribution system operations

Fund: Electric Fund - Operating
Category: System Improvements
Project Location: Utility Control Center

Managing Department: Utilities

Initial Project Start: Fall 2017
Initial Project Completion: Spring 2018

Project Number: EL-17008

Utility Control Center Upgrades

Description

This project will make improvements to the Utility Control Center including: upgrade to the existing lighting system, improvement to the operation map display by installing large video display panels, and improvement to the system-wide security monitoring facilities.

Justification

The Utilities Control Center is used to coordinate the activities of the City's Electric Utility. Within the facility there are large maps for monitoring the control of the system, video surveillance feeds from other utility facilities and the Supervisory Control and Data Acquisition (SCADA) system. This project will improve efficiency and operation of the room by updating map displays and the surveillance facilities to newer technologies.

Supplemental Information

This project reflects expenditures in prior years for unrelated improvements in the Utility Control Center. Funding is added to this project on an as-needed basis.

Significant Changes

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project. As part of the FY 2017 Proposed CIP Budget, this was inadvertently reported as project EL-06003, this adopted document corrents this.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	N/A	0	0	400,000	0	0	0	0	400,000	0	N/A
Total	**N/A**	**0**	**0**	**400,000**	**0**	**0**	**0**	**0**	**400,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	0	0	400,000	0	0	0	0	400,000	0	N/A
Total	**N/A**	**0**	**0**	**400,000**	**0**	**0**	**0**	**0**	**400,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-3

Policy: C-24

Program: C-19

Environmental Impact Analysis:

Possible exemption.

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Security cameras for system security and monitoring

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 2018

Project Number: EL-04012

Utility Site Security Improvements

Description

Utilities' 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

The project is to address a utility site assessment that was completed in 2003 identifying security risks and methods of mitigation for City utility facilities. Recent incidents have increased security concerns regarding utility sites and systems. This CIP is implementing the recommendations in the site assessment report. Equipment is installed at two to three facilities per year. Through March 2016, 7 of 9 electric utility sites were completed.

Significant Changes

2017-2021 CIP: Shifting project priorities have caused the delay for the completion of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	1,014,136	524,148	524,148	50,000	50,000	300,000	50,000	50,000	500,000	0	2,038,284
Total	**1,014,136**	**524,148**	**524,148**	**50,000**	**50,000**	**300,000**	**50,000**	**50,000**	**500,000**	**0**	**2,038,284**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	811,308	524,148	524,148	50,000	50,000	300,000	50,000	50,000	500,000	0	1,835,456
Design	202,827	0	0	0	0	0	0	0	0	0	202,827
Total	**1,014,135**	**524,148**	**524,148**	**50,000**	**50,000**	**300,000**	**50,000**	**50,000**	**500,000**	**0**	**2,038,283**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-40

Potential Board/Commission Review:

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: VA Hospital

Managing Department: Utilities

Initial Project Start: Summer 2017
Initial Project Completion: Summer 2018

Revised Project Start:
Revised Project Completion:

Project Number: EL-17003

VA Hospital - Customer Load Requirements

Description

The VA Hospital is outgrowing the capability of the electric infrastructure the City has traditionally provided. Hanover and Maybell Substations currently serve the VA Hospital campus with 2 electric lines, as the federal guidelines require full redundancy of electric power in case one line goes down. The VA Hospital is reaching the full capacity of a single line this year in 2016. Additional capacity is required and will be met using mostly existing underground conduits in the short term. In the long term, a new 60kV substation will be installed to provide the full capacity needed.

Justification

The interim, short term solution will be implemented in one year by using existing underground pathways to upsize the existing 12kV wires and to bring additional 12kV wires to the VA from Hanover and Maybell Substations to meet the rapid load growth needs, since the long term solution cannot be built and energized for a minimum of 2.5 years from now. The long term, 60kV substation addition is necessary to meet both the VA Hospital's power needs and the needs of other 12kV power users in the neighborhood as the local 12kV system cannot also support the full VA Hospital load projections by 2022. A 60kV substation takes its power from a higher level in the electric system that has adequate capacity. Without this improvement, in the event of an outage in the Hanover/Maybell area once the VA Hospital is at full load, the majority of Customers would experience sustained timeframes until the power can be restored.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	600,000	400,000	0	0	0	1,000,000	0	1,000,000
Revenue from Other Agencies	0	0	0	2,400,000	1,600,000	0	0	0	4,000,000	0	4,000,000
Total	**0**	**0**	**0**	**3,000,000**	**2,000,000**	**0**	**0**	**0**	**5,000,000**	**0**	**5,000,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	3,000,000	2,000,000	0	0	0	5,000,000	0	5,000,000
Total	**0**	**0**	**0**	**3,000,000**	**2,000,000**	**0**	**0**	**0**	**5,000,000**	**0**	**5,000,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-65

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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Undergrounding Projects

Fund: Electric Fund - Operating
Category: Undergrounding Projects
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:

Project Number: EL-17007

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 diesel powered commuter trains 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 Cityís overhead electric and communication lines, as well as those owned by others, e.g. AT&T, Comcast, which cross the railroad tracks. Caltrain is looking to have the overhead lines relocated/removed by August 2018 for an anticipated project completion in 2020. In order to meet Caltrainís timeline, Utilities must obtain funding and start 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 provide by PG&E from outside of Palo Altoís 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 different sources. If Caltrain does not obtain full funding to complete the project, construction fund-

ing approved by Council for the relocation of facilities will be returned to reserves. Revenue projections are based on shared installation underground facilities with AT&T and Comcast.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	150,000	2,550,000	0	0	0	2,700,000	0	2,700,000
Total	**0**	**0**	**0**	**150,000**	**2,550,000**	**0**	**0**	**0**	**2,700,000**	**0**	**2,700,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	2,500,000	0	0	0	2,500,000	0	2,500,000
Design	0	0	0	150,000	50,000	0	0	0	200,000	0	200,000
Total	**0**	**0**	**0**	**150,000**	**2,550,000**	**0**	**0**	**0**	**2,700,000**	**0**	**2,700,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Potential Board/Commission Review:

Utilities Advisory Commission

Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Spring 2015
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion: Spring 2018

Project Number: EL-13007

The damage done by copper/metal thieves can far exceed the value to the thief and cost of protection

Underground Distribution System Security

Description

This project funds the purchase and installation of equipment to secure underground electric distribution facilities used to provide electricity to utility customers in the City of Palo Alto, from vandalism, tampering, and theft to facilitate a safe, secure, and reliable electric system.

Justification

In recent years, the theft of metals for scrap has escalated due to increased demand overseas and shortages of raw materials. This has included the theft of electrical wire and cast iron manhole covers. The electric system, and to a lesser extent the dark fiber system, fuels the economy of the City as technology has become more reliant on electricity and communications systems.

Significant Changes

2017-2021 CIP: Engineering design is in progress. Additional time was requested to completed evaluation of samples.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	828	290,534	0	290,534	300,000	300,000	0	0	890,534	0	891,362
Total	**828**	**290,534**	**0**	**290,534**	**300,000**	**300,000**	**0**	**0**	**890,534**	**0**	**891,362**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	662	290,534	0	290,534	300,000	300,000	0	0	890,534	0	891,196
Design	166	0	0	0	0	0	0	0	0	0	166
Total	**828**	**290,534**	**0**	**290,534**	**300,000**	**300,000**	**0**	**0**	**890,534**	**0**	**891,362**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Potential Board/Commission Review:

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: Undergrounding Projects
Project Location: Along Embarcadero between Emerson and Middlefield

Managing Department: Utilities

Initial Project Start: Spring 2017
Initial Project Completion: Spring 2019

Revised Project Start:
Revised Project Completion:

Project Number: EL-08001

Intersection of Embarcadero Road and Waverley Street (part of Underground District 42)

Underground District 42 - Embarcadero Rd Emerson/Middlefield

Description

This project will replace the existing overhead 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. This rule 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	50,000	2,000,000	250,000	0	2,300,000	0	2,300,000
Total	**0**	**0**	**0**	**0**	**50,000**	**2,000,000**	**250,000**	**0**	**2,300,000**	**0**	**2,300,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	2,000,000	250,000	0	2,250,000	0	2,250,000
Planning and Engineering	0	0	0	0	50,000	0	0	0	50,000	0	50,000
Total	**0**	**0**	**0**	**0**	**50,000**	**2,000,000**	**250,000**	**0**	**2,300,000**	**0**	**2,300,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

This project is categorically exempt from CEQA under Section 15302.

Alma Street at Embarcadero Road (part of Underground District 43)

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:
Revised Project Completion: Spring 2020

Project Number: EL-11009

Underground District 43 - Alma/ Embarcadero

Description

This project will replace the existing overhead 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. This rule requires the Utility to bear the cost of the distribution system and the property owners to bear the cost of undergrounding their services. The undergrounding project will start in Fiscal Year 2018.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	0	0	0	0	0	150,000	2,000,000	500,000	2,650,000	0	2,650,000
Total	**0**	**0**	**0**	**0**	**0**	**150,000**	**2,000,000**	**500,000**	**2,650,000**	**0**	**2,650,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	2,000,000	500,000	2,500,000	0	2,500,000
Planning and Engineering	0	0	0	0	0	150,000	0	0	150,000	0	150,000
Total	**0**	**0**	**0**	**0**	**0**	**150,000**	**2,000,000**	**500,000**	**2,650,000**	**0**	**2,650,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-10

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

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:
Revised Project Completion: Winter 2016

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 distribution system in the area along the 400 block of West Charleston and El Camino Real. Undergrounding will be completed by Fiscal Year 2017, and the overhead system will be removed.

Justification

Benefits of undergounding 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

2017-2021 CIP: Due to safety concerns this project has been re-prioritized and moved up by one year.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	69,142	684,812	33,846	650,966	0	0	0	0	650,966	0	753,954
Total	**69,142**	**684,812**	**33,846**	**650,966**	**0**	**0**	**0**	**0**	**650,966**	**0**	**753,954**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	55,313	684,812	33,846	650,966	0	0	0	0	650,966	0	740,125
Design	13,828	0	0	0	0	0	0	0	0	0	13,828
Total	**69,141**	**684,812**	**33,846**	**650,966**	**0**	**0**	**0**	**0**	**650,966**	**0**	**753,953**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Overhead facilities that will be undergrounded as part of Underground District 47

Fund: Electric Fund - Operating
Category: Undergrounding Projects
Project Location: Middlefield, Homer Avenue, Webster Street, and Addion Avenue

Managing Department: Utilities

Initial Project Start: Spring 2013
Initial Project Completion: Spring 2016

Revised Project Start:
Revised Project Completion: Winter 2016

Project Number: EL-11010

Underground District 47-Middlefield, Homer, Webster, Addison

Description

This project includes the design costs to underground the existing overhead distribution system. Undergrounding will be completed in Fiscal Year 2016 and the overhead system will be removed.

Justification

Benefits of undergounding 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Electric Fund	357,049	2,598,525	1,454,487	744,038	0	0	0	0	744,038	0	2,555,574
Total	**357,049**	**2,598,525**	**1,454,487**	**744,038**	**0**	**0**	**0**	**0**	**744,038**	**0**	**2,555,574**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	285,639	2,694,525	1,454,487	744,038	0	0	0	0	744,038	0	2,484,164
Design	71,409	0	0	0	0	0	0	0	0	0	71,409
Total	**357,048**	**2,694,525**	**1,454,487**	**744,038**	**0**	**0**	**0**	**0**	**744,038**	**0**	**2,555,573**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Relationship to Comprehensive Plan

Secondary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Program: L-80,L-81

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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FIBER OPTICS FUND

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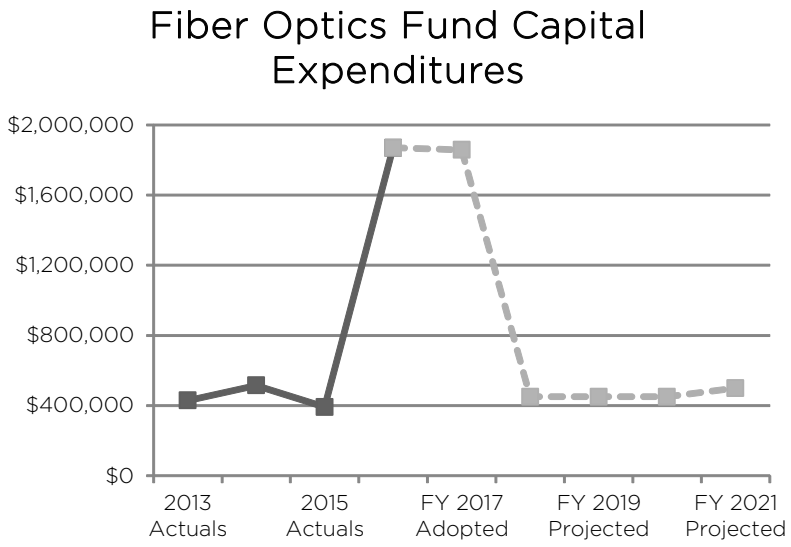
Overview

The City of Palo Alto is the only municipality in 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 customers is the leasing of "dark" fiber on a fiber optic loop, built by the City in 1996. For the 2017-2021 Capital Improvement Program, expenditures of $3.7 million are programmed, with $1.9 million allocated in Fiscal Year 2017. Major projects funded in the 2017-2021 CIP include the Fiber Optic System Rebuild Project ($1.3 million), Fiber Optics Customer Connections ($1.3 million), and Fiber Optics Network System Improvements ($1.2 million). The budget for the Fiber Optics Capital Improvement Program is broken into two separate categories: Capacity Improvements and Customer Connections.

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 customers, fiber optic system components (fiber optic cable 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.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Route Miles of Backbone Fiber Cable	42
Miles of Overhead Fiber Optic Cable	25
Miles of Underground Fiber Optic Cable	60

Recent Accomplishments

- Upgraded the downtown backbone between splice points BK-AX-CZ to improve efficiency for customer connections and free up fibers.

- Converted upgrade of AutoCAD fiber maps to AutoCAD AME GIS system.

2017-2021 Capital Improvement Program

Recurring Projects

There is one recurring project in the Capacity Improvements Category: the Fiber Optics Network System Improvements. This project extends the "dark" fiber optic network around Palo Alto through the development of fiber sub-rings and completion of general improvements to the fiber system. The annual funding for this project remains at $200,000 throughout the CIP.

Non-Recurring Projects

As part of the 2017-2021 Capital Improvement Program, one project is included within this category: Fiber Optic System Rebuild (Fiscal Year 2017: $1.3 million, total cost $2.4 million). This project is expected to extend through Fiscal Year 2017 and will rebuild portions of the "dark" fiber optics network. Certain sections of the system have reached capacity limiting the City's ability to provide fiber optics service to all potential customers. Rebuilding portions of the "dark" fiber optic network 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.

Recent Accomplishments

- Upgraded the dark fiber network from University to Lytton at Bryant to add capacity and improve efficiency for downtown businesses
- Completed upgrade of fiber maps to Utilities GIS system, enabling a single view of multiple utility infrastructures
- Conducted a physical audit of the dark fiber network to improve network performance and add capacity

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. The connection costs associated with new or upgraded connections are offset by charges to the customer.

Recent Accomplishments

- Several services installed for Stanford University offsite facilities and other customers in the Stanford Research Park area.

2017-2021 Capital Improvement Program

Recurring Projects

In the Customer Connections category there is one recurring project: Fiber Optics Customer Connections. In the 2017-2021 Capital Improvement Program, recurring funding in this project remains at $250,000. 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 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
FO-10000	Fiber Optics Customer Connections: Connection Charges	161,785	150,000	200,000	200,000	200,000	200,000	200,000	1,000,000
	Other Revenues Total	**161,785**	**150,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**	**1,000,000**
	Total Sources	**161,785**	**150,000**	**200,000**	**200,000**	**200,000**	**200,000**	**200,000**	**1,000,000**
Use of Funds									
Capacity Improvements									
FO-10001	Fiber Optics Network System Improvements	173,853	355,218	358,000	200,000	200,000	200,000	200,000	1,158,000
FO-16000	Fiber Optic System Rebuild	0	1,150,000	1,250,000	0	0	0	0	1,250,000
	Capacity Improvements Total	**173,853**	**1,505,218**	**1,608,000**	**200,000**	**200,000**	**200,000**	**200,000**	**2,408,000**
Customer Connections									
FO-10000	Fiber Optics Customer Connections	218,366	364,502	250,000	250,000	250,000	250,000	300,000	1,300,000
	Customer Connections Total	**218,366**	**364,502**	**250,000**	**250,000**	**250,000**	**250,000**	**300,000**	**1,300,000**
	Total Uses	**392,219**	**1,869,720**	**1,858,000**	**450,000**	**450,000**	**450,000**	**500,000**	**3,708,000**

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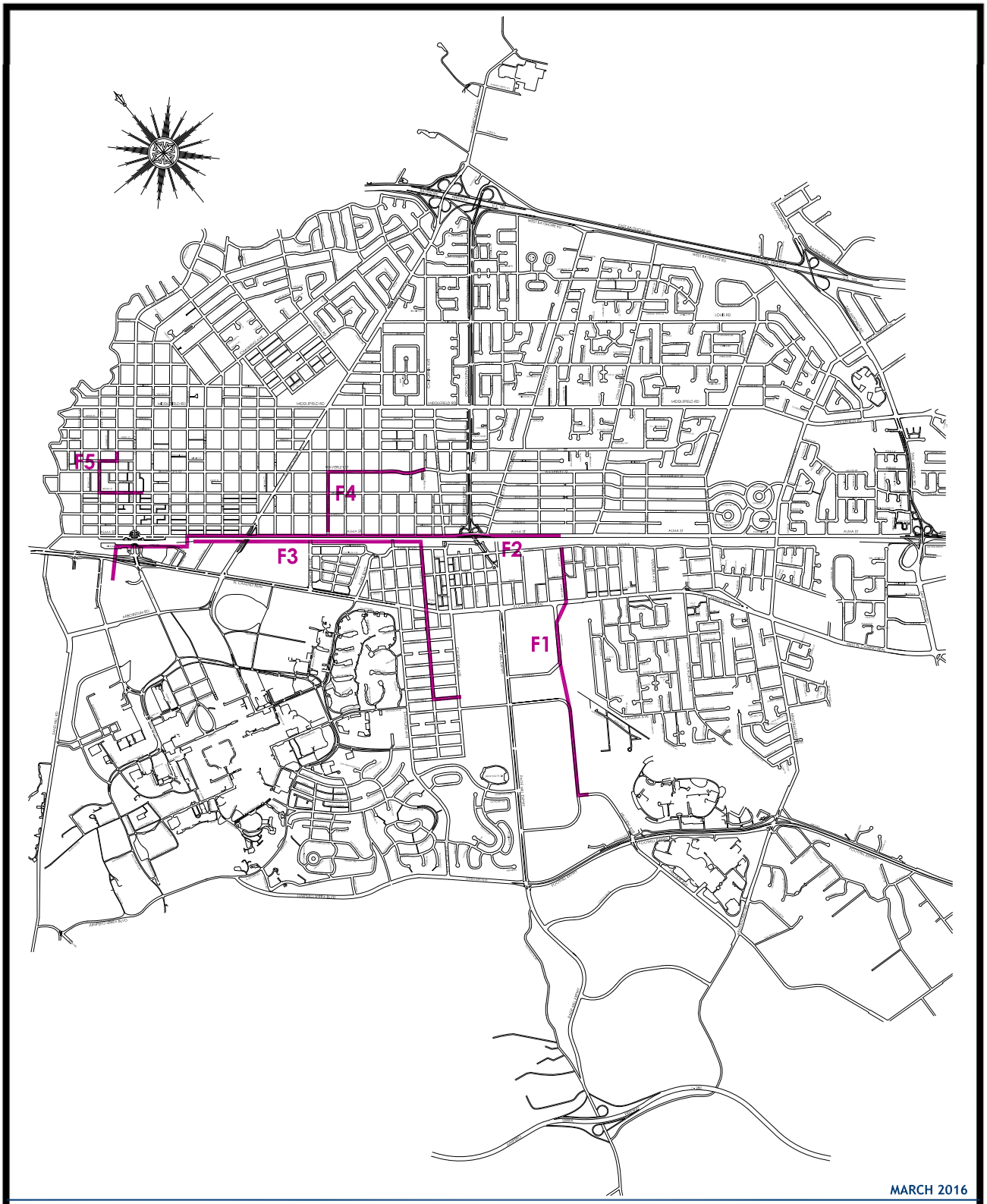

MARCH 2016

LEGEND

F **PROPOSED FIBER OPTIC BACKBONE EXTENSION**

F1	ADD FIBER CABLE TO INCREASE CAPACITY TO SERVE	(16000)	2016–2018
F2	SAME AS ABOVE	(16000)	2016–2018
F3	SAME AS ABOVE	(16000)	2016–2018

PROPOSED FIBER OPTIC SYSTEM IMPROVEMENT

F4	RELIABILITY IMPROVEMENT	(10001)	2016–2016
F5	RELIABILITY IMPROVEMENT	(10001)	2016–2016

The City of Palo Alto

FIBER OPTIC FUND 2017-2021 CAPITAL IMPROVEMENT PROGRAM

This map is a product of the City of Palo Alto GIS

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Capacity Improvements

Fiber optic splice closer ready for inspection and work

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:
Revised Project Completion:

Project Number: FO-16000

Fiber Optic System Rebuild

Description

This system capacity improvement project rebuilds portions of the "dark" fiber optic network around Palo Alto which, in turn, is leased to parties providing telecommunication services to citizens and businesses in Palo Alto. The rebuild projects will install new aerial duct or substructures (conduit and boxes), and additional fiber backbone cable to increase capacity for sections of the dark fiber ring that are at or near capacity, and allow the Utilities Department to meet customer requests for service. The rebuild project areas are mainly comprised of the Stanford Research Park, Palo Alto Internet Exchange, and Downtown areas.

Justification

The Dark Fiber system was constructed in the early 1990s and started leasing fibers to customers in 1996. Since that time several sections of the dark fiber system have reached capacity and limited the City's ability to serve its customers. This project improves the ability to maintain a competitive market for telecommunications in Palo Alto, accelerating the pace at which high quality, low cost, advanced telecommunications services are delivered to the residents and businesses of Palo Alto. Work included in the project is intended to increase system capacity and improve system reliability.

Significant Changes

2017-2021 CIP: The budget was reduced by the City Council during the Fiscal Year 2016 budget process. The Fiscal Year 2017 budget reflects this adjustment.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000
Total	**0**	**1,150,000**	**1,150,000**	**1,250,000**	**0**	**0**	**0**	**0**	**1,250,000**	**0**	**2,400,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,150,000	1,150,000	1,250,000	0	0	0	0	1,250,000	0	2,400,000
Total	**0**	**1,150,000**	**1,150,000**	**1,250,000**	**0**	**0**	**0**	**0**	**1,250,000**	**0**	**2,400,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Business & Economics

Section: Growth

Goal: B-3

Policy: B-13

Program: B-4

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

Fiber optic crew installing new fiber optic cables

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 Optics Network System Improvements

Description

This project provides funding to improve reliability within the fiber optic network 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, accelerating the pace at which high-quality, low-cost, advanced telecommunications services are delivered to the residents and businesses of Palo Alto. It does so while limiting the negative impacts on Palo Alto's environment by using pre-existing conduit and poles. Finally, it enables the Fiber Optics Fund to generate additional revenues through the enhanced use of its conduit and poles.

Supplemental Information

The Fiber Optics Utility continues to add capital improvements in the form of additional fiber in congested areas as well as areas of predicted growth.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	N/A	513,218	355,218	358,000	200,000	200,000	200,000	200,000	1,158,000	0	N/A
Total	**N/A**	**513,218**	**355,218**	**358,000**	**200,000**	**200,000**	**200,000**	**200,000**	**1,158,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	513,218	355,218	358,000	200,000	200,000	200,000	200,000	1,158,000	0	N/A
Total	**N/A**	**513,218**	**355,218**	**358,000**	**200,000**	**200,000**	**200,000**	**200,000**	**1,158,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Business & Economics

Section: Growth

Goal: B-3

Policy: B-13

Program: B-4

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

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Customer Connections

Technician installing new fiber optic cables

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

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 poles rather than adding additional infrastructure to the system. Finally, it enables the Fibers Optic 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Fiber Optics Fund	N/A	1,297	214,502	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Other	N/A	363,205	150,000	200,000	200,000	200,000	200,000	200,000	1,000,000	0	N/A
Total	**N/A**	**364,502**	**364,502**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**1,250,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	364,502	364,502	250,000	250,000	250,000	250,000	250,000	1,250,000	0	N/A
Total	**N/A**	**364,502**	**364,502**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**1,250,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Business & Economics

Section: Growth

Goal: B-3

Policy: B-13

Program: B-4

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

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GAS FUND

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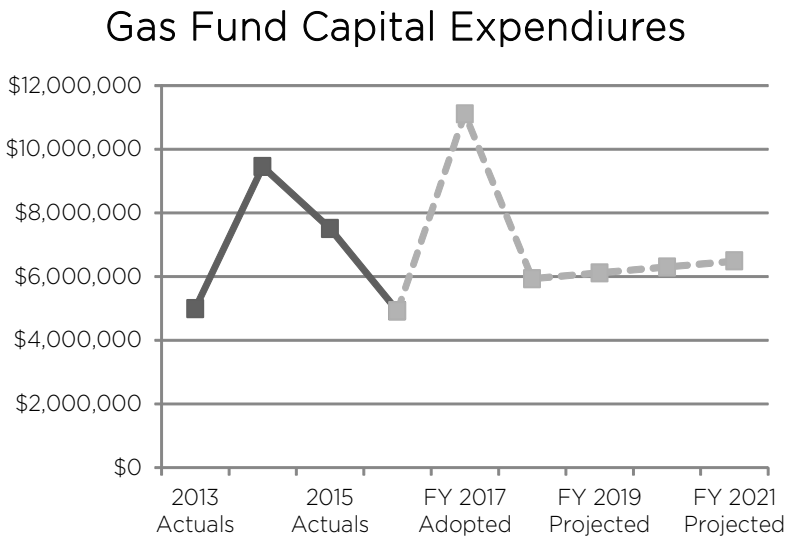
Overview

The City of Palo Alto is the only municipality in California that operates a full suite of City-owned utility services. The municipal gas distribution system began operation in 1917. It provides safe, reliable, and cost effective gas service to residents and customers of Palo Alto. For the 2017-2021 Capital Improvement Program (CIP), approximately $35.9 million is programmed, with $11.1 million allocated in Fiscal Year 2017. Overall, a total of 15 projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Gas Main Replacements (cumulative total of $23.7 million), Gas System Customer Connections ($7.9 million), and Gas Meters and Regulators ($2.2 million). The budget for the Gas Fund CIP is broken into three separate categories: Customer Connections, Gas Main Replacements, and System Improvements.

Customer Connections



As customers continually change their gas needs due to equipment additions, new construction, building expansions, building remodels, teardowns and rebuilds, and new building occupancy types, the gas system must evolve to meet these needs. The Gas System Customer Connections project, which is the largest project within the Gas Fund ($1.4 million in Fiscal Year 2017, $6.7 million over the 2017-2021 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.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of gas main distribution system	210.31 miles
Total miles of gas service extension to residents and businesses	205.55 miles
Number of gas receiving stations	4

Recent Accomplishments

In Fiscal Year 2015 the Utilities Gas Division completed approximately 195 customer service projects, at a cost of $0.26 million.

Recurring Projects

A total of $7.9 million is programmed for Customer Connection recurring projects in the 2017-2021 CIP, with $1.8 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Gas System Customer Connections (Fiscal Year 2017: $1.4 million; 5-Year CIP: $6.7 million)
- System Extensions - Unreimbursed (Fiscal Year 2017: $0.3 million; 5-Year CIP: $1.2 million)

Non-Recurring Projects

There are no non-recurring projects under this category.

Gas Main Replacements

The Gas Main Replacements category accounts for the replacement of inadequately-sized and structurally deficient gas mains. 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. In the next five years, it is anticipated that 88,380 linear feet of gas mains, or 8 percent of the entire system, will be replaced. The 2017-2021 Adopted CIP includes $23.6 million in funding for projects within this category, with $7.9 million allocated in Fiscal Year 2017.

Recent Accomplishments

Completed the design and construction of approximately 69,700 linear feet of gas mains and 996 gas service extensions from the City's main distribution system with the recent CIP project Gas Main Replacement projects 19, 20, & 21.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects under this category.

Non-Recurring Projects

Eight Gas Main Replacement projects are included in the 2017-2021 CIP (Fiscal Year 2017: $7.9 million; 5-Year CIP: $23.7 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 three projects during the 2017-2021 CIP at a total cost of $4.4 million, with $1.5 million allocated in Fiscal Year 2017.

Recent Accomplishments

- Completed building the gas distribution system model.

2017-2021 Capital Improvement Program

Recurring Projects

There are three funded recurring projects in the System Improvements category in the 2017-2021 CIP: Gas Distribution System Improvements (Fiscal Year 2017: $0.4 million, 5-Year CIP: $1.4 million), Gas Equipment and Tools (Fiscal Year 2017: $0.2 million, 5-Year CIP: $0.6 million), and Gas Meters and Regulators (Fiscal Year 2017: $0.7 million, 5-Year CIP: $2.2 million).

Non-Recurring Projects

There are no non-recurring projects under this category.

Please refer to the City of Palo Alto Utilities webpage to confirm project details: http://www.cityofpaloalto.org/gov/depts/utl/projects/default.asp

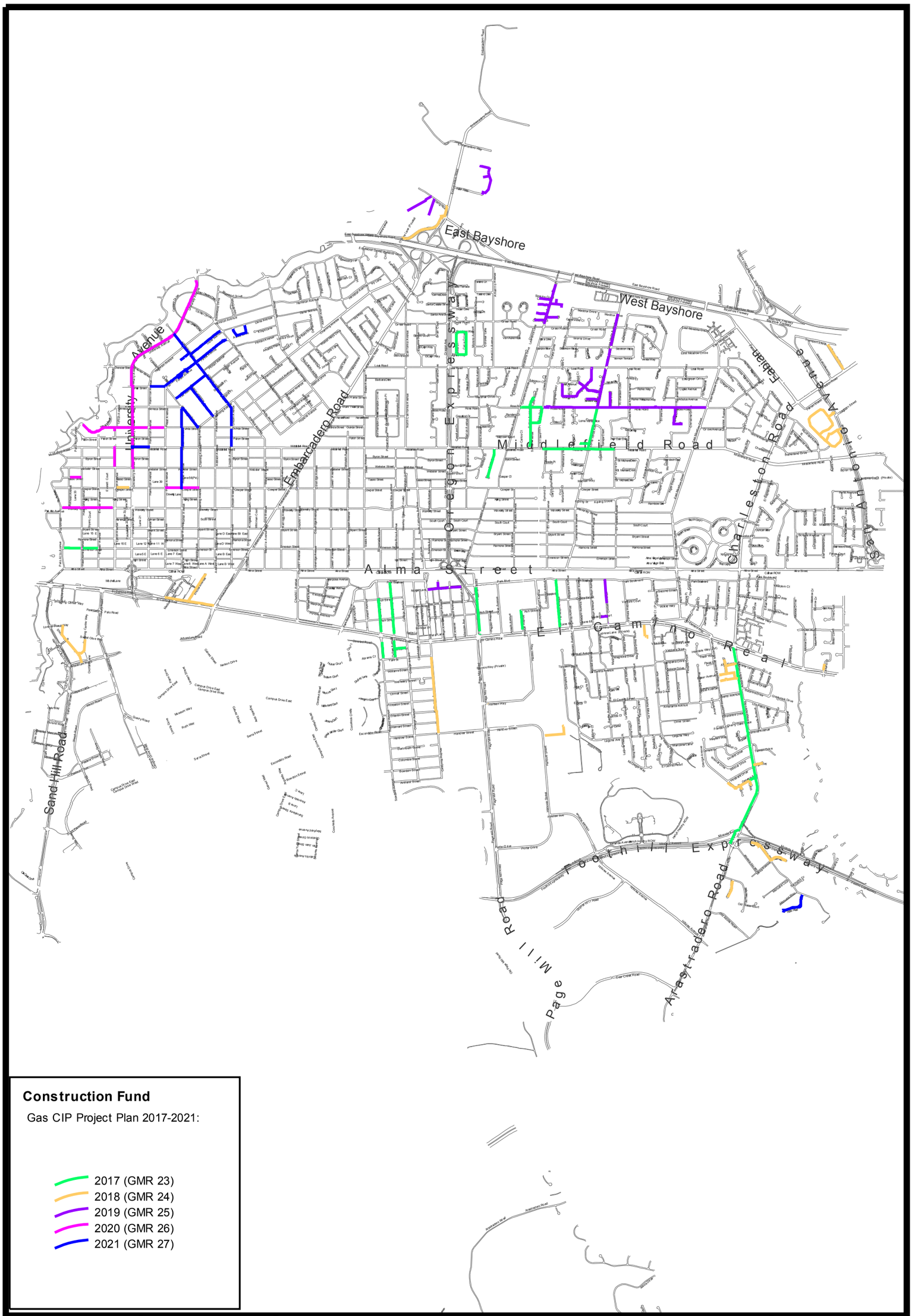
Summary of Capital Activity

GAS FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
GS-80017	Gas System, Customer Connections	747,954	850,000	1,017,000	1,047,510	1,078,935	1,111,303	1,144,642	5,399,390
	Other Revenue Total	**747,954**	**850,000**	**1,017,000**	**1,047,510**	**1,078,935**	**1,111,303**	**1,144,642**	**5,399,390**
	Total Sources	**747,954**	**850,000**	**1,017,000**	**1,047,510**	**1,078,935**	**1,111,303**	**1,144,642**	**5,399,390**
Use of Funds									
Customer Connections									
GS-80017	Gas System, Customer Connections	1,005,525	758,024	1,423,476	1,265,355	1,303,315	1,342,415	1,382,688	6,717,249
GS-03009	System Extensions - Unreimbursed	49,274	0	327,190	204,455	210,590	216,908	223,415	1,182,558
	Customer Connections Total	**1,054,799**	**758,024**	**1,750,666**	**1,469,810**	**1,513,905**	**1,559,323**	**1,606,103**	**7,899,807**
Gas Main Replacements									
GS-09002	Gas Main Replacement - Project 19	1,821,628	496,211	0	0	0	0	0	0
GS-10001	Gas Main Replacement - Project 20	2,443,978	2,297,621	0	0	0	0	0	0
GS-11000	Gas Main Replacement - Project 21	1,447,686	817,251	100,000	0	0	0	0	100,000

GAS FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
GS-12001	Gas Main Replacement - Project 22	306,590	267,425	3,568,560	0	0	0	0	3,568,560
GS-13001	Gas Main Replacement - Project 23	0	42,500	3,588,150	0	0	0	0	3,588,150
GS-14003	Gas Main Replacement - Project 24	0	0	640,000	3,100,000	0	0	0	3,740,000
GS-15000	Gas Main Replacement - Project 25	0	0	0	659,000	3,200,000	0	0	3,859,000
GS-16000	Gas Main Replacement - Project 26	0	0	0	0	678,200	3,300,000	0	3,978,200
GS-20000	Gas Main Replacement - Project 27	0	0	0	0	0	700,000	3,400,000	4,100,000
GS-20001	Gas Main Replacement - Project 28	0	0	0	0	0	0	721,000	721,000
	Gas Main Replacements Total	**6,019,882**	**3,921,008**	**7,896,710**	**3,759,000**	**3,878,200**	**4,000,000**	**4,121,000**	**23,654,910**
System Improvements									
GS-11002	Gas Distribution System Improvements	334,349	156,286	375,627	238,870	246,036	253,417	261,020	1,374,970
GS-14004	Gas Distribution System Model	7,866	33,681	106,791	0	0	0	0	106,791
GS-13002	Gas Equipment and Tools	17,131	9,894	170,106	100,000	100,000	100,000	100,000	570,106
GS-80019	Gas Meters and Regulators	36,891	42,872	659,957	365,681	376,652	387,952	399,591	2,189,833
GS-10000	Gas Station 3 Rebuild	30,125	0	0	0	0	0	0	0
GS-01019	GPS Global Positioning	6,728	1,300	0	0	0	0	0	0
GS-15001	Security at City Gas Receiving Stations	0	0	150,000	0	0	0	0	150,000
	System Improvements Total	**433,090**	**244,033**	**1,462,481**	**704,551**	**722,688**	**741,369**	**760,611**	**4,391,700**
	Total Uses	**7,507,771**	**4,923,065**	**11,109,857**	**5,933,361**	**6,114,793**	**6,300,692**	**6,487,714**	**35,946,417**



Construction Fund

Gas CIP Project Plan 2017-2021:

- 2017 (GMR 23)
- 2018 (GMR 24)
- 2019 (GMR 25)
- 2020 (GMR 26)
- 2021 (GMR 27)

The City of Palo Alto

City of Palo Alto
Fiscal Year 2017 Proposed Budget
Gas Fund Map

5 Year CIP Project Plan

This map is a product of the City of Palo Alto GIS

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Gas Fund Map 2017-2021 (\\co-maps\gis$\gis\admin\Personal\ssantos.mdb)

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Customer Connections

Gas System Customer Connections

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, 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	313,400	(91,976)	406,476	217,845	224,380	231,112	238,046	1,317,859	0	N/A
Other	N/A	639,600	850,000	1,017,000	1,047,510	1,078,935	1,111,303	1,144,642	5,399,390	0	N/A
Total	**N/A**	**953,000**	**758,024**	**1,423,476**	**1,265,355**	**1,303,315**	**1,342,415**	**1,382,688**	**6,717,249**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,203,000	758,024	1,423,476	1,265,355	1,303,315	1,342,415	1,382,688	6,717,249	0	N/A
Total	**N/A**	**1,203,000**	**758,024**	**1,423,476**	**1,265,355**	**1,303,315**	**1,342,415**	**1,382,688**	**6,717,249**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New gas main being installed by horizontal direction drill (HDD) method

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-03009

System Extensions - Unreimbursed

Description

This funding allows for the replacement of existing sections of the Gas Distribution System. This project will ensure continuous gas service to existing customers. Improvements include replacement of existing main sections, services, valves, regulators, meters, and accessories.

Justification

This project replaces gas distribution and existing customer service infrastructure. Existing gas service connections are replaced by the Gas Utility to maintain customer service. This project will capture non-reimbursed capital assets installed by staff.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	193,401	0	327,190	204,455	210,590	216,908	223,415	1,182,558	0	N/A
Total	**N/A**	**193,401**	**0**	**327,190**	**204,455**	**210,590**	**216,908**	**223,415**	**1,182,558**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	193,401	0	327,190	204,455	210,590	216,908	223,415	1,182,558	0	N/A
Total	**N/A**	**193,401**	**0**	**327,190**	**204,455**	**210,590**	**216,908**	**223,415**	**1,182,558**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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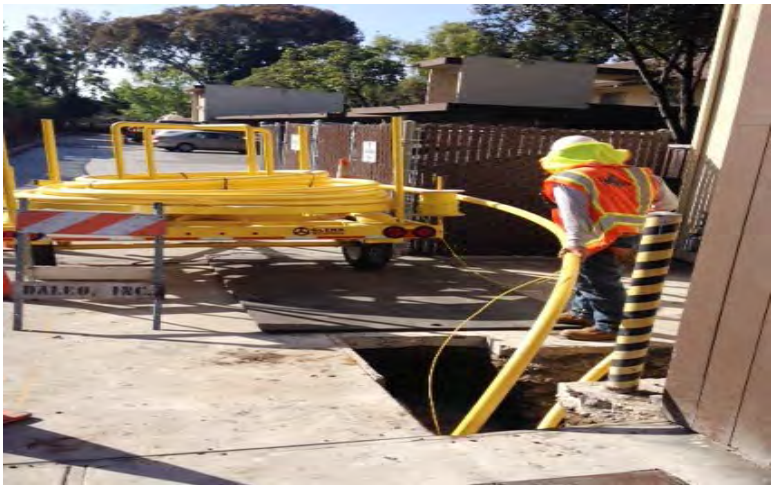
Gas Main Replacements



New 2-inch gas service being installed by horizontal directional drill (HDD) method, May 2014

Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Spring 2013
Initial Project Completion: Summer 2014

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: GS-11000

Gas Main Replacement - Project 21

Description

This project replaces leaking, inadequately sized, and structurally deficient gas mains and services. By researching the maintenance and leak histories of the mains in the gas distribution system, staff identifies mains and services with these problems. This gas system analysis, along with computer modeling of the proposed improvements to the gas distribution system and coordination with Public Works Paving CIP, is used to select candidates for main and service replacement.

Justification

This project will continue replacement of remaining ABS services, PVC mains, and steel mains with ineffective cathodic protection. The goal of the accelerated infrastructure replacement program is to replace all of the remaining ABS gas services and PVC mains in the gas distribution system. This project is mandatory due to the need to replace aging infrastructure and to reduce the City's liability exposure to these ABS, PVC, and steel gas facilities.

Supplemental Information

Targeted streets will be coordinated with the Public Works Street Maintenance program to replace ABS services, PVC, and steel mains before streets are paved.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	1,447,686	846,647	817,251	100,000	0	0	0	0	100,000	0	2,364,937
Total	**1,447,686**	**846,647**	**817,251**	**100,000**	**0**	**0**	**0**	**0**	**100,000**	**0**	**2,364,937**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,158,148	846,647	817,251	100,000	0	0	0	0	100,000	0	2,075,399
Design	289,537	0	0	0	0	0	0	0	0	0	289,537
Total	**1,447,685**	**846,647**	**817,251**	**100,000**	**0**	**0**	**0**	**0**	**100,000**	**0**	**2,364,936**

Relationship to Comprehensive Plan

Primary Connection

Goal: N-9

Policy: N-44

Environmental Impact Analysis:

This project is categorically exempt from CEQA under Section 15302.

New gas main being installed by horizontal direction drill (HDD) method

Fund: Gas Fund - Operating
Category: Gas 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:

Project Number: GS-12001

Gas Main Replacement - Project 22

Description

This project replaces approximately 23,960 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, including the Stanford Shopping, Midtown, and El Camino Real 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 in the industry as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the Cityís 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, assigned the highest probability and consequences 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 to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	306,684	3,835,985	267,425	3,568,560	0	0	0	0	3,568,560	0	4,142,669
Total	**306,684**	**3,835,985**	**267,425**	**3,568,560**	**0**	**0**	**0**	**0**	**3,568,560**	**0**	**4,142,669**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	245,347	3,835,985	267,425	3,568,560	0	0	0	0	3,568,560	0	4,081,332
Design	61,336	0	0	0	0	0	0	0	0	0	61,336
Total	**306,683**	**3,835,985**	**267,425**	**3,568,560**	**0**	**0**	**0**	**0**	**3,568,560**	**0**	**4,142,668**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installation of new HDP gas service main

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:
Revised Project Completion:

Project Number: GS-13001

Gas Main Replacement - Project 23

Description

This project replaces approximately 15,612 linear feet (which represents 1.4% of the City's Gas distribution system) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets, including the Stanford Shopping, Midtown, and El Camino Real 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 in the industry 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, assigned the highest probability and consequences 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 to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	620,650	42,500	3,588,150	0	0	0	0	3,588,150	0	3,630,650
Total	**0**	**620,650**	**42,500**	**3,588,150**	**0**	**0**	**0**	**0**	**3,588,150**	**0**	**3,630,650**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	620,650	42,500	3,588,150	0	0	0	0	3,588,150	0	3,630,650
Total	**0**	**620,650**	**42,500**	**3,588,150**	**0**	**0**	**0**	**0**	**3,588,150**	**0**	**3,630,650**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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 2019

Revised Project Start:
Revised Project Completion:

Project Number: GS-14003

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, including San Antonio, El Camino Real, and 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 know in the industry 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, assigned the highest probability and consequences 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 to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	640,000	3,100,000	0	0	0	3,740,000	0	3,740,000
Total	**0**	**0**	**0**	**640,000**	**3,100,000**	**0**	**0**	**0**	**3,740,000**	**0**	**3,740,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	3,100,000	0	0	0	3,100,000	0	3,100,000
Design	0	0	0	640,000	0	0	0	0	640,000	0	640,000
Total	**0**	**0**	**0**	**640,000**	**3,100,000**	**0**	**0**	**0**	**3,740,000**	**0**	**3,740,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New gas service meter and regulating equipment

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:
Revised Project Completion:

Project Number: GS-15000

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, including El Camino Real, Stanford Industrial, Bayshore, and Golf Course 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 in the industry 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, assigned the highest probability and consequences 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 to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	659,000	3,200,000	0	0	3,859,000	0	3,859,000
Total	**0**	**0**	**0**	**0**	**659,000**	**3,200,000**	**0**	**0**	**3,859,000**	**0**	**3,859,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	3,200,000	0	0	3,200,000	0	3,200,000
Design	0	0	0	0	659,000	0	0	0	659,000	0	659,000
Total	**0**	**0**	**0**	**0**	**659,000**	**3,200,000**	**0**	**0**	**3,859,000**	**0**	**3,859,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

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 2019
Initial Project Completion: Winter 2021

Revised Project Start:
Revised Project Completion:

Project Number: GS-16000

Gas Main Replacement - Project 26

Gas Main Replacement - Project 26

Description

This project replaces approximately 13,471 linear feet (which represents 1.2% of the City's Gas distribution system) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the University Park and Crescent Park 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 in the industry 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, assigned the highest probability and consequences 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 to confirm project details.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	678,200	3,300,000	0	3,978,200	0	3,978,200
Total	**0**	**0**	**0**	**0**	**0**	**678,200**	**3,300,000**	**0**	**3,978,200**	**0**	**3,978,200**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	678,200	3,300,000	0	3,978,200	0	3,978,200
Total	**0**	**0**	**0**	**0**	**0**	**678,200**	**3,300,000**	**0**	**3,978,200**	**0**	**3,978,200**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New gas service meter and regulating equipment

Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2020
Initial Project Completion: Winter 2022

Revised Project Start:
Revised Project Completion:

Project Number: GS-20000

Gas Main Replacement - Project 27

Description

This project replaces approximately 15,655 linear feet (which represents 1.4 percent of the City's gas distribution system) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the University South 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 in the industry 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, assigned the highest probability and consequences 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 to confirm project details.

Significant Changes

2016-2010 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	700,000	3,400,000	4,100,000	0	4,100,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**700,000**	**3,400,000**	**4,100,000**	**0**	**4,100,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	3,400,000	3,400,000	0	3,400,000
Design	0	0	0	0	0	0	700,000	0	700,000	0	700,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**700,000**	**3,400,000**	**4,100,000**	**0**	**4,100,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Gas Main Replacement, January 2016

Fund: Gas Fund - Operating
Category: Gas Main Replacements
Project Location: University South and Old Palo Alto neighborhoods

Managing Department: Utilities

Initial Project Start: Summer 2021
Initial Project Completion: Winter 2023

Revised Project Start:
Revised Project Completion:

Project Number: GS-20001

Gas Main Replacement - Project 28

Description

This project replaces approximately 12,500 linear feet (which represents 1.1% of the City's Gas distribution system) of leaking, inadequately-sized, and structurally deficient gas mains and services located on various streets in the University South and Old Palo Alto 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 in the industry as cathodic protection. This project is mandatory due to the need to replace aging infrastructure and to reduce the Cityís liability exposure due to PVC and steel gas facilities with ineffective cathodic protection.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	0	0	0	0	0	0	721,000	721,000	0	721,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**721,000**	**721,000**	**0**	**721,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Design	0	0	0	0	0	0	0	721,000	721,000	0	721,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**721,000**	**721,000**	**0**	**721,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Program: N-63

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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System Improvements

Gas System Improvements

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 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, reconfiguring/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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	377,293	156,286	375,627	238,870	246,036	253,417	261,020	1,374,970	0	N/A
Total	**N/A**	**377,293**	**156,286**	**375,627**	**238,870**	**246,036**	**253,417**	**261,020**	**1,374,970**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	377,293	156,286	375,627	238,870	246,036	253,417	261,020	1,374,970	0	N/A
Total	**N/A**	**377,293**	**156,286**	**375,627**	**238,870**	**246,036**	**253,417**	**261,020**	**1,374,970**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

GASWorks model snapshot example, showing a flow element type valve

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: Winter 2016

Project Number: GS-14004

Gas Distribution System Model

Description

This project funds development of a computerized geographic information system (GIS) based natural gas distribution system model, installation, 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).

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	9,258	140,742	33,951	106,791	0	0	0	0	106,791	0	150,000
Total	**9,258**	**140,742**	**33,951**	**106,791**	**0**	**0**	**0**	**0**	**106,791**	**0**	**150,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	7,406	140,742	33,951	106,791	0	0	0	0	106,791	0	148,148
Design	1,852	0	0	0	0	0	0	0	0	0	1,852
Total	**9,258**	**140,742**	**33,951**	**106,791**	**0**	**0**	**0**	**0**	**106,791**	**0**	**149,500**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New HDPE gas pipe being fused prior to installation

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

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, directional boring/locating and fusion equipment and tools need to be upgraded on an annual basis.

Significant Changes

2015-2019 CIP: Project was retitled from "General Shop Equipment and Tools".

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	117,869	9,894	170,106	100,000	100,000	100,000	100,000	570,106	0	N/A
Total	**N/A**	**117,869**	**9,894**	**170,106**	**100,000**	**100,000**	**100,000**	**100,000**	**570,106**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	17,869	0	0	0	0	0	0	0	0	N/A
Other	N/A	100,000	9,894	170,106	100,000	100,000	100,000	100,000	570,106	0	N/A
Total	**N/A**	**117,869**	**9,894**	**170,106**	**100,000**	**100,000**	**100,000**	**100,000**	**570,106**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Gas Meters and Regulators

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

Description

This project provides replacement of the existing meters and regulators for approximately 2,000 meter sets per year.

Justification

The meter replacement program ensures accuracy of gas consumption measurement, reducing 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	N/A	347,799	42,872	659,957	365,681	376,652	387,952	399,591	2,189,833	0	N/A
Total	**N/A**	**347,799**	**42,872**	**659,957**	**365,681**	**376,652**	**387,952**	**399,591**	**2,189,833**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	347,799	42,872	659,957	365,681	376,652	387,952	399,591	2,189,833	0	N/A
Total	**N/A**	**347,799**	**42,872**	**659,957**	**365,681**	**376,652**	**387,952**	**399,591**	**2,189,833**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Security at City Gas Receiving Stations

Fund: Gas Fund - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2015
Initial Project Completion: Summer 2016

Revised Project Start:
Revised Project Completion:

Project Number: GS-15001

Security at City Gas Receiving Stations

Description

This project equips the City's four Gas Receiving Stations with video surveillance systems.

Justification

Video surveillance systems will enhance security at the City's four gas receiving stations providing constant video monitoring of the stations' premises and alert against intrusion.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Gas Fund	0	150,000	0	150,000	0	0	0	0	150,000	0	150,000
Total	**0**	**150,000**	**0**	**150,000**	**0**	**0**	**0**	**0**	**150,000**	**0**	**150,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	150,000	0	150,000	0	0	0	0	150,000	0	150,000
Total	**0**	**150,000**	**0**	**150,000**	**0**	**0**	**0**	**0**	**150,000**	**0**	**150,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Energy

Goal: N-9

Policy: N-44

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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REFUSE FUND

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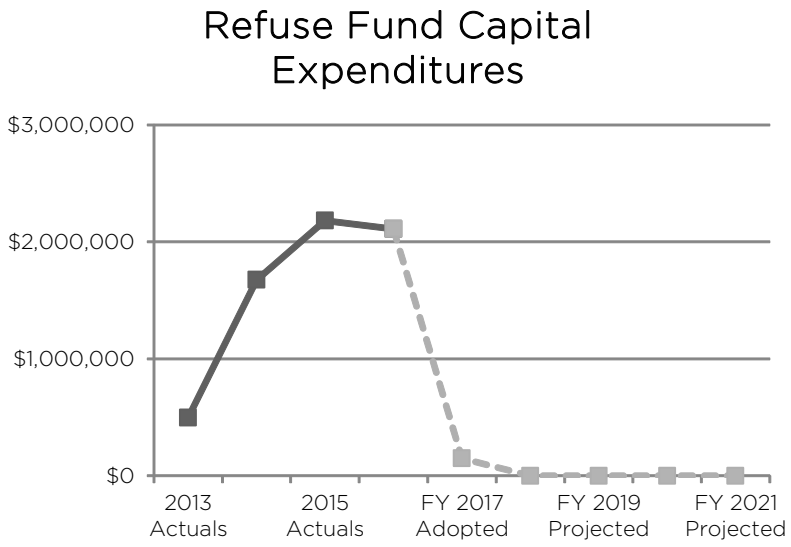
Overview

The Refuse Capital Improvement Program accounts for activities related to the City of Palo Alto Landfill's closure and post-closure maintenance and to buildings and facilities, mainly related to the operation of the Household Hazardous Waste (HHW) Collection Program.

For the Fiscal Year 2017-2021 Capital Improvement Program expenditures of $0.1 million are programmed for one project. This non-recurring project is funded in Fiscal Year 2017 with no other capital projects programmed for the out-years of the CIP. The Refuse Fund's Capital Improvement Program is broken into two separate categories: Landfill Post-Closure and Buildings and Facilities.



Landfill Post-Closure

The Landfill Post Closure category accounts for the construction of the landfill's cap and the repair or replacement of the landfill gas and leachate collection systems at the landfill. These projects are required by State and Federal regulations. With the completion of the post closure activities in Fiscal Year 2016 this category will be eliminated beginning in Fiscal Year 2019.

Recent Accomplishments

- The final cap construction has been completed over the entire landfill's 126 acre area. Regulatory approval for the closure was received in March 2016.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects.

Non-Recurring Projects

The landfill has been capped and closed in accordance with State and Federal regulatory requirements for a total cost of $5.6 million. No further projects are anticipated.

Buildings and Facilities

The Buildings and Facilities category mainly accounts for improvements to the household hazardous waste station located at the Regional Water Quality Control Plant.

Recent Accomplishments

- Improvements to the City's household hazardous waste collection station have allowed the City to facilitate weekly hazardous waste collection from residents and small businesses increasing the service from the previous monthly schedule.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects.

Non-Recurring Projects

For Fiscal Year 2017, the Household Hazardous Waste (HHW) Station Improvements is continued from Fiscal Year 2016. This project will complete the hazardous waste collection station construction by adding a new canopy structure. The new canopy structure will keep rainwater off of the household hazardous waste that is being unloaded, sorted, and packaged at the HHW Station, reducing the potential for contaminated runoff into the storm drains. The canopy structure was designed at the time that the station was constructed and the foundation footings were installed, however the canopy was not installed due to funding constraints in the Refuse Fund.

Summary of Capital Activity

REFUSE FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenue									
RF-11001	Landfill Closure	900,638	0	0	0	0	0	0	0
	Other Revenue Total	900,638	0	0	0	0	0	0	0
	Total Sources	**900,638**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Use of Funds									
Landfill Post Closure									
RF-11001	Landfill Closure	2,182,186	1,744,284	0	0	0	0	0	0
	Landfill Post Closure Total	2,182,186	1,744,284	0	0	0	0	0	0
Buildings and Facilities									
RF-16001	Household Hazardous Waste Station Collection Facility Improvements	0	366,908	148,346	0	0	0	0	148,346
	Building and Facilities Total	0	366,908	148,346	0	0	0	0	148,346
	Total Uses	**2,182,186**	**2,111,192**	**148,346**	**0**	**0**	**0**	**0**	**148,346**

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Buildings and Facilities

Fund: Refuse Fund - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2016

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: RF-16001

Household Hazardous Waste Station Improvements

Description

This project will provide for a new canopy structure at the City's Household Hazardous Waste (HHW) Station, located at the Regional Water Quality Control Plant. The canopy will be constructed out of metal purlin roofing material and will provide for separation of the collected household hazardous waste from the rain. The new canopy structure will tie into four existing footings that were installed in 2013 as part of a previous capital project. A new fire sprinkler system, lights, and gutters will also be installed on the canopy.

Justification

The new canopy will act as a primary best management practice (BMP) for separating rainwater from household hazardous waste that is being unloaded, sorted, and packaged at the HHW Station, reducing the potential for contaminated runoff into the storm drains.

Supplemental Information

The canopy was designed as part of the Relocation of Landfill Facilities project, which provided for improvements to the Household Hazardous Waste Station. That project was reduced in 2013 to achieve budget savings and the canopy construction was therefore not completed.

Staff will seek a grant from the Department of California Department of Resources Recycling and Recovery (CalRecycle) to potentially offset a portion of the cost of this project. Grant revenue for this project is not currently reflected within the CIP as the grant has not yet been awarded.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Refuse Fund	0	410,048	366,908	148,346	0	0	0	0	148,346	0	515,254
Total	**0**	**410,048**	**366,908**	**148,346**	**0**	**0**	**0**	**0**	**148,346**	**0**	**515,254**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	410,048	366,908	148,346	0	0	0	0	148,346	0	515,254
Total	**0**	**410,048**	**366,908**	**148,346**	**0**	**0**	**0**	**0**	**148,346**	**0**	**515,254**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Hazardous Waste

Goal: N-6

Policy: N-23

Program: N-28

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Policy: N-48

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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STORM DRAINAGE FUND

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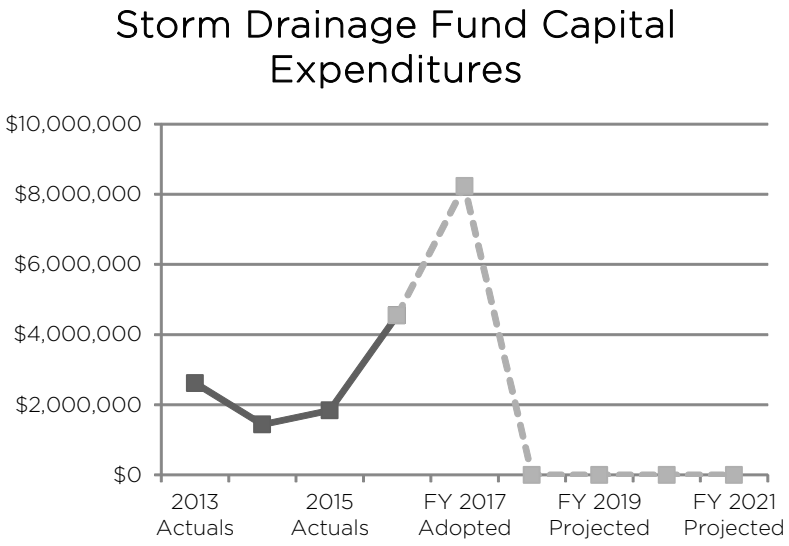
Overview

The Storm Drainage Fund Capital Improvement Program accounts for activities related to the improvement of the City's storm drain system (including pipelines, manholes, catch basins, and pump stations). Storm drain capital improvement projects are only programmed through Fiscal Year 2017, as the monthly storm drainage fee providing the revenue for capital improvements is due to sunset in June 2017. The current storm drain rates were approved by a majority of property owners via a ballot-by-mail process in April 2005. At that time, a new base rate of $10.00 per month was established 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 percent, whichever is less. Under the provisions of the ballot measure, the higher base rate will sunset on June 1, 2017, reverting back to the pre-election rate of $4.25 per month unless reauthorized through a new ballot measure. Future funding for storm drainage capital improvements will require the reauthorization of the storm drainage fee by property owners. Staff is currently working with a city manager-appointed blue ribbon committee to generate a recommendation for storm drain funding beyond Fiscal Year 2017, including a potential ballot measure in fall 2016. A joint committee/staff funding recommendation will be presented to City Council in late spring 2016. If the funding measure is not successful, the Storm Drainage Fund will not have the funding to address its ongoing infrastructure needs. It is anticipated that without reauthorization of the enhanced fee, fund revenues will decrease from $6.6 million to $2.2 million.



For the Fiscal Year 2017-2021 CIP, expenditures of $2.3 million are programmed for Fiscal Year 2017 Storm Drain System Replacement and Rehabilitation and $5.8 million for the Matadero Creek Storm Water Pump Station Improvement project. The budget for the Storm Drainage Capital Improvement Program (CIP) is broken into two separate 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).

Capacity Improvements

The Capacity Improvements category accounts for new or enhanced infrastructure added to the storm drain system increasing its capacity to convey storm water runoff to local creeks and San Francisco Bay. Recommended capacity upgrades are identified in the Storm Drain Master

Plan, which was prepared in 1993 and updated in 2015. Since passage of the storm drainage fee ballot measure in 2005, staff have been implementing a set of seven high-priority capital improvement projects to augment storm drain system capacity. Five of the seven projects have been completed, as well as two of three phases of the sixth project. The remaining phase and project will be implemented this fiscal year. In Fiscal Year 2015, an update to the Storm Water Master Plan was conducted to identify recommended drainage system capacity upgrades in preparation for the sunset of the Storm Drainage Fee in June 2017. The update resulted in the identification of $98 million in additional recommended storm drainage improvements, with $22 million identified as high-priority projects. Without the reauthorization of the Storm Drainage Fee, the projects identified in the Storm Water Master Plan will not be funded.

Recent Accomplishments

- Started construction of the last phase of the Channing Avenue/Lincoln Avenue Storm Drain Improvements, including new storm drain infrastructure along Lincoln Avenue (Middlefield Road to Alma Street).

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring Capacity Improvement projects.

Non-Recurring Projects

The 2017-2021 CIP includes funding for storm drain system capacity improvements in Fiscal Year 2017 only. Projects include the completion of construction of the Channing Avenue/Lincoln Avenue Storm Drain Improvements and Matadero Creek Storm Water Pump Station Improvements. The completion of the Channing Avenue/Lincoln Avenue project includes the construction of new storm drain pipelines along Lincoln Avenue between Middlefield Road and Alma Street. This project augments the capacity of the storm drain infrastructure serving the Professorville neighborhood and alleviates chronic street flooding along Embarcadero Road. The Matadero Creek Storm Water Pump Station will be modified to increase its pumping capacity. This pump station is one of the critical elements of the City's drainage infrastructure, serving a watershed area of 1,250-acres including the Midtown and Palo Verde neighborhoods. Recommendations for capacity improvements for the years beyond Fiscal Year 2017 will be developed as part of the storm drainage fee reauthorization process.

System Rehabilitation

The System Rehabilitation category accounts for the replacement or rehabilitation of deteriorated components of the storm drain system. Funds are budgeted annually to replace or rehabilitate storm drain pipelines, manholes, catch basins, and pump station equipment nearing the end of their useful life. System components to be rehabilitated each year were identified through a comprehensive storm drain condition assessment conducted in 1993 and through visual observations by maintenance crews. Projects in this category also include storm drain system modifications needed to accommodate new operational requirements, such as the mandate in the regional storm water 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. Funding for system rehabilitation has been relatively constant for the past ten years, with annual funding levels increasing each year based on increases in the local Consumer Price Index.

Recent Accomplishments

- Design of two large-scale trash capture devices in conjunction with the capacity upgrades to the Matadero Creek Storm Water Pump Station to comply with the requirements of the Municipal Regional Storm Water Discharge Permit.
- Design of fiber optic communication network connections to the storm water pump stations and creek monitor locations in order to increase the speed and reliability of the storm drain Supervisory Control and Data Acquisition (SCADA) system.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Storm drain pipelines	107 miles
Catch Basins	2,750
Manholes	800
Storm water pump stations	8

2017-2021 Capital Improvement Program

Recurring Projects

The Fiscal Year 2017-2021 CIP includes funding for one project in this category: Storm Drain System Replacement and Rehabilitation (Fiscal Year 2017: $2.3 million), focused on the installation of additional trash capture devices and upgrades to pump controls at the Airport and Adobe Creek Storm Water Pump Stations. Installation of additional trash capture devices in the storm drain system prevents trash from entering local water bodies and complies with the City's regional storm water discharge permit. The pump control updates replace outdated, difficult-to-maintain equipment and increase the effectiveness and efficiency of the two pump stations to be updated. Funding is not programmed beyond Fiscal Year 2017. Recommendations for system rehabilitation for the years beyond Fiscal Year 2017 will be developed as part of the storm drainage fee reauthorization process.

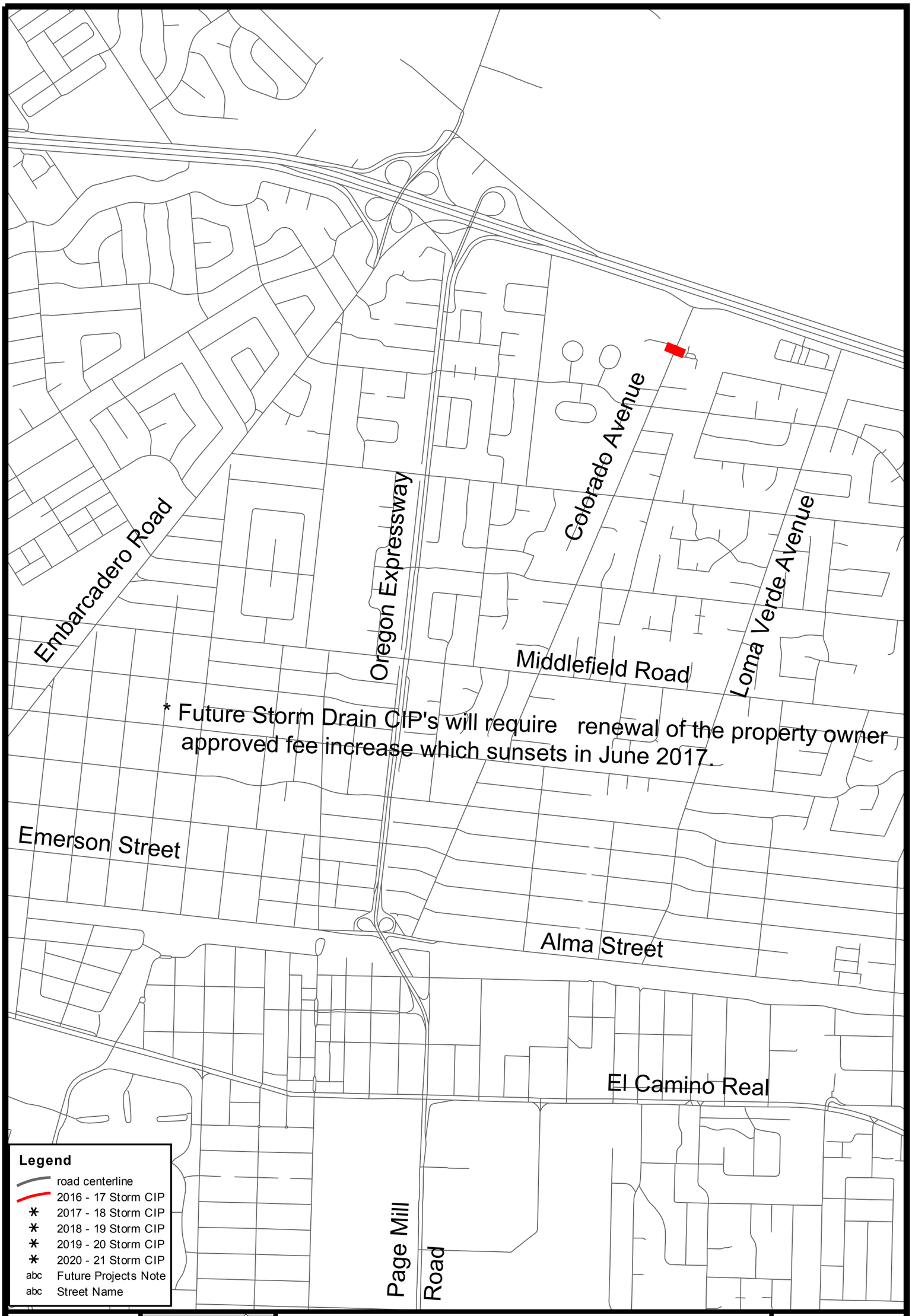
Non-Recurring Projects

There are no non-recurring System Rehabilitation projects.

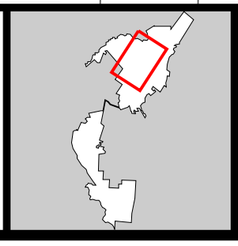
Summary of Capital Activity

STORM DRAINAGE FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Use of Funds									
Capacity Improvements									
SD-11101	Channing Avenue/Lincoln Avenue Storm Drain Improvements	48,068	3,369,712	132,687	0	0	0	0	132,687
SD-06104	Clara Drive to Matadero Pump Station	35,030	0	0	0	0	0	0	0
SD-13003	Matadero Creek Storm Water Pump Station and Trunk Line Improvements	19,164	628,538	5,842,372	0	0	0	0	5,842,372
SD-06102	San Francisquito Creek Storm Water Pump Station	631	0	0	0	0	0	0	0
SD-10101	Southgate Neighborhood Storm Drain Improvements	1,433,933	262,425	0	0	0	0	0	0
SD-15008	Storm Drain Master Plan Update	300,401	0	0	0	0	0	0	0
	Capacity Improvements Total	**1,837,227**	**4,260,675**	**5,975,059**	**0**	**0**	**0**	**0**	**5,975,059**
System Rehabilitation									
SD-06101	Storm Drain System Replacement and Rehabilitation	1,572	283,300	2,261,511	0	0	0		2,261,511
	System Rehabilitation Total	**1,572**	**283,300**	**2,261,511**	**0**	**0**	**0**	**0**	**2,261,511**
	Total Uses	**1,838,799**	**4,543,975**	**8,236,570**	**0**	**0**	**0**	**0**	**8,236,570**



The City of Palo Alto



STORM DRAIN UTILITY
FY 2017 - 2021 CAPITAL
IMPROVEMENT PROGRAM

This map is a product of the City of Palo Alto GIS

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Project Coordinator - Stormwater Schedule 2017-2021 (\\cc-maps\gis$\gis\admin\Personal\Storm.mdb)

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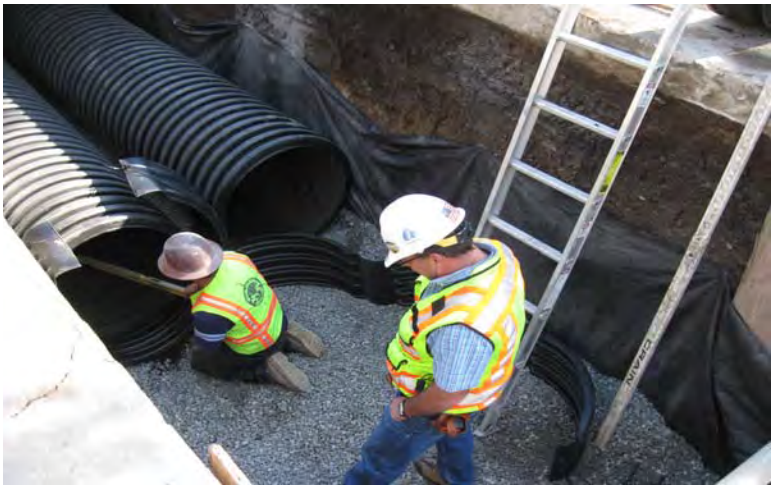
Capacity Improvements



Channing-Lincoln SD Improvements, February 2015

Fund: Storm Drainage - Operating
Category: Capacity Improvements
Project Location: Channing Ave. (Heather Lane to Lincoln Ave.); Lincoln Ave. (Channing Ave. to Alma St.)

Managing Department: Public Works

Initial Project Start: Spring 2011
Initial Project Completion: Fall 2014

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: SD-11101

Channing Avenue/Lincoln Avenue Storm Drain Improvements

Description

This project provides funding for the installation of 5,800 linear feet of 36-inch to 60-inch diameter storm drain along Channing and Lincoln Avenues over three project phases.

Justification

This new storm drain trunk improves drainage system performance in the Green Gables, Walnut Grove, Community Center, SOFA and Professorville neighborhoods by conveying storm runoff more efficiently to the San Francisquito Creek pump station. The project also reduces street flooding along Embarcadero Road, intercepting storm runoff from several storm drain feeder lines currently flowing to Embarcadero Road.

Supplemental Information

This improvement is consistent with the priorities established with the property-owner approved storm drain rate increase and input from the Storm Drain Oversight Committee.

Significant Changes

2017-2021 CIP: Timeline extended due to staffing resource constraints.

2016-2020 CIP: Timeline extended due to staffing resource constraints.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	4,173,876	3,394,712	3,369,712	132,687	0	0	0	0	132,687	0	7,676,275
Total	**4,173,876**	**3,394,712**	**3,369,712**	**132,687**	**0**	**0**	**0**	**0**	**132,687**	**0**	**7,676,275**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	3,920,705	3,394,712	3,369,712	132,687	0	0	0	0	132,687	0	7,423,104
Design	253,170	0	0	0	0	0	0	0	0	0	253,170
Total	**4,173,875**	**3,394,712**	**3,369,712**	**132,687**	**0**	**0**	**0**	**0**	**132,687**	**0**	**7,676,274**

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: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-24

Program: N-36

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is exempt from CEQA under Section 15302.

Matadero Creek Storm Water Pump Station

Fund: Storm Drainage - Operating
Category: Capacity Improvements
Project Location: Various locations in Midtown neighborhood

Managing Department: Public Works

Initial Project Start: Winter 2015
Initial Project Completion: Fall 2017

Revised Project Start:
Revised Project Completion: Fall 2018

Project Number: SD-13003

Matadero Creek Storm Water Pump Station and Trunk Line Improvements

Description

This project provides funding for construction upgrades to the Matadero Creek Storm Water Pump Station and the trunk storm drain pipelines that flow to the pump station. The Matadero Creek Storm Water Pump Station serves a low-lying 1250-acre area of southeastern Palo Alto.

Justification

The streets in this area are lower than the creek water level during storm events. Upgrades to the pump station and the storm drain pipelines leading to it will allow storm runoff to be pumped into Matadero Creek regardless of the creek level, improving drainage system performance in the Midtown and Palo Verde neighborhoods.

Supplemental Information

Construction of the pump station improvements will begin in Fiscal Year 2017. Due to budgetary constraints, construction of the storm drain pipeline improvements will be deferred to Fiscal Year 2018. This improvement is consistent with the priorities established with the property owner-approved storm drain rate increase in 2005. Budgeting for this project beyond Fiscal Year 2017 is being deferred until after the storm drain funding ballot measure tentatively scheduled for fall 2016.

Significant Changes

2017-2021 CIP: Based on cost estimates for the upgraded storm water pump station prepared during the preliminary design state, the project element to improve trunk storm drain pipelines leading to the pump station has been deferred to Fiscal Year 2018.

2016-2020 CIP: This project was previously accounted for in SD-13002. As part of the 2016-2020 CIP, a new project identification number was created for internal tracking purposes.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	19,162	4,255,616	628,538	5,842,372	0	0	0	0	5,842,372	0	6,490,072
Total	**19,162**	**4,255,616**	**628,538**	**5,842,372**	**0**	**0**	**0**	**0**	**5,842,372**	**0**	**6,490,072**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	4,152,369	628,538	5,788,251	0	0	0	0	5,788,251	0	6,416,789
Design	19,162	103,247	0	54,121	0	0	0	0	54,121	0	73,283
Total	**19,162**	**4,255,616**	**628,538**	**5,842,372**	**0**	**0**	**0**	**0**	**5,842,372**	**0**	**6,490,072**

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: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-24

Program: N-36

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

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

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System Rehabilitation

Storm Drain Repair & Rehabilitation

Fund: Storm Drainage - 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 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. For Fiscal Year 2017, the project scope will include the installation of additional trash capture devices at the Matadero Creek Storm Water Pump Station to prevent trash from entering the creek and upgrades to pump controls at the Airport and Adobe Creek Storm Water Pump Stations.

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 trash capture device installations are in compliance with the City's regional storm water discharge permit. The pump control updates replace outdated, difficult-to-maintain equipment and increase the effectiveness and efficiency of the two pump stations to be updated.

Supplemental Information

This improvement is consistent with the priorities established with the voter-approved storm drain rate increase. The property owner-approved enhanced Storm Drainage Fee will sunset on June 30, 2017 unless property owners reauthorize the current Storm Drainage Fee in the fall

2016 mail-by-ballot election. CIP funding for Fiscal Year 2018 and beyond will be developed once property owners decide whether to authorize a continuation of the fee increase.

Significant Changes

2017-2021 CIP: Funding allocated for installation of additional trash capture devices at the Matadero Creek Storm Water Pump Station to prevent trash from entering the creek and upgrades to pump controls at the Airport and Adobe Creek Storm Water Pump Stations.

2016-2020 CIP: Funding allocated for installation of additional trash capture devices in the storm drain system to prevent trash from entering local water bodies.

2015-2019 CIP: Funding allocated for implementation of upgrades to the communications network, linking the storm water pump stations to the central monitoring facility.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Storm Drainage Fund	N/A	1,841,577	283,300	2,261,511	0	0	0	0	2,261,511	0	N/A
Transfer from General Fund	N/A	233,662	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**2,075,239**	**283,300**	**2,261,511**	**0**	**0**	**0**	**0**	**2,261,511**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,646,142	283,300	2,255,941	0	0	0	0	2,255,941	0	N/A
Design	N/A	35,990	0	5,570	0	0	0	0	5,570	0	N/A
Total	**N/A**	**1,682,132**	**283,300**	**2,261,511**	**0**	**0**	**0**	**0**	**2,261,511**	**0**	**N/A**

Operating Impact

This project is not anticipated to impact operating expenses.

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-24

Program: N-36

Potential Board/Commission Review:

Storm Drain Oversight Committee

Environmental Impact Analysis:

This project is exempt from CEQA under Section 15302.

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WASTEWATER COLLECTION FUND

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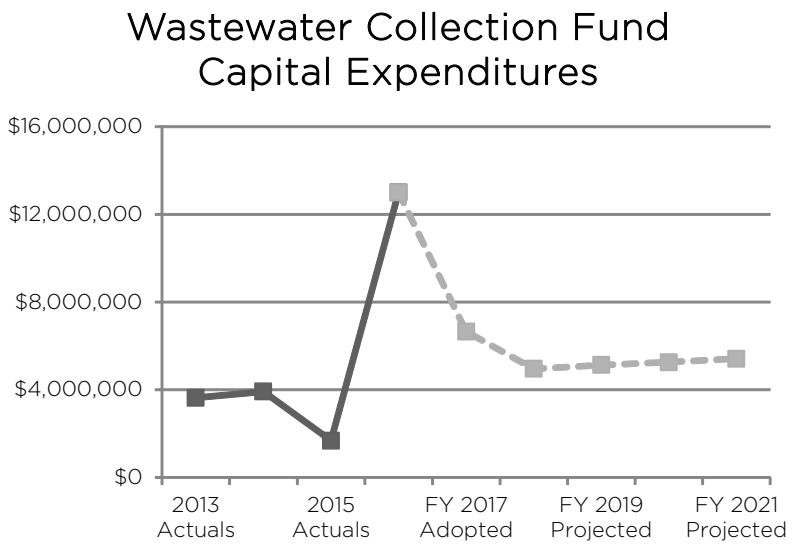
Overview

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 wastewater service to residents and customers of Palo Alto. For the 2017-2021 Capital Improvement Program (CIP), approximately $27.4 million is programmed, with $6.7 million allocated in Fiscal Year 2017. Overall, a total of 15 projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Wastewater Collection System Rehabilitation/Augmentation projects (cumulative total of $20.1 million), Sewer Lateral/Manhole Rehabilitation and Replacement ($3.4 million), and Sewer System Customer Connections ($2.3 million). The budget for the Wastewater Collection Fund CIP is broken into two separate categories: Customer Connections and System Improvements.

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 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 Fund pays for a portion of this project, while remaining costs are supported by reimbursements from customers for project work performed by the City.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Total miles of sanitary sewer lines	217 miles
Total number of sanitary laterals	18,141

Recent Accomplishments

In Fiscal Year 2015 the Utilities Wastewater Division completed over 58 customer service projects with a total cost of $0.3 million.

2017-2021 Capital Improvement Program

Recurring Projects

There is only one project within this category, the Sewer System Customer Connections project of $2.3 million. This project funds customer connections and offset by reimbursements from customers.

Non-Recurring Projects

There are no non-recurring projects in this category.

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 91,917 linear feet of wastewater mains will be replaced.

Recent Accomplishments

- Began construction of multi-year CIP projects for Wastewater Collection System Rehabilitation/Augmentation Projects 24, 25, & 26 which includes replacement of 42,398 linear feet of wastewater mains and 779 sewer laterals.
- Completed the design of 15,753 linear feet of wastewater mains and 259 wastewater laterals as part of CIP project Wastewater Collection System Rehabilitation/Augmentation Projects 27.

2017-2021 Capital Improvement Program

Recurring Projects

A total of $25.1 million is programmed for System Improvement recurring projects in the 2017-2021 CIP, with $6.1 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Wastewater System Improvements (Fiscal Year 2017: $0.3 million; 5-Year CIP: $1.3 million)
- Wastewater General Equipment and Tools (Fiscal Year 2017: $0.05 million; 5-Year CIP: $0.3 million)
- Sewer Lateral/Manhole Rehabilitation and Replacement (Fiscal Year 2017: $0.8 million; 5-Year CIP: $3.4 million)

Non-Recurring Projects

The majority of funding within this category is allocated towards Wastewater Collection System Rehabilitation/Augmentation Projects (cumulative total of $20.1 million). These projects implement high priority rehabilitation, augmentation, and lateral replacement work which reduces inflow of rainfall and ground water into the collection system. 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.

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.

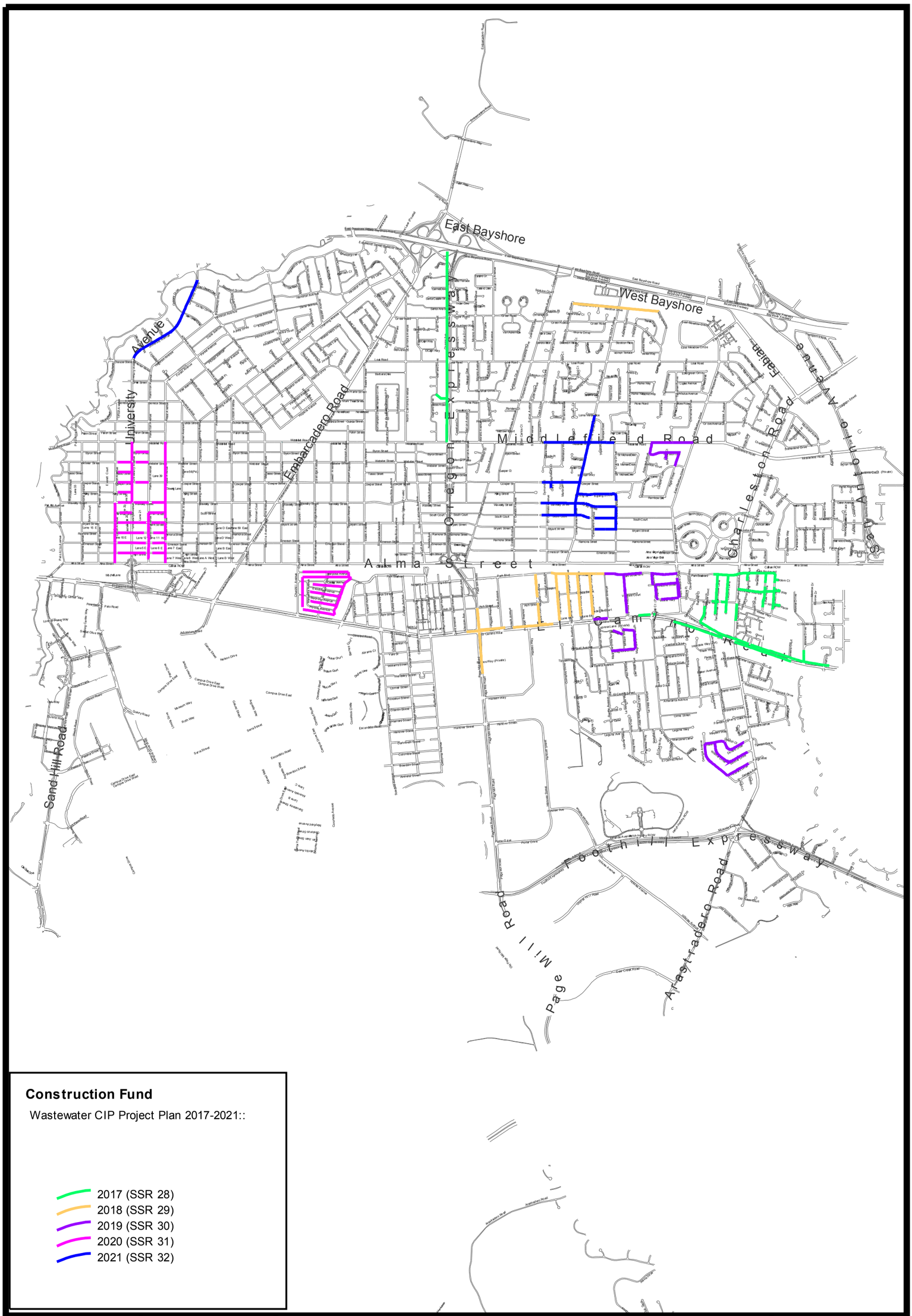
Summary of Capital Activity

WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Other Revenues									
WC-80020	Sewer System, Customer Connections	1,385,192	165,659	601,469	405,820	417,995	430,534	443,450	2,299,268
	Other Revenue Total	**1,385,192**	**165,659**	**601,469**	**405,820**	**417,995**	**430,534**	**443,450**	**2,299,268**
	Total Sources	**1,385,192**	**165,659**	**601,469**	**405,820**	**417,995**	**430,534**	**443,450**	**2,299,268**
Use of Funds									
Customer Connections									
WC-80020	Sewer System, Customer Connections	319,952	165,659	601,439	405,820	417,995	430,534	443,450	2,299,238
	Customer Connections Total	**319,952**	**165,659**	**601,439**	**405,820**	**417,995**	**430,534**	**443,450**	**2,299,238**
System Improvements									
WC-99013	Sewer Lateral/Manhole Rehabilitation and Replacement	357,207	1,076,222	763,189	636,540	655,636	675,305	695,564	3,426,234
WC-08012	Wastewater Collection System Rehabilitation/ Augmentation Project 21	36,961	0	0	0	0	0	0	0
WC-09001	Wastewater Collection System Rehabilitation/ Augmentation Project 22	49,901	0	0	0	0	0	0	0
WC-10002	Wastewater Collection System Rehabilitation/ Augmentation Project 23	290,027	972,263	100,000	0	0	0	0	100,000
WC-11000	Wastewater Collection System Rehabilitation/ Augmentation Project 24	172,305	2,333,064	7,066	0	0	0	0	7,066
WC-12001	Wastewater Collection System Rehabilitation/ Augmentation Project 25	168,802	2,316,756	369,419	0	0	0	0	369,419
WC-13001	Wastewater Collection System Rehabilitation/ Augmentation Project 26	108,901	3,032,949	130,700	0	0	0	0	130,700
WC-14001	Wastewater Collection System Rehabilitation/ Augmentation Project 27	103,583	2,808,248	498,169	0	0	0	0	498,169

WASTEWATER COLLECTION FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
WC-15001	Wastewater Collection System Rehabilitation/ Augmentation Project 28	0	0	3,513,000	0	0	0	0	3,513,000
WC-16001	Wastewater Collection System Rehabilitation/ Augmentation Project 29	0	0	327,849	3,278,490	0	0	0	3,606,339
WC-17001	Wastewater Collection System Rehabilitation/ Augmentation Project 30	0	0	0	337,684	3,376,845	0	0	3,714,529
WC-19001	Wastewater Collection System Rehabilitation/ Augmentation Project 31	0	0	0	0	372,185	3,478,150	0	3,850,335
WC-20000	Wastewater Collection System Rehabilitation/ Augmentation Project 32	0	0	0	0	0	358,249	3,582,495	3,940,744
WC-21000	Wastewater Collection System Rehabilitation/ Augmentation Project 33	0	0	0	0	0	0	368,997	368,997
WC-13002	Wastewater General Equipment and Tools	0	50,000	50,000	50,000	50,000	50,000	50,000	250,000
WC-15002	Wastewater System Improvements	70,721	236,697	292,567	246,000	253,000	260,000	269,000	1,320,567
	System Improvements Total	**1,358,408**	**12,826,199**	**6,051,959**	**4,548,714**	**4,707,666**	**4,821,704**	**4,966,056**	**25,096,099**
	Total Uses	**1,678,360**	**12,991,858**	**6,653,398**	**4,954,534**	**5,125,661**	**5,252,238**	**5,409,506**	**27,395,337**



Construction Fund

Wastewater CIP Project Plan 2017-2021::

- 2017 (SSR 28)
- 2018 (SSR 29)
- 2019 (SSR 30)
- 2020 (SSR 31)
- 2021 (SSR 32)

The City of Palo Alto

City of Palo Alto
Fiscal Year 2017 Adopted Budget
Wastewater Fund Map

5 Year CIP Project Plan

This map is a product of the City of Palo Alto GIS

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Wastewater Fund Map 2017-2021 (\\cc-maps\gis$\gis\admin\Personal\ssantos.mdb)

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Customer Connections

Sewer System, 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

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 Revenues includes 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

This project was previously titled "Sewer System Extension". As part of the Fiscal Year 2015 budget it has been retitled "Sewer System, Customer Connections" to more accurately reflect the work done with this funding.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	383,000	165,659	601,439	405,820	417,995	430,534	443,450	2,299,238	0	N/A
Wastewater Collection Fund	N/A	(94,952)	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**288,048**	**165,659**	**601,439**	**405,820**	**417,995**	**430,534**	**443,450**	**2,299,238**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	288,048	165,659	601,439	405,820	417,995	430,534	443,450	2,299,238	0	N/A
Total	**N/A**	**288,048**	**165,659**	**601,439**	**405,820**	**417,995**	**430,534**	**443,450**	**2,299,238**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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System Improvements

Sewer manhole base

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 Lateral/Manhole Rehabilitation and Replacement

Description

This project will replace defective sewer laterals, cleanouts, 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 videotapes sewer collection mains and laterals as necessary.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	1,221,411	1,076,222	763,189	636,540	655,636	675,305	695,564	3,426,234	0	N/A
Total	**N/A**	**1,221,411**	**1,076,222**	**763,189**	**636,540**	**655,636**	**675,305**	**695,564**	**3,426,234**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,221,411	1,076,222	763,189	636,540	655,636	675,305	695,564	3,426,234	0	N/A
Total	**N/A**	**1,221,411**	**1,076,222**	**763,189**	**636,540**	**655,636**	**675,305**	**695,564**	**3,426,234**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: L-1

Policy: N-25

Potential Board/Commission Review:

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 2009
Initial Project Completion: Winter 2012

Revised Project Start: Summer 2014
Revised Project Completion: Fall 2016

Project Number: WC-10002

Wastewater Collection System Rehabilitation/Augmentation Project 23

Description

This project will implement high priority rehabilitation, augmentation, and lateral replacement work, which reduces inflow of rainfall and ground water into the collection system. The project will be comprised of streets identified in the Master Plan or video inspection work as deficient and in need of enlargement or rehabilitation. Priority will be given to areas identified by Public Works as targeted work zones ensuring infrastructure coordination among the different City departments.

Justification

The 2004 Collection System Master Plan 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 of the Master Plan Study; by research and analysis of sewer main maintenance records; by cleaning and videotaping of sanitary sewer mains; by condition assessment; by real time flow monitoring of existing sewers; and by hydraulic computer modeling.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	290,026	982,263	882,263	100,000	0	0	0	0	100,000	0	1,272,289
Total	**290,026**	**982,263**	**882,263**	**100,000**	**0**	**0**	**0**	**0**	**100,000**	**0**	**1,272,289**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	232,021	982,263	882,263	100,000	0	0	0	0	100,000	0	1,214,284
Design	58,005	0	0	0	0	0	0	0	0	0	58,005
Total	**290,026**	**982,263**	**882,263**	**100,000**	**0**	**0**	**0**	**0**	**100,000**	**0**	**1,272,289**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New HDPE sewer main

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: Summer 2017

Project Number: WC-11000

Wastewater Collection System Rehabilitation/Augmentation Project 24

Description

The funding for this project is for replacement and/or rehabilitation of approximately 42,398 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.

Significant Changes

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 engineerís 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	779,678	2,340,130	2,333,064	7,066	0	0	0	0	7,066	0	3,119,808
Total	**779,678**	**2,340,130**	**2,333,064**	**7,066**	**0**	**0**	**0**	**0**	**7,066**	**0**	**3,119,808**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	623,742	2,340,130	2,333,064	7,066	0	0	0	0	7,066	0	2,963,872
Design	155,934	0	0	0	0	0	0	0	0	0	155,934
Total	**779,676**	**2,340,130**	**2,333,064**	**7,066**	**0**	**0**	**0**	**0**	**7,066**	**0**	**3,119,806**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

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 2011
Initial Project Completion: Winter 2013

Revised Project Start: Spring 2015
Revised Project Completion: Winter 2017

Project Number: WC-12001

Wastewater Collection System Rehabilitation/Augmentation Project 25

Description

The funding for this project is for replacement and/or rehabilitation of approximately 42,398 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.

Significant Changes

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 engineerís 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	357,023	2,686,175	2,316,756	369,419	0	0	0	0	369,419	0	3,043,198
Total	**357,023**	**2,686,175**	**2,316,756**	**369,419**	**0**	**0**	**0**	**0**	**369,419**	**0**	**3,043,198**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	420,659	2,686,175	2,316,756	369,419	0	0	0	0	369,419	0	3,106,834
Design	105,164	0	0	0	0	0	0	0	0	0	105,164
Total	**525,823**	**2,686,175**	**2,316,756**	**369,419**	**0**	**0**	**0**	**0**	**369,419**	**0**	**3,211,998**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installation of HDPE sewer main by directional drilling method

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: Winter 2017

Project Number: WC-13001

Wastewater Collection System Rehabilitation/Augmentation Project 26

Description

The funding for this project is for replacement and/or rehabilitation of approximately 42,398 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.

Significant Changes

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 engineerís 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	146,350	3,163,649	3,032,949	130,700	0	0	0	0	130,700	0	3,309,999
Total	**146,350**	**3,163,649**	**3,032,949**	**130,700**	**0**	**0**	**0**	**0**	**130,700**	**0**	**3,309,999**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	117,080	3,163,649	3,032,949	130,700	0	0	0	0	130,700	0	3,280,729
Design	29,270	0	0	0	0	0	0	0	0	0	29,270
Total	**146,350**	**3,163,649**	**3,032,949**	**130,700**	**0**	**0**	**0**	**0**	**130,700**	**0**	**3,309,999**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installation of HDPE sewer main by directional drilling method

Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2015
Initial Project Completion: Winter 2017

Revised Project Start:
Revised Project Completion:

Project Number: WC-14001

Wastewater Collection System Rehabilitation/Augmentation Project 27

Description

The funding programmed for fiscal year 2016 will fund the design and construction of high priority wastewater collection main and lateral replacement work, which reduces inflow of rainfall and ground water into the collection system. The project replaces 16,859 linear feet (which represents 1.5% of the City's Wastewater Collection system) for various streets including areas in North Palo Alto and Embarcadero Road. 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 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	103,582	3,358,133	2,808,248	498,169	0	0	0	0	498,169	0	3,409,999
Total	**103,582**	**3,358,133**	**2,808,248**	**498,169**	**0**	**0**	**0**	**0**	**498,169**	**0**	**3,409,999**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	82,866	3,358,133	2,808,248	498,169	0	0	0	0	498,169	0	3,389,283
Design	20,716	0	0	0	0	0	0	0	0	0	20,716
Total	**103,582**	**3,358,133**	**2,808,248**	**498,169**	**0**	**0**	**0**	**0**	**498,169**	**0**	**3,409,999**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

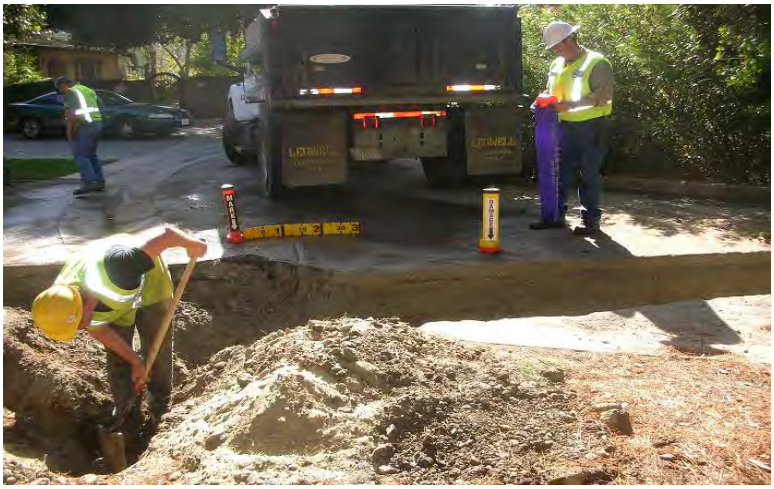
Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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



Trenching for installation of HDPE sewer main by open trench method

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:
Revised Project Completion:

Project Number: WC-15001

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 ground water into the collection system. The project replaces 21,889 linear feet (which represents 1.5% of the City's Wastewater Collection system) for various streets in the City, including large sections in the Charleston Meadows neighborhood. The project will be comprised of laterals identified in video inspection work or through maintenance records identified 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	330,000	0	3,513,000	0	0	0	0	3,513,000	0	3,513,000
Total	**0**	**330,000**	**0**	**3,513,000**	**0**	**0**	**0**	**0**	**3,513,000**	**0**	**3,513,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	3,183,000	0	0	0	0	3,183,000	0	3,183,000
Design	0	330,000	0	330,000	0	0	0	0	330,000	0	330,000
Total	**0**	**330,000**	**0**	**3,513,000**	**0**	**0**	**0**	**0**	**3,513,000**	**0**	**3,513,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Rehabilitation Equipment

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:
Revised Project Completion:

Project Number: WC-16001

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 ground water into the collection system. The project replaces 14,352 linear feet (which represents 1.3% of the City's Wastewater Collection system) for large sections in the Ventura 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 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	327,849	3,278,490	0	0	0	3,606,339	0	3,606,339
Total	**0**	**0**	**0**	**327,849**	**3,278,490**	**0**	**0**	**0**	**3,606,339**	**0**	**3,606,339**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	3,278,490	0	0	0	3,278,490	0	3,278,490
Design	0	0	0	327,849	0	0	0	0	327,849	0	327,849
Total	**0**	**0**	**0**	**327,849**	**3,278,490**	**0**	**0**	**0**	**3,606,339**	**0**	**3,606,339**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Trenching for installation of HDPE sewer main by open trench method

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:
Revised Project Completion:

Project Number: WC-17001

Wastewater Collection System Rehabilitation/Augmentation Project 30

Description

For fiscal years 2018 and 2019, this project funds the design and construction of high priority main and lateral replacement work, which reduces inflow of rainfall and ground water into the collection system. The project replaces 15,680 linear feet (which represents 1.4% of the City's Wastewater Collection system) for various streets in the City, including large sections in the Green Acres and Barron 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 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	337,684	3,376,845	0	0	3,714,529	0	3,714,529
Total	**0**	**0**	**0**	**0**	**337,684**	**3,376,845**	**0**	**0**	**3,714,529**	**0**	**3,714,529**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	3,376,845	0	0	3,376,845	0	3,376,845
Design	0	0	0	0	337,684	0	0	0	337,684	0	337,684
Total	**0**	**0**	**0**	**0**	**337,684**	**3,376,845**	**0**	**0**	**3,714,529**	**0**	**3,714,529**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Sewer Trench Line

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:
Revised Project Completion:

Project Number: WC-19001

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 ground water into the collection system. The project replaces 24,983 linear feet (which represents 2.2% of the City's Wastewater Collection system) for various streets in the City, including large sections in the Southgate and University 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 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	372,185	3,478,150	0	3,850,335	0	3,850,335
Total	**0**	**0**	**0**	**0**	**0**	**372,185**	**3,478,150**	**0**	**3,850,335**	**0**	**3,850,335**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	3,478,150	0	3,478,150	0	3,478,150
Design	0	0	0	0	0	372,185	0	0	372,185	0	372,185
Total	**0**	**0**	**0**	**0**	**0**	**372,185**	**3,478,150**	**0**	**3,850,335**	**0**	**3,850,335**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

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:
Revised Project Completion:

Project Number: WC-20000

A bursing head attached with 8′ HDPE, for a sewer main replacement project by 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 ground water into the collection system. The project scope is as yet undetermined but may include approximately 15,000 - 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 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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	358,249	3,582,495	3,940,744	0	3,940,744
Total	**0**	**0**	**0**	**0**	**0**	**0**	**358,249**	**3,582,495**	**3,940,744**	**0**	**3,940,744**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	3,582,495	3,582,495	0	3,582,495
Design	0	0	0	0	0	0	358,249	0	358,249	0	358,249
Total	**0**	**0**	**0**	**0**	**0**	**0**	**358,249**	**3,582,495**	**3,940,744**	**0**	**3,940,744**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Rehabilitation Equipment

Fund: Wastewater Collection - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2021
Initial Project Completion: Winter 2023

Revised Project Start:
Revised Project Completion:

Project Number: WC-21000

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 ground water into the collection system. The project scope is as yet undetermined but may include approximately 15,000 - 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 infrastructure coordination among different City departments.

Justification

The 2004 Collection System Master Plan 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

The mains selected for replacement and/or rehabilitation are determined by the recommendations of the Master Plan Study; research and analysis of sewer main maintenance records; clean-

ing and videotaping of sanitary sewer mains; condition assessment; real time flow monitoring of existing sewers; and hydraulic computer modeling. Linear footage and locations are subject to change, please refer to the City of Palo Alto Utilities webpage to confirm project details.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	0	0	0	0	0	0	0	368,997	368,997	3,689,969	4,058,966
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**368,997**	**368,997**	**3,689,969**	**4,058,966**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	3,689,969	3,689,969
Design	0	0	0	0	0	0	0	368,997	368,997	0	368,997
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**368,997**	**368,997**	**3,689,969**	**4,058,966**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Equipment used to install fuse HDPE pipe

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

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 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 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	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
Total	**N/A**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**250,000**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000	0	N/A
Total	**N/A**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**50,000**	**250,000**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-14

Program: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Program: N-25

Potential Board/Commission Review:

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: Recurring
Initial Project Completion: Recurring

Project Number: WC-15002

Trenching for installation of 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Collection Fund	N/A	290,264	236,697	292,567	246,000	253,000	260,000	269,000	1,320,567	0	N/A
Total	**N/A**	**290,264**	**236,697**	**292,567**	**246,000**	**253,000**	**260,000**	**269,000**	**1,320,567**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	290,264	236,697	292,567	246,000	253,000	260,000	269,000	1,320,567	0	N/A
Total	**N/A**	**290,264**	**236,697**	**292,567**	**246,000**	**253,000**	**260,000**	**269,000**	**1,320,567**	**0**	**N/A**

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan	Potential Board/Commission Review:
Primary Connection	**Secondary Connection**	Utilities Advisory Commission
Element: Natural Environment	Element: Natural Environment	
Section: Water Resources	Section: Water Resources	
Goal: N-4	Goal: N-4	
Policy: N-14	Policy: N-20	
Program: N-18	Program: N-25	

Environmental Impact Analysis:

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

CITY OF
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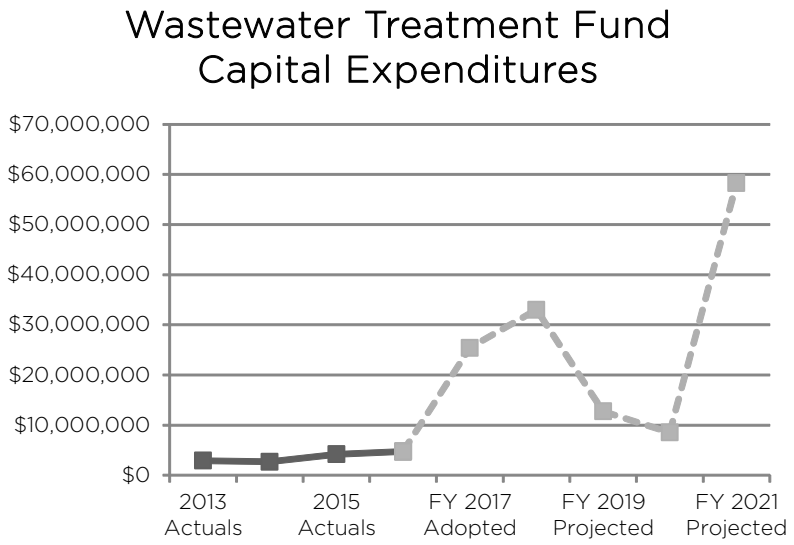
WASTEWATER TREATMENT FUND

CITY OF
PALO
ALTO

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 Adopted Operating Budget. As part of the 2017-2021 Capital Improvement Program (CIP) expenditures of $137.9 million are programmed, with $25.4 million allocated in Fiscal Year 2017. It is important to note that about 64% of expenditures in the Wastewater Treatment Fund are reimbursed by five contributing partner agencies outside of the City of Palo Alto, based on each agencies expected capacity share. Overall, a total of ten capital projects are programmed over the five-year CIP. The budget for the Wastewater Treatment Fund is broken into two separate categories: 'Buildings and Facilities" and 'System Improvements."



The Long Range Facilities Plan, which evaluated the infrastructure needs of the wastewater treatment plant, was completed in July 2012. The Plan analyzed and made recommendations on future regulations, needed replacement and rehabilitation, site planning, and flow and load projections. A key component of the Plan was an analysis of biosolids handling options. After community and partner agency coordination on the Long Range Facilities Plan, further stakeholder outreach and engineering analysis was completed as part of the Biosolids Facilities Plan, which was completed in October 2014 further detailing the solution to a new Plant solids handling system. The major projects in the 5-year CIP originated from the Long Range Facilities Plan and Biosolids Facilities Plan.

Biosolids generated at the Regional Water Quality Control Plant are currently incinerated, with the City being one of only two wastewater plants in California operating sewage sludge incinerators. Palo Alto is planning to retire the incinerators in 2019, after 47 years of service. In May 2014 the City Council approved an Organic Facilities Plan to address treatment of sludge, food scraps, and yard trimmings. The Organics Facilities Plan laid out a strategy to deliver four components of organics processing facilities. Given space constraints at the wastewater treatment plant, the project was divided into individual phases. The sludge dewatering and truck offhaul facility is needed to both retire the incinerators and open the site for later components of a permanent solids handling system. Once sludge is hauled away successfully, demolition of the incinerators could commence followed by installation of a long-term biosolids treatment solution such as anaerobic digesters, gasification, pyrolysis, etc. The Wastewater Treatment Fund recovers costs from the Palo Alto Wastewater Collection Fund and from the City's five partner

agencies (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 230,000 residents are served by the six agencies contributing sewage to the Regional Water Quality Control Plant.

Funding for the major projects included in the 2017-2021 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 2017-2021 CIP. Staff is in the process of applying for state revolving fund loans for projects that are ready for planning/design/CEQA or construction. Major projects planned include Fixed Film Reactors (2017-2021 CIP: $19.7 million; total cost: $19.7 million), Sludge Dewatering and Haul Facility (2017-2021 CIP: $23.7 million; total cost: $26.3 million), Laboratory and Environmental Services Building (2017-2021 CIP: $22.1 million), and Primary Sedimentation Tank Replacement (2017-2021 CIP: $7.5 million).

Minor CIP projects are funded through recurring repayments 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 in the five-year CIP include:

- System Flowmeter Rehabilitation: $0.2 million
- Plant Equipment Replacement: $11.2 million
- Facility Condition Assessment and Retrofit: $7.2 million

Infrastructure Inventory

CLASSIFICATION	TYPE
Liquid Treatment Systems	Preliminary Treatment Primary, Secondary, and Tertiary Treatment UV Disinfection and Outfall
Solids Treatments 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 Regional Water Quality Control Plant. During the 2017-2021 CIP, four projects are programmed in this category at a total cost of $58.4 million, of which $18.1 million is allocated in Fiscal Year 2017.

Recent Accomplishments

- Completed two of the three retrofit projects, including installation of structural repairs to extend facility life and enhance facility safety

Recurring Projects

There is one recurring project in this category: Facility Condition Assessment ($7.2 million over the 2017-2021 CIP). This project funds the construction of repair and retrofits identified through an assessment process of the structural condition of existing plant facilities.

Non-Recurring Projects

There are three non-recurring projects in this category during the 2017-2021 CIP: Dewatering and Loadout Facility (Fiscal Year 2017: $9.8 million; 5-Year CIP: $23.7 million), New Laboratory and Environmental Services Building (Fiscal Year 2017: $0.4 million; 5-Year CIP: $22.1 million) and Plant Master Plan (Fiscal Year 2017: $2.8 million). The Dewatering and Loadout Facility, which was identified in the Long Range Facilities Plan, will replace the current sewage sludge incinerators with a new solids handling system. With the construction of the Laboratory and Environmental Services Building, staff currently located in four separate facilities will be consolidated in one newly built, larger and updated lab. This project, which was also identified in the Long Range Facilities Plan, is expected to be completed by spring 2021 and funded by State Revolving Fund loans. The Plant Master Plan project includes the planning and program management functions for the Long Range Facilities Plan.

System Improvements

The System Improvements category accounts for all infrastructure and equipment related to the safe and efficient treatment of wastewater received at the Regional Water Quality Control Plant. Over the course of the 2017-2021 CIP, approximately $82.1 million is allocated towards System Improvements projects, with $9.8 million allocated in Fiscal Year 2017. Significant projects programmed in this category include the Anaerobic Digesters, Fixed Film Reactors, and Plant Equipment Replacement. Completion of projects within this category will ensure the Plant meets regulatory requirements with modern and reliable equipment.

Recent Accomplishments

- Completed design and CEQA documents for the sludge dewatering and hauloff facility to replace the sewage sludge incinerators
- Installed permanent alkalinity adjustment system

Recurring Projects

The System Improvements category includes one recurring project: Plant Equipment Replacement with cumulative funding of $11.2 million over the 5-Year CIP. This project provides funding for the replacement of equipment at the Regional Water Quality Control Plant that is necessary to maintain treatment reliability. The United States Environmental Protection Agency mandates that funding is allocated for equipment replacement to ensure adequate wastewater treatment reliability.

Non-Recurring Projects

The System Improvements category includes five non-recurring projects, totaling $70.8 million over the 2017-2021 CIP with $6.2 million allocated in Fiscal Year 2017. Significant projects programmed in this category include Fixed Film Reactors (Fiscal Year 2017: $1.9 million; 5-Year CIP: $19.7 million), Primary Sedimentation Tank Replacement (Fiscal Year 2017: $1.2 million; 5-Year CIP: $7.5 million), and Headworks Facility Replacement (5-Year CIP: $40.2 million).

Summary of Capital Activity

WASTEWATER TREATMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Revenue from the State of California									
WQ-10001	Plant Master Plan	0	0	3,157,473	0	0	0	0	3,157,473
WQ-14001	New Dewatering and Loadout Facility	0	0	14,672,744	7,040,386	6,896,508	0	0	28,609,638
WQ-14002	New Laboratory and Environmental Services Building	0	0	423,342	932,000	707,000	4,032,000	15,812,094	21,906,436
WQ-14003	Primary Sedimentation Tank Replacement	0	0	1,239,612	4,210,308	2,014,727	0	0	7,464,647
WQ-14004	Fixed Film Reactor Rehabilitation	0	0	1,847,703	17,875,047	0	0	0	19,722,750
WQ-16002	Headworks Facility Replacement	0	0	0	0	0	1,307,903	38,856,627	40,164,530
	State of California Total	**0**	**0**	**21,340,874**	**30,057,741**	**9,618,235**	**5,339,903**	**54,668,721**	**80,860,944**
	Total Sources	**0**	**0**	**21,340,874**	**30,057,741**	**9,618,235**	**5,339,903**	**54,668,721**	**80,860,944**
Use of Funds									
Buildings and Facilities									
WQ-04011	Facility Condition Assessment and Retrofit	677,372	368,544	2,508,221	1,018,828	1,020,115	1,020,205	1,600,710	7,168,079
WQ-14001	New Dewatering and Loadout Facility	357,282	2,167,488	9,805,117	7,040,386	6,896,508	0	0	23,742,011
WQ-14002	New Laboratory and Environmental Services Building	0	0	432,995	945,499	713,175	4,113,466	15,893,796	22,098,931
WQ-10001	Plant Master Plan	131,673	594,823	2,849,484	0	0	0	0	2,849,484
	Buildings and Facilities Total	**1,166,327**	**3,130,855**	**15,595,817**	**9,004,713**	**8,629,798**	**5,133,671**	**17,494,506**	**55,858,505**
System Improvements									
WQ-14004	Fixed Film Reactor Rehabilitation	0	0	1,847,703	17,805,047	0	0	0	19,652,750
WQ-16002	Headworks Facility Replacement	0	0	0	0	0	1,307,903	38,884,627	40,192,530
WQ-16001	New Anaerobic Digesters to Replace Incinerators	0	0	2,984,829	27,074	38,802	42,767	291,428	3,384,900
WQ-80021	Plant Equipment Replacement	3,003,805	1,595,947	3,571,655	1,956,149	2,035,129	2,040,410	1,621,218	11,224,561

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
WQ-14003	Primary Sedimentation Tank Replacement	0	0	1,239,612	4,210,308	2,014,727	0	0	7,464,647
WQ-80022	System Flow Meters	0	0	162,683	0	0	0	0	162,683
	System Improvements Total	**3,003,805**	**1,595,947**	**9,806,482**	**23,998,578**	**4,088,658**	**3,391,080**	**40,797,273**	**82,082,071**
	Total Uses	**4,170,132**	**4,726,802**	**25,402,299**	**33,003,291**	**12,718,456**	**8,524,751**	**58,291,779**	**137,940,576**

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Buildings and Facilities

UV Control Building

Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Recurring
Initial Project Completion: Recurring

Project Number: WQ-04011

Facility Condition Assessment and Retrofit

Description

This project provides for the structural condition assessment of existing plant facilities and, once issues are identified, the construction of repair and retrofits. Concrete and metal structures are evaluated for evidence of damage caused by corrosion, weathering, age, and ground movement.

Justification

Plant facilities are subject to many adverse conditions, including a highly corrosive environment and potential ground movement. Facilities with repair and retrofit deficiencies need to be returned to good structural condition to ensure that the plant continues to provide safe and reliable plant operations through the year 2036 and beyond.

Supplemental Information

The third retrofit project included structural repairs to ensure safety of the incinerator platforms, sustainability of mudwell tanks in dual media filter building and miscellaneous roof drain repairs.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	1,861,070	368,544	2,508,221	1,018,828	1,020,115	1,020,205	1,600,710	7,168,079	0	N/A
Total	**N/A**	**1,861,070**	**368,544**	**2,508,221**	**1,018,828**	**1,020,115**	**1,020,205**	**1,600,710**	**7,168,079**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	1,861,070	368,544	2,508,221	1,018,828	1,020,115	1,020,205	1,363,710	6,931,079	0	N/A
Design	N/A	0	0	0	0	0	0	237,000	237,000	0	N/A
Total	**N/A**	**1,861,070**	**368,544**	**2,508,221**	**1,018,828**	**1,020,115**	**1,020,205**	**1,600,710**	**7,168,079**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

Biosolids Facility

Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Summer 2013
Initial Project Completion: Fall 2019

Revised Project Start: Winter 2015
Revised Project Completion: Summer 2019

Project Number: WQ-14001

New Dewatering and Loadout Facility

Description

This project provides funding for the sludge dewatering and truck loadout facility, replacing the current sewage sludge incinerators with a new solids handling system.

Justification

Current sewage sludge incinerators were constructed in 1972 and are at the end of their useful life. A new facility is required to improve the operational reliability of the wastewater plant. Council voted to retire the incinerators as soon as possible when accepting the Long Range Facilities Plan and approved a $2.3 million contract for the new sludge and dewatering facility design, CEQA and engineering in project WQ-80021 Plant Equipment Replacement.

Supplemental Information

This project was identified in the Long Range Facilities Plan accepted by Council in 2012. A biosolids facility plan was completed in 2014. CEQA documentation was approved by Council March 28, 2016. Design is complete. Construction will commence in FY2017 and continue through FY2019. The budget estimate represents the capital cost of a sludge dewatering and truck loadout facility.

Funding via a low interest state loan (State Revolving Fund) is being pursued and the application is in process. The interest rate is 1.7% as of March 2016. The loan may also reimburse planning, program management, design, CEQA, and construction costs.

The loan application will be complete once partner agenciesí approval is received and state required resolutions are adopted by Council.

Significant Changes

2017-2021 CIP: Total project costs reflect the latest construction cost estimate based on 90% design. Approval by partner agencies (Stanford University, the Cities of Mountain View and Los Altos, and the Board of the East Palo Alto Sanitary District) is required for project approval and to guarantee repayment of any state loans. Three partners have approved the project with one final partner expected to approve in late Fiscal Year 2016, at which time project funding can continue.

2016-2020 CIP: Title has been changed from Biosolids Facility to better define the project. This component's project construction costs have been updated from the Fiscal Year 2015 estimate of $13.6 million to Fiscal Year 2015 $18.1 million (an increase of approximately $1.7 million) based on the more recent preliminary design cost estimate that was higher than the earlier master planning level cost estimate.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	14,672,744	7,040,386	6,896,508	0	0	28,609,638	0	28,609,638
Wastewater Treatment Fund	357,281	4,941,108	2,167,488	(4,867,627)	0	0	0	0	(4,867,627)	0	(2,342,858)
Total	**357,281**	**4,941,108**	**2,167,488**	**9,805,117**	**7,040,386**	**6,896,508**	**0**	**0**	**23,742,011**	**0**	**26,266,780**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	4,651,996	2,167,488	9,562,366	6,796,886	6,796,537	0	0	23,155,789	0	25,323,277
Design	357,281	289,112	0	242,751	243,500	99,971	0	0	586,222	0	943,503
Total	**357,281**	**4,941,108**	**2,167,488**	**9,805,117**	**7,040,386**	**6,896,508**	**0**	**0**	**23,742,011**	**0**	**26,266,780**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

CEQA MND has been completed.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Water Quality Control Plant Laboratory

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: Spring 2016
Revised Project Completion: Spring 2021

Project Number: WQ-14002

New Laboratory And Environmental Services Building

Description

This project provides funding for the design of a new building that will consolidate staff and provide a larger updated lab.

Justification

Currently staff is located in four separate buildings that are aging and house industrial pumps, thus are limited in size for the number of staff assigned to each.

Supplemental Information

This project was identified in the Long Range Facilities Plan accepted by the City Council in 2012. Funding via a low interest state loan (State Revolving Fund) will be pursued for this project, which is subject to approval from partner agencies (Stanford University, Mountain View, Los Altos, and the East Palo Alto Sanitary District).

Significant Changes

2017-2021 CIP: Approval by partner agencies (Stanford University, the Cities of Mountain View and Los Altos, and the Board of the East Palo Alto Sanitary District) is required for project approval and to guarantee repayment of any state loans. Three partners have approved the project with one final partner expected to approve in late Fiscal Year 2016, at which time project funding can continue.

2016-2020 CIP: Project budget in Fiscal Year 2016 now captures an additional $4.0M more in

Fiscal Year 2020 for final design and start of construction. Fiscal Year 2020 budget was not included in the 5-year CIP in Fiscal Year 2015.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	423,342	932,000	707,000	4,032,000	15,812,094	21,906,436	0	21,906,436
Wastewater Treatment Fund	0	423,342	0	9,653	13,499	6,175	81,466	81,702	192,495	0	192,495
Total	**0**	**423,342**	**0**	**432,995**	**945,499**	**713,175**	**4,113,466**	**15,893,796**	**22,098,931**	**0**	**22,098,931**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	423,342	0	0	2,550,512	14,299,269	17,273,123	0	17,273,123
Design	0	423,342	0	9,653	945,499	713,175	1,562,954	1,594,527	4,825,808	0	4,825,808
Total	**0**	**423,342**	**0**	**432,995**	**945,499**	**713,175**	**4,113,466**	**15,893,796**	**22,098,931**	**0**	**22,098,931**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

CEQA will be required.

Potential Board/Commission Review:

Architectural Review Board

Planning and Transportation Commission

Looking West from Fixed Film Reactors

Fund: Wastewater Treatment - Operating
Category: Buildings and Facilities
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Summer 2009
Initial Project Completion: Summer 2012

Revised Project Start:
Revised Project Completion: Summer 2017

Project Number: WQ-10001

Plant Master Plan

Description

This project provides funding for the planning and program management of the long range facilities plan (Master Plan) completed in 2012. Program management includes project definitions of long range capital projects, acquisition of funding for new large capital projects, preparation of City issued design consultant Request for Proposal packages, and ancillary services related to plan implementation.

Justification

The long range facilities needed for a wastewater treatment plant primarily consist of replacing aging industrial facilities, but also include plant process optimizations, new support infrastructure, and responsiveness to changing situations and regulations.

Significant Changes

2017-2021 CIP: The Plant is in the second year of the program manager contract and program implementation continues to be dependent upon securing state revolving fund loans.

2016-2020 CIP: After completion of the Long Range Facilities Plan in 2012, a program manager was brought on board to support implementation of the master plan. About $0.6 million of the consultant's work was approved during Fiscal Year 2015, and the remainder was subject to approval of an additional $3.3 million in capital funding authorization in the Fiscal Year 2016 capital budget.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	3,157,473	0	0	0	0	3,157,473	0	3,157,473
Wastewater Treatment Fund	1,579,934	1,765,363	594,823	(307,989)	0	0	0	0	(307,989)	0	1,866,768
Total	**1,579,934**	**1,765,363**	**594,823**	**2,849,484**	**0**	**0**	**0**	**0**	**2,849,484**	**0**	**5,024,241**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	1,158,609	(36,339)	0	0	0	0	0	0	0	0	1,158,609
Design	289,652	1,801,702	594,823	2,849,484	0	0	0	0	2,849,484	0	3,733,959
Study	131,672	0	0	0	0	0	0	0	0	0	131,672
Total	**1,579,933**	**1,765,363**	**594,823**	**2,849,484**	**0**	**0**	**0**	**0**	**2,849,484**	**0**	**5,024,240**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

CEQA will be required.

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System Improvements

Fixed Film Reactor Distribution Arms

Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Spring 2015
Initial Project Completion: Winter 2019

Revised Project Start: Winter 2015
Revised Project Completion: Spring 2020

Project Number: WQ-14004

Fixed Film Reactor Rehabilitation

Description

This project provides funding for the rehabilitation of fixed film reactors which provide biological treatment, helping the City to comply with discharge permit limits. The two reactors, which came online in 1980, need replacement of core structural components including fiberglass barriers, steel supports, and concrete underdrains. Process components need replacement including biofilter media, 20-foot deep plastic media, rotating distributor mechanisms, electrical motor control centers, and process piping and pumping.

Justification

This project was identified in the Long Range Facilities Plan report accepted by Council in 2012. The fixed film reactors are 36 years old and have numerous issues, including stressed concrete with exposed reinforcing steel bars, brittle plastic media continually clogged with rags/plastic, corroded steel piping and distributors, and biofilter media and electrical controls at the end of their useful life.

Supplemental Information

Funding via a low interest state loan (State Revolving Fund) will be pursued for this project, which is subject to approval from partner agencies (Stanford University, Mountain View, Los Altos, and the East Palo Alto Sanitary District).

Significant Changes

2017-2021 CIP: Approval by the partner agencies (Stanford University, the Cities of Mountain View and Los Altos, and the Board of the East Palo Alto Sanitary District) is required for project approval and to guarantee repayment of any state loans. Three partners have approved the

project with one final partner expected to approve in late Fiscal Year 2016 at which time project funding can continue.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	1,847,703	17,875,047	0	0	0	19,722,750	0	19,722,750
Wastewater Treatment Fund	0	600,302	0	0	(70,000)	0	0	0	(70,000)	0	(70,000)
Total	**0**	**600,302**	**0**	**1,847,703**	**17,805,047**	**0**	**0**	**0**	**19,652,750**	**0**	**19,652,750**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	684,732	17,221,259	0	0	0	17,905,991	0	17,905,991
Design	0	600,302	0	1,162,971	583,788	0	0	0	1,746,759	0	1,746,759
Total	**0**	**600,302**	**0**	**1,847,703**	**17,805,047**	**0**	**0**	**0**	**19,652,750**	**0**	**19,652,750**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

Headworks Facility

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:
Revised Project Completion:

Project Number: WQ-16002

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 report accepted by Council in 2012. The existing headworks are at the end of their useful life and required for operational reliability of pumping the raw sewage from the influent sewers into the treatment plant.

Supplemental Information

The total project cost is estimated at $40,192,530 and includes planning, design and construction. The project duration will be from 2020 through 2023.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	0	0	0	1,307,903	38,856,627	40,164,530	0	40,164,530
Wastewater Treatment Fund	0	0	0	0	0	0	0	28,000	28,000	0	28,000
Total	**0**	**0**	**0**	**0**	**0**	**0**	**1,307,903**	**38,884,627**	**40,192,530**	**0**	**40,192,530**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	35,009,820	35,009,820	0	35,009,820
Design	0	0	0	0	0	0	1,307,903	3,874,807	5,182,710	0	5,182,710
Total	**0**	**0**	**0**	**0**	**0**	**0**	**1,307,903**	**38,884,627**	**40,192,530**	**0**	**40,192,530**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

Thermal Hydrolysis and Digester

Fund: Wastewater Treatment - Operating
Category: System Improvements
Project Location: 2501 Embarcadero Way

Managing Department: Public Works

Initial Project Start: Winter 2016
Initial Project Completion: Winter 2022

Revised Project Start:
Revised Project Completion:

Project Number: WQ-16001

New Anaerobic Digesters to Replace Incinerators

Description

This project provides funding for design and construction of the anaerobic digesters, biogas utilization, electric co-generation, and a thermal hydrolysis process which precedes the anaerobic digestion. The digesters are the final stage in the biosolids treatment, producing biosolids for beneficial use.

Justification

This project was identified in the Long Range Facilities Plan report accepted by Council in 2012. The digesters are key sludge stabilization units that ensure final biosolids are safe for truck off-haul and Class A beneficial reuse in land application. This project implements energy generating and sludge stabilization component of the Organics Facilities Plan, endorsed by Council in 2014.

Supplemental Information

This project was presented to Council as part of an Organics Facilities Plan and completed in October 2014. A preliminary design was completed in April 2015. Construction of the anaerobic digesters is scheduled to follow startup of the Sludge Dewatering and Loadout Facility (WQ-14001) and be completed by 2022. The first phase will be to demolish the sewage sludge incinerator facilities, followed by construction of the large digester tanks below and above ground along with the ancillary support systems to thermally convert the sludge as well as biogas and landfill gas into energy.

The digester system will have some surplus capacity for future high strength waste such as food scraps, providing an opportunity for additional control of organics waste stream.

Significant Changes

2017-2021 CIP: Based on the increased estimate, a long term solids plan is needed and will require re-evaluation of anaerobic digestion, gasification, pyrolysis, etc.

2016-2020 CIP: Estimated cost of Solids Handling Project - Anaerobic Digesters was adjusted upwards to $75 million upon completion of Preliminary Design. The cost escalation of this magnitude was not anticipated. Planning and design work is deferred till Biosolids/Organic Facility Plan is updated and revised.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	0	2,968,557	0	2,984,829	27,074	38,802	42,767	291,428	3,384,900	0	3,384,900
Total	**0**	**2,968,557**	**0**	**2,984,829**	**27,074**	**38,802**	**42,767**	**291,428**	**3,384,900**	**0**	**3,384,900**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	9,877	13,712	264,000	287,589	0	287,589
Design	0	2,968,557	0	2,984,829	27,074	28,925	29,055	27,428	3,097,311	0	3,097,311
Total	**0**	**2,968,557**	**0**	**2,984,829**	**27,074**	**38,802**	**42,767**	**291,428**	**3,384,900**	**0**	**3,384,900**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

Belt Filter Press

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-80021

Plant Equipment Replacement

Description

This project provides funding for replacing necessary plant equipment to maintain treatment reliability and ancillary facilities to maintain existing infrastructure.

Justification

Plant equipment requires periodic replacement to maintain reliability. 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 and equipment maintenance. In renovating and replacing ancillary facilities such as building structures and landscaping, the City affirms its commitment to maintain sound infrastructure and facility sites and energy efficiency.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	3,298,723	1,595,947	3,571,655	1,956,149	2,035,129	2,040,410	1,621,218	11,224,561	0	N/A
Total	**N/A**	**3,298,723**	**1,595,947**	**3,571,655**	**1,956,149**	**2,035,129**	**2,040,410**	**1,621,218**	**11,224,561**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	3,115,963	1,595,947	3,384,767	1,760,534	1,831,616	2,040,410	1,384,218	10,401,545	0	N/A
Design	N/A	182,760	0	186,888	195,615	203,513	0	237,000	823,016	0	N/A
Total	**N/A**	**3,298,723**	**1,595,947**	**3,571,655**	**1,956,149**	**2,035,129**	**2,040,410**	**1,621,218**	**11,224,561**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

Primary Sedimentation Tank

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 2015
Revised Project Completion: Spring 2020

Project Number: WQ-14003

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 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 concretes life another 30 years. Rotating parts are worn and need replacement.

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 Council in 2012. Funding via a low interest state loan (State Revolving Fund) will be pursued for this project, which is subject to approval from partner agencies (Stanford University, Mountain View, Los Altos, and the East Palo Alto Sanitary District).

Significant Changes

2017-2021 CIP: Approval by the partner agencies (Stanford University, the Cities of Mountain View and Los Altos, and the Board of the East Palo Alto Sanitary District) is required for project

approval and to guarantee repayment of any state loans. Three partners have approved the project with one final partner expected to approve in late Fiscal Year 2016 at which time project funding can continue.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Revenue from the State of California	0	0	0	1,239,612	4,210,308	2,014,727	0	0	7,464,647	0	7,464,647
Wastewater Treatment Fund	0	930,313	0	0	0	0	0	0	0	0	0
Total	**0**	**930,313**	**0**	**1,239,612**	**4,210,308**	**2,014,727**	**0**	**0**	**7,464,647**	**0**	**7,464,647**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	679,412	0	961,311	3,987,185	2,014,727	0	0	6,963,223	0	6,963,223
Design	0	250,901	0	278,301	223,123	0	0	0	501,424	0	501,424
Total	**0**	**930,313**	**0**	**1,239,612**	**4,210,308**	**2,014,727**	**0**	**0**	**7,464,647**	**0**	**7,464,647**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

System Flow Meter

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-80022

System Flow Meters

Description

This project provides funding to replace the large diameter flow meters built into the wastewater treatment system on sewers, pipes, and water lines.

Justification

Generally, magnetic flow meters, used to measure the flow of wastewater by magnetic field, have a life of over ten years. When the reliability of the meter's electronics fail, the meter needs expeditious replacement to continue accurate partner billing, process control, and regulatory reporting.

Supplemental Information

There are 13 key meters that require replacement through an ongoing capital project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Wastewater Treatment Fund	N/A	162,683	0	162,683	0	0	0	0	162,683	0	N/A
Total	**N/A**	**162,683**	**0**	**162,683**	**0**	**0**	**0**	**0**	**162,683**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	162,683	0	162,683	0	0	0	0	162,683	0	N/A
Total	**N/A**	**162,683**	**0**	**162,683**	**0**	**0**	**0**	**0**	**162,683**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Environmental Impact Analysis:

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

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WATER FUND

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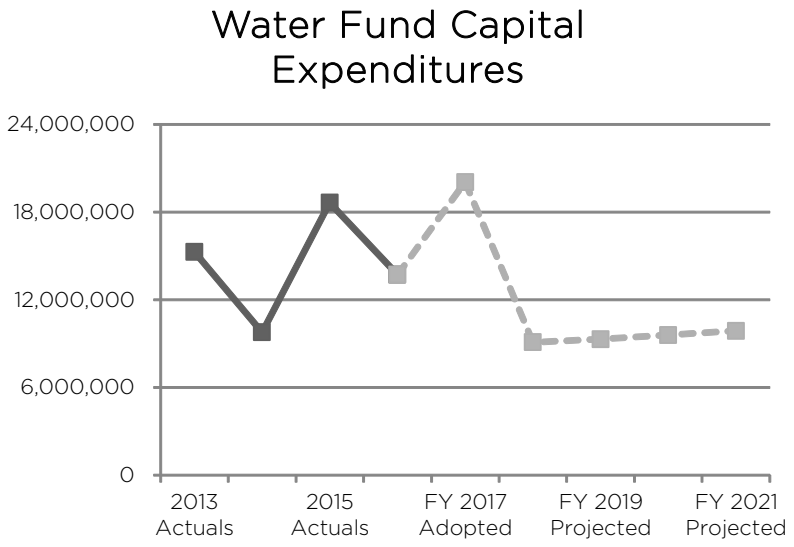
Overview

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 2017-2021 Adopted Capital Improvement Program (CIP), approximately $57.9 million is programmed, with $20.0 million allocated in Fiscal Year 2017. Overall, a total of 20 projects are programmed for the 5-year CIP. Major projects funded in the 2017-2021 CIP include Water Main Replacements (cumulative total of $40.4 million), Water System Customer Connections ($3.7 million), Water Meters ($2.9 million) and Water, Gas, and Wastewater Utility GIS Data ($2.1 million). The Budget for the Water Fund is broken into three separate categories: Customer Connections, System Improvements, and Water Main Replacements.

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. Projects in this category include 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.

Infrastructure Inventory

CLASSIFICATION	QUANTITY
Miles of water main	235.58 miles
Number of wells	1 active standby and 7 emergency standby
Number of reservoirs	4 steel and 3 reinforced concrete

Recent Accomplishments

- In Fiscal Year 2015 the Utilities Water Utility completed over 67 customer service projects with a total cost of $0.23 million.

2017-2021 Capital Improvement Program

Recurring Projects

The Water System Customer Connections project is the only project within this category. Over the course of the 2017-2021 CIP, $3.7 million is programmed, with $0.7 million allocated in Fiscal Year 2017.

Non-Recurring Projects

There are no non-recurring projects in this category.

System Improvements

To ensure reliable water services for the City of Palo Alto residents and customers, infrastructure must be replaced upon reaching the end of its expected life. The System Improvements category includes 12 projects during the 2017-2021 CIP at a total cost of $13 million, with $2.6 million allocated in Fiscal Year 2017.

Recent Accomplishments

- Completed the water distribution system seismic evaluation and condition assessment master study to determine the reliability of water system and seismic stability of water pipelines in the Foothills. Pipeline improvements recommended from this study will be included in future capital improvement projects.
- Completed 90% construction of concrete water tank rehabilitation work at Boronda Reservoir.

2017-2021 Capital Improvement Program

Recurring Projects

A total of $10.5 million is programmed for System Improvement recurring projects during the 2017-2021 CIP, with $2.5 million allocated in Fiscal Year 2017. Recurring projects in this category include the following:

- Water distribution system improvements (Fiscal Year 2017: $0.8 million; 5-Year CIP: $1.9 million)
- Water Fusion and General Equipment/Tools (Fiscal Year 2017: $0.07 million; 5-Year CIP: $0.3 million)
- Water Meters (Fiscal Year 2017: $0.8 million; 5-Year CIP: $2.9 million)
- Water Service Hydrant Replacement (Fiscal Year 2017: $0.4 million; 5-Year CIP: $2.1 million)
- Water System Supply Improvements (Fiscal Year 2017: $0.3 million; 5-Year CIP: $1.3 million)
- Water, Gas, Wastewater Utility GIS Data (Fiscal Year 2017: $0.4 million; 5-Year CIP: $2.1 million)

Non-Recurring Projects

A total of $3.2 million is allocated in Fiscal Year 2017 for six non-recurring projects. Funding for the non-recurring project represents funding approved by the City Council in prior fiscal years

and are recommended to be carried over to Fiscal Year 2017 to complete projects. There is no funding for non-recurring projects beyond Fiscal Year 2017.

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 54,717 linear feet of water mains will be replaced.

Recent Accomplishments

- Completed the design and construction of 12,000 linear feet of water mains and 225 services with CIP project WMR 25.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects in this category.

Non-Recurring Projects

The 2017-2021 Adopted CIP includes $40.4 million in funding for eight non-recurring projects within this category, with $13.4 million approved for Fiscal Year 2017. 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.

Summary of Capital Activity

WATER FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Transfer from Other Funds									
Gas Fund									
WS-02014	Water Gas Wastewater GIS Data	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
	Total Gas Fund Transfers	**91,667**	**110,917**	**122,009**	**134,209**	**147,630**	**152,059**	**156,621**	**712,528**
Wastewater Collection Fund									
WS-02014	Water Gas Wastewater GIS Data	91,667	110,917	122,009	134,209	147,630	152,059	156,621	712,528
	Total Wastewater Collection Fund	**91,667**	**110,917**	**122,009**	**134,209**	**147,630**	**152,059**	**156,621**	**712,528**
	Total Transfer from Other Funds	**183,334**	**221,834**	**244,018**	**268,418**	**295,260**	**304,118**	**313,242**	**1,425,056**

WATER FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Other Revenues									
WS-80014	Water Service Hydrant Replacement	1,776	0	0	0	0	0	0	0
WS-80013	Customer Connections	2,150,370	463,000	876,000	902,280	929,348	957,228	985,946	4,650,802
	Other Revenue Total	**2,152,146**	**463,000**	**876,000**	**902,280**	**929,348**	**957,228**	**985,946**	**4,650,802**
	Total Sources	**2,335,480**	**684,834**	**1,120,018**	**1,170,698**	**1,224,608**	**1,261,346**	**1,299,188**	**6,075,858**
Use of Funds									
Customer Connections									
WS-80013	Water System, Customer Connections	666,872	463,000	690,000	710,700	732,021	753,981	776,601	3,663,303
	Customer Connections Total	**666,872**	**463,000**	**690,000**	**710,700**	**732,021**	**753,981**	**776,601**	**3,663,303**
System Improvements									
WS-13004	Asset Management Mobile Deployment	6,308	92,163	0	0	0	0	0	0
WS-08002	Emergency Water Supply Project	430,778	508,504	271,208	0	0	0	0	271,208
WS-09000	Seismic Water System Upgrades	714,139	3,525,997	1,881,097	0	0	0	0	1,881,097
WS-11003	Water Distribution System Improvements	733,636	84,024	865,582	247,000	254,000	261,620	269,469	1,897,671
WS-13002	Water Fusion and General Equipment/Tools	6,675	0	70,685	50,000	50,000	50,000	50,000	270,685
WS-13006	Water Meter Shop Renovations	10,001	0	0	0	0	0	0	0
WS-80015	Water Meters	207,623	282,908	817,092	565,000	500,000	515,000	530,450	2,927,542
WS-07001	Water Recycling Facilities	144,705	50,358	393,358	0	0	0	0	393,358
WS-07000	Water Regulation System Improvements	40,417	1,581,718	135,541	0	0	0	0	135,541
WS-08001	Water Reservior Coating Improvements	42,870	2,170,820	320,682	0	0	0	0	320,682
WS-80014	Water Service Hydrant Replacement	133,211	100,000	400,000	412,000	424,360	437,091	450,204	2,123,655
WS-15004	Water System Master Plan	192,207	152,273	155,520	0	0	0	0	155,520
WS-11004	Water System Supply Improvements	289,494	140,376	256,700	247,000	254,000	261,620	269,469	1,288,789
WS-02014	Water, Gas, Wastewater Utility GIS Data	210,905	332,750	366,025	402,628	442,890	456,177	469,862	2,137,582
	System Improvements Total	**3,162,969**	**9,021,891**	**5,933,490**	**1,923,628**	**1,925,250**	**1,981,508**	**2,039,454**	**13,803,330**
Water Main Replacements									
WS-11000	Water Main Replacement - Project 25	380,487	4,132,487	725,386	0	0	0	0	725,386
WS-12001	Water Main Replacement - Project 26	22,005	49,766	5,904,489	0	0	0	0	5,904,489
WS-13001	Water Main Replacement - Project 27	0	42,500	6,206,216	0	0	0	0	6,206,216
WS-14001	Water Main Replacement - Project 28	0	0	585,107	5,851,070	0	0	0	6,436,177
WS-15002	Water Main Replacement - Project 29	0	0	0	602,660	6,026,602	0	0	6,629,262
WS-16001	Water Main Replacement - Project 30	0	0	0	0	620,740	6,207,400	0	6,828,140

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
WS-19001	Water Main Replacement - Project 31	0	0	0	0	0	639,362	6,396,320	7,035,682
WS-20000	Water Main Replacement - Project 32	0	0	0	0	0	0	658,543	658,543
	Water Main Replacements Total	**402,492**	**4,224,753**	**13,421,198**	**6,453,730**	**6,647,342**	**6,846,762**	**7,054,863**	**40,423,895**
	Total Uses	**4,232,333**	**13,709,644**	**20,044,688**	**9,088,058**	**9,304,613**	**9,582,251**	**9,870,918**	**57,890,528**

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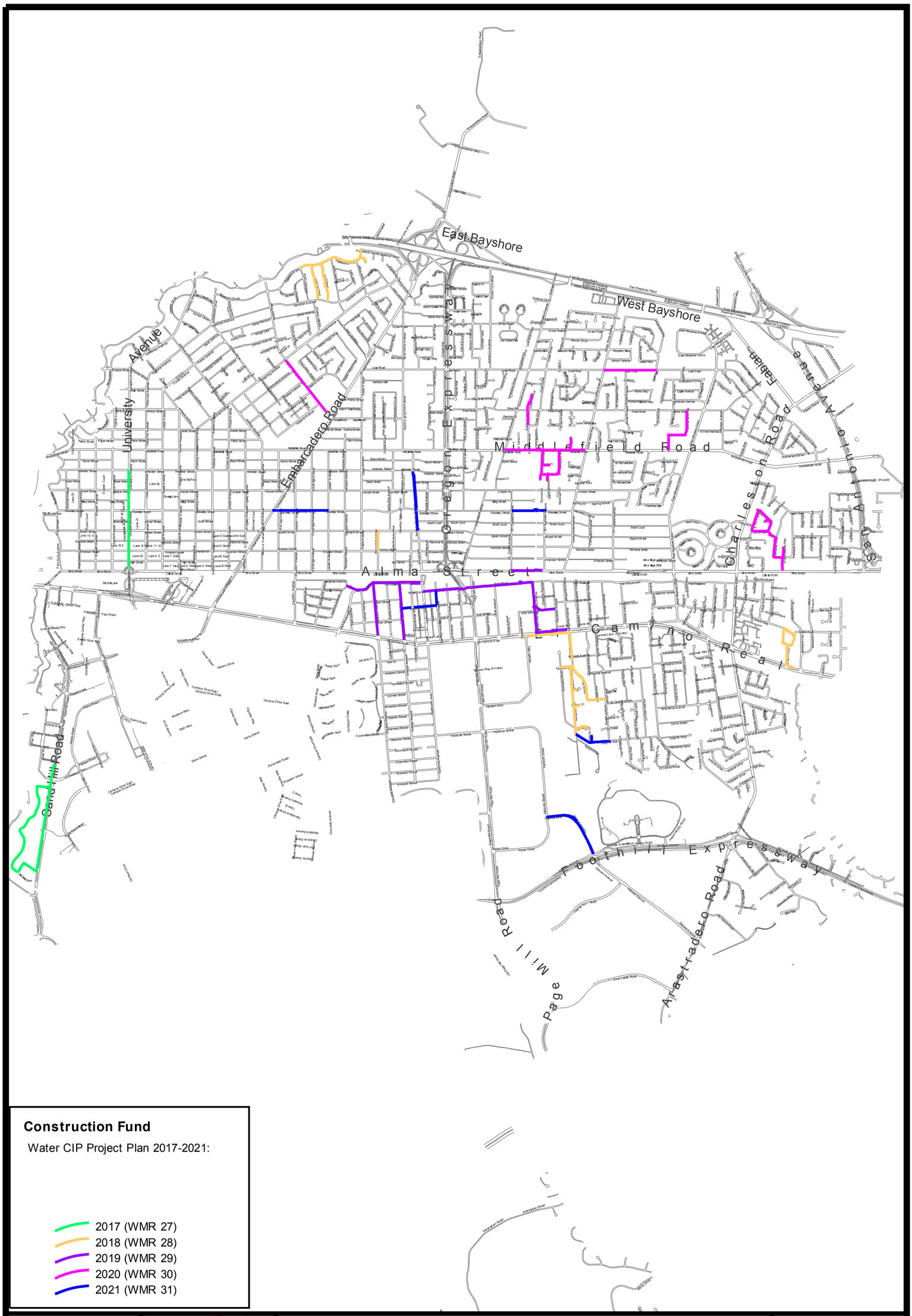

Construction Fund

Water CIP Project Plan 2017-2021:

- 2017 (WMR 27)
- 2018 (WMR 28)
- 2019 (WMR 29)
- 2020 (WMR 30)
- 2021 (WMR 31)

The City of Palo Alto

City of Palo Alto
Fiscal Year 2017 Adopted Budget
Water Fund Map

5 Year CIP Project Plan

This map is a product of the City of Palo Alto GIS

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Water Fund Map 2017-2021 (\\co-maps\gis$\gis\admin\Personal\wt view.mdb)

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Customer Connections

Installation of 8" HDPE pipe by directional drilling method

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

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.

Significant Changes

This project was previously titled "Water System Extensions". As part of the Fiscal Year 2015 budget, this project has been re-titled to "Water System, Customer Connections" to more accurately reflect the work done with this funding.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	460,000	463,000	690,000	710,700	732,021	753,981	776,601	3,663,303	0	N/A
Water Fund	N/A	3,000	0	0	0	0	0	0	0	0	N/A
Total	**N/A**	**463,000**	**463,000**	**690,000**	**710,700**	**732,021**	**753,981**	**776,601**	**3,663,303**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	463,000	463,000	690,000	710,700	732,021	753,981	776,601	3,663,303	0	N/A
Total	**N/A**	**463,000**	**463,000**	**690,000**	**710,700**	**732,021**	**753,981**	**776,601**	**3,663,303**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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System Improvements

Construction of El Camino Park Reservoir

Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Spring 2008
Initial Project Completion: Summer 2012

Revised Project Start: Spring 2010
Revised Project Completion: Summer 2017

Project Number: WS-08002

Emergency Water Supply Project

Description

The Emergency Water Supply and Storage Project includes the installation of three new wells, rehabilitation of five existing wells, rehabilitation of the Mayfield Pump Station and construction of a new water storage reservoir and pump station at El Camino Park. The work to be performed under this project includes the demolition of the existing mechanical and electrical equipment, well buildings and hardscape and construction of new mechanical and electrical equipment, utility piping, and hardscape at each well site. New water, storm and electrical utilities will be installed and connected to the City's existing distribution systems. Once completed, the five rehabilitated wells will supply water to the City's distribution system during emergencies that disrupt the normal water supplies.

Justification

This project is needed to meet minimum emergency water demand, as recommended by the California Department of Health Services (DHS). As defined by DHS, an emergency is the shutdown of the City of Palo Alto's water source, the San Francisco Public Utility Commission (SFPUC) aqueduct system. The recommended three new wells, in conjunction with the rehabilitated existing wells, new and existing reservoirs and pump stations will be capable of delivering a stable emergency water supply to Palo Alto residents and utility customers.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	34,481,719	779,712	508,504	271,208	0	0	0	0	271,208	0	35,261,431
Total	**34,481,719**	**779,712**	**508,504**	**271,208**	**0**	**0**	**0**	**0**	**271,208**	**0**	**35,261,431**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	27,585,375	779,712	508,504	271,208	0	0	0	0	271,208	0	28,365,087
Design	6,896,343	0	0	0	0	0	0	0	0	0	6,896,343
Total	**34,481,718**	**779,712**	**508,504**	**271,208**	**0**	**0**	**0**	**0**	**271,208**	**0**	**35,261,430**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Program: N-25

Environmental Impact Analysis:

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

Seismic Upgrade, Boronda Reservoir, December 2014

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:

Project Number: WS-09000

Seismic Water System Upgrades

Description

This project will provide structural reinforcement for the Monte Bello, Corte Madera, Park, Boronda, and Dahl reservoirs 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: seismic shut off valves, flexible joints at the inlet/outlet piping connections, backup power supplies, the relocation of overflow pipes, and reinforcement of interior pipe columns.

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, environmental damages, and possible mudslides causing significant property damage could occur. The seismic protection systems will preserve potable water after a seismic event.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	714,139	5,407,094	3,525,997	1,881,097	0	0	0	0	1,881,097	0	6,121,233
Total	**714,139**	**5,407,094**	**3,525,997**	**1,881,097**	**0**	**0**	**0**	**0**	**1,881,097**	**0**	**6,121,233**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	571,311	5,013,907	3,525,997	1,881,097	0	0	0	0	1,881,097	0	5,978,405
Design	142,827	0	0	0	0	0	0	0	0	0	142,827
Total	**714,138**	**5,013,907**	**3,525,997**	**1,881,097**	**0**	**0**	**0**	**0**	**1,881,097**	**0**	**6,121,232**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Relationship to Comprehensive Plan

Secondary Connection

Section: Local Landuse and Growth Management

Goal: L-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.

Installation of a new fire hydrant with FlowGuard fire hydrant check valve

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

Water Distribution System Improvements

Description

This project provides funds as needed 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 is necessary to maintain adequate quantities of quality water, meeting local, state, and federal safe drinking water standards.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	210,606	84,024	865,582	247,000	254,000	261,620	269,469	1,897,671	0	N/A
Total	**N/A**	**210,606**	**84,024**	**865,582**	**247,000**	**254,000**	**261,620**	**269,469**	**1,897,671**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	210,606	84,024	865,582	247,000	254,000	261,620	269,469	1,897,671	0	N/A
Total	**N/A**	**210,606**	**84,024**	**865,582**	**247,000**	**254,000**	**261,620**	**269,469**	**1,897,671**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

16" HDPE pipe being fused prior to installation

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

Water General Equipment/Tools

Description

This funding allows for the acquisition of new equipment and tools, the replacement of existing fusion equipment, and other associated tools, annually. The fusion equipment is used to fuse together pipe joints in the City's water distribution system.

Justification

As the 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	50,000	0	70,685	50,000	50,000	50,000	50,000	270,685	0	N/A
Total	**N/A**	**50,000**	**0**	**70,685**	**50,000**	**50,000**	**50,000**	**50,000**	**270,685**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	50,000	0	70,685	50,000	50,000	50,000	50,000	270,685	0	N/A
Total	**N/A**	**50,000**	**0**	**70,685**	**50,000**	**50,000**	**50,000**	**50,000**	**270,685**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

5/8" Badger water meter

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

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 each year.

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	635,457	282,908	817,092	565,000	500,000	515,000	530,450	2,927,542	0	N/A
Total	**N/A**	**635,457**	**282,908**	**817,092**	**565,000**	**500,000**	**515,000**	**530,450**	**2,927,542**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	635,457	282,908	817,092	565,000	500,000	515,000	530,450	2,927,542	0	N/A
Total	**N/A**	**635,457**	**282,908**	**817,092**	**565,000**	**500,000**	**515,000**	**530,450**	**2,927,542**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Recycled water piping

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 2017

Project Number: WS-07001

Water Recycling Facilities

Description

This funding allows the City of Palo Alto to fund 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 serve primarily the Stanford Research Park and provide an alternative supply source of 1,000 acre feet or 435,600 CCF per year. For context this represents 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 new 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 evaluating a wide range of alternative water supplies. Recycled water and groundwater are two such resources that are interrelated in their development and potential. Therefore, the City is taking an integrated approach to evaluating non-potable recycled water, shallow aquifer groundwater, deep aquifer groundwater, and Direct Potable Reuse and Indirect Potable Reuse.

The end product will be a recycled water strategic plan for the most flexible and robust use of these resources.

Significant Changes

While staff has addressed many issues regarding a future recycled water project including the completion and certification by the Council of the projectís 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 environmental document was essential for securing Federal or State grant or loan funding for the construction of the project, and now the City of Palo Alto 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	408,983	243,716	50,358	393,358	0	0	0	0	393,358	0	852,699
Total	**408,983**	**243,716**	**50,358**	**393,358**	**0**	**0**	**0**	**0**	**393,358**	**0**	**852,699**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	327,186	243,716	50,358	393,358	0	0	0	0	393,358	0	770,902
Design	81,796	0	0	0	0	0	0	0	0	0	81,796
Total	**408,982**	**243,716**	**50,358**	**393,358**	**0**	**0**	**0**	**0**	**393,358**	**0**	**852,698**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Program: N-26

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Siesmic Upgrade, Arastradero Turnout, June 2010

Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Fall 2006
Initial Project Completion: Summer 2008

Revised Project Start: Summer 2014
Revised Project Completion: Winter 2017

Project Number: WS-07000

Water Regulation Station Improvements

Description

This project will improve fourteen underground vaults and two above-ground water regulation facility locations. The improvements include: supervisory control and data acquisition (SCADA) chloramine monitors, pipe coating, wall sealing/painting, vault door replacement, lighting, valve replacement, and electrical upgrades.

Justification

These critical components in the water system require various improvements to increase reliability, safety and to prolong their service life. The San Francisco Public Utility Commission (SFPUC) turnouts are the main source of water supply to Palo Alto residents and need maintenance improvements. The pressure regulating stations protect pipelines from over-pressurization, which prevents water main breaks and customer outages. The electrical systems for these facilities need to be improved for staff safety.

Supplemental Information

The work locations of this project include Page Mill, Arastradero, California, Charleston, Mayfield, Hillview, Hewlett, Foothill 6, Foothill 7, Corte Madera, Boronda, Park, Dahl, Montebello vaults, Dahl booster and Lytton pump station.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	40,416	1,903,156	1,581,718	135,541	0	0	0	0	135,541	0	1,757,675
Total	**40,416**	**1,903,156**	**1,581,718**	**135,541**	**0**	**0**	**0**	**0**	**135,541**	**0**	**1,757,675**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	32,333	1,903,156	1,581,718	135,541	0	0	0	0	135,541	0	1,749,592
Design	8,083	0	0	0	0	0	0	0	0	0	8,083
Total	**40,416**	**1,903,156**	**1,581,718**	**135,541**	**0**	**0**	**0**	**0**	**135,541**	**0**	**1,757,675**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Program: N-24

Environmental Impact Analysis:

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

Seismic Upgrade, Dahl Reservoir, May 2006

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: Summer 2015

Project Number: WS-08001

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	42,869	2,098,314	2,170,820	320,682	0	0	0	0	320,682	0	2,534,371
Total	**42,869**	**2,098,314**	**2,170,820**	**320,682**	**0**	**0**	**0**	**0**	**320,682**	**0**	**2,534,371**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	34,295	2,098,314	2,170,820	320,682	0	0	0	0	320,682	0	2,525,797
Design	8,573	0	0	0	0	0	0	0	0	0	8,573
Total	**42,868**	**2,098,314**	**2,170,820**	**320,682**	**0**	**0**	**0**	**0**	**320,682**	**0**	**2,534,370**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Section: Local Landuse and Growth Management

Goal: L-1

Environmental Impact Analysis:

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

Newly installed fire hydrant service line and assembly on Greenwood Avenue

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

Water Service Hydrant Replacement

Description

This project replaces system control valves, deteriorated galvanized service lines, lead goose-necks, and fire hydrant valves and assemblies as a result of 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 when found.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	244,869	100,000	400,000	412,000	424,360	437,091	450,204	2,123,655	0	N/A
Total	**N/A**	**244,869**	**100,000**	**400,000**	**412,000**	**424,360**	**437,091**	**450,204**	**2,123,655**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	244,869	100,000	400,000	412,000	424,360	437,091	450,204	2,123,655	0	N/A
Total	**N/A**	**244,869**	**100,000**	**400,000**	**412,000**	**424,360**	**437,091**	**450,204**	**2,123,655**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

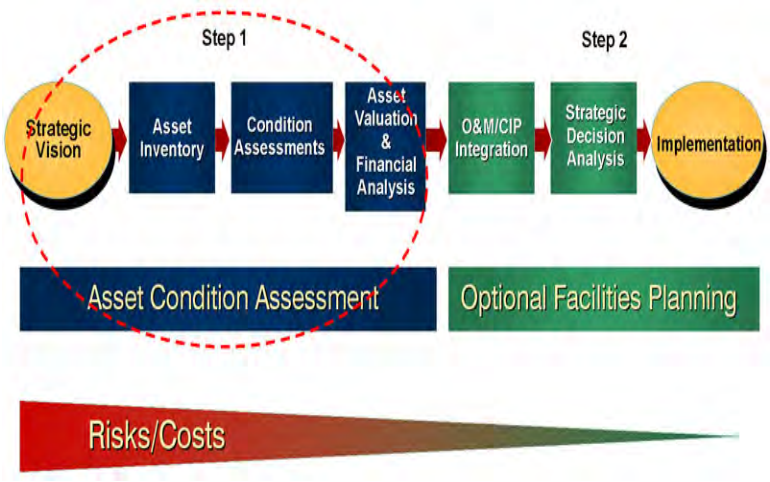
Policy: N-19

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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



Asset management and utility replacement planning flow chart

Fund: Water Fund - Operating
Category: System Improvements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Summer 2015
Initial Project Completion: Fall 2015

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: WS-15004

Water System Master Plan

Description

The primary objective of the City of Palo Alto 2015 Water System Master Plan is to identify and present capital improvements and replacement rates required to ensure optimal reliability levels of service to the existing distribution and transmission conveyance system. Further, the Plan serves as a guide for long-range capital improvement planning for improvements to ensure the community has a reliable water delivery system for years to come. The scope of work for this project entails seismic evaluation of the water transmission system, condition assessment of both the transmission and distribution system, optimal replacement and/or rehabilitation rates, and construction methods based on pipe material coupled with a master operations and maintenance plan. The Master Plan will integrate with the City's existing asset management GIS/ Topobase platform in order to establish a strategic capital improvement plan which stabilizes water rates.

Justification

Water conveyance system reliability and adequate capacity are critical to providing a high level of service to customers in Palo Alto. Rate stabilization through strategic capital improvements to the water conveyance system is essential. Continuous evaluation of system needs through condition assessment and seismic vulnerability improvements must be conducted to maintain high level of service reliability factoring lifecycle costing, meeting local, state, and federal safe drinking water standards

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	192,207	307,793	152,273	155,520	0	0	0	0	155,520	0	500,000
Total	**192,207**	**307,793**	**152,273**	**155,520**	**0**	**0**	**0**	**0**	**155,520**	**0**	**500,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	153,765	307,793	152,273	155,520	0	0	0	0	155,520	0	461,558
Design	38,442	0	0	0	0	0	0	0	0	0	38,442
Total	**192,207**	**307,793**	**152,273**	**155,520**	**0**	**0**	**0**	**0**	**155,520**	**0**	**500,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

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: 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, as needed, to improve the City's water distribution system. This system includes: connection facilities between the City's and the San Francisco Public Utility Commission's pipelines, emergency water wells within the City, pumping stations, water reservoirs, and pipelines.

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 when they are required.

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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	N/A	158,076	140,376	256,700	247,000	254,000	261,620	269,469	1,288,789	0	N/A
Total	**N/A**	**158,076**	**140,376**	**256,700**	**247,000**	**254,000**	**261,620**	**269,469**	**1,288,789**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	158,076	140,376	256,700	247,000	254,000	261,620	269,469	1,288,789	0	N/A
Total	**N/A**	**158,076**	**140,376**	**256,700**	**247,000**	**254,000**	**261,620**	**269,469**	**1,288,789**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

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

Water, Gas, Wastewater Utility GIS Data

Description

This funding 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; developing and prioritizing cost-effective capital improvement designs; and asset management of the City's utility enterprise system; thereby enhancing the level of service to utility customers.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Transfer from Gas Fund	N/A	110,917	110,917	122,009	134,209	147,630	152,059	156,621	712,528	0	N/A
Transfer from Wastewater Treatment Fund	N/A	110,917	110,917	122,009	134,209	147,630	152,059	156,621	712,528	0	N/A
Water Fund	N/A	166,004	110,916	122,007	134,210	147,630	152,059	156,620	712,526	0	N/A
Total	**N/A**	**387,838**	**332,750**	**366,025**	**402,628**	**442,890**	**456,177**	**469,862**	**2,137,582**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	387,838	332,750	366,025	402,628	442,890	456,177	469,862	2,137,582	0	N/A
Total	**N/A**	**387,838**	**332,750**	**366,025**	**402,628**	**442,890**	**456,177**	**469,862**	**2,137,582**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Transportation

Section: Reducing Auto Use

Goal: T-1

Policy: T-2

Program: T-10

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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Water Main Replacements

16" HDPE pipe ready to be installed

Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various locations

Managing Department: Utilities

Initial Project Start: Spring 2011
Initial Project Completion: Spring 2012

Revised Project Start: Summer 2015
Revised Project Completion: Winter 2017

Project Number: WS-11000

Water Main Replacement - Project 25

Description

Funding for this project will provide for the installation of approximately 11,872 linear feet of new High Density Polyethylene (HDPE) water mains, 225 new HDPE water services, 19 new fire hydrants and reconnection of 1 existing fire service within the City limits of Palo Alto. The project will replace mains and services on various streets, including streets in University South and the Leland Manor/Garland subdivisions.

Justification

Replacing the water distribution system mains with HDPE pipe will eliminate leaks in the project area, increase the reliability of the water distribution system, improve the quality of supplied water, and increase the required flow and pressure for fire protection.

Significant Changes

Two prior solicitations signaled changes in cost and availability in the current bidding environment due to large demand of construction work in the Bay Area. Therefore, staff had to reduce the the work scope during each bid solicitation in an effort to solicit bids that would stay within the project budget, without compromising safety. The construction contract has been awarded and projected project duration is 180 days.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	587,197	4,857,873	4,132,487	725,386	0	0	0	0	725,386	0	5,445,070
Total	**587,197**	**4,857,873**	**4,132,487**	**725,386**	**0**	**0**	**0**	**0**	**725,386**	**0**	**5,445,070**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	469,757	4,857,873	4,132,487	725,386	0	0	0	0	725,386	0	5,327,630
Design	117,439	0	0	0	0	0	0	0	0	0	117,439
Total	**587,196**	**4,857,873**	**4,132,487**	**725,386**	**0**	**0**	**0**	**0**	**725,386**	**0**	**5,445,069**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

16" HDPE pipe ready to be installed

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:

Project Number: WS-12001

Water Main Replacement - Project 26

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Year 2016. 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

Water Main Replacement Project 26 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	65,939	5,954,255	49,766	5,904,489	0	0	0	0	5,904,489	0	6,020,194
Total	**65,939**	**5,954,255**	**49,766**	**5,904,489**	**0**	**0**	**0**	**0**	**5,904,489**	**0**	**6,020,194**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	52,751	5,954,255	49,766	5,904,489	0	0	0	0	5,904,489	0	6,007,006
Design	13,187	0	0	0	0	0	0	0	0	0	13,187
Total	**65,938**	**5,954,255**	**49,766**	**5,904,489**	**0**	**0**	**0**	**0**	**5,904,489**	**0**	**6,020,193**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installed 16" HDPE pipe waiting to be backfilled

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:
Revised Project Completion:

Project Number: WS-13001

Water Main Replacement - Project 27

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2016 and 2017. 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 29,340 linear feet (which represents 2.3% of the City's Water distribution system) of mains and services on various streets within the City, including areas in Downtown North, University South and Professorville neighborhoods.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	568,065	42,500	6,206,216	0	0	0	0	6,206,216	0	6,248,716
Total	**0**	**568,065**	**42,500**	**6,206,216**	**0**	**0**	**0**	**0**	**6,206,216**	**0**	**6,248,716**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	5,680,651	0	0	0	0	5,680,651	0	5,680,651
Design	0	568,065	42,500	525,565	0	0	0	0	525,565	0	568,065
Total	**0**	**568,065**	**42,500**	**6,206,216**	**0**	**0**	**0**	**0**	**6,206,216**	**0**	**6,248,716**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

New HDPE main connecting to side street with new valve

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:
Revised Project Completion:

Project Number: WS-14001

Water Main Replacement - Project 28

Description

This project will fund the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2017 and 2018. 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 14,754 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 Old Palo Alto.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	585,107	5,851,070	0	0	0	6,436,177	0	6,436,177
Total	**0**	**0**	**0**	**585,107**	**5,851,070**	**0**	**0**	**0**	**6,436,177**	**0**	**6,436,177**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	5,851,070	0	0	0	5,851,070	0	5,851,070
Design	0	0	0	585,107	0	0	0	0	585,107	0	585,107
Total	**0**	**0**	**0**	**585,107**	**5,851,070**	**0**	**0**	**0**	**6,436,177**	**0**	**6,436,177**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

16" HDPE pipe ready to be installed by open trench method

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:
Revised Project Completion:

Project Number: WS-15002

Water Main Replacement - Project 29

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 12,523 linear feet (which represents 1.0% of the City's Water distribution system) of mains and services on various streets within the City, including areas in Leland Manor neighborhood.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	602,660	6,026,602	0	0	6,629,262	0	6,629,262
Total	**0**	**0**	**0**	**0**	**602,660**	**6,026,602**	**0**	**0**	**6,629,262**	**0**	**6,629,262**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	6,026,602	0	0	6,026,602	0	6,026,602
Design	0	0	0	0	602,660	0	0	0	602,660	0	602,660
Total	**0**	**0**	**0**	**0**	**602,660**	**6,026,602**	**0**	**0**	**6,629,262**	**0**	**6,629,262**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-18

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-25

Potential Board/Commission Review:

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:
Revised Project Completion:

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 2019 and 2020. 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 16,943 linear feet (which represents 1.4% of the City's Water distribution system) of mains and services on various streets within the City, including areas in Midtown West and Palo Verde.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	620,740	6,207,400	0	6,828,140	0	6,828,140
Total	**0**	**0**	**0**	**0**	**0**	**620,740**	**6,207,400**	**0**	**6,828,140**	**0**	**6,828,140**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	6,207,400	0	6,207,400	0	6,207,400
Design	0	0	0	0	0	620,740	0	0	620,740	0	620,740
Total	**0**	**0**	**0**	**0**	**0**	**620,740**	**6,207,400**	**0**	**6,828,140**	**0**	**6,828,140**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installed 16" HDPE pipe waiting to be backfilled

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:
Revised Project Completion:

Project Number: WS-19001

Water Main Replacement - Project 31

Description

Funding for this project is a placeholder that will allow for the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2020 and 2021. 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 is as yet undetermined but may include 15,000 - 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.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	639,362	6,396,320	7,035,682	0	7,035,682
Total	**0**	**0**	**0**	**0**	**0**	**0**	**639,362**	**6,396,320**	**7,035,682**	**0**	**7,035,682**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	6,396,320	6,396,320	0	6,396,320
Design	0	0	0	0	0	0	639,362	0	639,362	0	639,362
Total	**0**	**0**	**0**	**0**	**0**	**0**	**639,362**	**6,396,320**	**7,035,682**	**0**	**7,035,682**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Installed 16" HDPE pipe waiting to be backfilled

Fund: Water Fund - Operating
Category: Water Main Replacements
Project Location: Various Locations

Managing Department: Utilities

Initial Project Start: Summer 2021
Initial Project Completion: Winter 2023

Revised Project Start:
Revised Project Completion:

Project Number: WS-20000

Water Main Replacement - Project 32

Description

Funding for this project is a placeholder that will allow for the design and replacement of structurally deficient water mains and appurtenances in Fiscal Years 2021 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 is as yet undetermined but may include 15,000 - 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.

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.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Water Fund	0	0	0	0	0	0	0	658,543	658,543	0	658,543
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**658,543**	**658,543**	**0**	**658,543**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	0	0	0	0	0	0	6,588,210	6,588,210
Design	0	0	0	0	0	0	0	658,543	658,543	0	658,543
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**658,543**	**658,543**	**6,588,210**	**7,246,753**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-20

Relationship to Comprehensive Plan

Secondary Connection

Element: Natural Environment

Section: Water Resources

Goal: N-4

Policy: N-19

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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INTERNAL SERVICE FUND PROJECTS

CITY OF
PALO
ALTO

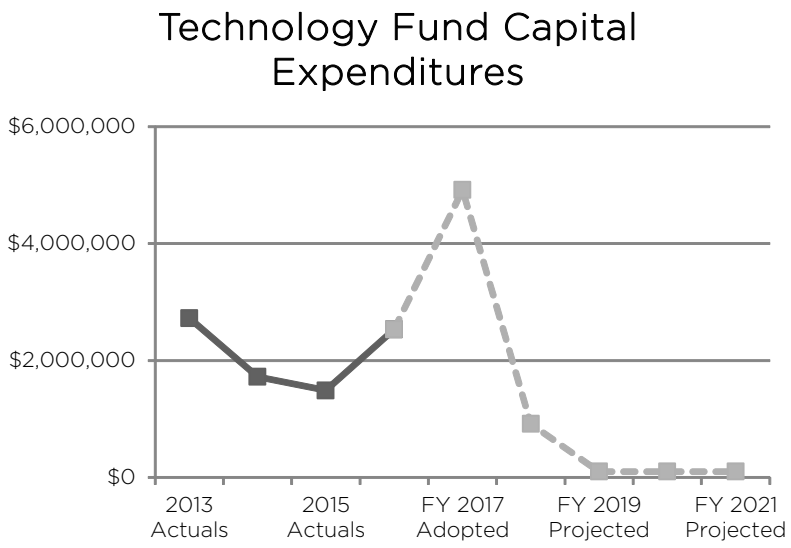
TECHNOLOGY FUND

CITY OF
PALO
ALTO

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 funds benefiting from the services and purchases incurred in the fund. Overall, a total of fourteen capital projects are programmed over the 5 year Capital Improvement Program (CIP), with nearly three quarters of the funding included in Fiscal Year 2017 ($4.9 million out of a total $6.1 million in the 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 Adopted Operating budget for additional information on Information Technology operating projects. 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



This Citywide Technology Upgrades category includes projects that benefit multiple City departments. They tend to have a larger scope and thus entail more coordination and complexity. For the 2017-2021 Capital Improvement Program, $3.9 million is allocated within this category, of which over $2.0 million represents funding approved by the City Council in prior years.

Recent Accomplishments:

- Information Security risk assessment has been completed and next steps identified.
- Assessment of a new Enterprise Asset Management System (EAMS) to capture operating and capital maintenance budgetary needs has been completed.
- Upgraded existing phone equipment at all City Fire Stations to new VoIP phones.

2017-2021 Capital Improvement Program

Recurring Projects:

There is one recurring Citywide Technology Upgrade project within this category:

- Radio Infrastructure Replacement. This project, which is funded by annual transfers from the General Fund and various enterprise funds, allows for the replacement of various items in the City's telecommunications infrastructure inventory. Most recently, the City has participated with 14 other local agencies in an effort organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move towards a county-wide 700 Mhz radio communication system. It is anticipated that the City's share for this project will be $4.2 million (General Fund: $2.8 million; Utility Funds: $1.4 million). As with the General Fund, the remaining share will be funded in future years as the costs associated with this project are refined.

Non-Recurring Projects:

- Telephone System Replacement: This project allows for an analysis and assessment of current and future requirements for voice-related communications within the City. The new telephone system, Avaya, was implemented at the end of 2012. The remaining funds from this CIP will be used to upgrade any remaining legacy phone equipment, hardware and/or software. The Adopted CIP includes $0.1 million for the completion of this project.
- IT Disaster Recovery: This initiative identifies and addresses gaps in business continuity that when completed, will benefit the entire City. The Adopted CIP includes $0.1 million for the completion of this project.
- Infrastructure Management System: As a result of a recommendation from the Infrastructure Blue Ribbon Commission (IBRC), the Public Works department in conjunction with the Information Technology department are implementing an Enterprise Asset Management Solution (EAMS). The Adopted CIP includes $0.1 million for the completion of this project.
- Interactive Voice Response: This project will purchase and implement an Interactive Voice Response (IVR) system for the Utilities Department. The IVR system will supplement and work in conjunction with the Utilities customer service call center Automated Call Distribution (ACD) system in order to enhance the Utilities department customer service call center operations. The Adopted CIP includes $0.1 million for the completion of this project.

Department Technology Upgrades and Improvements

The Department Technology Upgrades category includes projects that benefit one or a limited number of City departments. For the 2017-2021 Capital Improvement Program, $2.3 million is programmed within this category. All funding for this category was approved by the City Council in prior years.

Recent Accomplishments:

- Creation of a functioning Geographic Information System and Accela interface
- Development of expired permit notification through the Accela permitting system

- Upgraded from Accela Classic to Accela V360 permitting system
- Launched an inspection scheduling app used by the public that allows customers to view or schedule their own building inspections
- Launched Green Halo project to assist sign-up and tracking of recycling activities

2017-2021 Capital Improvement Program

Recurring Projects:

The 2017-2021 Adopted CIP includes one recurring project within this category:

- Utilities Customer Bill System Continuous 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. This project will continue to be recurring until an upgrade or replacement of the ERP and Utilities Billing system are completed. After the systems are implemented, the project will be reevaluated to determine if recurring funding is required ($0.2 million).

Non-Recurring Projects:

- Public Safety Computer-Aided Dispatch Replacement: The old Public Safety CAD system, PSSI, was replaced by the Intergraph CAD system. This replacement was a Tri-City coordinated effort between Mountain View, Los Altos, and Palo Alto. The Adopted CIP includes $0.4 million for the completion of this project.
- Fire Mobile Data: This project will install mobile data computer technology in the new ambulances being procured in the Fire Department. This will allow for the access of fire hazardous materials and other information, mapping capabilities, uploading of reports, and the exchange of information between the Dispatch Center, Emergency Operations Center, and the field. The Adopted CIP includes $0.01 million for the completion of this project.
- Development Center Blueprint Technology Enhancements: This project allows for the introduction of new technologies to support business processes, in an exercise to optimize and greatly improve customer service, at the Development Center. Major enhancements to the existing Accela permitting system are included in this initiative. The Adopted CIP includes $0.6 million for the completion of this project.
- Permit Information Tracking System: This project implements and updates a multi-module automated Permit Tracking system. The system is used to track and monitor many types of permits and other activities such as applications, planning entitlements, building and public works permits, licenses, inspections, and code enforcement cases. The Adopted CIP includes $0.07 million for the completion of this project.
- Library RFID Implementation: This project will implement radio frequency identification (RFID) technology for use in circulating and managing library collections.The Adopted CIP includes $0.3 million for the completion of this project.
- Library Computer System Software: The procurement of a new Library Computer System or also referred to as an ILS (Integrated Library System) was completed. The implementation of the ILS will be completed in the latter part of this fiscal year. The Adopted CIP includes $0.2 million for the completion of this project.

- Virtual Library Branch: The Library Department will explore options to procure an off-the-shelf or custom developed virtual branch of the library. The Adopted CIP includes $0.2 million for the completion of this project.
- Mobile In-Car Video: This project includes upgrading the Mobile In-Car Video System of the entire police department fleet (28 vehicles), testing of nine body-worn cameras by the Traffic Safety Team and patrol officers, and the outfitting of one Fire Service vehicle with a Mobile In-Car Video System. The Adopted CIP includes $0.03 million for the completion of this project.

Summary of Capital Activity

TECHNOLOGY FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Source of Funds									
Transfers from Other Funds									
Transfers from Electric Fund									
TE-10001	Utilities Customer Billing System Continuous Support	122,855	24,572	122,856	0	0	0	0	122,856
TE-05000	Radio Infrastructure Replacement	0	97,412	132,412	80,912	5,000	5,000	5,000	228,324
	Transfers from Electric Fund Total	**122,855**	**121,984**	**255,268**	**80,912**	**5,000**	**5,000**	**5,000**	**351,180**
Transfers from Gas Fund									
TE-10001	Utilities Customer Billing System Continuous Support	47,317	9,463	47,317	0	0	0	0	47,317
TE-05000	Radio Infrastructure Replacement	0	97,412	132,412	80,912	5,000	5,000	5,000	228,324
	Transfers from Gas Fund Total	**47,317**	**106,875**	**179,729**	**80,912**	**5,000**	**5,000**	**5,000**	**275,641**
Transfers from General Fund									
TE-14002	Library Virtual Branch	0	0	0	0	0	0	0	0
TE-05000	Radio Infrastructure Replacement	0	1,328,749	246,798	479,300	64,000	64,000	64,000	918,098
	Transfers from General Fund Total	**0**	**1,328,749**	**246,798**	**479,300**	**64,000**	**64,000**	**64,000**	**256,000**
Transfers from Wastewater Collection Fund									
TE-10001	Utilities Customer Billing System Continuous Support	15,856	3,171	15,856	0	0	0	0	15,856
TE-05000	Radio Infrastructure Replacement	0	97,412	132,412	80,912	5,000	5,000	5,000	228,324
	Transfers from Wastewater Collection Fund Total	**15,856**	**100,583**	**148,268**	**80,912**	**5,000**	**5,000**	**5,000**	**244,180**
Transfers from Water Fund									
TE-10001	Utilities Customer Billing System Continuous Support	28,170	5,634	28,170	0	0	0	0	28,170
TE-05000	Radio Infrastructure Replacement	0	97,412	132,412	80,912	50,000	5,000	5,000	273,324

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
	Transfers from Water Fund Total	**28,170**	**103,046**	**160,582**	**80,912**	**50,000**	**5,000**	**5,000**	**301,494**
Transfers from Fiber Optics Fund									
TE-10001	Utilities Customer Billing System Continuous Support	941	188	942	0	0	0	0	942
	Transfers from Fiber Optics Fund Total	**941**	**188**	**942**	**0**	**0**	**0**	**0**	**942**
Transfers from Refuse Fund									
TE-10001	Utilities Customer Billing System Continuous Support	28,719	5,744	28,718	0	0	0	0	28,718
	Transfers from Refuse Fund Total	**28,719**	**5,744**	**28,718**	**0**	**0**	**0**	**0**	**28,718**
Transfers from Storm Drainage Fund									
TE-10001	Utilities Customer Billing System Continuous Support	6,142	1,229	6,143	0	0	0	0	6,143
	Transfers from Fiber Optics Fund Total	**6,142**	**1,229**	**6,143**	**0**	**0**	**0**	**0**	**6,143**
	Total Transfers from Other Funds	**250,000**	**1,768,398**	**1,026,448**	**802,948**	**129,000**	**84,000**	**84,000**	**1,464,298**
Other Revenue									
TE-05000	Radio Infrastructure Replacement: Stanford	0	114,464	114,464	114,464	16,000	16,000	16,000	276,928
	Other Revenue Total	**0**	**114,464**	**114,464**	**114,464**	**16,000**	**16,000**	**16,000**	**276,928**
	Total Other Revenue	**0**	**114,464**	**114,464**	**114,464**	**16,000**	**16,000**	**16,000**	**276,928**
	Total Sources	**250,000**	**1,882,862**	**1,140,912**	**917,412**	**145,000**	**100,000**	**100,000**	**1,741,226**
Use of Funds									
Citywide Technology Upgrades and Improvements									
TE-13004	Infrastructure Management System	35,765	124,483	90,944	0	0	0	0	90,944
TE-13001	Interactive Voice Response	0	23,819	106,181	0	0	0	0	106,181
TE-01012	IT Disaster Recovery Plan	110,887	254,709	100,713	0	0	0	0	100,713
TE-05000	Radio Infrastructure Replacement	78,394	1,256,022	2,203,004	917,412	100,000	100,000	100,000	3,420,416
TE-00010	Telephone System Replacement	178,095	140,762	143,194	0	0	0	0	143,194
	Total Citywide Technology Upgrades and Improvements	**403,141**	**1,799,795**	**2,644,036**	**917,412**	**100,000**	**100,000**	**100,000**	**3,861,448**
Department Technology Upgrades and Improvements									
TE-12001	Development Center Blueprint Technology Enhancement	318,163	333,681	626,731	0	0	0	0	626,731
TE-08004	Fire Mobile Data Computer	34,040	18,690	8,353	0	0	0	0	8,353
TE-11001	Library Computer System Software	73,750	166,695	200,868	0	0	0	0	200,868

TECHNOLOGY FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
TE-06001	Library RFID Implementation	174,859	0	314,589	0	0	0	0	314,589
TE-11002	Mobile In-Car Video System Replacement	644	0	30,902	0	0	0	0	30,902
TE-95016	Permit Information Tracking System	27,925	75,364	73,359	0	0	0	0	73,359
TE-09000	Public Safety Computer-Aided Dispatch Replacement	423,432	75,380	420,168	0	0	0	0	420,168
TE-10001	Utilities Customer Bill System Improvements	17,998	50,000	425,656	0	0	0	0	425,656
TE-14002	Virtual Library Branch	13,084	9,462	170,425	0	0	0	0	170,425
	Total Department Technology Upgrades and Improvements	**1,083,895**	**729,272**	**2,271,051**	**0**	**0**	**0**	**0**	**2,271,051**
	Total Uses	**1,487,036**	**2,529,067**	**4,915,087**	**917,412**	**100,000**	**100,000**	**100,000**	**6,132,499**

Citywide Technology Upgrades and Improvements

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: Summer 2013
Revised Project Completion: Fall 2016

Project Number: TE-13004

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 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

2017-2021 CIP: Project completion revised to reflect phased approach for project, in which a needs assessment study provided recommendations for establishing the IMS, and an implementation phase is currently underway.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	84,573	215,427	124,483	90,944	0	0	0	0	90,944	0	300,000
Total	**84,573**	**215,427**	**124,483**	**90,944**	**0**	**0**	**0**	**0**	**90,944**	**0**	**300,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	84,573	215,427	124,483	90,944	0	0	0	0	90,944	0	300,000
Total	**84,573**	**215,427**	**124,483**	**90,944**	**0**	**0**	**0**	**0**	**90,944**	**0**	**300,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Land Use and Community Design

Section: Public Ways

Goal: L-9

Policy: L-79

Environmental Impact Analysis:

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

Interactive Voice Response System

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 2013

Revised Project Start: Fall 2016
Revised Project Completion: Fall 2017

Project Number: TE-13001

Interactive Voice Response

Description

This project will purchase and implement an Interactive Voice Response (IVR) system for the Utilities Department. The IVR system will supplement and work in conjunction with the Utilities customer service call center Automated Call Distribution (ACD) system in order to enhance the Utilities department customer service call center operations.

Justification

The purpose of the IVR system is to 1) Improve customer satisfaction levels by providing callers with a choice on how to interact with the call center; 2) Improve Customer Service Representative (CSR) productivity and reduce caller wait times by allowing customers to automatically access information or pay their utility bill without the need to speak to a CSR; 3) Extend hours of operation without increasing Customer Service staff or work hours without increasing operating cost; and 4) Allow for productivity and efficiency of the call center to be measured and benchmarked.

Supplemental Information

In addition to the online customer portal "My Utilities Account", the IVR will provide customers 24/7 access to review and pay their utility bills. Customers who are transferred to a customer service representative will have the opportunity to participate in a customer satisfaction survey.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	0	200,000	23,819	106,181	0	0	0	0	106,181	0	130,000
Total	**0**	**200,000**	**23,819**	**106,181**	**0**	**0**	**0**	**0**	**106,181**	**0**	**130,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	200,000	23,819	106,181	0	0	0	0	106,181	0	130,000
Total	**0**	**200,000**	**23,819**	**106,181**	**0**	**0**	**0**	**0**	**106,181**	**0**	**130,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-10

Program: Supports Program C10 and C12

Environmental Impact Analysis:

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

IT Disaster Recovery

Fund: Technology Fund
Category: Citywide Technology Upgrades and Improvements
Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2012
Initial Project Completion: Summer 2015

Revised Project Start: Summer 2015
Revised Project Completion: Winter 2017

Project Number: TE-01012

IT Disaster Recovery Plan

Description

This project provides the City with 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 three 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

2017-2021 CIP: Due to the implementation of other disaster recovery and business continuity solutions, this project is slated to be completed in Fiscal Year 2017.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	223,201	355,421	254,709	100,713	0	0	0	0	100,713	0	578,623
Total	**223,201**	**355,421**	**254,709**	**100,713**	**0**	**0**	**0**	**0**	**100,713**	**0**	**578,623**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	223,201	355,421	254,709	100,713	0	0	0	0	100,713	0	578,623
Total	**223,201**	**355,421**	**254,709**	**100,713**	**0**	**0**	**0**	**0**	**100,713**	**0**	**578,623**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Natural Hazards

Goal: N-10

Policy: No policies/program related to this project

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

Public Safety Radios

Fund: Technology Fund
Category: Citywide Technology Upgrades and Improvements
Project Location: Various
Managing Department: Information Technology
Initial Project Start:
Initial Project Completion:
Project Number: TE-05000

Radio Infrastructure Replacement

Description

This project funds the annual replacement of various items in the City's telecommunications infrastructure inventory in accordance with a life-cycle replacement schedule. The City operates two radio systems (UHF frequency band and VHF frequency band) with five radio sites for each system. Most recently, the City has participated with 14 other local agencies in an effort organized by the Silicon Valley Regional Interoperability Authority (SVRIA) to move towards a county-wide 700 Mhz radio communication system. This project provides funding for the City's share of establishing an interoperable radio communication system within the region. Upon completion of the project, the law enforcement, fire and rescue service, emergency medial response, and disaster recovery units within the participating agencies will be able to communicate via an integrated voice and data communications system.

Justification

Communications system require continued replacement as infrastructure and equipment ages. Further, within the region, the communications system is fragmented and through the SVRIA it is intended to use the same system for all Santa Clara County agencies.

Supplemental Information

Beginning with Fiscal Year 2016, approximately $1.3 million in funding was available for the SVRIA project from annual transfers from the General Fund and various Utility Enterprise Funds. Of the $1.3 million, approximately $0.8 million was contributed by the General Fund and $0.5 million from various utility funds. According to most recent estimates, the City's costs over the life of the project will be $4.2 million. Of that amount, approximately $2.6 million is the respon-

sibility of the General Fund, with the Utilities Funds and Stanford responsible for the remaining amounts.

As part of Fiscal Year 2015 closing process, $1.0 million from the General Fund was allocated for this project and an additional $1.0 million was allocated to the project as part of the Fiscal Year 2016 mid-year budget, leaving a General Fund funding need of approximately $600,000. This funding requirements to complete the project are included in Fiscal Year 2017 and Fiscal Year 2018.

For the Utilities Funds, Fiscal Year 2017 costs are anticipated to be approximately $510,000. As with the General Fund portion, remaining implementation costs to complete the project are allocated in Fiscal Year 2017 and Fiscal Year 2018. Expenses planned for Fiscal Year 2018 include radio infrastructure ($817,000).

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	N/A	83,036	114,464	114,464	114,464	16,000	16,000	16,000	276,928	0	N/A
Technology Fund	N/A	2,339,465	687,908	1,312,092	0	0	0	0	1,312,092	0	N/A
Transfer from Electric Fund	N/A	46,309	97,413	132,413	80,913	5,000	5,000	5,000	228,326	0	N/A
Transfer from Gas Fund	N/A	46,309	97,413	132,413	80,912	5,000	5,000	5,000	228,325	0	N/A
Transfer from General Fund	N/A	1,000,000	64,000	246,798	479,300	64,000	64,000	64,000	918,098	0	N/A
Transfer frm Waste-water Collection Fnd	N/A	0	97,412	132,412	80,912	5,000	5,000	5,000	228,324	0	N/A
Transfer frm Waste-water Treatment Fnd	N/A	46,309	0	0	0	0	0	0	0	0	N/A
Transfer from Water Fund	N/A	46,309	97,412	132,412	80,912	5,000	5,000	5,000	228,324	0	N/A
Total	**N/A**	**3,607,737**	**1,256,022**	**2,203,004**	**917,413**	**100,000**	**100,000**	**100,000**	**3,420,417**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	3,607,737	1,256,022	2,203,004	917,413	100,000	100,000	100,000	3,420,417	0	N/A
Total	**N/A**	**3,607,737**	**1,256,022**	**2,203,004**	**917,413**	**100,000**	**100,000**	**100,000**	**3,420,417**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Potential Board/Commission Review:

Architectural Review Board

Utilities Advisory Commission

Environmental Impact Analysis:

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

New Telephone System Replacement

Fund: Technology Fund
Category: Citywide Technology Upgrades and Improvements
Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2007
Initial Project Completion: Summer 2011

Revised Project Start: Summer 2007
Revised Project Completion: Spring 2017

Project Number: TE-00010

Telephone System Replacement

Description

This project allows for an analysis and assessment of current and future requirements for voice-related communications within the City. The new telephone system, Avaya, was implemented at the end of 2012. The remaining funds from this CIP will be used to upgrade any remaining legacy phone equipment, hardware and/or software.

Justification

The reliability of the City's telephone and telecommunications services is critical to city operations. Telecommunications technology has developed significantly in recent years. Newer switches will offer more compatibility, provide greater functionality, and require less space and power than the current equipment. As resources are distributed throughout the City, the PBX system will be required to provide greater flexibility to in-house staff and to remote locations.

Supplemental Information

This project allows for an analysis and assessment of current and future requirements for voice-related communications within the City, and for the acquisition of the new system. Requirements will be determined for all City departments, and include telecommunications, the telephone switch network (PBX), connectivity to the data communications network, implementation strategies for voice over the fiber backbone, and voice mail requirements and applications. The new telephone system, Avaya, was implemented at the end of 2012. This project also funded the e911 telephone implementation, which allowed the Police Department staff

to pinpoint the location from which emergency calls are received from within City owned or leased facilities.

The fire stations throughout the City were initially excluded from this project due to cost and the low number of telephones needing to be replaced. It has since been determined that an upgrade to the telephones at the fire stations is required due to the antiquated state of these telephones. Also, a separate police network is now required to meet the Department of Justice regulations.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	2,218,507	427,150	140,762	143,194	0	0	0	0	143,194	0	2,502,463
Total	**2,218,507**	**427,150**	**140,762**	**143,194**	**0**	**0**	**0**	**0**	**143,194**	**0**	**2,502,463**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	2,218,507	427,150	140,762	143,194	0	0	0	0	143,194	0	2,502,463
Total	**2,218,507**	**427,150**	**140,762**	**143,194**	**0**	**0**	**0**	**0**	**143,194**	**0**	**2,502,463**

Operating Impact

The maintenance costs associated with the telephone system is accounted for in the operating budget within the Technology Fund. Maintenance costs are shared by all city departments.

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Relationship to Comprehensive Plan

Secondary Connection

Element: Business & Economics

Potential Board/Commission Review:

Utilities Advisory Commission

Environmental Impact Analysis:

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

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Department Technology Upgrades and Improvements

Development Center

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: Summer 2011
Revised Project Completion: Summer 2018

Project Number: TE-12001

Development Center Blueprint Technology Enhancements

Description

This project will allow for the provision of technology enhancements to the Development Services Department. Some areas of enhancement include: installation of a walk-in queuing system; conversion of Accela V360 to Accela 8.0; configuration and implementation of Accela Citizen Access; creation of web self service and publications sites; creation of a functioning Geographic Information System and Accela interface; permit centric mobile applications; electronic plan review system and automated permit tracking system; development of expired permit notification; purchase of field ready hardware and associated data plans to support inspections; and creation of performance reports/metrics.

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 Development Services Department.

Significant Changes

2017-2021 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. Some of the projects that are in progress are the creation of web self-service and publications sites; the development of permit centric mobile applications; the implementation of electronic plan review system; 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 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	777,590	960,411	333,681	626,731	0	0	0	0	626,731	0	1,738,002
Total	**777,590**	**960,411**	**333,681**	**626,731**	**0**	**0**	**0**	**0**	**626,731**	**0**	**1,738,002**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	777,590	960,411	333,681	626,731	0	0	0	0	626,731	0	1,738,002
Total	**777,590**	**960,411**	**333,681**	**626,731**	**0**	**0**	**0**	**0**	**626,731**	**0**	**1,738,002**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Environmental Impact Analysis:

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

Palo Alto Fire Engine

Fund: Technology Fund
Category: Department Technology Upgrades and Improvements
Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2007
Initial Project Completion: Summer 2008

Revised Project Start: Summer 2007
Revised Project Completion: Winter 2016

Project Number: TE-08004

Fire Mobile Data Computer

Description

This project will install mobile data computer technology in the new ambulances that are being procured by the Fire Department. This will allow for the access of fire hazardous materials and other information; mapping capabilities and uploading of reports; and the exchange of information between the Dispatch Center, Emergency Operations Center and the field. This project will include hardware for broadband wireless access, as well as creating wireless access points at six fire stations to allow upload of reports by Fire personnel.

Justification

This project will improve the capabilities of information-sharing between the 9-1-1 Dispatch Center, the Emergency Operations Center, and field personnel, and provide field access to critical internet-based fire hazardous information and the City's Geographic Information System (GIS) mapping database. Installation of a global positioning system (GPS) will be available to track Fire resources to ensure fast and accurate deployment of resources during an emergency.

Significant Changes

2017-2021 CIP: The new ambulances will not arrive until Fiscal Year 2017; therefore, this project will close as soon as the ambulances have arrived and the technology has been installed.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	222,957	27,043	18,690	8,353	0	0	0	0	8,353	0	250,000
Total	**222,957**	**27,043**	**18,690**	**8,353**	**0**	**0**	**0**	**0**	**8,353**	**0**	**250,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	222,957	27,043	18,690	8,353	0	0	0	0	8,353	0	250,000
Total	**222,957**	**27,043**	**18,690**	**8,353**	**0**	**0**	**0**	**0**	**8,353**	**0**	**250,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-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

Fund: Technology Fund
Category: Department Technology Upgrades and Improvements
Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2012
Initial Project Completion: Summer 2013

Revised Project Start: Summer 2012
Revised Project Completion: Winter 2016

Project Number: TE-11001

Library Computer System Software

Description

This project will purchase and implement state of the art software or software services to provide the functionality of the Library's current integrated library system (ILS) and upgrade it. The ILS performs and manages most of the library transactions and operations, including circulation of books and other materials, customer accounts and collections databases; the public library catalog; processes associated with acquiring and cataloging items for the collection; and statistical reporting. The average life expectancy of an ILS is about seven years. The Library's most recent ILS was installed in 2005. The project and associated costs are detailed in the Library's Technology Plan completed in 2009 and reviewed by the Library Advisory Commission.

Justification

This project will allow for a more secure, reliable, online system for public and staff transactions.

Significant Changes

This project has experienced delays due to delays in the completion of bond-funded library projects. It is now anticipated that this project will be completed in winter 2016, as a vendor was selected and the contract was awarded in winter 2014.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	132,437	367,563	166,695	200,868	0	0	0	0	200,868	0	500,000
Total	**132,437**	**367,563**	**166,695**	**200,868**	**0**	**0**	**0**	**0**	**200,868**	**0**	**500,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	132,437	367,563	166,695	200,868	0	0	0	0	200,868	0	500,000
Total	**132,437**	**367,563**	**166,695**	**200,868**	**0**	**0**	**0**	**0**	**200,868**	**0**	**500,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

Goal: C-2

Policy: C-9

Program: T-10

Relationship to Comprehensive Plan

Secondary Connection

Element: Business & Economics

Potential Board/Commission Review:

Library Advisory 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 2009
Initial Project Completion: Summer 2014

Revised Project Start: Summer 2009
Revised Project Completion: Summer 2017

Project Number: TE-06001

Library RFID Implementation

Description

This project will implement radio frequency identification (RFID) technology for use in circulating and managing library collections. The first year of the project, consisting of a feasibility study and market research to cost out library-wide implementation, was completed in 2006. In 2012 to 2016, collections at the three renovated libraries have been RFID tagged. Two Automated Materials Handling systems were installed. The Library's online service platform acquired in 2016 created opportunities for exploration of work efficiency and effectiveness by utilizing this technology.

Justification

Implementation of RFID technology and automated materials handling (AMH) equipment will facilitate the use of self-service options and will help staff cope with increasing workloads. It will improve staff efficiency by enabling faster handling of check-out and check-in of books and other library materials. RFID and AMH will enable staff to return materials to the shelves more quickly, reduce repetitive motions and resulting injuries for staff, and free staff to provide direct customer service.

Significant Changes

This project has experienced delays due to delays in the bond-funded library construction projects. The project was completed in Fiscal Year 2016. But the online library service platform acquired in 2016 lent opportunities for staff to identify efficiency in the use of the AMH. The Library started in 2016 a project Lean Management Using RFID Technology . It is expected the Library will complete implementation of the recommendation from the project consultant at the end of 2017.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	478,011	314,589	0	314,589	0	0	0	0	314,589	0	792,600
Total	**478,011**	**314,589**	**0**	**314,589**	**0**	**0**	**0**	**0**	**314,589**	**0**	**792,600**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	478,011	314,589	0	314,589	0	0	0	0	314,589	0	792,600
Total	**478,011**	**314,589**	**0**	**314,589**	**0**	**0**	**0**	**0**	**314,589**	**0**	**792,600**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Social Services

Goal: C-2

Policy: C-10

Program: C-12

Potential Board/Commission Review:

Library Advisory 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 2010
Initial Project Completion: Spring 2011

Revised Project Start: Spring 2013
Revised Project Completion: Fall 2016

Project Number: TE-11002

Mobile/In-Car Video System Replacement

Description

This project includes upgrading the Mobile In-Car Video System of the entire police department fleet (28 vehicles), testing of nine body-worn cameras by the Traffic Safety Team and patrol officers, and the outfitting of one Fire Service vehicle with a Mobile In-Car Video System.

Justification

The department's legacy mobile in-car video system was purchased in 2007 and reached the end of its life-cycle in 2011. Improved technology, video resolution and audio quality, as well as the emergence of body-worn cameras will provide enhanced incident review for court cases and internal investigations and training.

Significant Changes

The project was delayed from it's original timeline due to a decision by the department to wait for more mature technology to come to market.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	644	30,901	0	30,902	0	0	0	0	30,902	0	31,546
Total	**644**	**30,901**	**0**	**30,902**	**0**	**0**	**0**	**0**	**30,902**	**0**	**31,546**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	644	30,901	0	30,902	0	0	0	0	30,902	0	31,546
Total	**644**	**30,901**	**0**	**30,902**	**0**	**0**	**0**	**0**	**30,902**	**0**	**31,546**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Environmental Impact Analysis:

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

Development Center

Fund: Technology Fund
Category: Department Technology Upgrades and Improvements
Project Location: Various

Managing Department: Information Technology

Initial Project Start: Summer 2004
Initial Project Completion: Summer 2005

Revised Project Start: Summer 2005
Revised Project Completion: Spring 2017

Project Number: TE-95016

Permit Information Tracking System

Description

This project is to implement and update a multi-module automated Permit Tracking system. The system is used to track and monitor many types of permits and other activities such as applications, planning entitlements, building and public works permits, licenses, inspections, and code enforcement cases. One of the most advantageous uses of the system is to monitor the complete development project from planning to occupancy.

Justification

The Interdepartmental Cooperation Subcommittee of the Customer Service Committee has identified over 50 different types of permit procedures that require interdepartmental approval and coordination, and a need for improved tracking systems. Most of these permit procedures can be significantly improved through the use of an automated permit tracking system.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	114,229	148,723	75,364	73,359	0	0	0	0	73,359	0	262,952
Total	**114,229**	**148,723**	**75,364**	**73,359**	**0**	**0**	**0**	**0**	**73,359**	**0**	**262,952**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	114,229	148,723	75,364	73,359	0	0	0	0	73,359	0	262,952
Total	**114,229**	**148,723**	**75,364**	**73,359**	**0**	**0**	**0**	**0**	**73,359**	**0**	**262,952**

Relationship to Comprehensive Plan	Relationship to Comprehensive Plan
Primary Connection	**Secondary Connection**
Element: Community Services & Facilities	Element: Governance
Section: Customer Service	
Goal: C-2	
Policy: C-10	

Environmental Impact Analysis:

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

New CAD Console

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: Winter 2017

Project Number: TE-09000

Public Safety Computer-Aided Dispatch Replacement

Description

This project replaces the existing 1999 public safety Computer Aided Dispatch (CAD) and Records Management System (RMS) that is beyond the reliable life-cycle for this type of technology. As a result, maintenance costs are higher and features and functionality available with more current technology cannot be fully realized. This project will jointly acquire new CAD and RMS systems with the cities of Mountain View and Los Altos, as well as integrate this technology with the current Fire Records Management System.

Justification

The project will improve information-sharing between the 911 centers in Palo Alto, Mountain View, and Los Altos. This project is in the final phase of a project that began in 2007-08 with a joint Request for Proposal. 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. A joint purchase should reduce the fiscal impact to any one city.

Supplemental Information

This replacement project will take advantage of the foundation of hardware, software and knowledge in the North County, as well as provide integration across our jurisdictions which will help to improve communication, provide enhanced connectivity, and allow for better coordination of public safety operations in the field. The Computer Aided Dispatch (CAD) system went

live on March 17, 2014 and has passed acceptance. The implementation of the Records Management System (RMS) in in process, with completion estimated for winter 2016.

Significant Changes

2017-2021 CIP: The project has taken longer to complete than anticipated due to additional configuration work from the vendor that was necessary for successful project completion.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	904,452	495,548	75,380	420,168	0	0	0	0	420,168	0	1,400,000
Total	**904,452**	**495,548**	**75,380**	**420,168**	**0**	**0**	**0**	**0**	**420,168**	**0**	**1,400,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	714,676	495,548	75,380	420,168	0	0	0	0	420,168	0	1,210,224
Design	189,776	0	0	0	0	0	0	0	0	0	189,776
Total	**904,452**	**495,548**	**75,380**	**420,168**	**0**	**0**	**0**	**0**	**420,168**	**0**	**1,400,000**

Relationship to Comprehensive Plan

Primary Connection

Policy: C-9

Program: C-12

Environmental Impact Analysis:

N/A

Utilities Customer Billing System Improvements

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

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.

Significant Changes

This project has traditionally been a recurring project, with new funding being transferred to the Technology Fund from the various enterprise funds each year. We are extending funding into Fiscal Year 2017 to address a required technical upgrade to the Utilities bill print and electronic vaulting software as well as proceed with a scheduled upgrade to the My Utilities Account self-customer service portal to allow for mobile optimized viewing and enhanced functionality.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	N/A	5,002	(175,656)	175,656	0	0	0	0	175,656	0	N/A
Transfer from Electric Fund	N/A	119,415	24,572	122,856	0	0	0	0	122,856	0	N/A
Transfer from Fiber Optics Fund	N/A	915	188	941	0	0	0	0	941	0	N/A
Transfer from Gas Fund	N/A	45,992	9,463	47,317	0	0	0	0	47,317	0	N/A
Transfer from Refuse Fund	N/A	27,914	5,744	28,718	0	0	0	0	28,718	0	N/A
Transfer From Storm Drainage Fund	N/A	5,970	1,228	6,142	0	0	0	0	6,142	0	N/A
Transfer from Wastewater Collection Fund	N/A	15,412	3,171	15,856	0	0	0	0	15,856	0	N/A
Transfer from Water Fund	N/A	27,381	5,634	28,170	0	0	0	0	28,170	0	N/A
Total	**N/A**	**248,001**	**(125,656)**	**425,656**	**0**	**0**	**0**	**0**	**425,656**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	248,002	50,000	425,656	0	0	0	0	425,656	0	N/A
Total	**N/A**	**248,002**	**50,000**	**425,656**	**0**	**0**	**0**	**0**	**425,656**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Customer Service

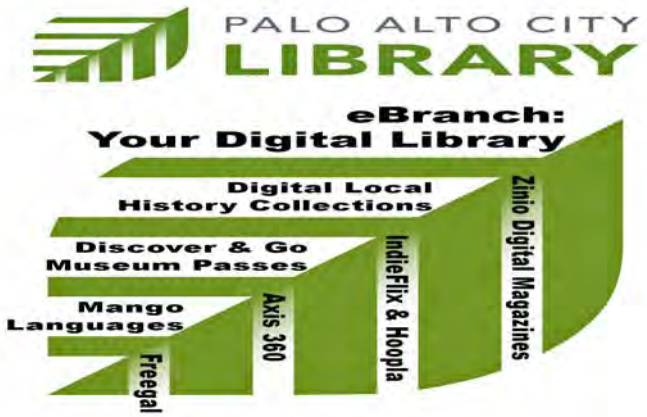
Goal: C-2

Policy: C-10

Program: C-12

Environmental Impact Analysis:

This project is categorically exempt 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 2013
Initial Project Completion: Summer 2015
Revised Project Start: Summer 2013
Revised Project Completion: Summer 2017
Project Number: TE-14002

Virtual Library Branch

Description

This project funds the creation of a library virtual branch that will allow all library activities that take place in physical buildings to be accessible in an online environment. It will provide collections, customer service, programs, and community engagement using current web and mobile technology.

Justification

The Library Service Model Analysis and Recommendations (LSMAR), published in 2006, stated the library should "boldly address community needs through the provision of collection and services that meet leading edge standards for content, access and connectivity" to "efficiently and effectively serve all ages and support life-long learning." The Library Technology Plan 2009-2013 added the idea for a "full-service online library branch," noting that "mobile-friendly services" would be common by 2015. The project will result in improved customer service interactions and increased use of available Library resources. The Library has been working on the project with a consultant since 2015. Due to the external and internal changes, staff plans to complete the project by the end of 2017.

Supplemental Information

In 2011 the Library Advisory Commission proposed building a virtual branch, integrating the library catalog with online resources and delivery that is web-based and mobile. The library has constructed prototypes to be used with a content management system to become actual interactive tools for staff.

Significant Changes

This project has experienced delays due to delays with the bond-funded library construction projects.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Technology Fund	15,113	179,887	9,462	170,425	0	0	0	0	170,425	0	195,000
Total	**15,113**	**179,887**	**9,462**	**170,425**	**0**	**0**	**0**	**0**	**170,425**	**0**	**195,000**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	15,113	179,887	9,462	170,425	0	0	0	0	170,425	0	195,000
Total	**15,113**	**179,887**	**9,462**	**170,425**	**0**	**0**	**0**	**0**	**170,425**	**0**	**195,000**

Relationship to Comprehensive Plan

Primary Connection

Element: Governance

Section: Public Participation

Goal: G-1

Policy: G-3

Program: G-6

Potential Board/Commission Review:

Library Advisory Commission

Environmental Impact Analysis:

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

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VEHICLE REPLACEMENT FUND

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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 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 Adopted Operating Budget. For the 2017-2021 Capital Improvement Program (CIP), includes projects totaling $22.1 million, with $9 million allocated in Fiscal Year 2017. Of the $9 million, $4.8 million is for the continuation of projects approved by City Council in prior fiscal years. In addition, although this CIP shows programmed expenditures of $3.3 million for Fiscal Year 2017 (VR-17000), $3.3 million is being set aside in a reserve until a backlog of vehicle replacements from Fiscal Years 2015 and 2016 have been completed. It is important to note that all expenditures in the fund are reimbursed by transfers from the funds benefitting from the services and purchases incurred in the fund. A total of ten capital projects are programmed over the 5-year program. Major projects funded in the 2017-2021 CIP include Replacement of the Co-owned Fire Apparatus ($0.6 million), Emergency Repairs and Replacements ($0.1 million) and Infrastructure Improvements ($0.2 million). The budget for the VRF Capital Improvement Program is broken into two separate 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. This could mean an update in software, new diesel particulate filters for diesel vehicles required by Bay Area Air Quality Management District, new fuel tanks, etc.

Recent Accomplishments

- Relocation of Compressed Natural Gas (CNG) fueling station to the north side of MSC to ensure public safety and site security.
- Installation of credit card readers at the CNG fueling station to streamline VRF's accounts receivables, reduce administrative costs and for the public's convenience.

2017-2021 Capital Improvement Program

Recurring Projects

There are no recurring projects in this category.

Non-Recurring Projects

The 2017-2021 CIP includes $0.2 million for the Municipal Services Center Fuel Station Demolition. The demolition and removal of the obsolete fueling station and above ground storage tanks will liberate space for parking and additional storage.

Vehicle and Equipment Replacement

The Vehicle and Equipment Replacement category accounts for the purchase of vehicles and equipment. Funds are collected from the department/fund that will utilize the equipment over the projected useful life of the vehicle/equipment, so when the useful life of the vehicle or equipment has been reached, funds will be in place to support the cost of replacement. Over the 5-year 2017-2021 Capital Improvement Program approximately 32% of the fleet is programmed for replacement at a cost of $21.9 million, $8.8 million of which is allocated in Fiscal Year 2017. This figure includes $4.8 million in delayed replacements.

Infrastructure Inventory

TYPE/GROSS VEHICLE WEIGHT (GVW)	UNLEADED	DIESEL	CNG	HYBRID	ELECTRIC	NO ENGINE TRAILER	TOTAL
Sedans/SUVs	41	-	23	25	-1	-	70
Police marked units	26	-	-	-	-	-	26
Motorcycles	6	-	-	-	-	-	6
Scooters**	4	-	-	-	2	-	6
Truck/Van <6k GVW	64	-	-	-	-	-	64
Truck/Van 6K-11K GVW	72	2	26	-	-	-	100
Trucks 11K-15K GVW	11	3	-	-	-	-	14
Trucks 15K-26K GVW	9	13	-	-	-	-	22
Dump Truck <11K GVW	10	17	-	-	-	-	27
Large Equipment: Boom truck, aerials, crane truck	3	12	-	-	-	-	15
Wildland patrol vehicles	3	-	-	-	-	-	3
Water truck	-	1	-	-	-	-	1
Fire safety	2	18	-	-	-	-	20
Sweepers	-	4	-	-	-	-	4
Backhoe, mowers, tractors, forklifts, rollers, air compressors, chippers, trailers	2	44	-	-	8	-	54
Asphalt rollers, water pumps, light towers, spray rigs	2	7	-	-	-	-	9
Generators, ditch witches, cable reelers	18	31	4	-	5	68	126
TOTAL	259	153	56	2	15	68	553

** Scooters and no engine trailers were not included in previous years

Recent Accomplishments

- Delivered 25 vehicles: three hybrid sedans; two electric sedans; one gasoline sedan; four pickups; one patch truck; five SUV's; three vans; one marked police vehicle; one tractor; two vacuum flush trucks; and two pieces of equipment.

2017-2021 Capital Improvement Program

Recurring Projects

The 2017-2021 CIP includes one recurring project, VR-15001. Annual budget of $100,000 provides funding for emergency repairs and replacements of vehicles/equipment that sustain damage due to accidents or unpreventable failure. Additionally, this project provides funding for identifying and tracking events and the collection of associated insurance claims. In the two years this project has been funded, 13 vehicles/equipment have been repaired and three replaced.

Non-Recurring Projects

The 2017-2021 CIP includes nine projects, with $21.9 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 where possible, electric vehicles are considered first and then alternative fuels.

Summary of Capital Activity

VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
Use of Funds									
Fleet Infrastructure Improvements									
VR-06801	Citywide Fuel Transaction and Inventory Management System Replacement	9,203	108,733	0	0	0	0	0	0
VR-92006	Fuel Storage Tanks Upgrade	0	0	0	0	0	0	0	0
VR-14002	Municipal Services Center Fuel Station Demolition	50,672	16,152	186,935	0	0	0	0	186,935
VR-01001	Municipal Services Center Fuel Storage Tank/ Service Island Replacement	62,815	0	0	0	0	0	0	0
	Fleet Infrastructure Improvements Total	**122,690**	**124,885**	**186,935**	**0**	**0**	**0**	**0**	**186,935**
Vehicle and Equipment Replacement									
VR-17001	Co-Owned Fire Apparatus Replacement	0	0	630,543	0	0	0	0	630,543
VR-14001	Emergency Repair and Replacement	5,418	0	0	0	0	0	0	0
VR-15001	Emergency Repair and Replacement	52,653	63,900	110,181	110,486	110,801	111,125	111,570	554,163

VEHICLE REPLACEMENT FUND

Project Number	Project Title	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Adopted	FY 2018	FY 2019	FY 2020	FY 2021	5-Year Total
VR-13000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2013	443,389	1,048,207	0	0	0	0	0	0
VR-14000	Schedule Vehicle and Equipment Replacement - Fiscal Year 2014	1,733,776	65,601	0	0	0	0	0	0
VR-15000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015	409,932	1,123,404	2,372,068	0	0	0	0	2,372,068
VR-16000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016	0	497,424	2,421,207	54,997	0	0	0	2,476,204
VR-17000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017 (Reserve)	0	0	3,277,693	82,747	0	0	0	3,360,440
VR-18000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018	0	0	0	3,320,465	86,927	0	0	3,407,392
VR-19000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019	0	0	0	0	2,936,097	89,535	0	3,025,632
VR-20000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020	0	0	0	0	0	3,513,140	0	3,513,140
VR-21000	Scheduled Vehicle and Equipment Replacement - Fiscal Year 2021	0	0	0	0	0	0	2,566,500	2,566,500
	Vehicle and Equipment Replacement Total	**2,645,168**	**2,798,536**	**8,811,692**	**3,568,695**	**3,133,825**	**3,713,800**	**2,678,070**	**21,906,082**
	Total Uses	**2,767,858**	**2,923,421**	**8,998,627**	**3,568,695**	**3,133,825**	**3,713,800**	**2,678,070**	**22,093,017**

Fleet Infrastructure Improvements

Old Fuel Station, March 2015

Fund: Vehicle Replacement & Maintenance Fund
Category: Fleet Infrastructure Improvements
Project Location: 3201 East Bayshore Road

Managing Department: Public Works

Initial Project Start: Summer 2013
Initial Project Completion: Winter 2015

Revised Project Start: Spring 2014
Revised Project Completion: Fall 2016

Project Number: VR-14002

Municipal Services Center Fuel Station Demolition

Description

This project provides funding for demolition and removal of the fueling station and above ground storage tanks at the Municipal Service Center (MSC). The area will then be restored with asphalt pavement for additional storage, parking, and operational use.

Justification

The fueling station located on the north side of the MSC is obsolete and no longer in service. A newer station was constructed in 2008 on the eastern side of the property. The demolition and removal of the obsolete fueling station and above ground storage tanks will liberate space for parking and additional storage.

Significant Changes

2017-2021 CIP: The project bid documents are complete and require permit approvals and environmental clearance, which is taking longer than anticipated. Upon Council award, the construction will begin and end summer 2016.

2016-2020 CIP: This project was reassigned to another Project Manager due to workload and priority constraints, causing a delay in the start of this project.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	74,328	203,086	16,152	186,935	0	0	0	0	186,935	0	277,415
Total	**74,328**	**203,086**	**16,152**	**186,935**	**0**	**0**	**0**	**0**	**186,935**	**0**	**277,415**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	168,574	16,152	186,935	0	0	0	0	186,935	0	203,087
Design	23,656	34,512	0	0	0	0	0	0	0	0	23,656
Other	50,672	0	0	0	0	0	0	0	0	0	50,672
Total	**74,328**	**203,086**	**16,152**	**186,935**	**0**	**0**	**0**	**0**	**186,935**	**0**	**277,415**

Relationship to Comprehensive Plan

Primary Connection

Element: Community Services & Facilities

Section: Parks and Public Facilities

Goal: C-4

Policy: C-24

Program: C-19

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

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Vehicle and Equipment Replacement

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2016
Initial Project Completion: Fall 2017

Revised Project Start:
Revised Project Completion:

Project Number: VR-17001

Co-Owned Fire Apparatus Replacement

Description

This project provides funding for 50% of the replacement cost of vehicle 6124 with a Pierce Tractor Drawn 100-foot Aerial Ladder Truck shared with the City of Mountain View.

Justification

The existing truck is a 1998 Spartan Hi-Tech Quint Aerial Ladder Truck and unable to reach the roofs of newer buildings and heights beyond 75-feet for rescue or fire suppression operations. The Stanford University Medical Center and the Palo Alto Veterans Affairs Hospital are two examples where an effective aerial ladder truck, before and after construction, is necessary. This is a backup apparatus for use when a respective agency's primary vehicle is out of service.

Supplemental Information

This apparatus is jointly owned and operated by the Palo Alto Fire and the Mountain View Fire departments and is being acquired through a cooperative purchasing process. The 1998 agreement outlining the 50/50 split of operation and maintenance for this apparatus has worked well and both agencies have agreed to its renewal and extension.

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	630,543	0	0	0	0	630,543	0	630,543
Total	**0**	**0**	**0**	**630,543**	**0**	**0**	**0**	**0**	**630,543**	**0**	**630,543**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	0	0	630,543	0	0	0	0	630,543	0	630,543
Total	**0**	**0**	**0**	**630,543**	**0**	**0**	**0**	**0**	**630,543**	**0**	**630,543**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Goal: N-10

Policy: N-54

Program: N-80

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Marked Police & Fire Vehicle, February 2013

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

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

When critical vehicles/equipment such as utility trucks and police sedans experience lengthy down times, service levels are impacting, therefore when damage or failure occurs, these critical vehicles/equipment need to be replaced/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/equipment.

Supplemental Information

Additionally, this project provides funding for identifying and tracking events and the collection of associated insurance claims.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	N/A	155,397	63,900	110,181	110,486	110,801	111,125	111,570	554,163	0	N/A
Total	**N/A**	**155,397**	**63,900**	**110,181**	**110,486**	**110,801**	**111,125**	**111,570**	**554,163**	**0**	**N/A**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	N/A	47,347	0	0	0	0	0	0	0	0	N/A
Other	N/A	108,050	63,900	110,181	110,486	110,801	111,125	111,570	554,163	0	N/A
Total	**N/A**	**155,397**	**63,900**	**110,181**	**110,486**	**110,801**	**111,125**	**111,570**	**554,163**	**0**	**N/A**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Brush Chipper, March 2015

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2014
Initial Project Completion: Spring 2015

Revised Project Start:
Revised Project Completion: Fall 2016

Project Number: VR-15000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2015

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2015.

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

This funding allows for the replacement of: 7 sedans; 12 pickup trucks; 17 vans; 3 fire apparatus; 5 police vehicles and 5 misc. equipment units. Of the 49 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2015, 27 support General Fund operations ($2,144,000), and 22 support the operations of various Enterprise Funds ($1,642,000).

As part of the replacement policy and where possible, electric vehicles are considered first and then alternative fuels.

Significant Changes

2017-2021 CIP: After review with the Office of Management and Budget and the Fleet Review Committee, 8 additional vehicles were added to the 2015 Replacement List. Additionally, the cost of one vehicle was higher than estimated, resulting in an addition of $247,552 to the total

project budget. The transfer of $146,394 was approved by Council (CMR 5896); the transfer of $26,466 from Utilities Enterprise Fund, $28,000 from General Fund, and $46,692 from the Vehicle Fund was approved midyear 2016.

2016-2020 CIP: Due to staffing shortages, including the vacancy for the Fleet Manager, and long lead times not all vehicles under this CIP have been put in service. Since the approval of this project 31 vehicles have been ordered, 26 have been received, 5 are being assembled. In addition, 18 remain to be ordered, which includes 11 pickups; 3 vans; 2 sedans; 1 police vehicle; and 1 miscellaneous equipment unit.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	409,932	3,716,528	1,123,404	2,372,068	0	0	0	0	2,372,068	0	3,905,404
Total	**409,932**	**3,716,528**	**1,123,404**	**2,372,068**	**0**	**0**	**0**	**0**	**2,372,068**	**0**	**3,905,404**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Construction	0	1,368,057	0	0	0	0	0	0	0	0	0
Other	409,932	2,348,471	1,123,404	2,372,068	0	0	0	0	2,372,068	0	3,905,404
Total	**409,932**	**3,716,528**	**1,123,404**	**2,372,068**	**0**	**0**	**0**	**0**	**2,372,068**	**0**	**3,905,404**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

GMC 3500 with crane, February 2015

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2015
Initial Project Completion: Spring 2017

Revised Project Start:
Revised Project Completion:

Project Number: VR-16000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2016

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2016.

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

This funding allows for the following replacements: 5 sedans; 13 pickup trucks; 6 vans; three police vehicles; one wildland pumper; two SUVs; one dump truck and 8 miscellaneous equipment units. Of the 39 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2016, twenty-one support operations in the General Fund ($1,469,000), and eleven support the operations in various Enterprise Funds ($1,305,000).

As part of the replacement policy and where possible, electric vehicles are considered first and then alternative fuels.

Significant Changes

2017-2021 CIP: After review with the Office of Management and Budget and Fleet Review Committee, 1 utility truck was approved and added to the Fiscal Year 2016 replacement list.

Additionally, the cost of two of the utility trucks was higher than estimated, increasing the total project cost by $532,638 and requiring Council approval (CMR 6371). Total number of vehicles or pieces of equipment is now 40.

2016-2020 CIP: The original funding amount was $2,306,000 for 32 vehicle/equipment replacements. Adopted Capital Budget request was increased by $468,000 due to the addition of a pickup truck, step van, green machine, two trailers, wash trailer for substation transformers, and a F-550 utility aerial truck which brought the total up to 39 vehicles at a budget of $2,774,000.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	3,373,080	497,424	2,421,207	54,997	0	0	0	2,476,204	0	2,973,628
Total	**0**	**3,373,080**	**497,424**	**2,421,207**	**54,997**	**0**	**0**	**0**	**2,476,204**	**0**	**2,973,628**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	3,373,080	497,424	2,421,207	54,997	0	0	0	2,476,204	0	2,973,628
Total	**0**	**3,373,080**	**497,424**	**2,421,207**	**54,997**	**0**	**0**	**0**	**2,476,204**	**0**	**2,973,628**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

DMT generator, March 2015

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2016
Initial Project Completion: Spring 2018

Revised Project Start:
Revised Project Completion:

Project Number: VR-17000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2017 (Reserve)

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for 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

The replacement list now contains: 1 fire engine; 1 sedan; 12 pickup trucks; 15 vans; 2 dump trucks; 1 flatbed truck with crane; 1 aerial truck; 2 motorcycles; 6 miscellaneous equipment units, and 2 trailers. Of the 43 vehicles and equipment, 26 support the operations of the General Fund ($1,899,000), and 17 support the operations of various Enterprise Funds ($1,318,000). The amount of funding has increased due to the type of vehicles being replaced and market adjustments.

As part of the replacement policy and where possible, electric vehicles are considered first and then alternative fuels.

Significant Changes

2017-2021 CIP: After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the current backlog of replacements from Fiscal Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacements were addressed. To enable staff to deliver the backlog from previous year's CIPs, funding for all but critical vehicles/equipment scheduled for replacement this fiscal year will be set aside in reserve.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	3,277,693	82,747	0	0	0	3,360,440	0	3,360,440
Total	**0**	**0**	**0**	**3,277,693**	**82,747**	**0**	**0**	**0**	**3,360,440**	**0**	**3,360,440**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	3,277,693	82,747	0	0	0	3,360,440	0	3,360,440
Total	**0**	**0**	**0**	**3,277,693**	**82,747**	**0**	**0**	**0**	**3,360,440**	**0**	**3,360,440**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Freightliner with aerial, February 2012

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2017
Initial Project Completion: Spring 2019

Revised Project Start:
Revised Project Completion:

Project Number: VR-18000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2018

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2018.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by City's policy for vehicle replacement. The policy includes guidelines for these replacements 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 a new policy being developed staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding has increased due to 7 vehicles added to the approved list and the increase of prices for vehicles/equipment. The replacement list now includes: 4 pickups; 8 patrol vehicles; two SUV's; 5 vans; one aerial truck; 4 wildland trucks; one dump truck; 6 miscellaneous equipment units. Of the 31 vehicles and pieces of equipment, 18 support the operations in the General Fund ($1,532,000), and 13 support the operations of various Enterprise Funds ($1,724,000).

Significant Changes

2017-2021 CIP: After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the current backlog of replacements from Fiscal Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacement were addressed.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	3,320,465	86,927	0	0	3,407,392	0	3,407,392
Total	**0**	**0**	**0**	**0**	**3,320,465**	**86,927**	**0**	**0**	**3,407,392**	**0**	**3,407,392**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	3,320,465	86,927	0	0	3,407,392	0	3,407,392
Total	**0**	**0**	**0**	**0**	**3,320,465**	**86,927**	**0**	**0**	**3,407,392**	**0**	**3,407,392**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Ambulance, January 2011

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto, CA

Managing Department: Public Works

Initial Project Start: Summer 2018
Initial Project Completion: Spring 2020

Revised Project Start:
Revised Project Completion:

Project Number: VR-19000

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2019

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2019.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by City's policy for vehicle replacement. The policy includes guidelines for these replacements 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 a new policy being developed staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding has increased due to 17 vehicles added to the approved list and cost increases in vehicles/equipment. The replacement list now includes: 2 ambulances; 2 CNG sedan; 7 CNG pickups; 5 gasoline pickups; 7 patrol vehicles; one SUV; 2 dump trucks; 1 patch truck; 6 miscellaneous equipment units; and 5 trailers. Of the 38 vehicles and pieces of equipment, 25 support the operations in the General Fund ($1,969,000), and 13 support the operations of various Enterprise Funds ($899,000).

Significant Changes

2017-2021 CIP: After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the current backlog of replacements from Fiscal Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacement were addressed.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	2,936,097	89,535	0	3,025,632	0	3,025,632
Total	**0**	**0**	**0**	**0**	**0**	**2,936,097**	**89,535**	**0**	**3,025,632**	**0**	**3,025,632**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	2,936,097	89,535	0	3,025,632	0	3,025,632
Total	**0**	**0**	**0**	**0**	**0**	**2,936,097**	**89,535**	**0**	**3,025,632**	**0**	**3,025,632**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Isuzu cab chasis with custom utility body, February 2014

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

Scheduled Vehicle and Equipment Replacement - Fiscal Year 2020

Description

This project provides funding for the scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2020.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by City's policy for vehicle replacement. The policy includes guidelines for these replacements 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 a new policy being developed staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

Funding has increased due to a rearrangement of vehicles on the approved list and an price increases in vehicles/equipment. The replacement list now includes: 5 sedans; 23 pickups; 3 vans; one SUV; 2 dump trucks; 1 aerial truck; 5 miscellaneous equipment units; and 4 trailers. Of the 44 vehicles and pieces of equipment, 32 support the operations in the General Fund ($2,640,000), and 12 support the operations of various Enterprise Funds ($803,000).

Significant Changes

2017-2021 CIP: After working with the Office of Management and Budget and the Fleet Review Committee it was decided staff would address the current backlog of replacements from Fiscal

Year 2015 and Fiscal Year 2016. The previously scheduled replacements were re-evaluated to ensure critical replacement were addressed.

2016-2020 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	3,513,140	0	3,513,140	0	3,513,140
Total	**0**	**0**	**0**	**0**	**0**	**0**	**3,513,140**	**0**	**3,513,140**	**0**	**3,513,140**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	3,513,140	0	3,513,140	0	3,513,140
Total	**0**	**0**	**0**	**0**	**0**	**0**	**3,513,140**	**0**	**3,513,140**	**0**	**3,513,140**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

Fund: Vehicle Replacement & Maintenance Fund
Category: Vehicle and Equipment Replacement
Project Location: 3201 East Bayshore Road, Palo Alto CA

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 scheduled replacement of existing City fleet vehicles and equipment for Fiscal Year 2021.

Justification

The ongoing replacement of City fleet vehicles and equipment is prescribed by City's policy for vehicle replacement. The policy includes guidelines for these replacements 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 a new policy being developed staff will first consider electric vehicles and then other alternative fuel vehicles when replacing existing vehicles.

Supplemental Information

This funding will allow for the following replacements: 6 patrol vehicles; 1 van; 4 pickup trucks; 10 trailers; 11 miscellaneous pieces of equipment; and 2 ambulances. Of the 34 vehicles and pieces of equipment scheduled for replacement in Fiscal Year 2021, 22 support the operations in the General Fund ($1,728,500), and 12 support the operations of various Enterprise Funds ($838,000).

Significant Changes

2017-2021 CIP: Project established.

Funding Sources Schedule

Funding Source	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Vehicle Replacement Fund	0	0	0	0	0	0	0	2,566,500	2,566,500	0	2,566,500
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,566,500**	**2,566,500**	**0**	**2,566,500**

Expenditure Schedule

Project Phase	Prior Years	FY 2016 Budget	FY2016 Est.	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	5 Year CIP Total	Beyond 5 Year CIP	Total
Other	0	0	0	0	0	0	0	2,566,500	2,566,500	0	2,566,500
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,566,500**	**2,566,500**	**0**	**2,566,500**

Relationship to Comprehensive Plan

Primary Connection

Element: Natural Environment

Section: Air Quality

Goal: N-5

Policy: N-26

Program: N-41

Potential Board/Commission Review:

Fleet Review Committee

Environmental Impact Analysis:

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

SUPPLEMENTAL INFORMATION

CITY OF
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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 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, housing, natural environment, business and economics, and community services. Its focus is on the physical form of the City and is applicable to both public and private properties. The Proposed Budget integrates the 1998-2010 Comprehensive Plan into the budget process.

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 1.0 FTE employee works full time; a.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.

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AMERICANS WITH DISABILITIES ACT

CITY OF
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IN COMPLIANCE WITH

AMERICANS WITH DISABILITIES ACT (ADA) OF 1990,

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