



Fiscal Year 2017-18 and Fiscal Year 2018-19

Capital and IT Budget Request

FIRE COMMISSION

JANUARY 11, 2017



Capital and IT Budget Request



Capital and IT Budget Process

- Department submits its proposed budget requests to the Capital Planning Committee (CPC) and Committee on Information Technology (COIT) on January 13th in advance of operating budget submittals
- Vetted through the CPC and COIT in April/May
- CPC and COIT develop scenarios depending on budget guidelines working with Mayor's Office
- One of the scenarios is adopted by Mayor's Office and incorporated into the Mayor's June 1st proposed budget



Capital and IT Budget Request



Facility Issues

- Recently updated fire station facility assessment by DPW identified hundreds of millions of dollars in facility needs
- Through work of ESER bond, develop deeper knowledge base of the status of facilities
- Limited financial resources to address over 50 different Departmental facilities
- Explore alternative funding sources



Capital and IT Budget Request



Board-Approved Capital Budgets for SFFD

Project	FY16-17	FY17-18
General Facility Maint.	\$738,675	\$775,609
UST Maintenance	\$334,058	\$350,760
Apparatus Doors	\$200,000	\$150,000
HVAC Systems	\$500,000	\$375,000
Exhaust Extractors	\$200,000	\$150,000
Boilers	\$400,000	\$300,000
Generators	\$500,000	\$375,000
Total	\$2,872,733	\$2,476,369



Capital and IT Budget Request



Current year projects

- Work continues on close-out of 2010 ESER bond as well as beginning 2014 ESER bond and 2016 Health bond projects
- Upgrade of fire station exhaust extractor through Federal grant
- Replacement of boilers at eight stations through cost share program with PUC
- Renovation of old Fire Station 21 for use by Fire Prevention
- Improved tracking of maintenance and repair records
- Working with DPW on procurement improvements



Capital and IT Budget Request



FY17-18 and FY18-19 SFFD proposal

Project	FY17-18	FY18-19
Roof Replacements	\$ 1,890,000	\$ 1,533,818
Exterior Envelope	\$ 262,971	\$ 5,750,000
Windows	\$ 294,000	\$ 96,000
Showers	\$ 214,000	\$ 856,000
Mechanical/HVAC	\$ 4,167,529	\$ 7,700,000
Emergency Generators	\$ 1,650,000	\$ 1,980,000
Exhaust Extractor	\$ 750,000	\$ 750,000
Electrical	\$ 16,955,000	\$ 31,555,000
Sitework/Sidewalk	\$ 412,588	\$ 765,747
Kitchens	\$ 2,480,000	\$ 1,372,414



Capital and IT Budget Request



FY17-18 and FY18-19 SFFD proposal (cont.)

Project	FY17-18	FY18-19
Apparatus Bay Door Maintenance	\$ 750,000	\$ 750,000
Data Infrastructure Upgrades	\$ 7,023,000	\$ 3,804,000
Oxygen Cascade Systems	\$ 400,000	\$ 400,000
Chief's Residence	\$ 1,369,166	\$ -
Boiler Maintenance	\$ 750,000	\$ 750,000
SFFD Training Facility Study	\$ 500,000	\$ -
SFFD Bureau of Equipment Study	\$ 500,000	\$ -
SFFD Electrical and Wiring Study	\$ 500,000	\$ -
TOTAL	\$ 40,868,254	\$ 58,062,979



Capital and IT Budget Request



IT Issues

- Budget initiatives in the previous two fiscal years has increased the number of IT staff to help support Departmental infrastructure
- Aging Department infrastructure unable to support current technological advancements and possibilities
- Limited funding for IT enhancements
- Data consistency issues across City agencies



Capital and IT Budget Request



Board-Approved COIT Projects for SFFD

Project	FY16-17	FY17-18
Vehicle Modem Project	\$444,328	\$0
MDT Replacement	\$365,665	\$0
Business Intelligence	\$130,000	\$0
Total	\$939,993	\$0



Capital and IT Budget Request



Current year projects

- Installation of MDTs and Vehicle modems as part of previously funded projects continues
- Wi-Fi at Station 49, Division of Training and Treasure Island completed with HQ underway to be followed by a number of fire stations
- Continuation of mobile device deployment for Department
- Upgrade of Fire Prevention platform along with a number of public access and data transparency projects internally and with a number of other City Departments
- City-wide projects (FSP, policy implementation, data group)



Capital and IT Budget Request



FY17-18 and FY18-19 SFFD proposal

Project	FY17-18
Incident Display Boards	\$301,400
SharePoint Implementation & Training	\$150,000
Training Simulator	\$250,000
Mobile Network Consultant Services	\$150,000
Total	\$851,400

San Francisco Fire Department

FY17-18 and FY18-19 Budget

Committee on Information Technology (COIT) IT Project Submissions

Project	Amount
Incident Display Boards	\$ 301,400
SharePoint Implementation & Training	\$ 150,000
Training Simulator	\$ 250,000
Mobile Network Consultant Services	\$ 150,000
TOTAL	\$ 851,400

Incident Display Boards (\$301,400) -

LCD monitors display information on incoming alerts based on input from the CAD system, including units responding, address/location, incident type, cross streets, any premise hazards, etc. These incident boards can assist in improving response. At a glance, firefighter could get all relevant information for a call without having to wait for the complete audio dispatch and/or the run printout. The Department has installed a number of trial units at a couple of fire stations, and has received very positive feedback

SharePoint Implementation & Training (\$150,000) -

Create a single repository for multiple documents currently stored through different applications within the SFFD IT infrastructure. Because training documents will also be available through SharePoint, the Department could simplify delivery of training through the platform, as well as improve collaboration capabilities of Department committees and workgroups. The Department has started to use the SharePoint application, but additional design and training resources are needed to fully implement.

Training Simulator (\$250,000) -

Funding to be used to procure an advance fire training simulator, with the ability to transmit a number of different scenarios for crews to train on. Given the dangers and difficulties of live fire training, fire training simulation platforms are an effective and efficient way to deliver training and provide scenarios to improve situational awareness, communications, and response. Enhanced incident management training through simulation would help Department members improve decision-making as well as performance in stressful environments, with scenarios customizable to emphasize specific aspects of response.

Mobile Network Consultant Services (\$150,000) -

Over the past few years, the Department has increased dramatically the number of mobile devices it uses in its day to day operations, including tablets, laptops and smartphones. With these devices comes the need for a mobile network infrastructure, to protect the performance and security of the networks and allow IT staff to administer, maintain and support the Department's mobile applications and hardware efficiently and ensure all systems integrate correctly. The Department does not have the expertise to develop a management plan for mobile networks, so it is requesting funds to hire a consultant who is well versed in successful mobile network infrastructure development.

San Francisco Fire Department

FY17-18 and FY18-19 Capital Budget Request

Project	FY17-18	FY18-19
Roof Replacements	\$ 1,890,000	\$ 1,533,818
Exterior Envelope	\$ 262,971	\$ 5,750,000
Windows	\$ 294,000	\$ 96,000
Showers	\$ 214,000	\$ 856,000
Mechanical/HVAC	\$ 4,167,529	\$ 7,700,000
Emergency Generators	\$ 1,650,000	\$ 1,980,000
Exhaust Extractor	\$ 750,000	\$ 750,000
Electrical	\$ 16,955,000	\$ 31,555,000
Sitework/Sidewalk	\$ 412,588	\$ 765,747
Kitchens	\$ 2,480,000	\$ 1,372,414
Apparatus Bay Door Maintenance	\$ 750,000	\$ 750,000
Data Infrastructure Upgrades	\$ 7,023,000	\$ 3,804,000
Oxygen Cascade Systems	\$ 400,000	\$ 400,000
Chief's Residence	\$ 1,369,166	\$ -
Boiler Maintenance	\$ 750,000	\$ 750,000
SFFD Training Facility Study	\$ 500,000	\$ -
SFFD Bureau of Equipment Study	\$ 500,000	\$ -
SFFD Electrical and Wiring Study	\$ 500,000	\$ -
TOTAL	\$ 40,868,254	\$ 58,062,979

Roof Replacements

Station	FY17-18	FY18-19
Station 7	\$ 500,000	
Station 8		\$ 330,000
Station 11	\$ 520,000	
Station 12	\$ 360,000	
Station 14		\$ 420,000
Station 21	\$ 290,000	
Station 22	\$ 220,000	
Station 33		\$ 240,000
DOT Folsom/Tower		\$ 543,818
TOTAL	\$ 1,890,000	\$ 1,533,818

Exterior Envelope

Station	FY17-18	FY18-19
Station 3		\$ 1,590,000
Station 9	\$ 262,971	
Station 12		\$ 1,680,000
Station 21		\$ 1,360,000
Station 33		\$ 1,120,000
TOTAL	\$ 262,971	\$ 5,750,000

Roofs at numerous fire stations are leaking due to deferred maintenance, causing multiple health and safety issues at many of the stations. Without this much-needed attention and repair, roofs will continue to leak, resulting in numerous other issues at the facility, including water damage, dry rot, and leaks throughout all areas of the building. Many roofs are in need of repair beyond simple patching. A number of roofs were/will be repaired as part of the ESER bond focused-scope program.

Due to much deferred maintenance, the status of many of the fire station exteriors is deteriorating. The cracks in the concrete need to be painted and active leaks need to be addressed in order to prevent further damage throughout the building. Repair also includes fixing the epoxy injection and elastic water barrier paint. Damage can run from cosmetic improvements to complete painting of the exterior to substantial repair. Many of the exteriors of the Department's facilities have not been painted in years and have seen the impacts of weather as well as regular wear and tear.

Windows

Station	FY17-18	FY18-19
Station 7	\$ 110,000	
Station 10		\$ 96,000
Station 18	\$ 91,000	
Station 22	\$ 47,000	
Station 34	\$ 46,000	
TOTAL	\$ 294,000	\$ 96,000

Due to much deferred maintenance, the status of many of the fire station exteriors is deteriorating, including windows. Active leaks need to be addressed in order to prevent further damage. Further damage could result in major health and safety issues such as rot and mold, as well as energy loss and inefficiencies. Furthermore, window failure has resulted in several workers' compensation claims from windows falling out of their frames. The Department would like to implement an annual replacement program to address the needs of stations with failing window systems.

Showers

Station	FY17-18	FY18-19
Station 2		\$ 107,000
Station 3	\$ 107,000	
Station 7	\$ 107,000	
Station 11		\$ 107,000
Station 12		\$ 107,000
Station 14		\$ 107,000
Station 21		\$ 107,000
Station 23		\$ 107,000
Station 31		\$ 107,000
Station 49		\$ 107,000
TOTAL	\$ 214,000	\$ 856,000

Showers at fire stations are used quite frequently. Fire Station members must be able to wash after being exposed to environmental hazards. Due to many years of deferred maintenance, showers and shower pans have leaks and are not properly sealed, which is leading to further damage throughout the building and could result in rot, mold or pests.

Mechanical/HVAC

Station	FY17-18	FY18-19
Station 7	\$ 1,100,000	
Station 12		\$ 790,000
Station 19		\$ 890,000
Station 21		\$ 630,000
Station 22		\$ 470,000
Station 23		\$ 600,000
Station 24		\$ 840,000
Station 25		\$ 680,000
Station 29		\$ 640,000
Station 33		\$ 520,000
Station 34		\$ 460,000
Station 37		\$ 590,000
Station 39		\$ 590,000
Station 43	\$ 850,000	
DOT Folsom	\$ 715,892	
SFFD Headquarters	\$ 1,501,637	
TOTAL	\$ 4,167,529	\$ 7,700,000

HVAC systems throughout the Department are extremely old and in frequent need of repair. Due to their age, they are also extremely inefficient from an energy perspective. Because of a lack of funding in the past, HVAC systems have not been maintained (or repaired) to appropriate levels. In addition, the SFFD relies primarily on boilers for heat. The boiler inventory has a very small number of energy efficient boilers - the remainder are outdated and inefficient, resulting in increased costs for the City. Poor distribution and/or control systems also contribute to high energy costs and greenhouse gas emission. The Department must restore heat within 48 hours of break-down of the heating system.

Emergency Generators

Station	FY17-18	FY18-19
Station 2	\$ 330,000	
Station 3	\$ 330,000	
Station 7	\$ 330,000	
Station 19	\$ 330,000	
Station 26		\$ 330,000
Station 28		\$ 330,000
Station 33		\$ 330,000
Station 34		\$ 330,000
Station 40		\$ 330,000
Station 43		\$ 330,000
Station 49	\$ 330,000	
TOTAL	\$ 1,650,000	\$ 1,980,000

Exhaust Extractor Maintenance

Station	FY17-18	FY18-19
Various Stations	\$ 750,000	\$ 750,000
TOTAL	\$ 750,000	\$ 750,000

Electrical

Station	FY17-18	FY18-19
Station 2	\$ 2,340,000	
Station 3		\$ 1,590,000
Station 6		\$ 2,200,000
Station 7	\$ 2,350,000	
Station 8	\$ 1,570,000	
Station 9	\$ 2,130,000	
Station 10		\$ 2,060,000
Station 11	\$ 2,450,000	
Station 12		\$ 1,680,000
Station 13		\$ 4,580,000
Station 14		\$ 1,970,000
Station 15	\$ 2,070,000	
Station 17		\$ 2,020,000
Station 18		\$ 1,950,000
Station 19		\$ 1,920,000
Station 20		\$ 1,720,000
Station 23		\$ 1,290,000
Station 26		\$ 1,220,000
Station 31	\$ 1,740,000	
Station 32		\$ 1,000,000
Station 33		\$ 1,120,000
Station 38	\$ 1,135,000	\$ 1,135,000
Station 40	\$ 1,170,000	
Station 41		\$ 1,110,000
Station 42		\$ 1,160,000
Station 43		\$ 1,830,000
TOTAL	\$ 16,955,000	\$ 31,555,000

Back-up power is an integral part of emergency response. Each fire station has a backup generator. Many of these generators are inefficient and cannot power many of the current systems in the fire houses, including the apparatus doors. Manually opening a door can take up to 15 minutes. Improving generator stock in the department will ensure redundancy and decrease the likelihood of power failure during emergency response. Additional generator funding will allow the Department to install newer, more efficient units.

The Department recently upgraded the exhaust extractors at its stations as part of a Federal Emergency Management Agency (FEMA) grant. The Department is currently requesting an allocation of funding for regular and on-going maintenance and repair of these systems.

The electrical systems at most Department fire stations are in need of major upgrades. As currently existing, the systems cannot handle the electrical load required for present-day operations, nor can they completely support the systems and technologies used by the Department on a daily basis. For example, for many of the stations targeted for installation of heavy-duty washer extractors for the cleaning of personal protective equipment, electrical upgrades are required in order to support the operation of the washing machines. Upgrades of current electrical distribution systems are required to support safety and reliability of the stations themselves.

Sitework/Sidewalk

Station	FY17-18	FY18-19
Station 7	\$ 150,275	
Station 10		\$ 177,146
Station 12		\$ 68,924
Station 22		\$ 74,902
Station 23		\$ 70,699
Station 25		\$ 69,229
Station 32		\$ 67,910
Station 33		\$ 55,237
Station 34		\$ 123,802
Station 37		\$ 57,898
Station 38	\$ 74,247	
Station 40	\$ 97,825	
Station 49	\$ 110,243	
TOTAL	\$ 412,588	\$ 765,747

Numerous fire stations have damage to concrete and sidewalks surrounding the stations. In most cases, these areas are accessed by the public on a daily basis. This is a liability for the Department and the City, as there is the potential for claims of injuries and damages if an accident were to occur. The State Highway Code and the local Public Works Code require property owners to maintain the sidewalk adjacent to their property to a condition acceptable to the Director of Public Works. This responsibility includes making repairs as needed when a sidewalk is damaged. Damage on the sidewalk for which the Department is responsible for include missing pavement, uneven pavement, holes or cracks in the pavement, and missing sewer vent covers.

Kitchens

Station	FY17-18	FY18-19
Station 2		\$ 310,000
Station 3		\$ 310,000
Station 6		\$ 310,000
Station 7	\$ 310,000	
Station 8	\$ 310,000	
Station 9	\$ 310,000	
Station 10		\$ 310,000
Station 11	\$ 310,000	
Station 15	\$ 310,000	
Station 31	\$ 310,000	
Station 38	\$ 310,000	
Station 40	\$ 310,000	
Station 43		\$ 132,414
TOTAL	\$ 2,480,000	\$ 1,372,414

Fire Stations are staffed by members on a 24-hours-a-day/7-days-a-week basis, and therefore need to have fully functional kitchens. Due to many years of deferred maintenance, the quality of many of the fire station kitchens is quite poor. Damage ranges from rot from leaks throughout the facility that have not been addressed to broken and unstable cabinetry. A third of the stations no longer have doors on their cabinets and a number of stations need new flooring because existing linoleum has peeled away due to heavy use and cleaning.

Apparatus Bay Door Maintenance

Station	FY17-18	FY18-19
Various Stations	\$ 750,000	\$ 750,000
TOTAL	\$ 750,000	\$ 750,000

SFFD apparatus doors are anticipated to be replaced as part of the 2014 ESER bond program. However, the need for maintenance and repair still exists on an annual basis for the Department, given the amount of use for apparatus doors. The Department is currently requesting an allocation of funding for regular maintenance and repair of doors to resolve issues that may occur throughout the year.

Data Infrastructure Upgrades

Station	FY17-18	FY18-19
Fire Station 2	\$ 527,000	
Fire Station 3	\$ 275,000	
Fire Station 6	\$ 381,000	
Fire Station 7	\$ 401,000	
Fire Station 8	\$ 272,000	
Fire Station 9	\$ 370,000	
Fire Station 10	\$ 357,000	
Fire Station 11	\$ 424,000	
Fire Station 12	\$ 292,000	
Fire Station 13	\$ 794,000	
Fire Station 14	\$ 341,000	
Fire Station 15	\$ 358,000	
Fire Station 17	\$ 349,000	
Fire Station 18	\$ 337,000	
Fire Station 19	\$ 332,000	
Fire Station 20		\$ 297,000
Fire Station 21		\$ 235,000
Fire Station 22		\$ 175,000
Fire Station 23		\$ 224,000
Fire Station 24		\$ 311,000
Fire Station 25		\$ 253,000
Fire Station 26		\$ 211,000
Fire Station 28		\$ 203,000
Fire Station 29		\$ 238,000
Fire Station 31	\$ 301,000	
Fire Station 32		\$ 174,000
Fire Station 33		\$ 195,000
Fire Station 34		\$ 170,000
Fire Station 37		\$ 217,000
Fire Station 38	\$ 393,000	
Fire Station 39		\$ 219,000
Fire Station 40	\$ 202,000	
Fire Station 41		\$ 193,000
Fire Station 42		\$ 200,000
Fire Station 43	\$ 317,000	
Fire Station 44		\$ 289,000
TOTAL	\$ 7,023,000	\$ 3,804,000

The technology infrastructure currently supporting fire stations is quite outdated and in need of upgrade and/or replacement. This project would modernize the Department's fire stations with new wiring and equipment to support industry-standard Fire Station Alerting and notification capabilities. This will include new electrical wiring, emergency lighting, PA and Speaker Systems in all Fire Stations. By doing these upgrades, the Department's goal is to improve Fire and EMS response times.

Oxygen Cascade Systems

Station	FY17-18	FY18-19
Various Locations (20)	\$ 400,000	\$ 400,000
TOTAL	\$ 400,000	\$ 400,000

Approximately half of the Department's fire stations have an oxygen cascade system which allows members to refill the oxygen bottles that are used on medical calls. Currently, some of these systems do not have complete safety features, most significantly in some cases protective housing for the event of tank failure.

Chief's Residence

Station	FY17-18	FY18-19
Rooming	\$ 85,343	
Exterior Envelope	\$ 7,998	
Windows	\$ 170,988	
Showers	\$ 26,483	
Mechanical (HVAC)	\$ 369,779	
Electrical	\$ 299,173	
Sitework/Sidewalk	\$ 51,687	
Kitchen	\$ 135,000	
Interior Work	\$ 75,869	
Specialties	\$ 11,725	
ADA Upgrades	\$ 137,115	
TOTAL	\$ 1,369,166	\$ -

The Chief's Residence serves as a secondary Operations Center in the event of a disaster. The electrical system at the facility needs to be upgraded. The windows leak and are starting to rot, and the building needs to be weatherproofed. The kitchen has not been upgraded since the 1950's and there are no exhaust fans in the bathrooms.

Boiler System Maintenance & Replacement

Station	FY17-18	FY18-19
Various Stations	\$ 750,000	\$ 750,000
TOTAL	\$ 750,000	\$ 750,000

In addition to complete boiler replacement that is needed at a number of stations (covered in the HVAC/Mechanical project), the Department has annual needs for regular maintenance and repairs on its existing boiler systems.

SFFD Training Facility Study

Station	FY17-18	FY18-19
Facility Planning	\$ 500,000	\$ -
TOTAL	\$ 500,000	\$ -

Continuing the preliminary work with DPW in the Department efforts for a new training facility, the Department is proposing a more in-depth study of its needs to complement the current needs assessment of training that DPW is conducting.

SFFD Bureau of Equipment Study

Station	FY17-18	FY18-19
Facility Planning	\$ 500,000	\$ -
TOTAL	\$ 500,000	\$ -

The Department's longer term plan includes a relocation of the Department's Bureau of Equipment to the space currently occupied by the EMS Division at 1415 Evans once the move to the new EMS facility is complete. This allocation would assist in establishing the needs of the Bureau from a programmatic perspective and see what re-purposing of the current facility/property is needed.

SFFD Electrical and Wiring Study

Station	FY17-18	FY18-19
Facility Planning	\$ 500,000	\$ -
TOTAL	\$ 500,000	\$ -

This allocation would fund an in-depth study of the Departmental needs for IT and electrical infrastructure at Department stations, including electrical and cabling/wiring upgrades that are needed to meet the current demands of station operations and make use of current technologies.