BOARD of SUPERVISORS

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MEMORANDUM

Date: June 27, 2016

To: Honorable Members, Board of Supervisors

From: Angela Calvillo, Clerk of the Board

Subject: 2015-2016 CIVIL GRAND JURY REPORT

We are in receipt of the San Francisco Civil Grand Jury (CGJ) report released Monday, June 27, 2016, entitled: **Maintenance Budgeting and Accounting Challenges For General Fund Departments: Maintenance Economics Versus Maintenance Politics: Pay Now or Pay More Later** (attached).

Pursuant to California Penal Code, Sections 933 and 933.05, the Board must:

1. Respond to the report within 90 days of receipt, or no later than September 25, 2016.
2. For each finding:
   - agree with the finding or
   - disagree with the finding, wholly or partially, and explain why.
3. For each recommendation indicate:
   - that the recommendation has been implemented and a summary of how it was implemented;
   - that the recommendation has not been, but will be, implemented in the future, with a timeframe for implementation;
   - that the recommendation requires further analysis, with an explanation of the scope of the analysis and timeframe of no more than six months; or
   - that the recommendation will not be implemented because it is not warranted or reasonable, with an explanation.

Pursuant to San Francisco Administrative Code, Section 2.10, in coordination with the Committee Chair, the Clerk will schedule a public hearing before the Government Audit and Oversight Committee to allow the Board the necessary time to review and formally respond to the findings and recommendations.

The Budget and Legislative Analyst will prepare a resolution, outlining the findings and recommendations for the Committee's consideration, to be heard at the same time as the hearing on the report.

Attachment

c: Honorable John K. Stewart, Presiding Judge
Nicole Elliott, Mayor's Office
Ben Rosenfield, Office of the Controller
Asja Steeves, Office of the Controller
Jon Givner, Office of the City Attorney
Alisa Somera, Office of the Clerk of the Board
Debra Newman, Office of the Budget and Legislative Analyst
Severin Campbell, Office of the Budget and Legislative Analyst
Jadie Wasilco, Office of the Budget and Legislative Analyst
Jay Cunningham, Foreperson, San Francisco Civil Grand Jury

Orig: GAO clerk
c: COB
cpage

CITY AND COUNTY OF SAN FRANCISCO
CIVIL GRAND JURY

June 22, 2016

Angela Calvillo
Clerk of the Board
SF Board of Supervisors
City Hall, Room 244
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Dear Ms. Calvillo,

The 2015 – 2016 Civil Grand Jury will release its report entitled, "Maintenance Budgeting and Accounting Challenges For General Fund Departments: Maintenance Economics Versus Maintenance Politics: Pay Now or Pay More Later" to the public on Monday, June 27, 2016. Enclosed is an advance copy of this report. Please note that by order of the Presiding Judge of the Superior Court, Hon. John K. Stewart, this report **is to be kept confidential until the date of release (June 27th).**

California Penal Code §933 (c) requires a response to be submitted to the Presiding Judge no later than 90 days. California Penal Code §933.5 states that for each finding in the report, the responding person or entity shall indicate one of the following: (1) agree with the finding; or (2) disagree with it, wholly or partially, and explain why.

Further, as to each recommendation, your response must either indicate:

1) That the recommendation has been implemented, with a summary of how it was implemented;
2) That the recommendation has not been, but will be, implemented in the future, with a timeframe for implementation;
3) That the recommendation requires further analysis, with an explanation of the scope of that analysis and a timeframe for discussion, not more than six months from the release of the report; or
4) That the recommendation will not be implemented because it is not warranted or reasonable, with an explanation.

Please provide your response to Presiding Judge Stewart at the following address:
400 McAllister Street, Room 008
San Francisco, CA 94102-4512

Respectfully,

Jay Cunningham, Foreperson
2015 – 2016 Civil Grand Jury

City Hall, Room 482
1 Dr. Carlton B. Goodlett Pl, San Francisco, CA 94102
Phone: 415-554-6630

MAINTENANCE BUDGETING AND ACCOUNTING CHALLENGES FOR GENERAL FUND DEPARTMENTS

MAINTENANCE ECONOMICS VERSUS MAINTENANCE POLITICS:
Pay Now or Pay More Later

Photo: CampbellPM

June 2016

City and County of San Francisco

Civil Grand Jury, 2015-2016

Members of the Civil Grand Jury

Jay Cunningham, Foreperson

Alison Ileen Scott, Esq., Foreperson Pro Tem

Arti M. Sharma, M.S., Recording Secretary

Sheldon Bachus

Richard Baker-Lehne

Mary Lou Bartoletti, M.B.A.

Jean Bogiages

Catherine Covey, M.D.

Libby Dodd, M.B.A.

John Hoskins, Esq.

Margaret Kuo, M.S.

David Lal

Andrew Lynch

Wassim J. Nassif

Patti Schock

Michael Skahill, Ph.D.

David Stein

Charles Thompson

Eric S. Vanderpool, Esq.

THE CIVIL GRAND JURY

The Civil Grand Jury is a government oversight panel of volunteers who serve for one year. It makes findings and recommendations resulting from its investigations.

Reports of the Civil Grand Jury do not identify individuals by name.
Disclosure of information about individuals interviewed by the jury is prohibited.
California Penal Code, section 929

STATE LAW REQUIREMENT

California Penal Code, section 933.05

Each published report includes a list of those public entities that are required to respond to the Presiding Judge of the Superior Court within 60 to 90 days as specified.

A copy must be sent to the Board of Supervisors. All responses are made available to the public.

For each finding, the response must:

1) agree with the finding , or
2) disagree with it, wholly or partially, and explain why.

As to each recommendation the responding party must report that:

1) the recommendation has been implemented, with a summary explanation; or
2) the recommendation has not been implemented but will be within a set timeframe as provided; or
3) the recommendation requires further analysis. The officer or agency head must define what additional study is needed. The Grand Jury expects a progress report within six months; or
4) the recommendation will not be implemented because it is not warranted or reasonable, with an explanation.

TABLE OF CONTENTS

SUMMARY

San Francisco needs improved tracking and budgeting
for maintenance and repair of vital assets.

The San Francisco Civil Grand Jury completed a ten-month investigation on problems with the City's budgeting for general fund dollars required to maintain buildings and infrastructure. Through more than 30 interviews with the heads and staff of General Fund departments and others and review of relevant documents and published reports, the Jury found opportunities to better identify maintenance funding needs so the Mayor and Supervisors will budget appropriately. Reliable data is the cornerstone of responsible maintenance management.

The report finds:

1. The "Facilities Maintenance" segment of the City's budget is both incomplete and inadequate.
2. Adequately funding maintenance would save money and protect City residents.
3. Maintenance funding for General Fund departments needs increased visibility.
4 Maintenance budget requests by General Fund departments deserve vigorous advocacy by department managers and staff.
5. Voter Information Pamphlets on General Obligation Bond propositions fail to disclose projected total interest costs and life-cycle maintenance needs.
6. Reduction of the City's growing deferred maintenance backlog should start NOW, not ten to fifteen years from now.
7. The City should adopt best accounting practices for tracking and reporting deferred maintenance.

Department managers and staff are very much aware of the consequences of underfunding maintenance. One manager said: "Routine maintenance is deferred until it becomes a capital replacement. The need becomes more visible. But it is excruciating watching unmaintained assets deteriorate. It's like watching a train wreck in slow motion."

INTRODUCTION

"Money to build; No money to fix."
—A witness describing the dilemma of maintenance budgeting.

"Stuff" – Stand-up comic George Carlin riffed about it; We want to talk about it. We want the decision-makers who control the City's purse strings to pay more attention to taking care of the City's stuff.

Our report uses the official terms "Assets", "Facilities" and "Infrastructure", but what we are really talking about is the "Stuff" – the physical things – the City and County landmarks, the buildings and hospitals, the parks and playgrounds, the streets and sidewalks, the stuff that has to be in good working condition for our City to function; the stuff we take for granted and do not notice until something breaks or stops working. Then we complain.

This is what "maintenance" is all about – keeping the City's stuff we take for granted running, so we can continue to take it for granted, and complain about other things.

This "stuff" we rely on does not just happen to be here – our forefathers paid for it through their taxes. We are still paying for much of it through our taxes. Our children and grandchildren will be paying for it through their taxes long after we are gone.

The City assets of today are not only our children's inheritance -- if maintained --, they are our legacy and history. But because we – the collective "we" – are not getting the job done of paying to maintain this stuff, we are eating away at our children's inheritance, and we are piling up debts for them to pay.

Anyone want to play the "blame game"? There is plenty of blame to go around.

a) The department heads who don't make the compelling case that the stuff they manage, and that we all depend on to keep working, needs more money to maintain each year than the budget deciders allocate;
b) The officials – appointed and elected – who make the budget decisions allocating money to stuff and to services, who know how important maintaining the City's stuff is, yet are overwhelmed by the persistent claims for more and more services; and ultimately
c) We, the citizen taxpayers, who take the City's stuff for granted and do not pressure our elected representatives to pay more attention to its maintenance. We were told that taxpayers only pay attention to the short-term: We want more stuff but we don't want to pay more in taxes.

Cynics may say it will take a disaster -- or several disasters -- to mobilize public and political support for adequate maintenance funding. But, ideally, and with the help of the media, we can shine a light on the need to maintain the City's stuff – for us and for those who will follow.

The guiding principles in this report are:

Stewardship: City officials manage City property on behalf of the citizens;

Interperiod Equity: Whether City government is deferring costs to the future or using accumulated resources to provide current period services;

Accountability: City officials are responsible for their actions, decisions, and policies, and must inform citizens about them; and

Transparency: Information should be disclosed in forms that the public can readily find and use.

Transparency is the best hope for getting adequate maintenance and repair funding. Attention must be paid.

OBJECTIVES, SCOPE AND METHODOLOGY

This report focuses on the challenge of budgeting to maintain facilities and infrastructure managed by the City's General Fund departments and the need for adoption of best accounting practices to track and report the full extent to which the City defers maintenance. The 2015 General Fund budget of $4.7 billion was slightly more than half of the total City budget, with almost half of that spent for personnel and only 0.2% to maintain stuff. This causes a growing deferred maintenance backlog when the budgeted funds for maintenance do not meet the need. (When we refer to "departments" in this report, we mean General Fund departments, unless otherwise noted.)

We researched public-agency maintenance budgeting by reading books, journal articles, and Civil Grand Jury reports from other California counties. We examined City reports available to the public online at OneSanFrancisco and SFOpenBook. We spoke to many department managers and staff who gave their time and expertise to educate us about the City's budget and accounting processes generally and issues impacting General Fund departments maintenance needs specifically.

Our review was performed between August 2015 and May 2016.

BACKGROUND

San Francisco's economy depends on continuing investments to maintain the infrastructure and services that benefit City residents, workers, visitors, and businesses. (CAFR 2015, iv http://sfcontroller.org/Modules/ShowDocument.aspx?documentid=6984; SPUR 2005 http://www.spur.org/publications/spur-report/2005-01-03/big-fix) [These abbreviated titles and others signify reference materials in the Bibliography at the back of this report. CAFR means the City's Comprehensive Annual Financial Report. SPUR refers to the San Francisco Bay Area Planning and Urban Research Association which published a very influential article, "The Big Fix", in

2005 that is frequently referred to in this report.We are indebted to the authors for their article and commend it to the reader.]

As is typical of most government entities, need exceeds funding availability forcing City officials to prioritize and make choices. Good information is a fundamental requirement for establishing priorities, including reliable information on the City's maintenance needs.

Historically, the City budgeted inadequate funds to General Fund departments for their maintenance needs. Even during times of fiscal health, mayors and boards of supervisors have not provided adequate annual funding for routine maintenance and repair. (SPUR 2005)

As noted in the SPUR article:

> Political realities facing mayors and boards of supervisors make it difficult for them to consistently fund capital maintenance despite the best intentions.
>
> There exists little political incentive, especially given term limits for elected officials, to make a priority of the long-term issue of maintenance.
>
> The history of underinvestment provides ample evidence that the normal budget process does not provide adequate funding for capital and infrastructure maintenance.
>
> Insufficient capital maintenance is fundamentally wasteful, leading to greater expenses for government over time and reducing the amount of public funds available to pay for important discretionary programs.
>
> Adequate maintenance will lessen the dependence on costly bond financing thereby saving taxpayers millions of dollars over time.
>
> Improvement in the financing of deferred maintenance will extend the life of the City's assets.

As a consequence of this funding deficit, the City has saddled itself with a very large (and growing) backlog of deferred maintenance liabilities. When maintenance is deferred, the City's infrastructure is allowed to deteriorate. This deterioration accelerates over time, increasing the amount of money the City must pay to restore infrastructure to its original condition. (Id.)

When critical facilities deteriorate past the point where further maintenance would be cost-effective, the City typically raises capital to replace those assets through General Obligation bonds. Borrowing money costs money. As the City fails to spend money to maintain its assets on an annual "pay-as-you-go" basis, there is a growing over-reliance on costly bond financing to address the consequences of deferred maintenance. (SPUR 2005)

Photo source:
http://www.campbellpropertymanagement.com/blog/2014/08/06/word-wednesdays-deferred-maintenance-wait/

Operational Accountability and Interperiod Equity

Governments are required to provide information about operating costs, operating results, and *interperiod equity* information – i.e., whether the government is deferring costs to the future or using up accumulated resources to provide current-period services. (GASB 34, paragraph 221)

Many of the Findings and Recommendations in this Report are intended to focus attention on interperiod equity issues: i.e., whether by inadequately funding Maintenance and Repairs, the City government is deferring costs to the future and using up its accumulated resources – its facilities and infrastructure – to provide current period services.

As an influential and much-cited National Research Council report succinctly concluded: We are spending our assets and wasting our inheritance. (NRC 1990).

Parts of This Report

Part I: We analyze the decline in Facilities Maintenance funding for General Fund departments over the decade between 2005-2015, as stated in the respective Budget Ordinances (Appendix A and B). Other pieces of the maintenance funding puzzle may exist, but they are not transparently disclosed to the public.

Part II: We discuss how the City is wasting money and taking risks when it does not adequately maintain the physical assets of its General Fund departments. We discuss a few examples -- trees and bridges -- of the many underfunded risk areas.

Part III: We contend that funding necessary to meet the needs of General Fund departments should be made more visible. We discuss the Ten-Year Capital Plan and Condition Assessment methods. We note that the City Services Auditor is concurrently performing a citywide Facilities Maintenance Practices audit. We recommend that rental rates for tenant City departments be set by the Real Estate Division sufficient to cover M&R (maintenance and repair) needs.

Part IV: We offer suggestions to General Fund department managers and staff on recognized methods for advocating vigorously in the budget process for adequate maintenance and repair funding.

Part V: We contend transparency mandates that Voter Information Pamphlets on General Obligation Bond propositions disclose the life-cycle maintenance cost projections for the new facilities and infrastructure, the expected sources of support for those expenses, and the total expected amount of interest to be paid on the bond.

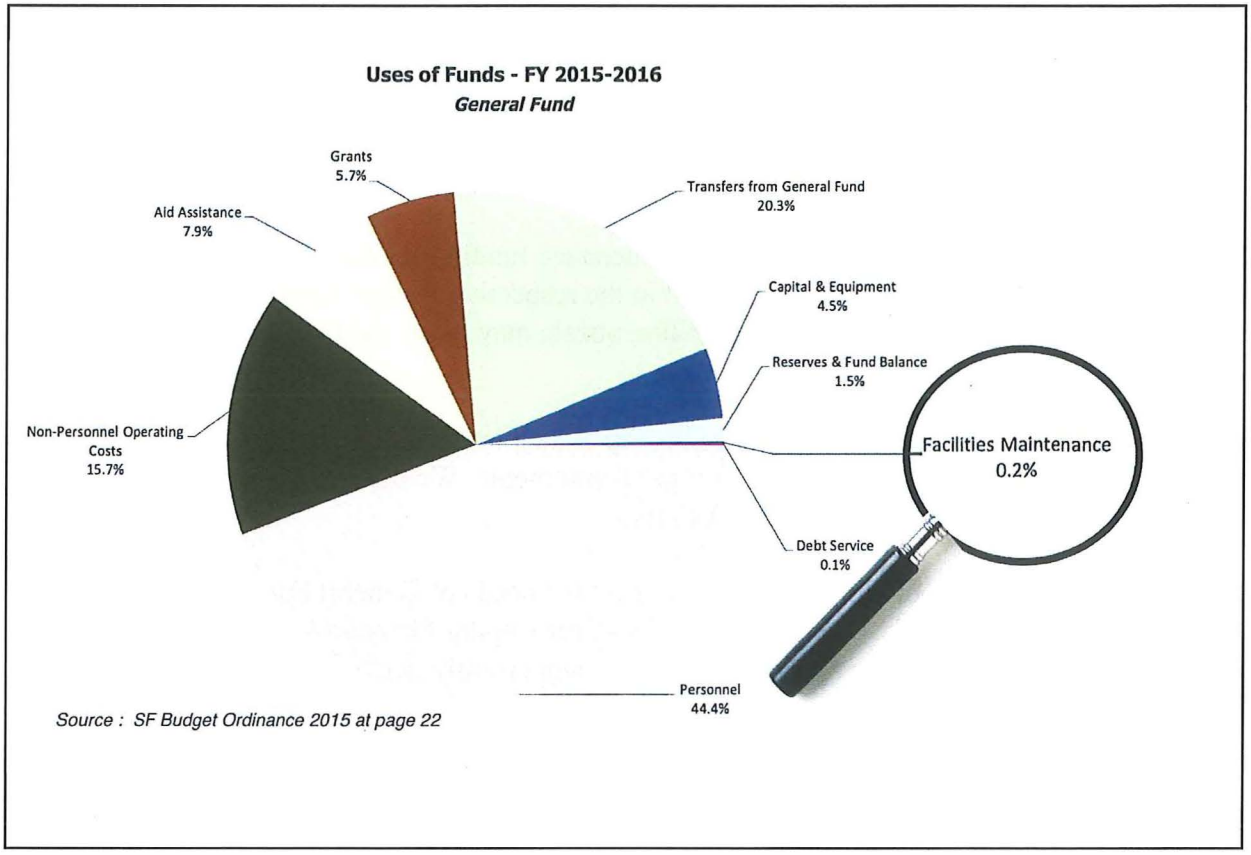
Part VI: We call attention to the City's Deferred Maintenance Backlog, which the Ten-Year Capital Plan acknowledges will continue growing at historic funding levels for the next 15 years.

Part VII: We discuss current best accounting practices for tracking and reporting deferred maintenance and recommend that the City follow these accounting practices.

PART I: WHY THE DECADE-LONG DECLINE IN THE FACILITIES MAINTENANCE BUDGET?

Where's Waldo?

"Facilities Maintenance" sliver of pie chart depicting General Fund departments' Use-of-Funds Budget. (See Figure 1 below)



DISCUSSION

Question asked: How much does the City budget on a yearly basis for maintenance in its General Fund Departments? An inquisitive citizen, curious about the City's maintenance budget for General Fund departments, might first look at page 22 of the "Blue Book" -- the City and

County of San Francisco Budget and Appropriation Ordinance 128-15 (reproduced here as Figure 1). (SF Budget Ordinance 2015, http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances15/o0128-15.pdf)

Under "Uses of Funds – FY 2015-2016 General Fund", the "pie chart" shows a tiny slice for "Facilities Maintenance 0.2%". See Figure 1 below.

In Appendix A, the "Type of Use" listing shows the Facilities Maintenance (gross and net) of $7,925,826 as 0.2% of the General Fund Total. (SF Budget Ordinance 2015)

End of search. A miniscule slice of the budget goes to General Fund departments' maintenance budgets. Question answered.

Or, maybe not. Is 0.2% the transparently obvious answer?

Simple questions sometimes have complex answers.

City officials told us that it is hard to know what the City actually spends on maintenance, and, at the General Fund level, the City does not have a handle on maintenance spending. Furthermore, City accountants told us that there is no "Facilities Maintenance" category in the City's Comprehensive Annual Financial Report (CAFR).

Why isn't San Francisco's General Fund departments' total maintenance data broken out and transparently available to the public? Improving transparency of spending is essential to improve accountability. (Data Transparency GAO 2013 http://www.gao.gov/products/GAO-13-758)

The City's population is growing and at a historic high, the number of private sector jobs is at a historic high, and the General Fund departments' asset value for Facilities, Infrastructure and Equipment grew more than 70% between 2005 and 2015. Yet "Facilities Maintenance" for General Fund departments has not shared in that growth. Instead, that portion of the City's budget was cut by 17.5%, year to year (Appendix B -- from $9.6 million to $7.9 million).The City has fallen behind on asset maintenance spending, and its General Fund departments' deferred maintenance backlog is growing. As shown in this report, it is not just a matter of how much needs to be spent on catching up, but how and where the money is spent.

Upon being questioned about the tiny segment in the General Fund budget representing the maintenance category, City staffers explained to us that "Facilities Maintenance" is a "legacy line item" in the City's budget accounting system. It is not defined, so it is very unlikely that there would be consistency across City departments as to what is covered by this budget code. We were told that a lot of maintenance expenses are not broken out in the budget; for example, the salaries of employees who do the maintenance. Some departments have custodians or stationary engineers who may do some maintenance work. Most organizations do not track at this level. Because of the lack of a clear definition and the staff salary issues, "Facilities

Maintenance" probably does not now represent the complete maintenance budget for City departments (if it ever did).

The 10-year Capital Plan for 2016-2025 assumes that funding for General Fund departments' "Routine Maintenance" will average $14.4 million for FY 2016-2020 and $18.4 million per year for FY 2021-2025. (http://onesanfrancisco.org/wp-content/uploads/1-EXEC2.pdf) If the approved FY 2016-17 budget actually funds routine maintenance at the $14.4 million level, that will be a substantial increase over the FY 2015-2016 facilities maintenance level of approximately $7.93 million.

The following items are normally *included* in a Facilities Maintenance budget: preventive maintenance, programmed major maintenance, predictive testing and inspection, routine repairs, service calls, and replacement of obsolete items if required for continued operation of the facility. The following items are normally *excluded*: Construction, operations, special event support, and alterations. (NRC 1996, http://www.nap.edu/read/9226/chapter/1)

The City Services Auditor's performance unit provides analysis, problem solving and practical support to city departments to improve their service delivery. This unit is conducting a Citywide Facilities Maintenance Practices Audit, with a target completion date of September, 2016. We have discussed in general terms the progress of this Audit with City Services Auditor staff on several occasions.The audit team is looking at analyzing the availability of citywide data used for management decisions about maintenance, and to see if there are leading practices that could improve the City's planning of facilities maintenance.

Facilities Maintenance is a subset of all necessary maintenance and repair of City assets. We were told the the CSA's "Citywide Facilities Maintenance Audit" will be discussing what facilities maintenance means to various City departments and leading practices that require consideration of maintenance in design and construction.

We were told that City agencies currently are using five different systems for tracking maintenance needs, and that a common platform would provide better information to answer the question: What is the gap between need and funding?

Cautionary Note: Our investigation suggests the City does not have systems to define quantitatively the level of maintenance and deferred maintenance for General Fund departments. Section VII of this report identifies best practices to achieve better accounting and reporting of deferred maintenance.

Nevertheless, working with the limited maintenance data disclosed in the City budget, here are some observations about "Facilities Maintenance" as reported on Figure 1:

1. The Facilities Maintenance portion of the Fiscal Year 2015-2016 General Fund budget is approximately $7.93 million, which is 0.17% of the entire General Fund budget of $4.59 billion.

2. The Enterprise Departments (which essentially generate their own funds) budget $59.8 million for their Facilities Maintenance (which is roughly 1.37% of the total Enterprise Departments' budget of $4.35 billion).

This apparent imbalance is graphically depicted in Figure 2 and Figure 3.

Figure 2 shows that the total dollars in the Facilities Maintenance budgets for Enterprise Departments and General Fund Departments have gone in different ways over the past decade: Enterprise up (a lot); General Fund down.

Facilities Maintenance Budgets
Fiscal Years 2005-06 through 2015-16 (actual dollars)

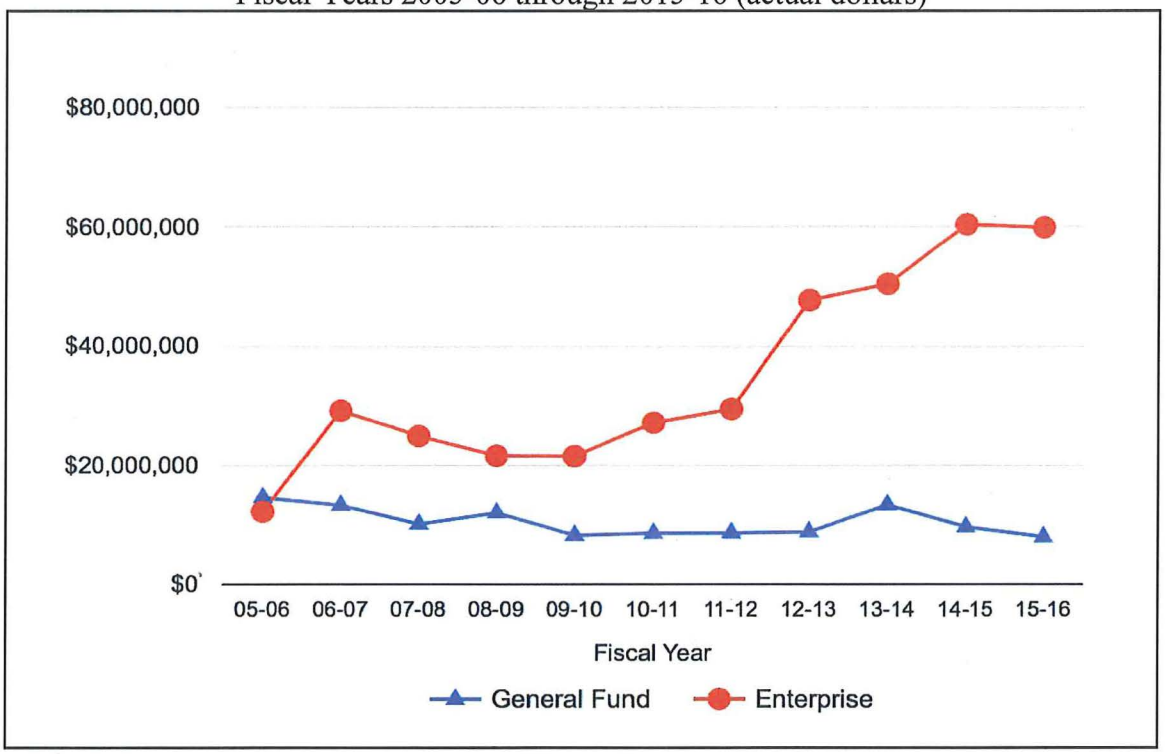


Figure 2

Source: City and County of San Francisco Budget and Appropriation Ordinances for Fiscal Years 2005-06 through 2015-16, Appendix B.

Figure 3 compares Facilities Maintenance as a percentage of total budget for the fiscal year 2015-2016. Enterprise Departments budget 8 times as much for this purpose. For every Enterprise $1, General Fund Departments get 12-½ cents. Why the difference?

Facilities Maintenance as Percentage of Total Budget
General Fund & Enterprise departments, Fiscal Year 2015-16

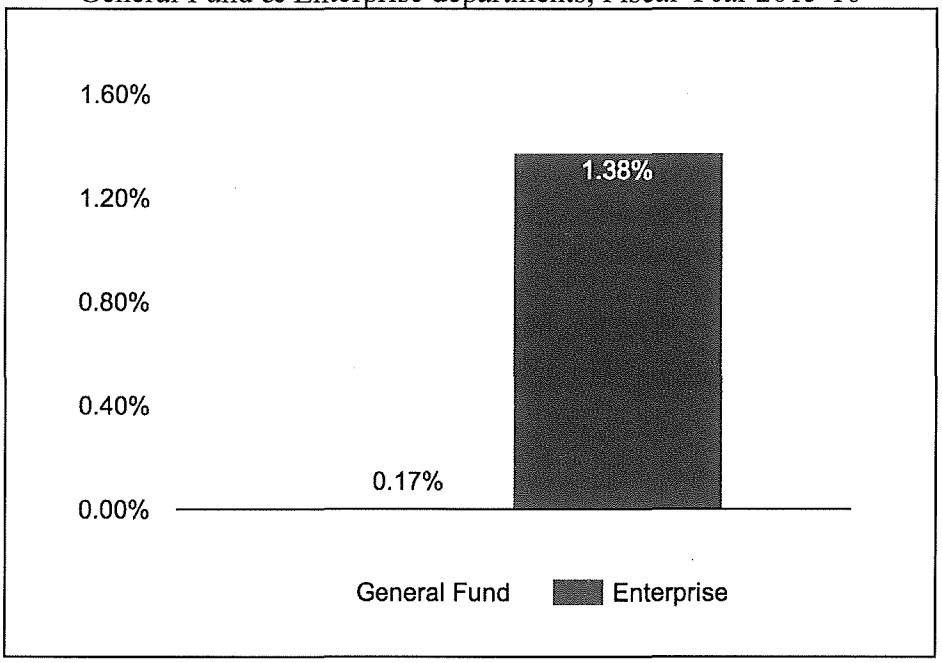


Figure 3

Source: City and County of San Francisco Budget and Appropriation Ordinance for Fiscal Year 2015-16, Appendix B.

12-½ cents versus $1

As revenue-generators, Enterprise department directors effectively get to set their own budgets, subject to their commissions' and Board of Supervisors approval. They have an incentive to keep their departmental facilities in good condition in order to keep generating revenue. They can set their Facilities Maintenance budgets accordingly. For example, we learned that Enterprise department San Francisco Airport has no deferred maintenance backlog. Conversely, the deferred maintenance backlog for General Fund departments exceeds $1 billion. See Appendix E.

As money consumers, General Fund department directors do not set their own departmental budgets -- they must request funding from other decision-makers.

A consequence of this municipal arrangement is that, for every $1 that an Enterprise Department budgets for Facilities Maintenance, the General Fund departments must "make do" with 12-½ cents.

12½ cents.

General Fund departments weathered significant facilities maintenance budget cuts and restorations in the last decade. The high points were $14.56 million in 2005, $13.27 million in

2006, and $13.35 million in 2013, with lows of $7.93 million in 2015, $8.19 million in 2009, and $8.55 million in 2010. (Appendix B --Budget Blue Books for the respective years)

Allowing for 21.5% compounded inflation between 2005 and 2015 (www.usinflationcalculator.com), the 2005 high of $14.56 million would be the equivalent of $17.69 million in 2015 dollars. Thus the inflation-adjusted difference between the high and the low "facilities maintenance" budget is $9.76 million, or a 55% decline.

Budget-deciders must recognize that variations in "facilities maintenance" funding of this magnitude are likely to make it very challenging for General Fund department managers to implement a comprehensive maintenance plan. It inevitably leads to an ever-increasing amount of deferred maintenance.

One plausible take-away from this exercise is that as General Fund departments' "Facilities Maintenance " budgets go down, other parts of the budget are going up, with adverse "inter-period equity" consequences.

A couple of factors appear to be at work here. For example, maintenance is not as glamorous as other hot-button policy issues. We were told that politicians don't believe their constituents regard maintenance as "sexy"; in both good and bad economic times, funding for maintenance is often the first to be cut. It is relatively easy for decision-makers to defer maintenance, since the consequences are not apparent for many years. Political leadership recognizes that the crisis may not come on their watch. They also earn little praise for addressing infrastructure. (SPUR 2005; http://www.spur.org/publications/spur-report/2005-01-03/big-fix)

City staffers told us one of the political realities in setting the City budget is that, due to the crush of political pressure, services will not be cut. Politicians do not lack knowledge about the need for regular maintenance; but they are forced to make trade-offs over spending money for services. The City is a political organization.

The delivery of effective, high-quality services is frequently dependent on well-maintained public facilities. Yet, there are few advocates for increased spending on maintenance programs, whereas there are countless advocates demanding increased funding for social, health, and other important services. (SPUR 2005)

One veteran of City government told us that short-term focus is a fundamental fact of City politics: Leaders want their name on or picture in a new building now, and let the next guy worry about maintaining it when they have moved on to another office.

Government officials acknowledge up-front costs when they propose building a new structure, but they do NOT like to acknowledge the costs of maintenance for the life of the structure. (See Part V: Voter Information Pamphlets on General Obligation Bonds Should Disclose Life-Cycle Maintenance Cost Projections)

A department head told us that for any public official faced with hard choices, the easiest answer is "NO".

Standards for Maintenance Budgeting

How much should the City be budgeting in "Facilities Maintenance" for its General Fund departments?

Maintenance as per cent of total budget?

San Francisco reports its Facilities Maintenance budget as a percentage of the whole budget -- See Figure 1. San Francisco is the only combined City and County in California. We began our inquiry into the adequacy of San Francisco's facilities maintenance budgeting by looking for comparable governmental entities. How much are other City and County's budgeting for maintenance? Using publicly available information, we found that the City and County of Honolulu, with roughly the same population, allocates more than 8 times as much for maintenance.

While this is an interesting (and disturbing) statistic, further research revealed that experts in the public agency maintenance budgeting field do not judge the adequacy of maintenance budgets by looking at the percent of total budget dollars. Instead, the standard in the public agency maintenance budgeting field is the maintenance budget as a percentage of asset current replacement value (CRV).

Maintenance as per cent of asset Current Replacement Value (CRV)

A widely-cited best practices benchmark for maintenance budgeting -- how much you should be spending to keep assets in good repair -- utilizes Current Replacement Value (CRV). A National Research Council (NRC) report recommends a range between two and four percent of CRV, (NRC 1990 http://www.nap.edu/catalog/9807/committing-to-the-cost-of-ownership-maintenance-and-repair-of). The San Jose auditor uses this formula for setting investment levels in maintaining assets. (San Jose 2014 http://www.sanjoseca.gov/DocumentCenter/View/37382).

San Francisco has a handle on the Current Replacement Value of its General Fund departments' assets. All but one General Fund departments use an asset management program, Facilities Renewal Resource Model (FRRM), to calculate CRV. The Office of the City Administrator Capital Planning Division found in a 2009 three-year-lookback analysis that, overall, FRRM's cost assumptions for calculating CRV were relatively close to actual construction cost increases and did not need to be adjusted. (Analysis of FRRM Cost Assumptions 2009 http://www.sfgov2.org/ftp/uploadedfiles/cpp/documents/FRRM%20Cost%20Analysis%20Report%20FINAL.pdf)

The Recreation and Parks Department uses COMET (Condition Management Estimation Technology) which can inflation-adjust an existing CRV engineering assessment.

Individual CRV estimates need not be precisely calculated for a particular facility because errors will tend to cancel out when the CRVs for several departmental facilities are combined, and any small cumulative errors become negligible when multiplied by two to four percent to get the requested overall M&R budget. (NRC 1996 http://www.nap.edu/read/9226/chapter/1)

The asset management program used by almost all the General Fund departments in San Francisco -- Facilities Renewal Resource Model (FRRM) -- generates for 18 departments an annual "target need" between zero and four percent of CRV. See Figure 4. This is not yet in the Capital Plan as a performance benchmark.

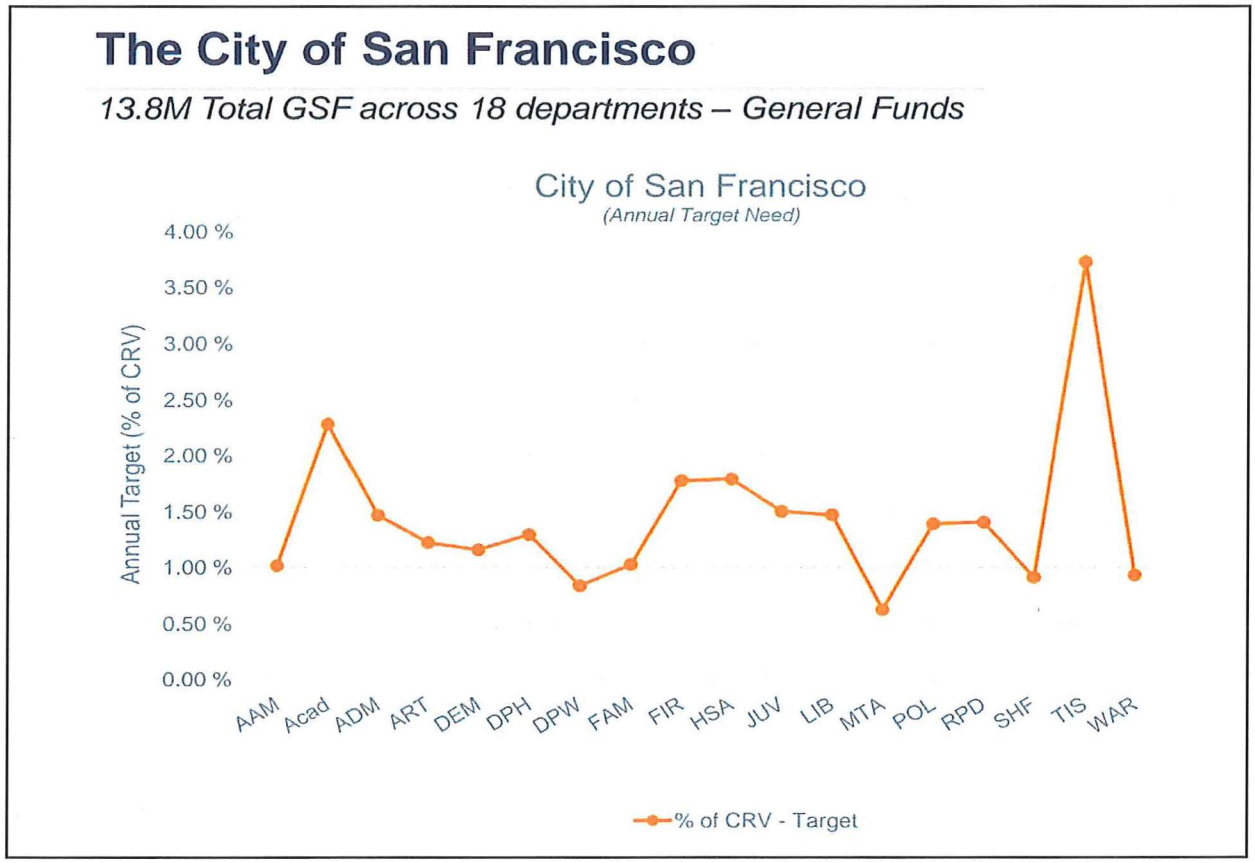


Figure 4

Source: OneSF,[onesanfrancisco.org] FRRM Training slides, September 22 and 24, 2015, page 20.

We were told that, nationally and internationally, two to three percent of CRV is recommended for maintenance by the Building Owners and Managers Association (BOMA) and the International Facilities Management Association (IFMA) and an additional two to four percent of CRV for renewals. Real estate management firms have similar guidelines.

The September, 2015 FRRM training materials charted the "Annual Target Need" for 18 General Fund departments (including Recreation and Parks Department) as a % of CRV. See Figure 4. The target needs ranged from 0.50% to 3.75% of departments' CRVs.

The Figure 4 chart of "target need" as a percent of CRV can be initially confusing. It is a snapshot in time for 18 departments, not a graph of target need changing over a period of years. (This comment does not rise to the level of a Civil Grand Jury "Recommendation", but for clarity and transparency purposes, we suggest future "target needs" be shown as a bar chart, without a line along the tops of the individual department bars.)

What is the gap between need and funding?

The gap between "need" and funding is approximately $114 million. As shown in Appendix D-5, the annual average total maintenance need as a percent of CRV is 1.7%.

The 2015 Facilities Maintenance $8 million budget amount is 1/10th of 1% of General Fund CRV. In dollars, the total target need is $122 million. Thus the gap between target need and Facilities Maintenance funding at ~$8 million is $114 million.

The challenges to adequately pay for maintenance of the City's assets are not unique to San Francisco. Literature we reviewed acknowledged that even reaching two percent of CRV funding is a challenge for many cities. See Table 1 below. (NRC 2004 http://www.nap.edu/catalog/11012/investments-in-federal-facilities-asset-management-strategies-for-the-21st; IFMA 2009 http://www.ifma.org/publications/books-reports/operations-and-maintenance-benchmarks-research-report-32; NRC 2012 http://www.nap.edu/catalog/13280/predicting-outcomes-from-investments-in-maintenance-and-repair-for-federal-facilities)

Among the IFMA survey participants were Minneapolis (~400,000 population), Oklahoma City (~600,000 population) and Sacramento, San Bernardino, San Diego, and Ventura counties in California.

According to our calculations, there is an even larger gap between benchmark funding for maintenance and repairs at 2% (~$139 million gap) and 4% (~$285 million gap) of CRV levels and the facilities maintenance budget amount. See Appendix D3.

The Capital Planning Committee recommends an average $14.4 million per year budget for General Fund Departments' "Routine Maintenance: for fiscal years 2016-2020". (Capital Plan 2015 http://onesanfrancisco.org/wp-content/uploads/Complete-CapitalPlan_Final2.) There will still be a very large gap between need and funding. See Appendix 5.

Thus, ***if*** the reported "Facilities Maintenance" $8 million budget for General Fund departments was the total General Fund maintenance budget for 2015, San Francisco would be close to last on the IFMA survey. (The City would still be close to last at 0.2% of CRV if we use the "Routine Maintenance" budget of $14.4 million as recommended by the CPC for FY 2016-17.)

Departments requesting maintenance appropriations in the next budget are told: "The amount allocated is based on the previous year's appropriation." (Instructions for Capital Budget Request Form 6; SF Budget Instructions 2015 http://sfcontroller.org/modules/showdocument.aspx?documentid=1436).

International Facilities Management Association CRV Index Survey

[54]A 2009 survey of 274 organizations conducted by the IFMA found that the average funded CRV Index of 1.55% demonstrated a continuing decline compared to previous reports:

Percentile	CRV Index %	
99	9.14%	
95	6.41%	
90	3.31%	
75	1.87%	← SF need 1.7%
50	0.94%	
25	0.49%	
10	0.26%	
5	0.16%	← SF funded 0.1%
1	0.04%	
Mean	1.55%	

N = 274

Table 1

Source: IFMA 2009; SF Need 1.7% from Figure 4; SF Funded 0.1% from calculating the 2015 Facilities Maintenance budget amount as a percentage of General Fund CRV ($7,925,816 / $7.337 billion = 0.108%, i.e. 1/10th of 1 percent). Appendix D1.

However, a division head told us there is no Charter provision, Administrative Code section, or other publicly-available requirement that would preclude the Controller from changing the basis of the maintenance allocation from an amount based on the previous year's appropriation to an amount based upon target need or as a percentage of the Current Replacement Value (CRV) of a department's asset portfolio.

The continued neglect of the City's infrastructure has huge implications for the City: deterioration of our public physical heritage harms our economy, limits the city's ability to function efficiently, exposes it to legal liability, endangers the public's health and safety, and threatens its fiscal stability. (Spur 2005)

FINDINGS

I.A. For General Fund Departments, the City could (but does not) provide the public with transparent information concerning the stewardship of assets by disclosing:

(1) the gap between industry maintenance standards and San Francisco's investment in General Fund Departments' "Facilities Maintenance" (measured as a percentage of Current Replacement Value and in dollars);
(2) the total General Fund Departments' maintenance and repair budget;
(3) the total General Fund Departments' maintenance and repair backlog, and
(4) benchmark comparisons with other cities and counties.

F:I.A.1. The gap between the City's investment in General Fund Departments' "Facilities Maintenance" assets and industry guidelines measured as a percentage of Current Replacement Value (CRV):

- Recommended 4%,
- Minimum 2%, or
- Total General Fund Departments' "target need" of approximately 1.7% calculated by Facilities Renewal Resource Model (FRRM), (see Figure 4 and Appendix D-3) and in dollar amounts

is not made available to citizens of San Francisco.

F:I.A.2-a. Without transparent and complete information about the investment levels in the City's General Fund Departments' maintenance and repair budgets, the public does not have important information with which to assess the City's stewardship of public assets.

F:I.A.2-b. The slice of the pie chart for General Fund departments labelled "Facilities Maintenance" in the Budget report is not the total maintenance budget for those departments.

F:I.A.2-c. The total maintenance budget for General Fund departments is not disclosed in the Budget report.

F:I.A.3. As a consequence of low investment levels in General Fund departments' asset maintenance and repair, the City has a large and growing deferred maintenance and repair backlog for General Fund departments. Without transparent and complete information about these deferred maintenance and repair backlogs, the public does not have important information with which to assess the City's stewardship of General Fund Departments' assets.

F:I.A.4. San Francisco's comparison with benchmark comparable cities and counties in terms of

(a) "Facilities Maintenance" investment in General Fund Departments' assets, measured as a percentage of Current Replacement Value (CRV) and dollars;
(b) General Fund Departments' total maintenance and repair budgets, and
(c) General Fund Departments' deferred maintenance and repair backlog

would be useful for the public in assessing the City's stewardship of these General Fund Departments' assets.

RECOMMENDATIONS

Disclose FRRM Target maintenance and repair need in dollars, study CRV benchmarks and audit General Fund departments' total maintenance funding and maintenance backlog

R:I.A.1-a. To provide useful information for the public in assessing the City's stewardship of public assets, the City Administrator and the Capital Planning Program Director should use the FRRM (Facilities Renewal Resource Model) to calculate the target need for General Fund departments' facilities maintenance as a percentage of Current Replacement Value (CRV) and in dollar amounts, and disclose that information to the public;

b. The City Administrator and th eDirector of the Capital Planning Program should determine the additional time and manpower cost to accomplish this additional calculating and reporting and include a line item for those costs in its budget requests;

c. The Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the amount requested by the City Administrator to accomplish this additional calculating and reporting; and

d. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the City Administrator to accomplish this additional calculating and reporting in the approved budgets for fiscal year 2017-2018 and thereafter.

R:I.A.2-a. This recommendation satisfies Findings F:I.A.2-a, -b, and -c:

a. In order for the public to assess the City's stewardship of General Fund Departments' assets, the Controller should:

(1) disclose the total maintenance budget for General Fund departments; and
(2) periodically conduct an audit of investment levels in General Fund departments' asset maintenance and repair.

R:I.A.2-b. The Controller should determine the additional annual time and manpower cost to accomplish the compilation and disclosure of the total maintenance budget for General Fund departments, and periodic audits and include line item entries for those costs in its budget requests for fiscal year 2017-2018 and thereafter;

R:I.A.2-c. The Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the amounts requested by the Controller for the compilation and disclosure of the total maintenance budget for General Fund departments and periodic audits; and

R:I.A.2-d. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller for the compilation and disclosure of the total maintenance budget for General Fund departments and periodic audits in the approved budget for fiscal year 2017-2018 and thereafter.

R:I.A-3-a. In order for the public to assess the City's stewardship of General Fund Departments' assets, the Controller should:

(1) disclose the total deferred maintenance and repair backlog for General Fund departments; and
(2) periodically conduct an audit of General Fund departments' deferred maintenance and repair backlog.

R:I.A.3-b. The Controller should determine the additional annual time and manpower cost to accomplish the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments, and periodic audits and include line item entries for those costs in its budget requests for fiscal year 2017-2018 and thereafter;

R:I.A.3-c. The Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the amounts requested by the Controller for the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments and periodic audits; and

R:I.A.3- d. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller for the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments and periodic audits in the approved budget for fiscal year 2017-2018 and thereafter.

R:I.A.4-a. To provide useful information for the public in assessing the City's stewardship of General Fund Departments' assets, the Controller should conduct a benchmark study of investment levels in General Fund departments' "Facilities Maintenance" measured as a percentage of Current Replacement Value, total maintenance and repair budgets and deferred maintenance and repair backlogs;

R:I.A.4-b. The Controller should determine the additional time and manpower cost for the City Services Auditor staff to conduct this benchmark study and include a line item for those costs in its budget request for fiscal year 2017-2018;

R:I.A.4-c. The Mayor should include in the proposed budget for fiscal year 2017-2018 the amount requested by the Controller for the benchmark study; and

R:I.A.4-d. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller to accomplish this benchmark study in the approved budget for fiscal year 2017-2018.

PART II: WHY ADEQUATE FUNDING FOR MAINTENANCE AND REPAIR IS IMPORTANT TO SAN FRANCISCO'S RESIDENTS

"When you are in a hole, stop digging."
—First Law of Holes (https://en.m.wikipedia.org/wiki/Law_of_holes)

When you buy a car for $20,000, you are not done with expenses. You must figure on roughly $1,000 a year for maintenance -- service, tires, etc. You must budget for that expense, to prevent breakdowns that would leave you stranded on the highway.

You need to think about how much to budget to keep the car running. Do the math, plot it out, anticipate, schedule. Have a plan. But this tends not to be the way the City operates.

Over the years, the City has invested billions of dollars in facilities and equipment needed to carry out its missions. Without sufficient maintenance, these assets deteriorate and eventually fall into disrepair. This poses threats to the health and safety of City staff and residents using the facilities; it also interrupts services, and causes wasteful expense.

Studies by the National Research Council, as well as our interviews with City officials, show that timely maintenance and repair (M&R) is essential to effective use of taxpayers' dollars.

The NRC highlighted potential beneficial consequences of adequate maintenance funding:

a. *Mission-Related outcomes*: improved reliability, improved productivity, functionality, and efficient space utilization;
b. *Compliance-Related outcomes*: fewer accidents and injuries, fewer building-related illnesses, and fewer injury claims, lawsuits, and regulatory violations;
c. *Condition-Related outcomes*: improved condition, reduced backlog of deferred maintenance and repairs;
d. *Efficient Operations outcomes*: less reactive, unplanned maintenance and repair, lower operating costs, lower life-cycle costs, cost avoidance, reduced energy use, reduced water use, reduced greenhouse gas emissions; and
e. *Stakeholder-Driven outcomes*: customer satisfaction and improved public image. (NRC 2012 http://www.nap.edu/catalog/13280/predicting-outcomes-from-investments-in-maintenance-and-repair-for-federal-facilities)

Conversely, potential adverse consequences from underfunding maintenance were also compiled by the NRC:

a. System failures that will disrupt agencies' operations;
b. Higher operating and life cycle costs;
c. Hazards that lead to injuries and illnesses or loss of life and property;
d. Waste of water, energy, and other resources;
e. Operation inefficiencies;
f. Continued greenhouse gas emissions;
g. Greater fiscal exposure related to facilities ownership; and
h. Even greater deferred maintenance backlogs.(Id.)

Persistent inadequacy of money for maintenance leads to more deferred maintenance. Pay now – or pay more later?

A. Adequately Funding M&R Saves Money and Protects Citizens

Trying to Do Maintenance on the Cheap Wastes Money

"If you build it, they will come."
—Field of Dreams

Maybe.

If the City builds it, and then fails to maintain it, taxpayers' money will be wasted. Definitely.

When repairs to key buildings and infrastructure components are put off, facilities can eventually require more expensive investments, such as:

- emergency repairs (when systems break down),
- capital improvements (such as major rehabilitation or replacement).

While deferring annual maintenance lowers costs in the short run, it often results in substantial costs in the long run. (LAO Deferred Maintenance 2015 http://www.lao.ca.gov/Publications/Detail/3216; Improved Transparency GAO 2014 http://www.gao.gov/products/GAO-14-188; SPUR 2005 http://www.spur.org/publications/spur-report/2005-01-03/big-fix)

We were told that letting the condition of assets slide until they qualify for bond money is an expensive way to pay for them.

City officials understand the benefits of timely maintenance. The Mayor's Office in 2011 stated delaying [street] repairs will only make them more expensive in the future, costing up to five times more than fixing now. [Mayor's Office 2011 Safe Streets Bond http://www.sfmayor.org/index.aspx?page=437] It is the current strategy to keep the City's roads and streets in

good shape, once achieved: Maintain the streets and keep them from deteriorating to the point where costly reconstruction is needed.

As another example, a recent City Services Auditor report on the Recreation and Parks Department observed that lack of comprehensive citywide facilities maintenance planning has resulted in under investment in preventative maintenance work which has depreciated the value and useful life of park facilities and assets. Regular preventative maintenance is necessary for realizing the expected useful life of an asset, and for mitigating the need to continuously repair broken or deteriorating assets. [CSA RPD http://sfcontroller.org/sites/default/files/FileCenter/Documents/6811-Maintenance%20Memo_FINAL.pdf]

The current General Fund departments' maintenance and repair budget is NOT sufficient to address current maintenance issues. (See Part I) When the little amount of money in that account runs out, the department must wait until the next year to fix things.

Various officials have acknowledged it is cheaper to maintain facilities and infrastructure, but decision-makers still are not willing to sustain funding for maintenance and repair. In hard times, the maintenance budget goes first.

Pay-as-you-go program and stable funding sources

The Five-Year Financial Plan for fiscal years 2015-16 through 2019-20 states the Mayor has made street funding a top priority to counteract the decline in Paving Condition Index scores that started two decades ago from underinvestment. The report assumes full-funding of the street repaving program in every year through the Capital Planning General Fund pay-as-you-go program. (SF Five Year Financial Plan 2015 http://sfcontroller.org/modules/showdocument.aspx?documentid=6056)

The Mayor is budgeting $98 million for street resurfacing, and $28.5 million for improvements to curbs, sidewalks, streetscapes, and street trees across the City. Smoother streets save drivers on average $800 per year in vehicle maintenance costs, and mean safer streets for all users -- pedestrians, bicyclists, and motorists. (Mayor's Budget Letter 2015 http://sfmayor.org/ftp/uploadedfiles/mayor/budget/SF_Budget_Book_FY_2015_16_and_2016_17_Final_WEB.pdf)

The Civil Grand Jury notes the announced intention to use pay-as-you-go program for funding on-going maintenance and repair, but recognizes that this may not be a complete solution to the funding challenges described in this report.

FINDINGS

Adequately funding M&R has beneficial consequences; underfunding has adverse consequences

F:II.A.1-a. Adequately funding maintenance and repair of General Fund departments' facilities and infrastructure has potential beneficial consequences, such as those noted in a National Research Council report (NRC 2012).

F:II.A.1-b. Underfunding maintenance and repair of General Fund departments' facilities and infrastructure creates potential adverse consequences, such as those noted in the same National Research Council report (NRC 2012).

F:II.A.1-c. The City saves money over the long term by using pay-as-you-go financing for high-priority maintenance and repairs.

F:II.A.1-d. Total reliance on annually budgeted pay-as-you-go funding can result in maintenance and repairs being deferred in lean budget years. It will be a challenge for policy makers to develop a range of stable "pay-as-you-go" annual funding mechanisms for maintenance and repairs.

RECOMMENDATIONS

Mayor and Board of Supervisors should adequately fund General Fund departments Maintenance and Repair to achieve beneficial consequences, avoid adverse consequences and save money

R:II.A.1-1. In order to achieve beneficial consequences and avoid the potential adverse consequences from underfunding maintenance and repair of General Fund departments' facilities and infrastructure, and to save money over the long term:

a. The City Administrator and the Director of the Capital Planning Program should identify a range of stable funding sources for pay-as-you-go maintenance and repair of the City's facilities and infrastructure;
b. The Mayor should propose sufficient funding in the Fiscal Year 2017-2018 budget and thereafter from stable funding sources for all General Fund departments' high-priority pay-as-you-go maintenance and repair projects; and
c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve sufficient funding in the Fiscal Year 2017-2018 budget and thereafter from stable funding sources for all General Fund departments' high-priority maintenance and repair projects.

B. Inadequate Maintenance means taking risks with the facilities citizens rely upon for critical public health, public protection, and other basic services.

DISCUSSION

"Risk: If it can happen, it will happen."
—City official

Adequate maintenance and repair funding pays dividends by minimizing interruptions in programs and services, and reducing health and safety risks to the public and staff.

The goal of any maintenance organization is to minimize the amount of corrective maintenance so as not to interrupt City programs and services. Corrective maintenance is inefficient and costly in nature compared to routine preventive maintenance. (San Jose Auditor 2014 http://www.sanjoseca.gov/DocumentCenter/View/37382) As found by a neighboring Civil Grand Jury: Compounding the monetary implications of the County's decision to inadequately fund maintenance and repair is the related health and safety exposure to the public and employees. (Contra Costa CGJ 2012 http://www.cc-courts.org/_data/n_0038/resources/live/rpt1203.pdf)

With respect to the health, safety and productivity of building occupants, cause-effect relationships have been scientifically documented

- between waterborne pathogens in water systems and Legionnaire's disease and Pontiac fever;
- between microorganisms growing in contaminated ventilation and humidification systems and hypersensitivity pneumonia and humidifier fever;
- between the release of carbon monoxide and carbon monoxide poisoning;
- between the presence of radon, secondhand smoke, and asbestos in buildings and lung cancer; and
- in connection with nonspecific symptoms – including eye, nose, and throat irritations – sometimes referred to as "sick-building syndrome". (NRC 2012 http://www.nap.edu/catalog/13280/predicting-outcomes-from-investments-in-maintenance-and-repair-for-federal-facilities)

Risk Assessments

Risk assessments play an important role in maintenance and repair funding decisions.

A risk assessment poses an initial series of questions:

1. What can go wrong?
2. What are the chances that something with serious consequences will go wrong?
3. What are the consequences if something does go wrong?

Then there are follow-up questions:

a. How can the consequences be prevented or reduced?
b. How can recovery be enhanced if the scenario occurs?
c. What are the associated tradeoffs in terms of all costs, benefits, and risks?
d. What are the impacts of current management decisions on future options?
e. How can key local officials, expert staff, and the public be informed to reduce concern and increase trust and confidence? (NRC 2012)

We were told the Mayor's Office did not know of any Risk Assessments for personal injury or property damage claims arising from unmaintained or poorly maintained City property. A seismic risk assessment set priorities (including which facilities were not worth repairing). A City official told us that it can be challenging to monetize risk.

The City has" estimated claims payable" (see definition in Glossary) arising from government activities (i.e., General Fund departments) of $157.7 million: $52.8 million current portion and $104.8 million long-term. (CAFR 2015 at 147 http://sfcontroller.org/Modules/ShowDocument.aspx?documentid=6984) The share due to allegedly poorly maintained capital assets is not stated.

The City Attorney's Office provided us with an actual "Settlements & Judgments" paid summary including ten types of alleged (by claimant on the claim form) premises liability maintenance-related causes for fiscal years 2011-2015. The amounts paid ranged from $1.9 million to $4.4 million per year, and averaged $3.4 million per year for the five year period. This $3.4 million is roughly 8 percent of the average annual "estimated claims payable" for all claims against the City. (CAFR 2011-2015)

The City Attorney's Office provides claim reports to department head periodically depending on claim volume and meets with them at their request to discuss problem areas.

The City is self-insured for Workers' Compensation. As of June 30, 2015, the Governmental Activities accrued workers' compensation liability for General Fund departments was $223.7 million. (CAFR 2015 at 148)

The City spent more than $46 million on Workers' Compensation in 2015. Because of the way in which claims information is gathered, the Workers' Compensation Division was unable to tell us what portion (if any) of this liability arises out of poorly maintained capital assets.

Cal OSHA requires all managers and supervisors to maintain "Hazard Logs" as part of an organization's injury analysis and prevention program. But the City's current General Services Agency -- Environmental Health and Safety procedures do not report the risk and cost of hazards created by deferred maintenance up the line to inform budget decision-makers.

FINDINGS

The City could do a better job of assessing maintenance-related risks by a Controller's audit of Workers Compensation claim causes and review of Hazard Logs

F:II.B.1-a. The City does not know what portion (if any) of its Workers' Compensation liabilities arise out of poorly maintained General Fund department capital assets.

F:II.B.1-b. If the City's budget decision-makers knew how much (if any) of the City's Workers Compensation liabilities arose out of poorly maintained General Fund department capital assets, they would have useful information in making budget trade-off decisions.

F:II.B.2-a. Hazard Logs in City General Fund departments are not being compiled and analyzed in a manner which identifies and quantifies risks of injury resulting from deferred maintenance.

F:II.B.2-b. If the Hazard Logs in General Fund departments were compiled and analyzed in a manner which identified and quantified risks of injury resulting from deferred maintenance, that information could be provided to budget decision-makers for use in making budget trade-offs.

RECOMMENDATIONS

The Controller should audit Workers Compensation Division data gathering procedures and General Services Agency -- Environmental Health and Safety Hazard Logs and other records to ascertain whether deferred maintenance and repair (DM&R) contributes to City employee injuries and Workers Compensation liabilities

R:II.B.1-a. The Controller should:

- conduct an audit of the Workers' Compensation Division of the Department of Human Resources data gathering policies and procedures,
- report to budget decision-makers its findings of identified and quantified risks of injury created by deferred maintenance and repairs, and recommend appropriate modifications.

So as budget funding trade-off decisions are made, the Mayor and Board of Supervisors will know what portion of the City's Workers Compensation liabilities (if any) arise from poorly maintained General Fund department capital assets.

R:II.B.1-b. The Controller should determine the additional time and manpower cost for the City Services Auditor staff to accomplish this audit and report and include a line item for this cost in its budget request for fiscal year 2017-2018.

R:II.B.1-c. To reduce the risk of injury to City employees, the Mayor should include in the proposed budget for fiscal year 2017-2018 this line item in the Controller's budget request for an audit of Workers Compensation Division data gathering policies and procedures.

R:II.B.1-d. To reduce the risk of injury to City employees, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve this line item in the Controller's budget request for an audit of Workers Compensation Division data gathering policies and procedures and include it in the approved budget ordinance for fiscal year 2017-2018.

R:II.B.2-a. The Controller should assist the City Administrator and the General Services Agency --Environmental Health and Safety in developing procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs.

R:II.B.2.b. To provide budget decision-makers with pertinent information for making trade-off decisions, the Controller should determine the additional time and manpower cost to develop procedures for periodic analysis of Hazard Logs to identify and quantify

risks of injury created by deferred maintenance and repairs and include a line item for this cost in its budget request for fiscal year 2017-2018.

R:II.B.2.c. To reduce the risk of injury to City employees, the Mayor should include in the proposed budget for 2017-2018 this line item in the Controller's budget request to develop procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs.

R:II.B.2.d. To reduce the risk of injury to City employees, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve this line item in the Controller's budget request to develop procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs and include it in the approved budget ordinance for fiscal year 2017-2018.

C. Examples of M&R Underfunding Risks

(1) Street Trees and Urban Forest

DISCUSSION

Trees along the City streets and in our parks are valuable assets which need secure funding sources for maintenance.

Budget cuts led the Department of Public Works to start a street tree maintenance transfer plan whereby the City retains ownership but adjacent property owners became responsible for the cost of maintaining the tree. Results have not been good for the trees.

The Urban Forest Plan (Phase 1: Street Trees; http://default.sfplanning.org/plans-and-programs/planning-for-the-city/urban-forest-plan/Urban_Forest_Plan_Final-092314WEB.pdf) recommends the Department of Public Works should take responsibility for ALL street trees, with secure funding. The Supervisors adopted this Forest Plan Phase 1 by Ordinance No. 23-15. (Ordinance No. 23-15 Street Trees, http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances15/o0023-15.pdf) If the funding proposal is placed on the November ballot and approved by the voters, street tree maintenance will be securely funded and 50,000 more trees will be planted throughout the City over the next 20 years.

Trees in City parks also need secure maintenance and risk assessment funding for the safety of park users.

Trees are City assets that the public can see. When tree maintenance is deferred, the adverse consequences are visible – uplifted sidewalks become trip hazards, falling limbs and trees can damage property and hurt people. (Figures 5, 6 and 9) Thus the challenges of maintaining the

Figure 5

In District 4, falling tree limb kills woman in Stern Grove parking lot, April 14, 2008. The City settled the resulting Dangerous Condition of Public Property claim for $650,000.

Credit: Lacy Atkins-San Francisco Chronicle

City's trees represents in microcosm the challenges the City faces in adequately maintaining other important but less-visible City assets.

San Francisco was once a largely treeless landscape of grassy hills and sand dunes. Almost all of the 670,000 trees on public and private land in the City have been planted by humans and need care. (Forest Plan Phase 1; Eldon, Hoodline 2015 http://hoodline.com/2015/01/san-francisco-street-tree-problems-to-get-worse-before-they-get-better) Trees perform valuable environmental, economic, and social functions and make San Francisco a better place to live and work. Trees in cities can contribute significantly to human health and environmental quality by reducing air temperature, directly removing pollutants from the air, and reducing energy consumption in buildings. (Forest Plan Phase 1) The U.S. Forest Service estimated the 2007 replacement value of the trees in San Francisco as $1.7 billion. (SF Urban Forest Values http://hoodline.com/2015/01/san-francisco-street-tree-problems-to-get-worse-before-they-get-better)

There are roughly 105,000 street trees and 131,000 trees growing in city parks and open spaces. For every $1 spent on public street trees, San Francisco receives $4.37 in benefits – a tremendous return on investment. (Forest Plan Phase 1)

Decreases in funding over the years restricted DPW and Rec & Park's ability to sustain urban forestry staffing and programs. (Forest Plan Phase 1) The Urban Forestry Council noted in its annual Urban Forest Reports that San Francisco's urban forest managers consistently identify their highest priority issue as the lack of adequate resources to effectively maintain the city's trees. The Rec & Parks Department and DPW both are significantly underfunded to do tree maintenance work.

At 13.7% canopy cover (the amount of land covered by trees when viewed from above), the City lags far behind other major cities (Los Angeles has 21%; New York City 24%). The city's canopy cover also varies widely between neighborhoods with some traditionally underrepresented communities having less greenery. (Forest Plan Phase 1)

One reason so few trees are currently planted in San Francisco is because no maintenance program exists to care for them afterwards. (Forest Plan Phase 1) Property owners are reluctant to plant new trees because of ongoing maintenance responsibilities and potential costs associated with liabilities such as sidewalk repair. (AECOS 2013 http://www.sf-planning.org/ftp/files/plans-and-programs/planning-for-the-city/urban-forest-plan/UFP_Financing_Study_Exec_Sum_131216.pdf)

(a) Street Trees Should Be Maintained By DPW

The Planning Department, DPW, Urban Forestry Council and the non-profit Friends of the Urban Forest developed the Urban Forest Plan (Phase 1: Street Trees). The Street Trees Plan grew out of the need to create a long-term strategy to ensure the ongoing health and sustainability of the city's street trees. (Urban Forest Plan transmittal 2014 http://www.sf-planning.org/ftp/files/plans-and-programs/planning-for-the-city/urban-forest-plan/UFP_Board_Transmittal-120814.pdf)

Street trees are the most visible component of the urban forest. Fragmented maintenance is a serious maintenance challenge: DPW maintains only about 40% of street trees, while responsibility for 60% falls to adjacent private property owners. Some property owners pay to maintain the adjacent street trees; others try to maintain the trees themselves or hire untrained individuals; while others do no maintenance because they are unaware that it is their responsibility or are unwilling to pay for it.

Substandard maintenance increases the risks to safety and property (e.g., from sidewalk damage and tree or limb failure).The consequence is not only risk of damage or injury but also costly removal and replacement and a loss or reduction in the environmental benefits provided by a mature tree.

As long as San Francisco's urban forestry program is a discretionary expenditure, its funding will remain unstable and continue to fluctuate. (AECOS 2013)

DPW's 2011 Tree Maintenance Transfer Plan Should Stop

DPW has partially implemented its plan to transfer maintenance responsibility for approximately 22,000 street trees from the City to adjacent property owners, while the City retains ownership. (Forest Plan Phase 1) So far, maintenance responsibility and legal liability for about 7,600 street trees have been transferred to property owners. (Johnson, Chronicle 4/18/16 http://www.sfchronicle.com/bayarea/article/SF-Supervisor-Wiener-proposes-parcel-tax-to-pay-725902.php) DPW plans to transfer 14,000 more trees within the next few years. (Id.) This approach is a last resort and will not result in a better standard of care for trees. (Forest Plan Phase 1)

This program is costly, as DPW must first assess the health of each tree to be transferred. (AECOS 2013)The transfer plan not only places an additional burden on property owners but also compromises tree health and stability, risking public safety,and diminishes the social and environmental benefits that street trees provide. (Id.)

DPW must "hopscotch" across the city maintaining only small numbers of trees over long time periods. This discontinuous maintenance patchwork creates an inefficient and costly maintenance program. (Forest Plan Phase 1)

For the owners responsible for a tree, normal maintenance costs can run into the thousands of dollars, or require permitting and additional fees to remove. (Eldon, Hoodline 2015 http://hoodline.com/2015/01/san-francisco-street-tree-problems-to-get-worse-before-they-get-better). Tree stewards can also be held liable for the damage their street trees cause. (Id.) Residents often do not have the funds for professional pruning and associated sidewalk repairs, and legal liability for accidents and injuries increases property owner insurance rates. We learned that some street trees under the transfer program were being secretly killed to avoid the expense of tree care.

The City Should Take Back Responsibility For All Street Trees

How do other cities deal with this challenge? Cities recognized as leaders in urban forestry (e.g., Santa Monica, Sacramento, Minneapolis, New York) have responsibility for all street trees. These cities recognize both the benefits that street trees provide, as well as those associated with a comprehensive program for their care. (AECOS 2013)

The Forest Plan Phase 1 would be a net benefit to San Francisco residents:

- Property owners who currently care for street trees would no longer be required to maintain trees or repair sidewalks damaged as a result of a street tree.
- The City would cover the liability associated with tree-related sidewalk falls, which have averaged just over $23,000 per claim.
- The program would expand San Francisco's urban forest by 50 percent over 20 years, benefiting residents citywide, with a substantial increase in the planting of new trees (2900 per year in addition to replacement trees) so that many additional residents would receive street trees in front of their homes.

- Property owners would save $10-$65 per tree annually compared to current costs (estimated at $160-$175 per year) incurred for maintenance, sidewalk repair, and claims associated with sidewalk falls. (AECOS 2013)

Routine street tree maintenance by DPW would potentially reduce DPW's per-tree maintenance costs by as much as 50 per cent by leveraging economies of scale from block pruning instead of the current approach of emergency and service request response. (Id.)

The incidence of injuries and damage claims would be expected to decline with routine maintenance. (Id.)

Alexander K / Twitter via Hoodline

Storm damage on Waller Street, December 2nd, 2014. Photo by Andrew Dudley / Hoodline

Fallen tree on Waller Street, December 24, 2014. Photo by Paul W. / Hoodline

Fallen tree on Divisadero, December 30, 2014. Photo by Cara K. / Hoodline

Fallen street trees in Districts 5 and 8.
Figure 6

Strategies The Forest Plan Phase 1 identified strategies to create a cohesive management program for the City's street trees:

- Adequately fund and establish the DPW as the primary maintenance provider of ALL street trees.
- Employ best management practices in street tree maintenance to create a more cost-efficient and effective program.
- Proactive pruning cycle
    - Block-pruning maintenance approach
    - Structural pruning & early tree care
    - Sidewalk repair to reduce risks and costs to private property owners and help reduce incidence of falls. (Forest Plan Phase 1)

Recommendations: The Plan includes four key recommendations:

(1) Maximize the benefits of street trees;
(2) Increase the street tree population with 50,000 new trees by 2035;
- Create a more equitable distribution of tree canopy

(3) Establish & fund a citywide street tree maintenance program;
- Relieve homeowners from the responsibility of maintenance and repairing tree-related sidewalk damage
- Centralize responsibility for 100% of the city's street trees under DPW
- Establish a fully funded municipal street tree program;

(4) Manage street trees throughout their entire life-cycle. (Forest Plan Phase 1)

A street tree census is underway, recording the exact location, species and condition of every street tree in the City, as well as identifying locations where new street trees could be planted. (The Urban Forest/PD) According to the Forest Plan Phase 1, aging or diseased trees near the end of their lifespan should be identified for removal to prevent potential hazards.(See Figure 9 at page 75)

Funding: The Plan noted that funding sources for tree *planting* have historically been more accessible than funds for tree *maintenance*. A division head told us the City proudly planted 25,000 trees during Mayor Brown's administration, but did not increase its arborist staff to maintain them. Therefore, different approaches are appropriate for planting and maintenance.

A Street Tree Working Group of neighborhood and small business organizations met with Supervisors to formulate a long-term funding solution for street tree maintenance. The group identified and made finance and policy recommendations. (Johnson, Chronicle 4/18/16)

On April 19, 2016, Supervisor Scott Wiener introduced a proposed Charter amendment (#160381 Charter Amendment and Business and Tax Regulations Code – City Responsibility and Parcel Tax for Street Trees) to implement and pay for Phase 1 of the Urban Forest Plan. (Johnson, Chronicle 4/18/16)

If approved by the voters on the November, 2016 ballot , the Proposition will mandate that the City take back maintenance and liability for all street trees. The mandate will be funded by a combination of a progressive parcel tax – one that increases with the property's size – and an $8 million annual budget set-aside.

(b) Park Trees Need Phase 2 Plan and Risk Assessment Funding

Phase 2 of the Urban Forest Plan will focus on a long-term policy vision and strategy for funding and staffing for maintenance of the trees in City parks and open space. (Urban Forest Plan/PD http://www.sf-planning.org/ftp/files/plans-and-programs/planning-for-the-city/urban-forest-plan/UFP_Board_Transmittal-120814.pdf)

The Strategic Plan 2016-2020 of the Recreation and Parks Department contains an objective to plant two trees for every tree removed and to implement a "programmatic tree maintenance and reforestation program" that sustains a 15-year tree maintenance cycle. (Rec and Park Strategic Plan 2016 http://sfrecpark.org/strategic-plan-2016-2020/)

The 2008 and 2012 Clean & Safe Neighborhood Parks Bonds included funds for tree risk assessment. (RPD Park Forestry) The Park Commission adopted a plan for risk assessment in Golden Gate Park to identify park properties with the highest priority for:

- Failure potential
- Size of the part of the tree that would fall
- The target that would be impacted should a failure occur.

Overall, 318 trees were recommended for removal out of 25,000 trees in Golden Gate Park. (HortScience GGP Memo 2012 (sfrecpark.org/wp-content/uploads/TreeRiskAssessmentMemoGoldenGatePark1.pdf)

Hazardous tree abatement was completed in Mission Dolores Park and McCoppin Square. Hazardous trees were pruned and removed in 4 areas, including Stern Grove (site of the 2008 fatality shown in Figure 5) Assessments were completed in 11 parks. (RPD Park Forestry http://sfrecpark.org/park-improvements/2008-clean-safe-bond/park-forestry-program/)

Hazardous trees in City Parks are a risk to public safety (Figures 5 and 9).

FINDINGS

Tree Maintenance Needs Stable Funding

Funding for Tree Maintenance

F:II.C-1-a. Because trees perform valuable environmental, economic and social functions and make San Francisco a better place to live and work, stable funding sources for maintenance of the City's urban forest is recognized as a goal in the budget process.

F:II.C-1-b. San Francisco's canopy cover at 13.7% lags far behind other major cities, and varies widely between neighborhoods.

F:II.C-1-c. The Urban Forestry Council notes in its annual Urban Forest Reports that San Francisco's urban forest managers consistently identify their highest priority as the lack of adequate resources to effectively maintain the city's trees. Recreation and Parks Department and Department of Public Works face the same challenge: both are significantly underfunded to do their needed maintenance work.

F:II.C-1-d. As long as San Francisco's urban forestry program is a discretionary expenditure, its funding will remain unstable and continue to fluctuate.

Street Tree Maintenance Needs Stable Funding

F:II.C-2-a. Budget cuts for street tree maintenance led to DPW's plan to transfer maintenance responsibility for approximately 22,000 trees from the City to adjacent property owners.

F:II.C-2-b. The maintenance-transfer program is costly to the City, as DPW must first assess the health of each tree to be transferred; and costly to property owners who are expected to bear the maintenance costs and liability risks.

F:II.C-2-c. The maintenance-transfer program compromises tree health and stability, risks public safety and also diminishes the social and environmental benefits that street trees provide.

F:II.C-2-d. Some property owners pay to maintain "their" street trees while others do no maintenance because they are unaware that it is their responsibility or are unwilling to pay for it.

F:II.C-2-e. Deferred maintenance leads to a street tree program that is reactive,and ultimately increases the costs of street tree care, since trees in poor condition require greater care and contribute to emergencies and claims for personal injury and property damage.

F:II.C-2-f. For every $1 spent on public street trees, San Francisco receives an estimated $4.37 in benefits.

F:II.C-2-g. One major reason new plantings do not keeping pace with tree removals is that no city maintenance program exists to care for them afterwards. There is reluctance among property owners to plant new trees because of ongoing maintenance responsibilities and potential costs associated with liabilities such as sidewalk repair.

F:II.C-2-h. The Urban Forest Plan (Phase One: Street Trees) recommends reducing long-term costs of the urban forest by having Public Works take control of all street trees under a comprehensive street tree plan, allowing for routine block-pruning (instead of responding only to emergency calls on specific trees) which would drive down per tree maintenance costs and increase overall tree health.

F:II.C-2-i. Routine maintenance of all street trees in the City under a comprehensive program of the Public Works Department, with stable funding, will increase overall tree health and reduce per-tree maintenance costs.

F:II.C-2-j. The Urban Forest Plan (Phase One: Street Trees) recommending the Department of Public Works take on the maintenance of all street trees will be a net benefit to all San Francisco residents.

F:II.C-2-k. The incidence of injuries to residents and visitors and damage claims against the City are expected to decline with routine street tree maintenance by the Department of Public Works.

F:II.C-3-a. The Board of Supervisors adopted the Plan by Ordinance No. 23-15.

F:II.C-3-b. On April 19, 2016, Supervisor Scott Wiener introduced a proposed Charter amendment (#160381 Charter Amendment and Business and Tax Regulations Code – City Responsibility and Parcel Tax for Street Trees) to implement and pay for Phase 1 of the Urban Forest Plan.

Park Trees Maintenance and Risk Assessments Need Funding

F:II.C-4-a. The Urban Forestry Council urges completion of Phase 2 of the Urban Forest Plan related to Parks and Open Spaces.

F:II.C-5-a. The Recreation and Park Department has a strategic reforestation plan to plant two trees for every tree removed.

F:II.C-6.a. The Recreation and Park Department has a plan to implement a programmatic tree maintenance program that will sustain a 15-year tree maintenance cycle and seeks secure funding.

F:II.C-7-a. Using funds from the 2008 and 2012 Clean & Safe Neighborhood Parks Bonds, RPD conducted risk assessments in many parks to identify trees with failure potential, the size of the part of the tree that would fall, and the target that would be impacted should a failure occur. Hazardous tree abatement was completed in several parks.

F:II.C-7-b. Hazardous trees in City Parks are a risk to public safety (Figures 5 and 9).

RECOMMENDATIONS

Urban Forest; Street Trees; Park Trees

R:II.C.1-1. **Maintain urban forest**. Because trees perform valuable environmental, economic and social functions and make San Francisco a better place to live and work:

a. The City Administrator and the Director of the Capital Planning Program should identify stable funding sources for maintaining the urban forest;
b. the Mayor should identify stable funding sources for maintaining the urban forest and include them in proposed budgets;
c. after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve stable funding sources for maintaining the urban forest.

R:II.C.1.2. **DPW street trees**: Because it will increase overall street tree health and reduce per-street-tree maintenance costs as described in the Urban Forest Plan (Phase 1: Street Trees):

a. The Department of Public Works should include line items in its budget requests for the routine maintenance of all street trees,
b. the Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter to the Public Works Department for the routine maintenance of all street trees; and
c. after Budget and Legislative Analyst's Office review, the Board of Supervisor should approve sufficient dedicated funding in the budget for upcoming fiscal years 2017-2018 and thereafter to the Public Works Department for the routine maintenance of all street trees.

R:II.C.1.3. **Proposition #160381** The Board of Supervisors should approve placing the Street Trees proposition (#160381 Charter Amendment and Business and Tax Regulations Code – City Responsibility and Parcel Tax for Street Trees) on the November 2016 ballot.

R:II.C.1.4. **The Urban Forest Plan Phase 2** Because it will increase overall tree health in the City's parks and open spaces and reduce per-tree maintenance costs:

a. The Planning Department should include a line item in its budget requests for the cost of completing The Urban Forest Plan (Phase 2: Parks and Open Space);
b. The Mayor should include sufficient funding in the proposed Budget for the upcoming fiscal years 2017-2018 and thereafter for the Planning Department to complete The Urban Forest Plan (Phase 2: Parks and Open Space); and
c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve sufficient funding in the approved budget for fiscal years 2017-2018 and thereafter for the Planning Department to complete The Urban Forest Plan (Phase 2: Parks and Open Space);
d. After review by the Budget and Legislative Analyst Office, The Board of Supervisors should pass an Ordinance incorporating The Urban Forest (Phase 2: Parks and Open Space) by reference; and
e. The Recreation and Park Commission should devise a creative dedicated funding plan to implement the Urban Forest Plan (Phase 2: Parks and Open Space).

R:II.C.1.5. **Rec & Park 2 for 1**: Because it will promote the strategic reforestation of the City, thereby improving quality of life for City residents and visitors:

a. The Recreation and Parks Department should include a line item in its budget requests for fiscal year 2017-2018 and thereafter for sufficient funding to plant two trees for every tree removed;
b. the Mayor should include sufficient funding in the proposed budget for upcoming fiscal year 2017-2018 and thereafter for the Recreation and Parks Department's plan to plant two trees for every tree removed; and
c. after Budget and Legislative Analyst's Office review, the Board of Supervisors should approve sufficient funding in the budget for upcoming fiscal year 2017-2018 and thereafter for the Recreation and Parks Department's plan to plant two trees for every tree removed.

R:II.C.1.6 **Rec & Park 15 year maintenance cycle:** Because it will increase overall tree health and reduce overall per-tree maintenance costs:

a. The Recreation and Parks Department should include a line item in its budget requests for fiscal year 2017-2018 and thereafter for sufficient funding to implement a programmatic tree maintenance program that will sustain a 15-year tree maintenance cycle
b. the Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for the sustained 15-year tree maintenance cycle; and
c. after Budget and Legislative Analyst's Office review, the Board of Supervisors should approve sufficient dedicated funding in the approved budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for the sustained 15-year tree maintenance cycle.

R:II.C.1.7 **Rec & Park Tree Risk Assessments.** Because it will increase safety for all park users,

a. The Recreation & Parks Department should seek a line item in its budget request to pay for completing tree risk assessments and hazardous tree abatement for trees in all remaining parks where that has not yet been accomplished.
b. The Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for completion of tree risk assessments and hazardous tree abatement; and
c. After review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve sufficient dedicated funding in the approved budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for completion of tree risk assessments and hazardous tree abatement.

(2) San Francisco's "Structurally Deficient" Bridges

DISCUSSION

San Francisco has 88 bridges that cross water, railroad tracks or roadways. Both the City and CalTrans inspect these bridges frequently (every two years by the City). Fourteen of San Francisco's bridges are rated "Structurally Deficient". The City is responsible for maintaining three of them. (FHA Highway Bridges 2015 https://www.fhwa.dot.gov/bridge/nbi.no10/county15.cfm#ca)

Bridges are considered "Structurally Deficient" if significant load carrying elements are found to be in poor condition.

"Structurally Deficient" is numerically defined as a bridge component (deck, superstructure, substructure or culvert) having a National Bridge Inspection general condition rating of 4 or less (poor condition).

The fact that a bridge is "structurally deficient" does NOT imply that it is likely to collapse or that it is unsafe. (Bridge Inspection Definitions http://www.virginiadot.org/info/resources/bridge_defs.pdf) A deficient bridge typically requires maintenance and repair and eventual rehabilitation and replacement to address deficiencies. To remain open to traffic, structurally deficient bridges are often posted with reduced weight limits that restrict the gross weight of vehicles using the bridges. If unsafe conditions are identified during a physical inspection, the structure must be closed. (Bridge Inspection Definitions).

Bridges may require substantial repairs before reaching the "Structurally Deficient" stage. For example, the Department of Public Works plans to repair the existing deterioration and unsafe conditions on the Richland Avenue bridge pictured in Figure 7.The reader is invited to ponder whether earlier remediation might have delayed this visible deterioration and postponed the need for more costly repairs.

FINDINGS

Structurally Deficient Bridges and Other Deteriorated Bridges

F:II.C.2-1 The City is responsible for maintenance of three of the fourteen bridges in the City rated as "Structurally Deficient".

F:II.C.2-2 Bridges may require substantial repairs before reaching the "Structurally Deficient" stage; e.g., the Richland Avenue bridge pictured in Figure 7.

Figure 7 Photo: John Hoskins

Richland Avenue bridge (between Districts 8 and 9) over highway showing rusting rebar and spalling concrete. (Despite the risk of falling debris onto passersby beneath, this bridge is not rated "structurally deficient".)

RECOMMENDATIONS

Structurally Deficient Bridges and Other Deteriorated Bridges

R:II.C.2-1-a. To prevent further deterioration and unsafe conditions, the Department of Public Works should seek prioritized line item budget funding in the fiscal year 2017-2018 for the maintenance and repair of the "Structurally Deficient" rated bridges for which it is responsible.

R:II.C.2-1-b. To prevent further deterioration and unsafe conditions, the Mayor should include in the Mayor's proposed budget for fiscal year 2017-2018 and thereafter these line items in the Department of Public Works budget request for the maintenance and repair of "Structurally Deficient" bridges; and.

R:II.C.2-1-c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve adequate funding for the Department of Public Works for maintenance and repair of "Structurally Deficient" bridges in the fiscal year 2017-2018 approved budget and thereafter.

R:II.C.2-2-a. We acknowledge the Department of Public Works plans to repair the existing deterioration and unsafe conditions on the Richland Avenue bridge and encourage the early completion of this important project.

R:II.C.2-2-b. To prevent further deterioration and unsafe conditions, the Department of Public Works should determine the cost of repairing the Richland Avenue Bridge and other deteriorated but not yet "Structurally Deficient" bridges for which it is responsible and include these costs as line items in its budget request for fiscal year 2017-2018.

R:II.C.2-2-c. To prevent further deterioration and unsafe conditions, the Mayor should include in the Mayor's proposed budget in the fiscal year 2017-2018 and thereafter the items in the Department of Public Works budget request for the maintenance and repair of the Richland Avenue bridge and other deteriorated but not yet "Structurally deficient" bridges.

R:II.C.2-2-d. To prevent further deterioration and unsafe conditions, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the items in the Department of Public Works budget request for the maintenance and repair of the Richland Avenue bridge and other deteriorated but not yet "Structurally deficient" bridges and include them in the adopted budget in the fiscal year 2017-2018 and thereafter.

PART III: MAINTENANCE FUNDING NEEDS INCREASED VISIBILITY

City officials told us that "Maintenance" is easy for budget makers to ignore. Maintenance is not visible, thus is easy to put off – no one sees it.

An article published by SPUR (formerly known as the San Francisco Planning & Urban Renewal Association) in 2005, "The Big Fix",(http://www.spur.org/publications/spur-report/2005-01-03/big-fix) written by Greg Wagner, Dick Merton and Jim Lazarus, focused attention on two interrelated problems in San Francisco government:

1. the lack of a coordinated approach to propose General Obligation bonds and
2. the inattention by decision makers to the need to maintain City assets.

City officials told us that the article was a factor in the City's decision to form the Capital Planning Committee to deal with the first problem -- it now acts as the gatekeeper on bond issues. Getting decision makers to focus on General Fund departments' need for maintenance remains an unsolved challenge.

A. New Asset Management System for General Fund Departments

DISCUSSION

Department managers and staff told us that the FRRM and COMET asset management programs are in the process of being replaced or supplemented by a PeopleSoft system. When a similar opportunity for development of new and revised performance metrics arose at the federal level, the GAO concluded that opportunity existed for [agencies] to revise requirements to collect and report (1) the costs agencies expend on annual maintenance and repair and (2) the annual costs incurred to address their deferred maintenance and repair backlogs. (Improving Transparency GAO 2014 http://www.gao.gov/products/GAO-14-188)

Having this information would further improve the City's reporting on its efforts to manage its real property portfolio and would enable an accounting of what funding resources have been spent in support of agencies' efforts to manage their backlogs. (Id.)

New or revised asset management programs can assist in leveraging the City's investment in maintenance spending -- not just how much should be spent, but how and where it should be spent. Getting that right is critical to getting the most out of public investment.(Khenna 2016 http://www.nytimes.com/2016/04/17/opinion/sunday/a-new-map-for-america.html?src=trending&module=Ribbon&version=origin&region=Header&action=click&contentCollection=Trending&pgtype=article [)

FINDING

New Asset Management Programs = Opportunity For M&R and DM&R Performance Metrics

F:III.A.1-a. Lack of comprehensive and reliable data obscures the relationship between the amounts General Fund departments spend on annual maintenance and repair and the costs resulting from deferred maintenance backlogs.

F:III.A.1-b. Replacement or revision of the current asset management programs used by General Fund departments provides an opportunity for development of new or revised performance metrics to collect and report:

(1) the dollars departments expend on annual maintenance and repair and
(2) the annual costs incurred in addressing their deferred maintenance and repair backlogs.

RECOMMENDATION

New Asset Management Programs = Opportunity For M&R and DM&R Performance Metrics

R:III.A.1.a. To focus attention on the relationship between General Fund departments' annual Maintenance and repair expenditures and these departments' deferred maintenance and repair backlogs, the Controller should utilize the replacement or revision of the current asset management programs used by General Fund departments as an

opportunity for development of new or revised performance metrics to collect and report to City officials and the public:

(1) the costs departments expend on annual maintenance and repair; and
(2) the annual costs incurred in addressing their deferred maintenance and repair backlogs.

R:III.A.1.b. The Controller should determine the additional time and manpower cost to develop these new or revised performance metrics in asset management programs and include line item entries in its budget request for fiscal year 2017-2018.

R:III.A.1.c. To focus attention on the relationship between General Fund departments annual maintenance and repair expenditures and their deferred maintenance backlogs, the Mayor should include in the proposed budget for fiscal year 2017-2018. these line item entries in the Controller's budget request to collect and report General Fund department costs expended on annual maintenance and repair and costs incurred in addressing their deferred maintenance and repair backlogs, and

R:III.A.1.d. To focus attention on the relationship between General Fund departments annual maintenance and repair expenditures and their deferred maintenance backlogs, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve these line item entries in the Controller's budget request to collect and report General Fund department costs expended on annual maintenance and repair and costs incurred in addressing their deferred maintenance and repair backlogs, and include them in the approved budget for fiscal year 2017-2018.

B. Ten-Year Capital Plan for Facilities and Infrastructure Investments

Capital Planning Committee Maintenance and Renewal Funding

DISCUSSION

The City enacted the Capital Plan in 2005, "addressing decades of underfunded infrastructure"; recognizing that the City was systematically underfunding maintenance and capital planning. It was the first time the City thought comprehensively about its infrastructure and started down a road to recovery. OneSF >> The Plan, http://onesanfrancisco.org/the-plan-2016/. We learned the members of the Capital Planning Committee see themselves as stewards of the City's infrastructure.

The Capital Plan focuses on Renewal and Enhancement. The FY 2016-2025 Capital Plan anticipates nearly $32 billion in funding across all service areas and department types:

General Fund Departments	$5.1 billion
Enterprise Departments	$18.3 billion
External Agencies	$8.5 billion

City officials told us the Ten-Year Capital Plan was created to be objective so that decisions are based on transparent criteria and data as opposed to politics, and to be a counter-balance to the

"shiny new building" preference of department heads: "Who wants to be known for replacing a 20-year old roof?"

The Ten-Year Capital Planning Committee has five "Funding Principles":

Priority 1: Comply with federal, state and local legal mandates;
Priority 2: Provide for the life, health, safety and security of occupants and the public and prevent the loss of use of the asset;
Priority 3: Ensure timely maintenance and renewal of existing infrastructure;
Priority 4: Support formal programs or objectives of an adopted plan or action by the Board or Mayor; and
Priority 5: Enhance the City's economic vitality. (2015 Ten-Year Plan http://onesanfrancisco.org/wp-content/uploads/Complete-CapitalPlan_Final2.)

The "timely maintenance" criteria is further described: It is imperative to maintain the City's infrastructure. However, the lack of maintenance at some facilities will have a greater effect on the asset's value and/or future repair and replacement costs. (Id.)

The "Criteria Measurements" for timely maintenance are:

- When failure to implement project risks potential loss or reduces the useful life of a City asset.
- The facility provides government services that cannot be provided at another location. (Id.)

However, we were told that the actual practice for prioritizing project requests differs somewhat from the Funding Principles: #1 is life-safety, while #2 is "critical political enhancements", i.e., items important to the politicians.

The Capital Planning Committee website acknowledged that annual maintenance has been significantly underfunded in the past, leading to a large backlog, decreased service and increased operating costs. "State of good repair" renewal needs,(such as potholes and roof repairs) are only partially funded in the Capital Plan. (OneSanFrancisco.org)

FINDING

CPC Does Not Report DM&R Separately From Capital Renewal and Replacement

F:III.B.1. The City's ability to determine the Deferred Maintenance and Repairs backlog is hampered by the aggregating of deferred maintenance expenses with capital renewal and replacement costs.

RECOMMENDATIONS

CPC Should Report DM&R Separately From Capital Renewal and Replacement

R:III.B.1.a. For increased transparency and accountability, the City Administrator and the Director of the Capital Planning Program should report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan.

R:III.B.1.b. The City Administrator and the Capital Planning Program Director should determine the additional time and manpower cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan, and include a line item for this cost in its budget request for fiscal year 2017-2018 and thereafter.

R:III.B.1.c. For increased transparency and accountability, the Mayor should include in the Mayor's proposed budget for fiscal year 2017-2018.
the Capital Planning Committee's request for the cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan,

R:III.B.1.d. For increased transparency and accountability, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve the Capital Planning Committee's request for the cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan, and include this cost in the adopted Budget for fiscal year 2017-2018 and thereafter.

C. Condition Assessments: Key Parts of the Maintenance Needs Determination Process Are Not Being Updated

DISCUSSION

Condition assessment; life-cycle costing; residual life risk analysis

"State of good repair" means that an asset is safe, reliable and keeps the users satisfied. (TCRP 2011 http://www.tcrponline.org/PDFDocuments/TCRP_RRD_101.pdf) Maintaining a state of good repair involves a constant process of assessing an asset's residual life and balancing that against costs of maintenance, upgrade or replacement. Three steps occur in the review:

A *condition assessment* is performed to determine the residual life of the asset.

The next step is *life costing* to determine the cost for the remaining life of the component and the entire asset. This includes labor and material costs for maintaining the component over the expected useful life of the entire asset.

> The final step is a *risk analysis*, to determine whether the component will be maintained, replaced in kind, or upgraded. The results of residual life and life costing are compared with performance risks — measures such as user journey time, lost user hours, compliance, extraordinary maintenance, and safety factors. (TCRP 2011)

Regular General Fund department facility condition assessments should be done at least every five years. An example of best practices in this area is the facility condition assessment policy at Lawrence Berkeley National Laboratory. In LBL's program, required maintenance is identified through Condition Assessment Surveys conducted by an independent consultant. The consultant's findings, along with cost estimates, are prioritized and entered into five-year and ten-year maintenance plans. Maintenance that is not performed when scheduled is then categorized as Deferred Maintenance. (LBL 2002 www.lbl.gov/Publications/Institutional-Plan)

The condition assessment surveys for much of San Francisco's general fund facilities started ten years ago. A division manager told us that the Recreation and Parks department has support from the Park Commission and the Mayor for a new condition assessment survey. The department's "Open Space Fund" set-aside will be the source of funding.

In June 2016, City voters approved Proposition B, a Charter amendment extending the City's park fund – established in 2001 and set to expire in 2031 – for 15 years until 2046, requiring a minimum escalating allocation from the general fund, and providing means to ensure park fund revenue is used equally in all neighborhoods.

City departments use several condition assessment indexes:

a. The DPW uses a Pavement Condition Index (PCI) to assess streets for ride quality, pavement defect and overall pavement condition. For PCI, a low score is bad and a high score is good. The Mayor's goal is to have all SF streets score above 70 which means that the streets are in good condition.
b. The same program used to calculate Current Replacement Value (CRV) [see Part I] is also used to track Facilities Condition Index (FCI). For most General Fund departments, it is the Facilities Renewal Resource Model (FRRM) which makes this computation, while for Recreation and Parks Department it is the COMET (Condition Management Estimation Technology) asset tracking system. Rather confusingly, in these systems a low FCI score is good and a high score is bad.

The FRRM (Facilities Renewal Resource Model) provides an FCI rating for listed facilities. (Appendix D4) It is a means of identifying building condition to assist in making resource allocations, particularly with limited budgets that are not adequate to address the deferred maintenance in all the facilities. It may also be used to determine the annual reinvestment rates to prevent further accumulation of deferred maintenance. (FCI 2013 http://www.assetinsights.net/Glossary/G_Facility_Condition_Index.html)

The FCI provides a measure of the "catch-up" costs of a facility. (FCI 2013) Industry standards indicate that a facility with an FCI greater than 0.30 is considered to be in "fair" to "poor" condition. (CSA RPD 2015
http://sfcontroller.org/sites/default/files/FileCenter/Documents/6811-Maintenance%20Memo_FINAL.pdf)

Industry standards further indicate that a facility with an FCI of 0.65 or greater is more cost effective to replace than to repair. According to the 2006 assessment, 102 of San Francisco's 190 neighborhood parks had an FCI of 0.30 or greater, with thirty-six of those having an FCI of 0.65 or greater. [CSA RPD 2015]

The Mayor has not announced a goal of having all General Fund departments' Facilities Condition Index ratings at good condition or better.

As of December, 2015, the FRRM report "Backlog and 10-Yr Need by Facility" on General Fund departments (not including Recreation and Parks Department) showed that 106 (54%) out of 196 listed physical assets had an Facilities Condition Index of .30 or greater, indicating that those facilities were considered to be in "fair" or "poor" condition. (Appendix D4.)

Facilities Condition Index of 0.30 or greater

Department	# of facilities	%
General Government/Administration	9/32	(28%)
General Government/Public Works	8/20	(40%)
General Government/Treasure Island [?]	1/1	(100%)
Health & Human Services/public health [all 7 at San Francisco General Hospital]	7/48	(15%)
Public Safety/Fire	47/54	(87%)
Public Safety/Juvenile	25/29	(86%)
Public Safety/Police	1/14	(7%)
Public Safety/Sheriff	9 /17	(53%)
Recreation, Culture, Education/Art	1/5	(20%)
Recreation, Culture, Education/Library	1/29	(3%)

(Appendix D4.)

FINDINGS

Updated Condition Assessment Surveys Will Provide Reliable Data for M&R Budgeting

F:III.C.1-a. Condition Assessment Surveys with cost estimates are an important factor in identifying required maintenance.

F:III.C.1-b. Some old condition assessments, a key part of the maintenance needs determination process, have not been updated for ten years or longer.

F:III.C.1-c. Updated Condition Assessment Surveys for capital assets maintained by the Real Estate Division, the Department of Public Works, and the Recreation and Parks Department will identify required maintenance needs.

F:III.C.2. A new comprehensive condition assessment survey of Recreation and Parks department facilities and infrastructure is an important step toward getting adequate maintenance funding appropriated on a regular basis.

F:III.C.3-a. The Mayor's announced goal of getting city streets to a Paving Condition Index rating of good condition, and keeping them there, is a good first step.

F:III.C.3-b. The Facilities Conditions Index may be used as a means of identifying the condition of buildings and other non-street capital assets to assist in projecting and making resource allocations, and to determine the annual reinvestment needed to prevent further accumulation of deferred maintenance and repair.

F:III.C.3-c. A Controller's Study of those physical assets with a Facilities Condition Index of 0.30 or greater will help determine whether a lack of comprehensive maintenance and repair planning resulted in underinvestment in preventive maintenance work that has depreciated the value and useful life of those physical assets.

RECOMMENDATIONS

Condition Assessment Surveys Should Be Updated and Controller Should Conduct A Study to Provide Reliable Data for M&R Budgeting

R:III.C.1-1. To obtain updated relevant information as a basis for rational and informed budget decision making:

a. The City Administrator and the Director of Real Estate should request a line item in its budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure;
b. The Director of Public Works should request a line item in its budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure;
c. The Director of Recreation and Parks should request a line item in its budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure;
d. Other General Fund departments responsible for maintaining capital assets should request a line item in their budget requests to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure;

e. The Mayor should include amounts for the Real Estate Division, the Department of Public Works, the Recreation and Parks Department and other General Fund departments responsible for maintaining capital assets in the Mayor's proposed Budget for fiscal year 2017-2018 budget specifically for condition assessment surveys with cost estimates of General Fund Department facilities and infrastructure; and
f. After review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve amounts in the fiscal year 2017-2018 Budget for:
   (1) the Real Estate Division,
   (2) the Department of Public Works,
   (3) the Recreation and Parks Department and
   (4) other General Fund departments responsible for maintaining capital assets

   specifically for Condition Assessment surveys with cost estimates of General Fund Department facilities and infrastructure.

R:III.C.2-a. As an important step toward getting adequate maintenance funding on a regular basis, the Director of Recreation and Parks should request the allocation of funds from the "Open Space Fund" for the purpose of conducting a comprehensive condition assessment of departmental facilities and infrastructure.

R:III.C.2-b. The Mayor should include the allocation of funds from the Recreation and Parks Department's "Open Space Fund" for the purpose of conducting a comprehensive condition assessment in the proposed fiscal year 2017-2018 budget.

R:III.C.2-c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the allocation of funds from the Recreation and Parks Department's "Open Space Fund" for the purpose of conducting a comprehensive condition assessment.

R:III.C.3-a. As he has done for City streets' Pavement Condition Index, the Mayor should announce his goal of having the Facility Condition Index for all General Fund Departments' non-street capital assets at the level of "good" or better.

R:III.C.3-b. The Controller should conduct a study of the General Fund Departments listed on the December 2015 FRRM (Facilities Renewal Resource Model) report "Backlog and 10-Yr Need by Facility (or such updated reports as is appropriate) with a Facilities Condition Index of 0.30 or greater ("fair" or "poor") to determine:

(1) Which of those physical assets (if any) are in "fair condition";
(2) Which of those physical assets (if any) are in "poor condition';
(3) Which of those physical assets (if any) are starting to approach or exceed their life expectancies;
(4) Which of those physical assets (if any) should be considered high-priority for maintenance and repair funding;

(5) Which of those physical assets (if any) require additional maintenance and repair funding to prevent further accumulation of deferred maintenance and repair;
(6) Whether lack of comprehensive maintenance and repair planning resulted in underinvestment in preventive maintenance and repair work that has depreciated the value and useful life of these physical assets;

and present the report containing the Controller's findings on the above items to the Mayor and Board of Supervisors for use in the budget process.

R:III.C.3-c. The Controller should determine the additional time and manpower cost to accomplish the additional reporting recommended in the preceding Recommendation 3(b) and include a line item entry for those costs in his budget requests for fiscal year 2017-2018.

R:III.C.3-d. To provide useful information for the public in assessing the City's stewardship of public assets, the Mayor should approve these line item entries for a study of facilities with FCI of fair or poor condition in the Controller's budget requests and include them in the Mayor's Proposed Budget for fiscal year 2017-2018.

R:III.C.3-e. To provide useful information for the public in assessing the City's stewardship of public assets, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve these line item entries for a study of facilities with an FCI of fair or poor condition in the adopted Budget Ordinance for fiscal year 2017-2018.

D. The City Administrator and Director of Real Estate Should Set Rental Rates for Tenant City Departments Sufficient to Cover Maintenance and Repair Needs.

DISCUSSION

The Real Estate Division (RED) acts as the "landlord" of many General Fund departments located in city-owned properties. The rental charges to General Fund department tenants established by the City Administrator and Director of Real Estate are substantially below market rates. The rates were recently raised from $22.56/square foot/year to $23.16. The below-market rental rates do not cover the full cost of maintenance, repair and capital replacements for the City-owned property used by General Fund Departments.

The City Administrator and the Director of Real Estate should explore moving to a real estate management model where the true costs of capital maintenance are reflected in departmental budgets. (SPUR 2005 http://www.spur.org/publications/spur-report/2005-01-03/big-fix). Under San Francisco's current system, departments often are not conscious of the full costs of the facilities they occupy, and are not required to pay them. Requiring City departments to pay closer-to-market-rate lease expenses would make the "true" cost of program delivery visible. Property used by City General Fund departments could be maintained by the Real Estate Division. The lease terms would designate a portion of the rent paid by departments for ordinary, recurring and deferred

maintenance. A model of this nature would help make facility costs more visible as a regularly budgeted and important component of government service delivery. (SPUR 2005)

FINDING

Real Estate Division Rental Rates Do Not Cover M&R

F:III.D.1. Below-market rental rates charged to General Fund department tenants do not cover the annual Maintenance and Repair and capital replacements costs and conceal the true costs of program delivery.

RECOMMENDATION

Real Estate Division Rental Rates Should Be Adjusted to Cover M&R and Make the True Cost of Services Delivery Visible.

R:III.D.1. To make the true cost of program delivery visible,

a. The City Administrator and the Director of Real Estate should charge rental rates sufficient to cover the full cost of maintenance, repair and capital replacements in the leased premises it manages(to make the true cost transparent).
b. The Mayor should propose adjustments to tenant General Fund departments' budgets sufficient to cover rent increases.
c. After review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve adjustments to tenant General Fund departments' budgets sufficient to cover rent increases.

PART IV: MAINTENANCE BUDGET REQUESTS DESERVE VIGOROUS ADVOCACY

"*Make your needs known VIGOROUSLY.*"
—Advice to property managers

DISCUSSION

Outside of the General Fund departments themselves, there are few advocates for maintenance. It is up to each department to make its needs known vigorously in order to get funding for adequate maintenance personnel and equipment. Without this advocacy, the budget decision-makers can continue to claim with "plausible deniability" that they did the best they could when setting General Fund maintenance budgets, without knowing the true extent of unmet maintenance needs.

San Francisco's history of underinvestment provides ample evidence that the normal budget process does not allocate adequate funding for facilities and infrastructure maintenance. (SPUR 2005 http://www.spur.org/publications/spur-report/2005-01-03/big-fix) A City staffer with experience in the budget process told us, "There is one pot of City money; it is a matter of priorities."

General Fund departments' Facilities Maintenance budgets in 2015 were less than 50% of the Facilities Maintenance budget in 2005 (Part I). What maintenance budget procedures are not succeeding? What is not being maintained?

Department managers undoubtedly advocate for their entire department budgets, but evidently that advocacy has worked better for their programs than for facilities maintenance.

With their major focus on services, General Fund department heads face a challenging task in advocating equally as vigorously for needed increases in their maintenance and repair budgets:

- Maintenance is not sexy;
- The physical consequences of neglected maintenance may not be immediately visible;
- The increased risk of safety hazard and liability may be real but difficult to quantify.

However, the City's decision makers – those who control the purse strings – deserve complete, prioritized and candid information on current and future maintenance and repair needs.

"Money to build; no money to fix" and "make do" should no longer be tolerated as the result of short-term focused M&R budget decisions for General Fund departments.

Mission-driven budgeting, as described by Section 9.114 in the City Charter (https://law.resource.org/pub/us/code/city/ca/SanFrancisco/Charter/article09.pdf), requires departmental budget requests to include goals, programs, targeted clients and strategic plans. The requested budget must tie program funding proposals directly to specific goals.

In addition, legislation passed by the Board of Supervisors requires performance standards to increase accountability. (Mayor's Budget Letter 2015 http://sfmayor.org/ftp/uploadedfiles/mayor/budget/SF_Budget_Book_FY_2015_16_and_2016_17_Final_WEB.pdf) The Mayor's Budget Letter proudly describes some of the funded maintenance projects, but does not list projects requested by General Fund departments that were not funded.

The SPUR "Big Fix" article recommended that the City develop a program to track annual maintenance, repair and replacement needs and provide data to assist in allocating capital funds. The Capital Planning Committee now prepares Ten Year Capital Plans. But better information will not solve the City's maintenance problems if it is not also accompanied by adequate funding. (SPUR 2005)

Department heads, as stewards for their departments, are responsible for making sure that those who decide on funding levels fully recognize the impact of their decisions on the public's investment for assets in their care.

There are built-in components of the City's budget process that could tend to discourage vigorous advocacy such as:

- the culture that "Department heads are not rewarded for requesting additional funds; so they make do with what they are given";

- reinforcement of a department's place in the budgeting pecking order as Capital Budget Request Form 6 comes preloaded with the amount allocated for maintenance based on the prior year's appropriation; and
- the inherent and relative dullness (i.e., lack of political sex appeal) of maintenance and repair relative to service programs.

Responsible stewardship mandates that General Fund department heads **not** make do with what they are given, until they have advocated for more maintenance and repair funding --- vigorously.

City departments are directed to prioritize needs and present balanced budgets for review and analysis by the Mayor's Office of Public Policy and Finance. It must be very challenging to present a "balanced budget" while at the same time advocating for substantial increases in M&R funding.

Even if the Mayor proposed substantial increases in M&R funding for General Fund departments, the Board of Supervisors has the ability to make expenditure reductions freeing up "unallocated monies" and then reallocate those monies for new public services set forth in its list of budget policy priorities. (Mayor's Budget Letter 2015)

General Fund departments need to quantify and communicate the adverse financial impact of deferred maintenance. "Unless you can communicate the consequences of deferred maintenance, your rationale for funding isn't likely to be very persuasive." (Madsen 2006 http://www.buildings.com/article-details/articleid/3161/title/paying-for-deferred-maintenance.aspx)

Among the recognized standards and best practices for maintenance budget advocacy which departments could use as appropriate are:

- Start with an explicit statement of the appropriate size of the routine maintenance and repair budget, which is part of the cost of asset ownership; e.g., the benchmark guideline of 2%-4% of Current Replacement Value of the assets; (NRC 1990 http://www.nap.edu/catalog/9807/committing-to-the-cost-of-ownership-maintenance-and-repair-of);
- Recognize that it is not intuitively obvious how a request for 2 to 4% of CRV will contribute to meeting an agency's mission -- and make the case explicitly; (NRC 2012);
- Make a business case to the people with the purse strings; (Madsen 2006);
- In developing budget submissions, consider Civil Grand Jury reports; (Controller's Technical Instructions #8 at page 18 -- SF Budget Instructions 2015 http://sfcontroller.org/modules/showdocument.aspx?documentid=1436);
- Have performance criteria and statistical bases to describe the maintenance and repair need;(NRC 1990);
- Demonstrate the immediately visible consequences of neglect; (SPUR 2005);
- Quantify and communicate the financial impact of deferring maintenance and repair; (SPUR 2005; SFFAS 42 http://www.fasab.gov/pdffiles/handbook_sffas_42.pdf);
- Explain the criteria used to prioritize maintenance and repair projects: e.g., currently critical (projects that require immediate action to return a facility to normal operation,

stop accelerated deterioration, or correct a critical safety hazard); potentially critical (projects that will become critical within 1 year if not corrected expeditiously); necessary-not yet critical (projects that require reasonably prompt attention to preclude predictable deterioration or potential downtime and the associated damage and higher costs if deferred further); (Madsen 2006 http://www.buildings.com/article-details/articleid/3161/title/paving-for-deferred-maintenance.aspx);

- Establish a risk-based process for setting priorities among annual M&R activities; (NRC 1996 http://www.nap.edu/read/9226/chapter/1);
- Best Practices organizations evaluate facilities investment proposals as mission enablers rather than solely as costs. (NRC 2012 http://www.nap.edu/catalog/13280/predicting-outcomes-from-investments-in-maintenance-and-repair-for-federal-facilities);
- Link priorities to the establishment of the department's mission and other public policies (NRC 1996);
- Identify the beneficial outcomes or adverse consequences of different investment strategies; (SPUR 2005);
- Quantify the adverse consequences of under-investing:
    - growing backlog;
    - increasingly expensive repairs;
    - more expensive premature replacements; (SPUR 2005)
- Achieve and report measurable results, small and large, short-term and long-term; (Kaiser 1993 https://www.appa.org/membershipawards/documents/1994.pdf);
- Communicating the basis for predictions of outcomes of a given level of investment in maintenance and repair should be transparent; and made available to decision makers. (NRC 2012);
- Department heads should know their actual maintenance spending, including labor and parts; and
- Plan for multiple communications -- no single message will suffice. (NRC 2012)

Submit "financially unconstrained" maintenance priority lists

The San Francisco MTA is a quasi-Enterprise department in that it has its own source of funding (fares), but also receives General Fund monies. It prepares a 20 Year Capital Plan, updated every two years, to advocate for the agency's funding needs. It contains a prioritized list of "financially unconstrained" capital needs, organized by Capital Program and "Investment types":

- Restoration of existing assets (generally of higher priority);
- system enhancements; and
- expansion. (SFMTA 20 Year Plan 2015 https://www.sfmta.com/sites/default/files/agendaitems/2015/7-15%20Draft%20FY2015-FY2034%20SFMTA%20Capital%20Plan.pdf)

General Fund departments have opportunities to make their prioritized "financially unconstrained" maintenance needs known to budget decision-makers, as does the MTA.

Work creatively within the guidelines and limits of the Budget Process ordinance.

Section 3.5 (a) of the Budget Process Ordinance [http://library.amlegal.com/nxt/gateway.dll/California/administrative/administrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1] requires each City department to submit a budget containing documentation providing:

- information on the overall mission and goals of the department;
- strategic plans that provide direction towards achieving the department's mission and goals;
- identification of policy outcome measures that reflect the mission and goals of the department and which can be used to gauge progress towards attaining these goals;
- the specific programs and activities conducted by the department to accomplish its mission and goals and the customers or clients served;
- the total cost of carrying out each program or activity; and
- Certification by the department head of the extent to which the department achieved, exceeded, or failed to meet its missions, goals, productivity and service objectives, during the prior fiscal year.

Department heads have the opportunity to supplement the budget documentation called for in Section 3.5(a) and should utilize best practices as applicable.

Work creatively within the limits of the Capital Budget Request Form 6

The Budget instructions for Maintenance (subobject 06F00) in Capital Budget Request Form 6 state the amount allocated is based on the previous year's appropriation. Maintenance allocations for eligible departments are handled by CPP staff. Departments should budget additional funds to meet maintenance needs if applicable.(SF Budget Instructions 2015 at p. 33 http://sfcontroller.org/modules/showdocument.aspx?documentid=1436)

Utilize the "unless otherwise specifically noted" provision of the Section 3.14 letter

Section 3.14 of the Budget Process Ordinance provides that in conformance with Charter Section 9.115, the head of each agency shall, within 30 days of the adoption of the annual budget by the Board of Supervisors, by letter addressed to the Mayor, Board of Supervisors and Controller, agree that the funding provided is adequate for his or her department …, **unless otherwise specifically noted by the appointing officer** and acknowledged in writing by the Board. (emphasis added) (Budget Process Ordinance http://library.amlegal.com/nxt/gateway.dll/California/administrative/administrativecode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1) The head of each agency should candidly note specifically when the proposed funding is NOT adequate for his or her department's maintenance needs.

Make supplemental appropriation requests as appropriate.

Supplemental appropriation requests are made when a department finds that it has inadequate resources to support operations through the end of the year. (Mayor's Budget Letter 2015 http://sfmayor.org/ftp/uploadedfiles/mayor/budget/SF_Budget_Book_FY_2015_16_and_2016_17_Final_WEB.pdf) Department heads should utilize this opportunity to fund their department's maintenance needs.

FINDINGS

Opportunities Exist for Vigorous Maintenance Budget Advocacy

F:IV.1. The Mayor's Office of Public Policy and Finance reviews and analyzes prioritized General Fund departmental budget proposals.

F:IV.2-a. Compliance with Section 3.5(a) of the Budget Process Ordinance provides City departments and department heads with an opportunity to make their maintenance needs known vigorously as part of the Budget Process.

F:IV.2-b. Opportunities exist for General Fund Department managers to advocate for increased maintenance and repair funding within the strictures of Capital Budget Request Form 6.

F:IV.2-c. Compliance with Section 3.14 of the Budget Ordinance provides City department heads with an opportunity to make their unfunded high-priority maintenance needs known.

F:IV.2-d. General Fund department heads have the opportunity to make supplemental appropriation requests when they find that their department has inadequate resources to support M&R operations through the end of the fiscal year.

F:IV.3. The Mayor's Budget Letter does not include a list with a description of the General Fund departments' high-priority maintenance and repair projects which did not get funded in the budget.

F:IV.4. The Board of Supervisors generates a list of budget policy priorities to guide funding decisions on the unallocated pools of money resulting from expenditure reductions to the Mayor's proposed budget.

RECOMMENDATIONS

Vigorously Advocated Maintenance Budget Requests Should Result in More Maintenance

R:IV.1. In recognition of maintenance of facilities and infrastructure as an important component in stewardship of City assets, the Mayor and the Office of Public Policy and Finance should encourage adequate Maintenance and Repair funding as one of the budget priorities for General Fund departments.

R:IV.2. In recognition of maintenance of facilities and infrastructure as an important component of stewardship and in fulfillment of their stewardship obligations, the managers and staff of General Fund departments:

a. should make their departmental maintenance needs known vigorously throughout the budget process and reallocation process;
b. should advocate vigorously in their submissions on Capital Budget Request Form 6 to demonstrate why the amount allocated for maintenance by the Capital Planning staff based on the prior year's appropriation may be insufficient, and if so, why additional funds to meet maintenance needs are required;
c. in their Section 3.14 letters, should make their unfunded high-priority maintenance needs known vigorously; and
d. should make supplemental appropriation requests when they find that they have inadequate resources to support Maintenance and Repair operations through the end of the fiscal year.

R:IV.3. To further transparency and accountability in City government, the Mayor's Budget Letter should include a section listing and describing the General Fund departments' high-priority maintenance projects which did not get funded.

R:IV.4. In recognition of maintenance of facilities and infrastructure as an important component in stewardship of City assets, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should include adequate funding for General Fund departments maintenance and repair in the list of budget policy priorities for "unallocated monies".

PART V: VOTER INFORMATION PAMPHLETS ON GENERAL OBLIGATION BONDS SHOULD DISCLOSE INTEREST AND LIFE-CYCLE MAINTENANCE COST PROJECTIONS

"Leaving a legacy as a political figure often requires concrete." (Brown 2015)

DISCUSSION

Accountability requires governments to justify the raising of public resources and the purposes for which they are used (GASB 34, paragraph 197 http://www.gasb.org/cs/BlobServer?blobkey=id&blobwhere=1175824063624&blobheader=application%2Fpdf&blobcol=urldata&blobtable=MungoBlobs). Citizens have a "right to know", a right to receive openly declared facts that may lead to public debate by citizens and their elected representatives.(Id.)

A paramount objective of accountability in government is to enlighten public discussion of all aspects of governmental activities. (GASB 34, paragraph 198) Governmental financial reporting should provide information to users in making economic, social and political decisions. (Id.). Striking a consensus balance between borrowing money to build new capital assets, maintaining the existing and future public heritage of physical assets, and providing needed services to City

residents is an important economic, social and political decision for the Mayor, the Board of Supervisors and the public.

As of December 1, 2015, the City had $1.9 billion in General Obligation bond debt outstanding. (http://onesanfrancisco.org/wp-content/uploads/Agenda-Item-5-1-RecPark-Port-Bond-Sale-Memo1.pdf)

Bonds do have a place in financing new city public works and significant capital improvements. However, they should not be a substitute for adequate annual appropriations for general capital improvements and timely maintenance. Too often, bond measures allocate 30% to 50% for deferred maintenance projects. In other words, taxpayers are paying for 20-year roof repairs with 30 years of interest payments. Some projects may well have been addressed through regular annual maintenance appropriations. (Also, the burden to repay bonds falls only on property taxpayers whereas annual funding is paid by all taxpayers.)

The Controller's Statement on General Obligation Bond Propositions in Voter Information Pamphlets does not explicitly disclose the projected interest cost of the proposed bond .For example, we were told that the 2011 "Safe Streets" bond for $248 million (principal) will cost $189 million in interest -- thus for every $10,000 borrowed, the city must pay back roughly $17,600. The $189 million figure did not appear in the Voter Information Pamphlet.

Life-Cycle Cost Forecasts

The Controller's Statement does not include the projected life-cycle costs for maintaining and repairing the asset to be built with bond proceeds.

Life-cycle cost forecasts are important elements of government accountability and transparency. A division head told us the City should not build things it will not maintain: " If we build something -- anything -- think about maintenance." When maintenance considerations are incorporated in design, future risks and costs can be minimized. We were told: "If it can happen, it will happen. So anticipate; prepare."

Design and construction costs are a small part of total life-cycle costs for new projects, typically requiring up front large capital expenditures in the first few years and accounting for 5 to 10% of the total cost of ownership. In contrast, the operations and maintenance of facilities will require annual expenditures for 30 years or more and will account for as much as 80% of total cost of ownership. (NRC 2012 http://www.nap.edu/catalog/13280/predicting-outcomes-from-investments-in-maintenance-and-repair-for-federal-facilities) Thus an important part of the decision to design and build a new public facility is the commitment to maintain it for its projected life.

Considering life-cycle costs of proposed facilities up-front is a best practice for all levels of governments.
(Nash 2010, https://www.gpo.gov/fdsys/pkg/CHRG-111hhrg55669/html/CHRG-111hhrg55669.htm)

Using life-cycle costing makes the total cost of a project transparent. Federal agencies conduct life-cycle analyses for significant new facilities. In doing so, decision makers and the public have greater insight into the total commitment of resources that will be required over several decades, not just up-front costs. (Id.)

As noted by the FASAB, life-cycle cost forecasts of maintenance and repairs expense may serve as a basis against which to compare actual maintenance and repairs expense. (SFFAS 42, http://www.fasab.gov/pdffiles/handbook_sffas_42.pdf)

A department head told us that the Capital Planning Committee that vets proposals for General Obligation bonds needs to understand the cost of operating and maintaining new projects. Life-cycle cost information is needed to advise the Mayor. Thus the Capital Plan for FY 2016-2025 assumes $71 million annually for "Critical Project Development" which "continues the City's commitment to funding pre-development planning so that project costs and impacts are clearly understood before a decision is made to either fund or place a project before voters". (page 6 of Executive Summary of Capital Plan 2016-2025 http://onesanfrancisco.org/wp-content/uploads/Complete-CapitalPlan_Final2.)

There are three components of the "Total Cost of Ownership":

a. non-recurring costs (e.g., planning and construction);
b. annual recurring costs (e.g., maintenance, repairs, utilities); and
c. periodic recurring costs (e.g., remodeling, replacement). (NRC 2012)

We were told that predicting maintenance costs for a new building is not easy, and may need adjustment after tenants move in. It is assumed that use of a new building will stay the same over time. But uses change, needing different levels of maintenance. Warranties on new buildings and equipment save maintenance money for a time; but, as the new items cycle off warranty, maintenance funding needs to pick up.

The Mayor's Five Year Plan 2015 (http://sfmayor.org/ftp/uploadedfiles/mayor/budget/SF_Budget_Book_FY_2015_16_and_2016_17_Final_WEB.pdf) speaks of the on-going costs associated with large one-time investments as a significant departmental issue identified in the Plan. A department director told us that upcoming projects will include information on operating costs and maintenance.

One department representative told us that they seek to use General Obligation bond funds for things that cost a lot of money to renovate but that also serve a lot of people, and for things that generate the highest amount of deferred maintenance and failure. But once the bond money is used for these purposes, the department must continue to maintain the bond-funded replacements, or it will have the same deferred maintenance problems again in ten years. Tax-exempt General Obligation Bond proceeds cannot be used for maintenance expenses. (AAP 2014 at 10.6 http://sfcontroller.org/Modules/showdocument.aspx?documentid=6828) Normal maintenance and repair costs are to be expensed rather than capitalized.(Id.)

Voter Information pamphlets do not show life-cycle cost projections for maintenance and repair. We were told that it would be more transparent if the descriptive materials accompanying Bond propositions clearly set forth some indication of the projected life-cycle maintenance and repair costs. A division manager told us that while the language of the bond itself is legally technical, the accompanying bond report allows more flexibility.

The Citizen's General Obligation Bond Advisory Committee ("GOBAC") reviews and reports on how bond money is spent. Although General Obligation Bond proceeds may not be used for maintenance expenses, GOBAC does inquire about the life-cycle maintenance and repair costs for assets built with such funds.

FINDINGS

Voters are not being told the projected future interest expense and life-cycle costs associated with General Obligation Bonds

F:V.1-a. As a basis against which to compare future actual M&R expenses, the Capital Planning Committee needs to understand the projected life-cycle cost of operating and maintaining proposed facilities to be built with General Obligation bond proceeds.

F:V.1-b. The "Critical Project Development" program under the Capital Planning Committee continues the City's commitment to funding pre-development planning so that project costs and impacts are clearly understood before a decision is made to either fund or place a project before voters.

F:V.2. The Mayor's Five Year Plans are starting to mention the long-term costs associated with one-time investments.

F:V.3. Voters are asked to approve General Obligation bonds for a new facility but are not informed of the projected interest cost to borrow the funds and of life-cycle cost projections for maintaining the new facility.

F:V.4. Life-cycle cost projections for operations and maintenance and repair are not visible to citizens when considering General Obligation Bond propositions, because this information is not included in the Voter Information Pamphlets.

F:V.5. The Citizen's General Obligation Bond Advisory Committee properly inquires as to the life-cycle maintenance and repair costs for assets built with General Obligation Bond proceeds, because that is pertinent information relating to those assets.

RECOMMENDATIONS

Voter Information Pamphlets Should Disclose Anticipated Interest Costs and Life-cycle Cost Projections

R:V.1. In accordance with best practices for governments and in the interest of transparency and accountability, the City Administrator and the Director of the Capital Planning Program should make projection of life-cycle costs of operation and maintenance a criteria for getting the Capital Planning Committee's approval to add General Obligation Bond propositions to the queue.

R:V.2. We recommend in the interest of transparency and accountability that the Mayor carry forward plans to include information on projected life-cycle operating costs and maintenance costs in Five Year Plans.

R:V.3. In the furtherance of transparency and accountability and best practices in government,

a. the Controller's Statement on General Obligation Bond propositions in the Department of Elections Voter Information Pamphlet should include a Life-Cycle Cost estimate, containing the projected life-cycle Maintenance and Repair cost for the proposed Capital Project.
b. the Controller should instruct General Fund departments to report annually to GOBAC:
    1) the inflation-adjusted Life-Cycle Maintenance and Repair Cost estimate for each General Obligation Bond funded project;
    2) the amount budgeted for Operating Cost and Maintenance Cost of that asset;
    3) the reasons for any budgeted shortfall; and
    4) the immediate and long-term consequences of any budgeted shortfall.

R:V.4. In furtherance of transparency, accountability and the public's right to know, GOBAC should prepare an annual report summarizing each General Fund department's life-cycle Maintenance and Repair cost estimates report and a consolidated report for all General Fund departments.

PART VI: MAINTENANCE POLICY IMPLICATIONS OF KICKING THE CAN DOWN THE ROAD: HIGHER COST, LOWER QUALITY, AND LESS RELIABILITY OF SERVICE

DISCUSSION

The Ten-Year Capital Plan is "financially constrained". " [W]e strive to make clear decisions on what should receive funding *given available resources*. As a result, over 4 billion in needs are deferred from the 10 year plan." http://onesanfrancisco.org/the-plan-2016/deferred-and-emerging-needs/ (italics added)

Facilities maintenance is normally funded through the operating budget. City officials told us that when the Capital Planning Committee (CPC) started in 2006, it used the budget amount of $12 million from the previous year to fund a centralized facility maintenance budget for General Fund facilities including several City-owned museums. The CPC continues to fund that as the base number, adjusted for inflation when possible. Several General Fund agencies that manage facilities receive a share of the inflation-adjusted $12 million to be used for facility or regular ongoing maintenance. We learned that CPC knows the facility maintenance base number is a limited amount that should be supplemented with other funds when possible.

The CPC picked an initial pay-as-you-go funding level for facilities maintenance, renewals and other critical needs. Between 2006 and 2014, the Capital Plan recommended increasing this funding at 10% per year (5% growth and 5% inflation) in order to eventually meet renewal needs, explaining: These modest annual increases help extend the useful life of the City's facilities and roads, maximize the effective delivery of services, and keep repair or replacement needs from becoming more costly. (Capital Plan 2015 http://onesanfrancisco.org/wp-content/uploads/Complete-CapitalPlan_Final2.)

However, the 2015 Capital Plan cut the planned growth rate to 7%, thereby postponing backlog reduction by an additional six years from 2019 to 2025:

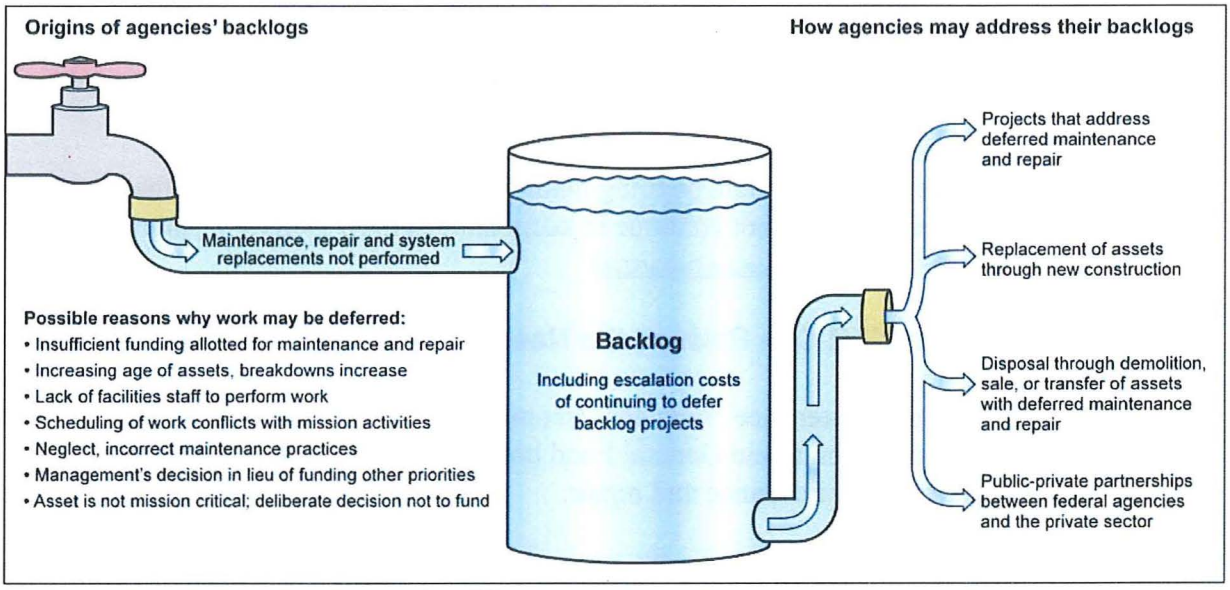
> The Plan proposes $1.66 billion into the Pay-as-you-go Program over the next ten years. After inflation, this is a *decrease* over the FY 2014-2023 Capital Plan primarily due to reducing the growth of the annual commitment from 10 percent to seven percent from FY 2017 to FY 2025.... [G]rowing the Pay-as-you-go program at seven percent means the budget will be unable to cover annual renewal needs until 2025. (Capital Plan 2015, emphasis added)

Even with full funding, the existing backlog is projected to grow by 44 percent as the result of the combination of backlog accumulated within the first six years of the Plan and cost escalation of today's existing backlog. Funding at lower "historical levels" means the City would not start seeing a reduction in its backlog until 2031. Id.

The expressed rationale for cutting the annual funding increase level from 10% to 7% was that in the final years of the Plan, the General Fund commitment would have more than doubled. (Capital Plan 2015). It is correct that "Doubling Times" are a function of the annual rate of increase: 7% per year doubles in 10 years; 10% per year doubles in 7 years. (http://www.cairco.org/reference/exponential-growth-doubling-time-rule-70)

However, given the acknowledged historical underfunding of the City's General Fund departments' maintenance budgets, the compounding nature of the fiscal pressures year after year, and the knowledge that cost escalation will increase the future cost of reducing the backlog, was it a bad thing to fund at levels that would start to catch up in 2019 rather than 2025 or 2031?

Figure 1: Components of Agency Deferred Maintenance and Repair Backlogs



Source: GAO.

Figure 8

Source: Improved Transparency GAO 2014

Experts and witnesses we interviewed suggest several ways to focus attention on the DM&R backlog while reducing or delaying General Obligation bond costs.

Set-asides

We were told the City should earmark facilities maintenance money. There are two categories of set-asides:

> *Revenue-driven* set-asides rise and fall based on the total tax revenues coming to the city. For example, a set-aside that is a percentage of the general fund typically is revenue-driven.
>
> *Expenditure-driven* set-asides [based on a percent of all property values] mandate a minimum amount of spending regardless of economic condition and city tax revenue. (SPUR 2009 http://www.spur.org/publications/spur-report/2009-01-01/secrets-san-francisco)

"Baseline funding" is a requirement to spend at least a certain amount on a service.

We were told that politicians do not like restrictions on discretionary funding.

Use Budget Hearings to Track the DM&R Backlog Factors

The California Legislative Analyst recommended that budget hearings be used to determine what factors led to the accumulation of deferred maintenance:

1. Use budget hearings to hear from individual departments on what factors led to the accumulation of deferred maintenance.
2. Craft policies to ensure that departments effectively manage their maintenance program on an ongoing basis.
3. Determine whether administration has a longer-term plan to:

    - Address accumulated deferred maintenance backlogs, and
    - Ensure that appropriate ongoing maintenance is SUSTAINED so that deferred maintenance does not continue to accumulate. (LAO Deferred Maintenance 2015 http://www.lao.ca.gov/Publications/Detail/3216)

Timely Attention to M&R Can Reduce the Need for General Obligation Bonds

A neglected "Facilities Maintenance" item can become a "Renewal" item which can become a General Obligation Bond item Some General Fund bond propositions include funding for the consequences of deferred maintenance and repair.

The ultimate message is clear: if the City does not pay now to maintain its physical assets, it will have to pay more in the future to prematurely replace them.

FINDINGS

There Are Ways to Reduce the City's DM&R Backlog

F:VI.1. Cutting the growth rate for funding the Pay-as-you-go Program from ten percent to seven percent causes a projected six year delay-- from 2019 to 2025 -- before the City begins to address its deferred backlog. Cost escalation over that six year delay will significantly increase the future cost of reducing the backlog.

F:VI.2-a. Funding the Pay-as-you-go Program at historical levels would cause a further delay to 2031 before the City begins to address its deferred backlog.

F:VI.2-b. The City wastes taxpayer money when it uses general fund bonds to pay for renewal of assets that deteriorated prematurely because of deferred maintenance and repairs.

F:VI.3. Budget hearings by the Board of Supervisors would be an opportunity to hear from General Fund departments on what factors led to the accumulation of deferred maintenance and lead to changes in funding policy to reduce those factors.

RECOMMENDATIONS

The City Should Focus More Attention on Reducing the DM&R Backlog

R:VI.1-a. To avoid future growth and cost escalation that will result from pushing back the starting date for reducing the backlog from 2019 to 2025 (or 2031 under historical funding levels), the Mayor should include in the proposed budget to the Board of

Supervisors restoration of the annual ten percent growth rate to the Pay-as-you-go Program budget.

R:VI.1-b. To avoid future growth and cost escalation that will result from pushing back the starting date for reducing the backlog from 2019 to 2025 (or 2031 under historical funding levels), and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve future budgets containing restoration of the annual ten percent growth rate to the Pay-as-you-go Program.

R:VI.2-a. In furtherance of good stewardship, the Board of Supervisors should require General Fund departments during budget hearings to describe what factors led to the accumulation of deferred maintenance in individual departments.

R:VI.2-b. In furtherance of good stewardship, the Mayor should propose in the Fiscal Year 2017-2018 Budget and thereafter sufficient funds for General Fund department maintenance and repair to prevent the Deferred Maintenance backlog from growing larger.

R:VI.2-c. In furtherance of good stewardship, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve sufficient maintenance and repair funding for General Fund departments in the Fiscal year 2017-2018 Budget to prevent the Deferred Maintenance backlog from growing larger.

R:VI.3-a. In furtherance of transparency, accountability and stewardship, the Controller should track General Fund departments' maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds is needed.

R:VI.3-b. The Controller should determine the additional time and manpower cost to accomplish the preceding Recommendation to track General Fund departments maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed, and include line item entries for those costs in its Budget Requests for the 2017-2018 Budget and thereafter.

R:VI.3-c. In the interests of transparency and accountability, the Mayor should include in the Mayor's proposed budget for the 2017-2018 Budget and thereafter those line item entries in the Controller's Budget Request for tracking General Fund departments maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed.

R:VI.3-d. In the interests of transparency and accountability, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve those line item entries in the Controller's Budget Request for tracking General fund departments

maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed, and include them in the adopted Budget ordinance for the 2017-2018 Budget and thereafter.

PART VII: IMPROVING ACCOUNTING AND REPORTING FOR DEFERRED MAINTENANCE

"*Define your terms.*"
—The secret to success in life, whispered to graduating Oxford students.

To cost effectively manage its capital assets, San Francisco needs to know the condition of its assets and the extent to which maintenance on these assets has been performed or deferred. The cost benefits are clear—properly maintaining assets as they age is far cheaper than repairing them when they break. (See Part II supra .)

Using the available data on maintenance budgeting and our interviews, we show the serious backlog in General Fund departments maintenance activities involving billions of dollars. And, the backlog continues to increase. There is little doubt that maintenance is the stepchild to other City budget priorities and has been for a long time.

This section of the report focuses on how the City can improve its accounting and reporting on its maintenance program and, especially, on deferred maintenance. Its purpose is not to question the reasonableness of existing data, but to identify ways to make the data better so that City managers can more accurately account for and report on its maintenance activities to the City's citizens.

Our investigation asked the question: Does the City have reliable information on the condition of its assets permitting it to adequately plan for their maintenance, and to report this information to the citizens of the City?

The answer is NO. Best accounting practices are available to do this and should be used. We conclude that the City needs more reliable information if it is to have what is needed to meet best standards and provide a sounder basis for making budgetary decisions.

Best Practices Exist to Better Identify and Report on Deferred Maintenance

Best accounting practices include:

- periodic condition assessment of City assets to serve as the foundation of its maintenance needs,
- a standard definition among City departments of what constitutes maintenance for use in accounting and budgeting,

- an accounting system that collects and compares both maintenance needs and maintenance budgets, and
- a financial reporting system that provides accurate information on the state of maintenance and the extent to which maintenance is being deferred.

Using these best practices will provide transparency on the current condition of the City's assets and the City's contingent liability for maintenance that has been deferred to future years.

Sound deferred maintenance reporting enables the government to be accountable to citizens for the proper administration and stewardship of public assets. Specifically, best accounting practices assist users by providing realistic estimates of needs and the effectiveness of asset maintenance practices.

At the Federal level, where accounting for deferred maintenance has been a long-standing problem, the Federal Accounting Standards Board (FASB) issued Federal Financial Accounting Standards 42: Deferred Maintenance and Repairs in April 2012. (SSFAS 42 http://www.fasab.gov/pdffiles/handbook_sffas_42.pdf) Its objective is to improve the measurement of deferred maintenance and repairs: federal entities are now required to:

(1) describe their maintenance and repairs (M&R) policies and how they are applied,
(2) discuss how they rank and prioritize M&R activities among other activities,
(3) identify factors considered in determining acceptable condition standards,
(4) provide beginning and ending DM&R balances by category of Property, Plant and Equipment, and
(5) explain significant changes from the prior year.

Recognition of the need for improved accountability for deferred maintenance was also strengthened by a Government Accountability Office (GAO) report, dated October 2008 and titled *Federal Real Property. Government's Fiscal Exposure from Repair and Maintenance Backlogs is Unclear*. (GAO 2008 http://www.gao.gov/assets/290/282802.pdf) In that study, the GAO discusses the need for comparability and realistic estimates of deferred maintenance so that the government's fiscal exposure could be revealed. These goals and practices appear as applicable to state and local governments as they are to the Federal government.

Controller Does Not Require Use of Best Practices for Managing City's Deferred Maintenance Backlog

According to accounting officials, the City uses Governmental Accounting Standards Board (GASB) Standard 34 as the basis by which it develops its general accounting practices and financial reporting requirements. (GASB 34 http://www.gasb.org/cs/BlobServer?blobkey=id&blobwhere=1175824063624&blobheader=application%2Fpdf&blobcol=urldata&blobtable=MungoBlobs) This standard is intended to help users of the financial statements understand the extent to which the City has invested in capital assets and the condition of these assets.

In accounting for its capital assets (assets that are used in operations and that have initial useful lives extending beyond a single reporting period), GASB Standard 34 allows the City to use two

basic approaches. One is to record capital assets at historical cost and depreciate them over their estimated useful lives. They should be reported net of accumulated depreciation in the financial statements.

A second permitted approach is termed the "modified approach". Under this approach, infrastructure assets are not required to be depreciated as long as two requirements are met. First, the City manages its infrastructure assets using an asset management system that has:

- An up-to-date inventory of eligible infrastructure assets,
- Condition assessments of the eligible infrastructure assets and a summary of the results using a measurement scale, and
- Estimates each year of the annual amount to maintain and preserve the assets at the condition level established and disclosed by the government.

The second requirement for using the "modified approach" is that the City document that it is preserving the assets approximately at or above an established and disclosed condition level.

According to accounting personnel, the City considered and decided not to use the "modified approach" in 2001 when first implementing GASB 34. Instead, it decided to go with the first accounting approach -- straight-line depreciation-based accounting. The estimated useful life of an infrastructure asset is established at the time of asset acquisition. But when the City does not fully maintain assets, their life will be less than originally estimated, actual depreciation will be understated, and the book value of assets overstated.

In our interviews with various departmental officials and staff, they acknowledged that there is no requirement to collect and report the extent of maintenance that is deferred from year to year. In fact, an official of a major City department told us that it does not keep track of deferred maintenance and does not know if it is increasing or not.

Another department official stated that the City is beginning to implement a new "Computer Maintenance Management System" that could provide some information on deferred maintenance. However, in our view, the reliability of any information depends on up-to-date comprehensive condition assessments, which do not appear to be happening across departments.

Other city managers also acknowledged that there are inconsistencies in the way departments view or define deferred maintenance and repair. We were told that some City departments use money allocated to facilities maintenance for other purposes, such as paying for project cost overruns and other emergency needs. At the same time, they agreed that using a consistent definition of "maintenance and repair" is necessary in any attempt to provide more reliable information across departments.

FINDINGS

City Not Using Best Practices to Account For and Report Deferred Maintenance

F:VII.1-a. Leading or best practices exist on how to account for and report deferred maintenance and repair so that reliable information is provided to City managers and the general public. However, these practices are not being implemented by many, if not most, City departments.

F:VII.1-b. Implementation of GASB Standard 34's "modified approach" can provide some improvement in accounting for capital assets, but the City has chosen not to implement that option.

F:VII.1-c. Implementing GASB Standard 34's modified approach would be an improvement over the existing practices, but is not as robust as FASB 42.

F:VII.2. The City does not have accounting and financial systems and processes in place to accurately determine and report the condition of its assets or the extent of its deferred maintenance.

F:VII.3. The City's capital assets shown in its financial statements may be overstated because its use of straight line depreciation assumes a longer asset life span than is likely given the reduced-life impact of deferred maintenance.

F:VII.4. Existing data show that maintaining assets extends asset life and is cheaper than prematurely replacing unmaintained assets.

RECOMMENDATIONS

City Should Use Best Practices to Account For and Report Deferred Maintenance

R:VII.1-a. The Controller should require all city departments to implement existing best practices as provided in FASB 42 and other best practices sources to account for and report deferred maintenance.

R:VII.1-b. The Controller should establish systems and procedures to establish clear maintenance and repair investment objectives and set priorities among outcomes to be achieved.

R:VII.1-c. The Controller and Director of Public Works should establish systems and procedures to identify types of facilities or specific buildings (i.e., capital assets) that are mission-critical and mission supportive.

R:VII.1-d. The Controller and Director of Public Works should establish systems and procedures to conduct condition assessments as a basis for establishing appropriate levels of funding required to reduce, if not eliminate, any deferred maintenance and repair backlog.

R:VII.1-e. The Controller and Director of Public Works should establish systems and procedures to establish performance goals, baselines for outcomes, and performance measures.

R:VII.1-f. The Controller and Director of Public Works should establish systems and procedures to identify the primary Methods to be used for delivering maintenance and repair activities.

R:VII.1-g. The Controller and Director of Public Works should establish systems and procedures to employ models for predicting the outcome of investments, analyzing tradeoffs, and optimizing among competing investments.

R:VII.1-h. The Controller and Director of Public Works should establish systems and procedures to align real property Portfolios with mission needs and dispose of unneeded assets.

R:VII.1-i. The Controller should establish systems and procedures to identify the types of risks posed by lack of timely investment.

R:VII.1-j. The Controller should determine the additional time and manpower cost to establish systems and procedures to accomplish the preceding items in Recommendation 1-a through 1-j and include a line item for those costs in its budget requests for fiscal year 2017-2018.

R:VII.1-k. The Mayor should include in the Mayor's proposed Budget for fiscal year 2017-2018. the line item entries in the Controller's budget requests to establish systems and procedures to accomplish the items in Recommendation 1-a through 1-j; and

R:VII.1-l. The Board of Supervisors, after review by the Budget and Legislative Analyst Office, should approve these line items in the Controller's budget requests to establish systems and procedures to accomplish the items in Recommendation 1-a through 1-j and include them in the approved budget for fiscal year 2017-2018.

R:VII.2-a. The Controller should include a discussion in its annual financial statements to describe what constitutes deferred maintenance and repair and how it is being measured.

R:VII.2-b. The Controller should include a discussion in its annual financial statements to include amounts of deferred maintenance and repair for each major category of Property, Plant, and Equipment.

R:VII.2-c. The Controller should include a discussion in its annual financial statements to include a general reference to specific component entity reports for additional information.

R:VII.3. The Controller should immediately reassess the reported value of capitalized assets in its financial statements given the impact of the high level of deferred maintenance on reducing the useable life of these assets.

R:VII.4-a. Beginning in FY 2017-18, the City's Capital Planning Committee should include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance.

R:VII.4-b. The City Administrator and Capital Planning Program Director should determine the additional time and manpower cost to accomplish the preceding Recommendation to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance, and include a line item entry for those costs in its Budget Requests for 2017-2018 and thereafter.

R:VII.4-c. The Mayor should include in the Mayor's Proposed Budget for 2017-2018 and thereafter the requested items in the Capital Planning Committee's Budget Requests to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance.

R:VII.4-d. The Board of Supervisors, after review by the Budget and Legislative Analyst Office, should approve these line item entries for the Capital Planning Committee to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance, and include these line items in the adopted Budget ordinance for 2017-2018 and thereafter.

CONCLUSIONS

"There's only one San Francisco. Let's take care of it."
—One SF Building Our Future

The guiding principles in this Report are stewardship, interperiod equity, accountability, and transparency.

We began our investigation into City maintenance funding confident that we could quickly spot all the problems; come up with perfect solutions that would satisfy every stakeholder; report our findings and recommendations in a way that would result in the Mayor and Board of Supervisors adopting them in their entirety; and we could return to our former status as private citizens serene in the knowledge that we had accomplished everything we set out to do.

Many months later:

We are awed by the magnitude and complexity of managing City government;
Humbled by our audacity;
Impressed with the caliber of City employees; and
Prepared to make suggestions for incremental improvements here and there.

We have no silver bullets to solve the challenge of raising sufficient funds to ensure City assets are properly maintained. The recommendations in our report will not make perfect the City's

budgeting processes for maintenance of General Fund departments' assets-- but should make them more transparent and thus better.

The General Fund departments' "Facilities Maintenance" budget allocation trended downward over the past decade, while Enterprise departments' Facilities Maintenance" budgets increased substantially (Appendix B). Why do Enterprise departments, which generate their own funds, choose to spend more on maintenance than the Mayor and Board of Supervisors allocate in the budget for General Fund departments?

No one disputes the proposition that adequate maintenance funding is important. Trying to do maintenance on the cheap wastes money, and takes risks with public health, public protection, and basic services that the City's residents and visitors rely upon. We discussed a few specific examples of maintenance needs that tend to get overlooked: trees and bridges.

A foundational problem for General Fund department maintenance funding is its lack of visibility. Uniform definitions that focus solely on Maintenance and Repairs will help. The forthcoming City Services Auditor's "Citywide Facilities Maintenance Practices Audit" may focus attention on the availability of citywide data for maintenance budgeting decisions. By lumping maintenance with useful-life-extending "Renewals", the Ten-Year Capital Plan masks the underlying deferred maintenance backlog. To minimize the annual budget "beauty contest" between services and maintenance, we recommend that adequate maintenance funding be built into the Real Estate division's rental rates for tenant City departments.

As an antidote to the "edifice-complex" desire to build without maintaining, we recommend that life-cycle cost estimates be a regular part of the review of new building proposals, and that the voting public have this information (along with projected interest costs) when asked to approve General Obligation Bond propositions.

The growing deferred maintenance backlog is a major challenge for the City. Kicking the can down the road hardly seems like responsible stewardship. Attention must be paid.

Best accounting practices are available to more effectively manage the City's assets and provide accurate information on the extent to which needed maintenance is being deferred. The absence of publicly available information on the condition and cost of deferred maintenance hides the problem. The failure to address the maintenance spending gap will result in an ever-increasing backlog of deferred maintenance that will cost the City dearly.

It is time for the City to right the ship by making deferred maintenance more visible to City managers and the citizens. There will be resistance from those who are comfortable with the situation as it is.

There are structural pressures inherent in our term-limited system of City government. In the "fiscally constrained" real world, set-asides for adequate maintenance and repair funding for General Fund departments should be approved by voters. This would instill fiscal discipline to counter the short-term focus of term-limited politicians and their appointed decision makers.

Due to voter-approved minimum spending requirements, General Fund discretionary spending is limited to 56% of the General Fund Budget. Voters passed ballot measures that require minimum spending levels for certain operations, including the Children's Baseline, and the Public Library Baseline. These measures inserted external discipline in the budgeting process. We were told that no politician likes set-asides, except the set-aside for a favorite project or department. Set asides may be blunt instruments, but they do work.

Our public budgeting systems have a fundamental bias toward dealing with problems only after they happen, rather than spending up front to prevent their happening in the first place. (Surowiecki 2014 www.newyorker.com/magazine/2014/09/22/home-free).

Our investigation revealed an unexpected Paradox of Public Infrastructure Funding: The "Worst" may be best; and the "Best" may be worst. The theoretical "Best" -- unanimously supported by all of the research authorities and interviews, is to pay for adequate maintenance out of current funds. That would be cheapest in the long run, but "worst" if the maintenance budget is constantly inadequate. There are many forces operating that keep the City's General Fund maintenance budget perpetually inadequate.

The theoretical "Worst" -- unanimously rejected by the authorities and interviews -- is to ignore deferred maintenance and replace prematurely aged facilities and infrastructure with General Obligation Bond money. This is considered the most expensive alternative. But in reality it may actually be the "least-bad", because the City does get new and improved facilities and infrastructure. The cost is greater, but the risks are reduced.

Were the City to adopt each of the recommendations set forth in this report, transparency would be greater than it is now. But it would still be a constant annual struggle to obtain adequate maintenance and repair budget levels, given the need to compete with ever-growing service level demands.

We anticipate push-back from the City employees whose maintenance budgeting practices we question. It is easy for us to tell the other guy that he should change his ways. As Charles Hitch, President of the University of California from 1967-1975 observed,

> It is much easier to change policy than to change procedures. Perhaps the reason is that policy involves a relatively small group of people at the very top of an organization, whereas procedures involve many people throughout the entire establishment and the way they have been doing things day after day, year after year. (Hitch 1966 http://www.amazon.com/Decision-Making-Defense-Charles-J-Hitch/dp/B000J0PV50).

We recognize that to increase transparency it will be essential to obtain stakeholder (staff) involvement as our recommended reporting requirements are developed and implemented. Managers will need to conduct outreach to listen to staff concerns and make changes in response to help ensure that staff can meet the new requirements. Without outreach, reporting challenges

may not be addressed, potentially impairing the data's collection and completeness, and increasing burdens on those reporting. (Data Transparency GAO 2013 http://www.gao.gov/products/GAO-13-758)

We were told that General Fund departments will never get more money allocated for maintenance until the City has the data that shows the need for more money.

It may take a disaster due to inadequate maintenance -- or a series of disasters -- to arouse the public to demand adequate budgets for General Fund departments' M&R. As we were told by an elected City official, discussing another matter, "It was unfortunate that it took a death to get reforms."

As stewards of our public property, the City's elected officials and budget decision makers should be mindful of *interperiod equity.* Adequately fund General Fund departments' M&R. Do not defer costs to the future and use up the City's accumulated resources -- its facilities and infrastructure -- to provide current period services.By adopting the recommendations in this report, the City can provide a greater degree of visibility and transparency on its future liabilities for deferred maintenance.

The City should maintain the stuff that people use; maintain the stuff that keeps people safe, and maintain the stuff that otherwise may hurt people.

Figure 9 Photo: John Hoskins

In District 9, a falling tree crushed a baseball backstop in St. Mary's Park. Luckily no one was injured by this March 2016 event .When will the adjacent "snag" dead tree trunk fall?

REQUEST FOR RESPONSES

Findings		Respondents
I.A.	For General Fund Departments, the City could (but does not) provide the public with transparent information concerning the stewardship of assets by disclosing: (1) the gap between industry maintenance standards and San Francisco's investment in General Fund Departments' "Facilities Maintenance" (measured as a percentage of Current Replacement Value and in dollars); (2) the total General Fund Departments' maintenance and repair budget; (3) the total General Fund Departments' maintenance and repair backlog, and (4) benchmark comparisons with other cities and counties.	
F:I.A.1.	The gap between the City's investment in General Fund Departments' "Facilities Maintenance" assets and industry guidelines measured as a percentage of Current Replacement Value (CRV): • Recommended 4%, • Minimum 2%, or • Total General Fund Departments' "target need" of approximately 1.7% calculated by Facilities Renewal Resource Model (FRRM), (see Figure 4 and Appendix D-3) and in dollar amounts is not made available to citizens of San Francisco.	Controller, City Administrator, Director of the Capital Planning Program
F:I.A.2-a.	Without transparent and complete information about the investment levels in the City's General Fund Departments' maintenance and repair budgets, the public does not have important information with which to assess the City's stewardship of public assets.	Controller, City Administrator, Director of the Capital Planning Program
F:I.A.2-b.	The slice of the pie chart for General Fund departments labelled "Facilities Maintenance" in the Budget report is not the total maintenance budget for those departments.	Controller, City Administrator, Director of the Capital Planning Program
F:I.A.2-c.	The total maintenance budget for General Fund departments is not disclosed in the Budget report.	Controller, City Administrator, Director of the Capital Planning Program
F:I.A.3.	As a consequence of low investment levels in General Fund departments' asset maintenance and repair, the City has a large and growing deferred maintenance and repair backlog for General Fund departments. Without transparent and complete information about these deferred maintenance and repair backlogs, the public does not have important information with which to assess the City's stewardship of General Fund Departments' assets.	Controller, City Administrator, Director of Capital Planning Program

F:I.A.4.	San Francisco's comparison with benchmark comparable cities and counties in terms of (a) "Facilities Maintenance" investment in General Fund Departments' assets, measured as a percentage of Current Replacement Value (CRV) and dollars; (b) General Fund Departments' total maintenance and repair budgets, and (c) General Fund Departments' deferred maintenance and repair backlog would be useful for the public in assessing the City's stewardship of these General Fund Departments' assets.	Controller
F:II.A.1-a.	Adequately funding maintenance and repair of General Fund departments' facilities and infrastructure has potential beneficial consequences, such as those noted in a National Research Council report (NRC 2012).	Mayor, Mayor's Office of Public Policy and Finance
F:II.A.1-b.	Underfunding maintenance and repair of General Fund departments' facilities and infrastructure creates potential adverse consequences, such as those noted in the same National Research Council report (NRC 2012).	Mayor, Mayor's Office of Public Policy and Finance
F:II.A.1-c.	The City saves money over the long term by using pay-as-you-go financing for high-priority maintenance and repairs.	Mayor, Mayor's Office of Public Policy and Finance, Controller
F:II.A.1-d.	Total reliance on annually budgeted pay-as-you-go funding can result in maintenance and repairs being deferred in lean budget years. It will be a challenge for policy makers to develop a range of stable "pay-as-you-go" annual funding mechanisms for maintenance and repairs.	Mayor, Mayor's Office of Public Policy and Finance, Controller, Board of Supervisors
F:II.B.1-a.	The City does not know what portion (if any) of its Workers' Compensation liabilities arise out of poorly maintained General Fund department capital assets.	Human Resources Director, Workers Compensation Division Director Mayor
F:II.B.1-b.	If the City's budget decision-makers knew how much (if any) of the City's Workers Compensation liabilities arose out of poorly maintained General Fund department capital assets, they would have useful information in making budget trade-off decisions.	Mayor, Mayor's Office of Public Policy and Finance, Board of Supervisors

F:II.B.2-a.	Hazard Logs in City General Fund departments are not being compiled and analyzed in a manner which identifies and quantifies risks of injury resulting from deferred maintenance.	Mayor, Office of the City Administrator General Services Agency - Environmental Health and Safety
F:II.B.2-b.	If the Hazard Logs in General Fund departments were compiled and analyzed in a manner which identified and quantified risks of injury resulting from deferred maintenance, that information could be provided to budget decision-makers for use in making budget trade-offs.	Mayor, Mayor's Office of Public Policy and Finance, Board of Supervisors
F:II.C-1-a.	Because trees perform valuable environmental, economic and social functions and make San Francisco a better place to live and work, stable funding sources for maintenance of the City's urban forest is recognized as a goal in the budget process.	Director of Public Works, General Manager of Recreation and Parks
F:II.C-1-b.	San Francisco's canopy cover at 13.7% lags far behind other major cities, and varies widely between neighborhoods.	Urban Forestry Council, Planning Director
F:II.C-1-c.	The Urban Forestry Council notes in its annual Urban Forest Reports that San Francisco's urban forest managers consistently identify their highest priority as the lack of adequate resources to effectively maintain the city's trees. Recreation and Parks Department and Department of Public Works face the same challenge: both are significantly underfunded to do their needed maintenance work.	Director of Public Works, General Manager of Recreation and Parks, Urban Forestry Council
F:II.C-1-d.	As long as San Francisco's urban forestry program is a discretionary expenditure, its funding will remain unstable and continue to fluctuate.	Planning Director
F:II.C-2-a.	Budget cuts for street tree maintenance led to DPW's plan to transfer maintenance responsibility for approximately 22,000 trees from the City to adjacent property owners.	Director of Public Works, Planning Director
F:II.C-2-b.	The maintenance-transfer program is costly to the City, as DPW must first assess the health of each tree to be transferred; and costly to property owners who are expected to bear the maintenance costs and liability risks.	Director of Public Works, Planning Director
F:II.C-2-c.	The maintenance-transfer program compromises tree health and stability, risks public safety and also diminishes the social and environmental benefits that street trees provide.	Director of Public Works, Planning Director
F:II.C-2-d.	Some property owners pay to maintain "their" street trees while others do no maintenance because they are unaware that it is their responsibility or are unwilling to pay for it.	Planning Director

F:II.C-2-e.	Deferred maintenance leads to a street tree program that is reactive,and ultimately increases the costs of street tree care, since trees in poor condition require greater care and contribute to emergencies and claims for personal injury and property damage.	Director of Public Works, Planning Director
F:II.C-2-f.	For every $1 spent on public street trees, San Francisco receives an estimated $4.37 in benefits.	Planning Director
F:II.C-2-g.	One major reason new plantings do not keeping pace with tree removals is that no city maintenance program exists to care for them afterwards. There is reluctance among property owners to plant new trees because of ongoing maintenance responsibilities and potential costs associated with liabilities such as sidewalk repair.	Planning Director
F:II.C-2-h.	The Urban Forest Plan (Phase One: Street Trees) recommends reducing long-term costs of the urban forest by having Public Works take control of all street trees under a comprehensive street tree plan, allowing for routine block-pruning (instead of responding only to emergency calls on specific trees) which would drive down per tree maintenance costs and increase overall tree health.	Director of Public Works, Planning Director
F:II.C-2-i.	Routine maintenance of all street trees in the City under a comprehensive program of the Public Works Department, with stable funding, will increase overall tree health and reduce per-tree maintenance costs.	Director of Public Works, Planning Director
F:II.C-2-j.	The Urban Forest Plan (Phase One: Street Trees) recommending the Department of Public Works take on the maintenance of all street trees will be a net benefit to all San Francisco residents.	Director of Public Works, Planning Director
F:II.C-2-k.	The incidence of injuries to residents and visitors and damage claims against the City are expected to decline with routine street tree maintenance by the Department of Public Works.	Director of Public Works, Planning Director
F:II.C-3-a.	The Board of Supervisors adopted the Plan by Ordinance No. 23-15.	Board of Supervisors
F:II.C-3-b.	On April 19, 2016, Supervisor Scott Wiener introduced a proposed Charter amendment (#160381 Charter Amendment and Business and Tax Regulations Code – City Responsibility and Parcel Tax for Street Trees) to implement and pay for Phase 1 of the Urban Forest Plan. (paragraph 31)	Board of Supervisors
F:II.C-4-a.	The Urban Forestry Council urges completion of Phase 2 of the Urban Forest Plan related to Parks and Open Spaces.	General Manager of Recreation and Parks, Urban Forestry Council
F:II.C-5-a.	The Recreation and Park Department has a strategic reforestation plan to plant two trees for every tree removed.	General Manager of Recreation and Parks

F:II.C-6.a.	The Recreation and Park Department has a plan to implement a programmatic tree maintenance program that will sustain a 15-year tree maintenance cycle and seeks secure funding.	General Manager of Recreation and Parks
F:II.C-7-a.	Using funds from the 2008 and 2012 Clean & Safe Neighborhood Parks Bonds, RPD conducted risk assessments in many parks to identify trees with failure potential, the size of the part of the tree that would fall, and the target that would be impacted should a failure occur. Hazardous tree abatement was completed in several parks.	General Manager of Recreation and Parks
F:II.C-7-b.	Hazardous trees in City Parks are a risk to public safety (Figures 5 and 9).	General Manager of Recreation and Parks
F:II.C.2-1.	The City is responsible for maintenance of three of the fourteen bridges in the City rated as "Structurally Deficient".	Director of Public Works
F:II.C.2-2.	Bridges may require substantial repairs before reaching the "Structurally Deficient" stage; e.g., the Richland Avenue bridge pictured in Figure 7.	Director of Public Works
F:III.A.1-a..	Lack of comprehensive and reliable data obscures the relationship between the amounts General Fund departments spend on annual maintenance and repair and the costs resulting from deferred maintenance backlogs.	Controller
F:III.A.1-b.	Replacement or revision of the current asset management programs used by General Fund departments provides an opportunity for development of new or revised performance metrics to collect and report: (1) the dollars departments expend on annual maintenance and repair and (2) the annual costs incurred in addressing their deferred maintenance and repair backlogs.	Controller, General Manager of Recreation and Parks
F:III.B.1.	The City's ability to determine the Deferred Maintenance and Repairs backlog is hampered by the aggregating of deferred maintenance expenses with capital renewal and replacement costs.	Controller, City Administrator, Director of the Capital Planning Program
F:III.C.1-a.	Condition Assessment Surveys with cost estimates are an important factor in identifying required maintenance.	Director of Public Works, City Administrator, Director of Real Estate, General Manager of, Recreation and Parks
F:III.C.1-b.	Some old condition assessments, a key part of the maintenance needs determination process, have not been updated for ten years or longer.	Director of Public Works, City Administrator, Director of Real Estate,,

		General Manager of Recreation and Parks
F:III.C.1-c.	Updated Condition Assessment Surveys for capital assets maintained by the Real Estate Division, the Department of Public Works, and the Recreation and Parks Department will identify required maintenance needs.	Director of Public Works, City Administrator, Director of Real Estate Division, General Manager of Recreation and Parks
F:III.C.2.	A new comprehensive condition assessment survey of Recreation and Parks department facilities and infrastructure is an important step toward getting adequate maintenance funding appropriated on a regular basis.	General Manager of Recreation and Parks
F:III.C.3-a.	The Mayor's announced goal of getting city streets to a Paving Condition Index rating of good condition, and keeping them there, is a good first step.	Director of Public Works, Mayor
F:III.C.3-b.	The Facilities Conditions Index may be used as a means of identifying the condition of buildings and other non-street capital assets to assist in projecting and making resource allocations, and to determine the annual reinvestment needed to prevent further accumulation of deferred maintenance and repair.	City Administrator, Director of the Capital Planning Program
F:III.C.3-c.	A Controller's Study of those physical assets with a Facilities Condition Index of 0.30 or greater will help determine whether a lack of comprehensive maintenance and repair planning resulted in underinvestment in preventive maintenance work that has depreciated the value and useful life of those physical assets.	Controller
F:III.D.1.	Below-market rental rates charged to General Fund department tenants do not cover the annual Maintenance and Repair and capital replacements costs and conceal the true costs of program delivery.	City Administrator, Director of Real Estate Division
F:IV.1.	The Mayor's Office of Public Policy and Finance reviews and analyzes prioritized General Fund departmental budget proposals.	Mayor's Office of Public Policy and Finance
F:IV.2-a.	Compliance with Section 3.5(a) of the Budget Process Ordinance provides City departments and department heads with an opportunity to make their maintenance needs known vigorously as part of the Budget Process.	Controller, Director of Public Works, City Administrator, Director of the Real Estate Division, General Manager of Recreation and Parks

F:IV.2-b.	Opportunities exist for General Fund Department managers to advocate for increased maintenance and repair funding within the strictures of Capital Budget Request Form 6.	Controller Director of Public Works, City Administrator, Director of the Capital Planning Program, Director of the Real Estate Division, General Manager of Recreation and Parks
F:IV.2-c.	Compliance with Section 3.14 of the Budget Ordinance provides City department heads with an opportunity to make their unfunded high-priority maintenance needs known.	Board of Supervisors, Controller Director of Public Works, City Administrator, Director of the Real Estate Division, General Manager of Recreation and Parks
F:IV.2-d.	General Fund department heads have the opportunity to make supplemental appropriation requests when they find that their department has inadequate resources to support M&R operations through the end of the fiscal year.	Director of Public Works, Mayor's Office of Public Policy and Finance, City Administrator, Director of the Real Estate Division, General Manager of Recreation and Parks
F:IV.3.	The Mayor's Budget Letter does not include a list with a description of the General Fund departments' high-priority maintenance and repair projects which did not get funded in the budget.	Mayor
F:IV.4.	The Board of Supervisors generates a list of budget policy priorities to guide funding decisions on the unallocated pools of money resulting from expenditure reductions to the Mayor's proposed budget.	Board of Supervisors
F:V.1-a.	As a basis against which to compare future actual M&R expenses, the Capital Planning Committee needs to understand the projected life-cycle cost of operating and maintaining proposed facilities to be built with General Obligation bond proceeds.	City Administrator, Director of the Capital Planning Program
F:V.1-b.	The "Critical Project Development" program under the Capital Planning Committee continues the City's commitment to funding pre-development planning so that project costs and impacts are clearly	City Administrator, Director of Capital

	understood before a decision is made to either fund or place a project before voters.	Planning Program
F:V.2.	The Mayor's Five Year Plans are starting to mention the long-term costs associated with one-time investments.	Mayor
F:V.3.	Voters are asked to approve General Obligation bonds for a new facility but are not informed of the projected interest cost to borrow the funds and of life-cycle cost projections for maintaining the new facility.	Department of Elections, Mayor, City Administrator, President of the San Francisco Election Commission
F:V.4.	Life-cycle cost projections for operations and maintenance and repair are not visible to citizens when considering General Obligation Bond propositions, because this information is not included in the Voter Information Pamphlets.	Department of Elections, Mayor, City Administrator, President of the San Francisco Election Commission
F:V.5.	The Citizen's General Obligation Bond Advisory Committee properly inquires as to the life-cycle maintenance and repair costs for assets built with General Obligation Bond proceeds, because that is pertinent information relating to those assets.	Citizen's General Obligation Bond Advisory Committee
F:VI.1.	Cutting the growth rate for funding the Pay-as-you-go Program from ten percent to seven percent causes a projected six year delay-- from 2019 to 2025 -- before the City begins to address its deferred backlog. Cost escalation over that six year delay will significantly increase the future cost of reducing the backlog.	Board of Supervisors, Mayor, Mayor's Office of Public Policy and Finance, City Administrator, Director of the Capital Planning Program
F:VI.2-a.	Funding the Pay-as-you-go Program at historical levels would cause a further delay to 2031 before the City begins to address its deferred backlog.	City Administrator, Director of the Capital Planning Program
F:VI.2-b.	The City wastes taxpayer money when it uses general fund bonds to pay for renewal of assets that deteriorated prematurely because of deferred maintenance and repairs.	Controller, Citizen's General Obligation Bond Advisory Committee
F:VI.3.	Budget hearings by the Board of Supervisors would be an opportunity to hear from General Fund departments on what factors led to the	Board of Supervisors

	accumulation of deferred maintenance and lead to changes in funding policy to reduce those factors.	
F:VII.1-a.	Leading or best practices exist on how to account for and report deferred maintenance and repair so that reliable information is provided to City managers and the general public. However, these practices are not being implemented by many, if not most, City departments.	Controller
F:VII.1-b.	Implementation of GASB Standard 34's "modified approach" can provide some improvement in accounting for capital assets, but the City has chosen not to implement that option.	Controller
F:VII.1-c.	Implementing GASB Standard 34's modified approach would be an improvement over the existing practices, but is not as robust as FASB 42.	Controller
F:VII.2.	The City does not have accounting and financial systems and processes in place to accurately determine and report the condition of its assets or the extent of its deferred maintenance.	Controller, Department of Public Works, City Administrator, Director of the Capital Planning Program, Director of the Real Estate Division, General Manager of Recreation and Parks
F:VII.3.	The City's capital assets shown in its financial statements may be overstated because its use of straight line depreciation assumes a longer asset life span than is likely given the reduced-life impact of deferred maintenance.	Controller
F:VII.4.	Existing data show that maintaining assets extends asset life and is cheaper than prematurely replacing unmaintained assets.	Controller, Director of Public Works, City Administrator, Director of the Capital Planning Program, Director of the Real Estate Division, General Manager of Recreation and Parks

Recommendations		Respondents
R:I.A.1-a.	To provide useful information for the public in assessing the City's stewardship of public assets, the City Administrator and the Director of the Capital Planning Program should use the FRRM (Facilities Renewal Resource Model) to calculate the target need for General Fund departments' facilities maintenance as a percentage of Current Replacement Value (CRV) and in dollar amounts, and disclose that information to the public; b. The City Administrator and the Director of the Capital Planning Program should determine the additional time and manpower cost to accomplish this additional calculating and reporting and include a line item for those costs in their budget requests; c. The Mayor should include in the proposed budget for Fiscal year 2017-18 and thereafter the amount requested by the City Administrator and the Director of the Capital Planning Program to accomplish this additional calculating and reporting; and d. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the City Administrator and the Director of the Capital Planning Program to accomplish this additional calculating and reporting in the approved budgets for fiscal year 2017-2018 and thereafter.	a & b: City Administrator, Director of the Capital Planning Program, c: Mayor and Mayor's Office of Public Policy and Finance, d: Board of Supervisors
R:I.A.2-a.	This recommendation satisfies Findings F:I.A.2-a, -b, and -c: a. In order for the public to assess the City's stewardship of General Fund Departments' assets, the Controller should: (1) disclose the total maintenance budget for General Fund departments; and (2) periodically conduct an audit of investment levels in General Fund departments' asset maintenance and repair.	Controller
R:I.A.2-b.	The Controller should determine the additional annual time and manpower cost to accomplish the compilation and disclosure of the total maintenance budget for General Fund departments, and periodic audits and include line item entries for those costs in its budget requests for fiscal year 2017-2018 and thereafter;	Controller
R:I.A.2-c.	The Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the amounts requested by the Controller for the compilation and disclosure of the total maintenance budget for General Fund departments and periodic audits; and	Mayor, Mayor's Office of Public Policy and Finance
R:I.A.2-d.	After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller for the compilation and disclosure of the total maintenance budget for General Fund departments and periodic audits in the approved budget for fiscal year 2017-2018 and thereafter.	Board of Supervisors
R:I.A-3-a.	In order for the public to assess the City's stewardship of General Fund Departments' assets, the Controller should: (1) disclose the total deferred maintenance and repair backlog for General Fund departments; and	Controller

	(2) periodically conduct an audit of General Fund departments' deferred maintenance and repair backlog.	
R:I.A.3-b.	The Controller should determine the additional annual time and manpower cost to accomplish the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments, and periodic audits and include line item entries for those costs in its budget requests for fiscal year 2017-2018 and thereafter;	Controller
R:I.A.3-c.	The Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the amounts requested by the Controller for the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments and periodic audits; and	Mayor, Mayor's Office of Public Policy and Finance
R:I.A.3- d.	After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller for the compilation and disclosure of the total deferred maintenance and repair backlog for General Fund departments and periodic audits in the approved budget for fiscal year 2017-2018 and thereafter.	Board of Supervisors
R:I.A.4-a.	To provide useful information for the public in assessing the City's stewardship of General Fund Departments' assets, the Controller should conduct a benchmark study of investment levels in General Fund departments' "Facilities Maintenance" measured as a percentage of Current Replacement Value, total maintenance and repair budgets and deferred maintenance and repair backlogs;	Controller, City Services Auditor
R:I.A.4-b.	The Controller should determine the additional time and manpower cost to conduct this benchmark study and include a line item for those costs in its budget request for fiscal year 2017-2018;	Controller, City Services Auditor
R:I.A.4-c.	The Mayor should include in the proposed budget for fiscal year 2017-2018 and the amount requested by the Controller for the benchmark study; and	Mayor, Mayor's Office of Public Policy and Finance
R:I.A.4-d.	After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the amount requested by the Controller to accomplish this benchmark study in the approved budget for fiscal year 2017-2018.	Board of Supervisors
R:II.A.1-1.	In order to achieve beneficial consequences and avoid the potential adverse consequences from underfunding maintenance and repair of General Fund departments' facilities and infrastructure, and to save money over the long term: a. The City Administrator and the Director of the Capital Planning Program should identify a range of stable funding sources for pay-as-you-go maintenance and repair of the City's facilities and infrastructure; b. The Mayor should propose sufficient funding in the Fiscal Year 2017-2018 budget and thereafter from stable funding sources for all	a: City Administrator and Director of the Capital Planning Program, b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors

	General Fund departments' high-priority pay-as-you-go maintenance and repair projects; and c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve sufficient funding in the Fiscal Year 2017-2018 budget and thereafter from stable funding sources for all General Fund departments' high-priority maintenance and repair projects.	
R:II.B.1-a.	The Controller should: • conduct an audit of the Workers' Compensation Division of the Department of Human Resources data gathering policies and procedures, • report to budget decision-makers its findings of identified and quantified risks of injury created by deferred maintenance and repairs, and recommend appropriate modifications. So as budget funding trade-off decisions are made, the Mayor and Board of Supervisors will know what portion of the City's Workers Compensation liabilities (if any) arise from poorly maintained General Fund department capital assets.	Controller
R:II.B.1-b.	The Controller should determine the additional time and manpower cost to the City Services Auditor staff to accomplish this audit and report and include a line item for this cost in its budget request for fiscal year 2017-2018.	Controller
R:II.B.1-c.	To reduce the risk of injury to City employees, the Mayor should include in the proposed budget for fiscal year 2017-2018 this line item in the Controller's budget request for an audit of Workers Compensation Division data gathering policies and procedures.	Mayor, Mayor's Office of Public Policy and Finance
R:II.B.1-d.	To reduce the risk of injury to City employees, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve this line item in the Controller's budget request for an audit of Workers Compensation Division data gathering policies and procedures and include it in the approved budget ordinance for fiscal year 2017-2018.	Board of Supervisors
R:II.B.2-a.	The Controller should assist the General Services Agency -- Environmental Health and Safety in developing procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs.	Controller, City Administrator General Services Agency - Environmental Health and Safety
R:II.B.2.b.	To provide budget decision-makers with pertinent information for making trade-off decisions, the Controller should determine the additional time and manpower cost to develop procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs and include a line item for this cost in its budget request for fiscal year 2017-2018.	Controller

R:II.B.2.c.	To reduce the risk of injury to City employees, the Mayor should include in the proposed budget for fiscal year 2017-2018 this line item in the Controller's budget request to develop procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs.	Mayor, Mayor's Office of Public Policy and Finance
R:II.B.2.d.	To reduce the risk of injury to City employees, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve this line item in the Controller's budget request to develop procedures for periodic analysis of Hazard Logs to identify and quantify risks of injury created by deferred maintenance and repairs and include it in the approved budget ordinance for fiscal year 2017-2018.	Board of Supervisors
R:II.C.1-1.	**Maintain urban forest**. Because trees perform valuable environmental, economic and social functions and make San Francisco a better place to live and work: a. the City Administrator and the Director of the Capital Planning Program should identify stable funding sources for maintaining the urban forest; b. the Mayor should identify stable funding sources for maintaining the urban forest and include them in proposed budgets; c. after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve stable funding sources for maintaining the urban forest.	Planning Director, a: City Administrator, b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors
R:II.C.1.2.	**DPW street trees**: Because it will increase overall street tree health and reduce per-street-tree maintenance costs as described in the Urban Forest Plan (Phase 1: Street Trees): a. The Department of Public Works should include line items in its budget requests for the routine maintenance of all street trees, b. the Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter to the Public Works Department for the routine maintenance of all street trees; and c. after Budget and Legislative Analyst's Office review, the Board of Supervisor should approve sufficient dedicated funding in the budget for upcoming fiscal years 2017-2018 and thereafter to the Public Works Department for the routine maintenance of all street trees.	a: Director of Public Works, b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors
R:II.C.1.3.	**Proposition #160381** The Board of Supervisors should approve placing the Street Trees proposition (#160381 Charter Amendment and Business and Tax Regulations Code – City Responsibility and Parcel Tax for Street Trees) on the November 2016 ballot.	Board of Supervisors
R:II.C.1.4.	**The Urban Forest Plan Phase 2** Because it will increase overall tree health in the City's parks and open spaces and reduce per-tree maintenance costs: a. The Planning Department should include a line item in its budget requests for the cost of completing The Urban Forest Plan (Phase 2: Parks and Open Space); b. The Mayor should include sufficient funding in the proposed Budget for the upcoming fiscal years 2017-2018 and thereafter for the	a: Planning Director, b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors, d: Board of Supervisors,

	Planning Department to complete The Urban Forest Plan (Phase 2: Parks and Open Space); and c. After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve sufficient funding in the approved budget for fiscal years 2017-2018 and thereafter for the Planning Department to complete The Urban Forest Plan (Phase 2: Parks and Open Space); d. After review by the Budget and Legislative Analyst Office, The Board of Supervisors should pass an Ordinance incorporating The Urban Forest (Phase 2: Parks and Open Space) by reference; and e. The Parks Commission should devise a creative dedicated funding plan to implement the Urban Forest Plan (Phase 2: Parks and Open Space).	e: President of the Recreation and Park Commission
R:II.C.1-5.	**Rec & Park 2 for 1**: Because it will promote the strategic reforestation of the City, thereby improving quality of life for City residents and visitors: a. The Recreation and Parks Department should include a line item in its budget requests for fiscal year 2017-2018 and thereafter for sufficient funding to plant two trees for every tree removed; b. the Mayor should include sufficient funding in the proposed budget for upcoming fiscal year 2017-2018 and thereafter for the Recreation and Parks Department's plan to plant two trees for every tree removed; and c. after Budget and Legislative Analyst's Office review, the Board of Supervisors should approve sufficient funding in the budget for upcoming fiscal year 2017-2018 and thereafter for the Recreation and Parks Department's plan to plant two trees for every tree removed.	a: General Manager of Recreation and Parks b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors
R:II.C.1.6.	**Rec & Park 15 year maintenance cycle:** Because it will increase overall tree health and reduce overall per-tree maintenance costs: a. The Recreation and Parks Department should include a line item in its budget requests for fiscal year 2017-2018 and thereafter for sufficient funding to implement a programmatic tree maintenance program that will sustain a 15-year tree maintenance cycle b. the Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for the sustained 15-year tree maintenance cycle; and c. after Budget and Legislative Analyst's Office review, the Board of Supervisors should approve sufficient dedicated funding in the approved budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for the sustained 15-year tree maintenance cycle.	a: General Manager of Recreation and Parks b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors
R:II.C.1.7.	**Rec & Park Tree Risk Assessments.** Because it will increase safety for all park users, a. The Recreation & Parks Department should seek a line item in its budget request to pay for completing tree risk assessments and hazardous tree abatement for trees in all remaining parks where that has not yet been accomplished. b. The Mayor should include sufficient dedicated funding in the proposed budget for upcoming fiscal years 2017-2018 and thereafter	a: General Manager of Recreation and Parks b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors

	to the Recreation and Parks Department for completion of tree risk assessments and hazardous tree abatement; and c. After review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve sufficient dedicated funding in the approved budget for upcoming fiscal years 2017-2018 and thereafter to the Recreation and Parks Department for completion of tree risk assessments and hazardous tree abatement.	
R:II.C.2-1-a.	To prevent further deterioration and unsafe conditions, the Department of Public Works should seek prioritized line item budget funding in the fiscal year 2017-2018 for the maintenance and repair of the "Structurally Deficient" rated bridges for which it is responsible.	Director of Public Works
R:II.C.2-1-b.	To prevent further deterioration and unsafe conditions, the Mayor should approve these line items in the Department of Public Works budget request for the maintenance and repair of "Structurally Deficient" bridges and include them in the Mayor's proposed budget for fiscal year 2017-2018 and thereafter.	Mayor, Mayor's Office of Public Policy and Finance
R:II.C.2-1-c.	After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve adequate funding for the Department of Public Works for maintenance and repair of "Structurally Deficient" bridges in the fiscal year 2017-2018 approved budget and thereafter.	Board of Supervisors
R:II.C.2-2-a.	We acknowledge the Department of Public Works plans to repair the existing deterioration and unsafe conditions on the Richland Avenue bridge and encourage the early completion of this important project.	Director of Public Works
R:II.C.2-2-b.	To prevent further deterioration and unsafe conditions, the Department of Public Works should determine the cost of repairing the Richland Avenue Bridge and other deteriorated but not yet "Structurally Deficient" bridges for which it is responsible and include these costs as line items in its budget request for fiscal year 2017-2018.	Director of Public Works
R:II.C.2-2-c.	To prevent further deterioration and unsafe conditions, the Mayor should approve the items in the Department of Public Works budget request for the maintenance and repair of the Richland Avenue bridge and other deteriorated but not yet "Structurally deficient" bridges and include them in the Mayor's proposed budget in the fiscal year 2017-2018 and thereafter.	Mayor, Mayor's Office of Public Policy and Finance
R:II.C.2-2-d.	To prevent further deterioration and unsafe conditions, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the items in the Department of Public Works budget request for the maintenance and repair of the Richland Avenue bridge and other deteriorated but not yet "Structurally deficient" bridges and include them in the adopted budget in the fiscal year 2017-2018 and thereafter.	Board of Supervisors
R:III.A.1.a.	To focus attention on the relationship between General Fund departments' annual Maintenance and repair expenditures and these departments' deferred maintenance and repair backlogs, the Controller should utilize the replacement or revision of the current asset	Controller

	management programs used by General Fund departments as an opportunity for development of new or revised performance metrics to collect and report to City officials and the public: (1) the costs departments expend on annual maintenance and repair; and (2) the annual costs incurred in addressing their deferred maintenance and repair backlogs.	
R:III.A.1.b.	The Controller should determine the additional time and manpower cost to develop these new or revised performance metrics in asset management programs and include line item entries in its budget request for fiscal year 2017-2018.	Controller
R:III.A.1.c.	To focus attention on the relationship between General Fund departments annual maintenance and repair expenditures and their deferred maintenance backlogs, the Mayor should approve these line item entries in the Controller's budget request to collect and report General Fund department costs expended on annual maintenance and repair and costs incurred in addressing their deferred maintenance and repair backlogs, and include them in the Mayor's proposed budget for fiscal year 2017-2018.	Mayor, Mayor's Office of Public Policy and Finance
R:III.A.1.d.	To focus attention on the relationship between General Fund departments annual maintenance and repair expenditures and their deferred maintenance backlogs, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve these line item entries in the Controller's budget request to collect and report General Fund department costs expended on annual maintenance and repair and costs incurred in addressing their deferred maintenance and repair backlogs, and include them in the approved budget for fiscal year 2017-2018.	Board of Supervisors
R:III.B.1.a.	For increased transparency and accountability, the City Administrator and the Director of the Capital Planning Program should report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan.	City Administrator Director of the Capital Planning Program
R:III.B.1.b.	The City Administrator and the Director of the Capital Planning Program should determine the additional time and manpower cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan, and include a line item for this cost in its budget request for fiscal year 2017-2018 and thereafter.	City Administrator, Director of the Capital Planning Program
R:III.B.1.c.	For increased transparency and accountability, the Mayor should include in the proposed budget for fiscal year 2017-2018 and thereafter the City Administrator's and the Director of the Capital Planning Project's request for the cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan.	Mayor, Mayor's Office of Public Policy and Finance

R:III.B.1.d.	For increased transparency and accountability, and after review by the Budget and Legislative Analyst, the Board of Supervisors should approve the request for the cost to collect data and report "Deferred Maintenance and Repair Backlog" separately from "projected capital renewal and replacement costs" in the Ten-Year Capital Plan, and include this cost in the adopted Budget for fiscal year 2017-2018 and thereafter.	Board of Supervisors
R:III.C.1-1.	To obtain updated relevant information as a basis for rational and informed budget decision making: a. The Director of the Real Estate Division should request a line item in the budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure; b. The Director of Public Works should request a line item in the budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure; c. The General Manager of the Recreation and Parks Department should request a line item in the budget request to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure; d. Other General Fund departments responsible for maintaining capital assets should request a line item in their budget requests to the Mayor for fiscal year 2017-2018 for updated condition assessment surveys of departmental facilities and infrastructure; e. The Mayor should include amounts in the proposed budget for fiscal year 2017-2018 for : (1) the Real Estate Division, (2) the Department of Public Works, (3) the Recreation and Parks Department and (4) other General Fund departments responsible for maintaining capital assets specifically for condition assessment surveys with cost estimates of General Fund Department facilities and infrastructure; and f. after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve amounts in the fiscal year 2017-2018 Budget for: (1) the Real Estate Division, (2) the Department of Public Works, (3) the Recreation and Parks Department and (4) other General Fund departments responsible for maintaining capital assets specifically for Condition Assessment surveys with cost estimates of General Fund Department facilities and infrastructure.	a. City Administrator, Director of the Real Estate Division, b: Director of Public Works, c: General Manager of Recreation and Parks, d: Mayor, e: Mayor, Mayor's Office of Public Policy and Finance, f: Board of Supervisors
R:III.C.2-a.	As an important step toward getting adequate maintenance funding on a regular basis, the General Manager of the Recreation and Parks Department should request the allocation of funds from the "Open Space Fund" for the purpose of conducting a comprehensive condition assessment of departmental facilities and infrastructure.	General Manager of Recreation and Parks

R:III.C.2-b.	The Mayor should include the allocation of funds from the Recreation and Parks Department's "Open Space Fund" for the purpose of conducting a comprehensive condition assessment in the proposed fiscal year 2017-2018 budget.	Mayor, Mayor's Office of Public Policy and Finance
R:III.C.2-c.	After review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve the allocation of funds from the Recreation and Parks Department's "Open Space Fund" for the purpose of conducting a comprehensive condition assessment.	Board of Supervisors
R:III.C.3-a.	As he has done for City streets' Pavement Condition Index, the Mayor should announce his goal of having the Facility Condition Index for all General Fund Departments' non-street capital assets at the level of "good" or better.	Mayor
R:III.C.3-b.	The Controller should conduct a study of the General Fund Departments listed on the December 2015 FRRM (Facilities Renewal Resource Model) report "Backlog and 10-Yr Need by Facility (or such updated reports as is appropriate) with a Facilities Condition Index of 0.30 or greater ("fair" or "poor") to determine: (1) Which of those physical assets (if any) are in "fair condition"; (2) Which of those physical assets (if any) are in "poor condition'; (3) Which of those physical assets (if any) are starting to approach or exceed their life expectancies; (4) Which of those physical assets (if any) should be considered high-priority for maintenance and repair funding; (5) Which of those physical assets (if any) require additional maintenance and repair funding to prevent further accumulation of deferred maintenance and repair; (6) Whether lack of comprehensive maintenance and repair planning resulted in underinvestment in preventive maintenance and repair work that has depreciated the value and useful life of these physical assets; and present the report containing the Controller's findings on the above items to the Mayor and Board of Supervisors for use in the budget process.	Controller
R:III.C.3-c.	The Controller should determine the additional time and manpower cost to accomplish the additional reporting recommended in the preceding Recommendation 3(b) and include a line item entry for those costs in his budget requests for fiscal year 2017-2018.	Controller
R:III.C.3-d.	To provide useful information for the public in assessing the City's stewardship of public assets, the Mayor should include in the Mayor's Proposed Budget for fiscal year 2017-2018 these line item entries for a study of facilities with FCI of fair or poor condition in the Controller's budget requests.	Mayor, Mayor's Office of Public Policy and Finance
R:III.C.3-e.	To provide useful information for the public in assessing the City's stewardship of public assets, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve	Board of Supervisors

	these line item entries for a study of facilities with an FCI of fair or poor condition in the adopted Budget Ordinance for fiscal year 2017-2018.	
R:III.D.1.	To make the true cost of program delivery visible, a. The City Administrator and the Director of the Real Estate Division should charge rental rates sufficient to cover the full cost of maintenance, repair and capital replacements in the leased premises it manages(to make the true cost transparent). b. the Mayor should propose adjustments to tenant General Fund departments' budgets sufficient to cover rent increases. c. after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve adjustments to tenant General Fund departments' budgets sufficient to cover rent increases.	a: City Administrator, Director of the Real Estate Division b: Mayor, Mayor's Office of Public Policy and Finance, c: Board of Supervisors
R:IV.1.	In recognition of maintenance of facilities and infrastructure as an important component in stewardship of City assets, the Mayor and the Office of Public Policy and Finance should encourage adequate Maintenance and Repair funding as one of the budget priorities for General Fund departments.	Mayor, Mayor's Office of Public Policy and Finance
R:IV.2.	In recognition of maintenance of facilities and infrastructure as an important component of stewardship and in fulfillment of their stewardship obligations , the managers and staff of General Fund departments: a. should make their departmental maintenance needs known vigorously throughout the budget process and reallocation process; b. should advocate vigorously in their submissions on Capital Budget Request Form 6 to demonstrate why the amount allocated for maintenance by the Capital Planning staff based on the prior year's appropriation may be insufficient, and if so, why additional funds to meet maintenance needs are required; c. in their Section 3.14 letters, should make their unfunded high-priority maintenance needs known vigorously; and d. should make supplemental appropriation requests when they find that they have inadequate resources to support Maintenance and Repair operations through the end of the fiscal year.	Board of Supervisors, Director of Public Works, City Administrator, Director of the Real Estate Division, General Manager of Recreation and Parks
R:IV.3.	To further transparency and accountability in City government, the Mayor's Budget Letter should include a section listing and describing the General Fund departments' high-priority maintenance projects which did not get funded.	Mayor
R:IV.4.	In recognition of maintenance of facilities and infrastructure as an important component in stewardship of City assets, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should include adequate funding for General Fund departments maintenance and repair in the list of budget policy priorities for "unallocated monies".	Board of Supervisors
R:V.1.	In accordance with best practices for governments and in the interest of transparency and accountability, the City Administrator and the Director of the Capital Planning Program should make projection of life-cycle	City Administrator, Director of the Capital Planning Program

	costs of operation and maintenance a criteria for getting its approval to add General Obligation Bond propositions to the queue.	
R:V.2.	We recommend in the interest of transparency and accountability that the Mayor carry forward plans to include information on projected life-cycle operating costs and maintenance costs in Five Year Plans.	Mayor
R:V.3.	In the furtherance of transparency and accountability and best practices in government, a. the Controller's Statement on General Obligation Bond propositions in the Department of Elections Voter Information Pamphlet should include a Life-Cycle Cost estimate, containing the projected life-cycle Maintenance and Repair cost for the proposed Capital Project. b. the Controller should instruct General Fund departments to report annually to GOBAC: 1) the inflation-adjusted Life-Cycle Maintenance and Repair Cost estimate for each General Obligation Bond funded project; 2) the amount budgeted for Operating Cost and Maintenance Cost of that asset; 3) the reasons for any budgeted shortfall; and 4) the immediate and long-term consequences of any budgeted shortfall.	a: Controller, President of the San Francisco Election Commission b: Citizen's General Obligation Bond Advisory Committee, Controller
R:V.4.	In furtherance of transparency, accountability and the public's right to know, GOBAC should prepare an annual report summarizing each General Fund department's life-cycle Maintenance and Repair cost estimates report and a consolidated report for all General Fund departments.	Citizen's General Obligation Bond Advisory Committee
R:VI.1-a.	To avoid future growth and cost escalation that will result from pushing back the starting date for reducing the backlog from 2019 to 2025 (or 2031 under historical funding levels), the Mayor should include in the proposed budget to the Board of Supervisors restoration of the annual ten percent growth rate to the Pay-as-you-go Program budget.	Mayor, Mayor's Office of Public Policy and Finance, City Administrator, Director of the Capital Planning Program
R:VI.1-b.	To avoid future growth and cost escalation that will result from pushing back the starting date for reducing the backlog from 2019 to 2025 (or 2031 under historical funding levels), and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve future budgets containing restoration of the annual ten percent growth rate to the Pay-as-you-go Program.	Board of Supervisors
R:VI.2-a.	In furtherance of good stewardship, the Board of Supervisors should require General Fund departments during budget hearings to describe what factors led to the accumulation of deferred maintenance in individual departments.	Board of Supervisors
R:VI.2-b.	In furtherance of good stewardship, the Mayor should propose in the Fiscal Year 2017-2018 Budget and thereafter sufficient funds for	Mayor,

	General Fund department maintenance and repair to prevent the Deferred Maintenance backlog from growing larger.	Mayor's Office of Public Policy and Finance City Administrator, Director of Capital Planning Program
R:VI.2-c.	In furtherance of good stewardship, and after review by the Budget and Legislative Analyst's Office, the Board of Supervisors should approve sufficient maintenance and repair funding for General Fund departments in the Fiscal year 2017-2018 Budget to prevent the Deferred Maintenance backlog from growing larger.	Board of Supervisors
R:VI.3-a.	In furtherance of transparency, accountability and stewardship, the Controller should track General Fund departments' maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds is needed.	Controller
R:VI.3-b.	The Controller should determine the additional time and manpower cost to accomplish the preceding Recommendation to track General Fund departments maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed, and include line item entries for those costs in its Budget Requests for the 2017-2018 Budget and thereafter.	Controller
R:VI.3-c.	In the interests of transparency and accountability, the Mayor should include in the Mayor's proposed budget for for fiscal year 2017-2018 and thereafter those line item entries in the Controller's Budget Request for tracking General Fund departments maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed.	Mayor, Mayor's Office of Public Policy and Finance
R:VI.3-d.	In the interests of transparency and accountability, and after review by the Budget and Legislative Analyst Office, the Board of Supervisors should approve those line item entries in the Controller's Budget Request for tracking General fund departments maintenance budgeting and spending to assure that assets are not deteriorating through lack of maintenance and repair to the point where premature replacement funded by General Obligation bonds will be needed, and include them in the adopted Budget ordinance for the 2017-2018 Budget and thereafter.	Board of Supervisors
R:VII.1-a.	The Controller should require all city departments to implement existing best practices as provided in FASB 42 and other best practices sources to account for and report deferred maintenance.	Controller
R:VII.1-b.	The Controller should establish systems and procedures to establish clear maintenance and repair investment objectives and set priorities among outcomes to be achieved.	Controller

R:VII.1-c.	The Controller and the Director of Public Works should establish systems and procedures to identify types of facilities or specific buildings (i.e., capital assets) that are mission-critical and mission supportive.	Controller Director of Public Works
R:VII.1-d.	The Controller should establish systems and procedures to conduct condition assessments as a basis for establishing appropriate levels of funding required to reduce, if not eliminate, any deferred maintenance and repair backlog.	Controller
R:VII.1-e.	The Controller should establish systems and procedures to establish performance goals, baselines for outcomes, and performance measures.	Controller
R:VII.1-f.	The Controller should establish systems and procedures to identify the primary Methods to be used for delivering maintenance and repair activities.	Controller
R:VII.1-g.	The Controller should establish systems and procedures to employ models for predicting the outcome of investments, analyzing tradeoffs, and optimizing among competing investments.	Controller
R:VII.1-h.	The Controller should establish systems and procedures to align real property Portfolios with mission needs and dispose of unneeded assets.	Controller
R:VII.1-i.	The Controller should establish systems and procedures to identify the types of risks posed by lack of timely investment.	Controller
R:VII.1-j.	The Controller should determine the additional time and manpower cost to establish systems and procedures to accomplish the preceding items in Recommendation 1-a through 1-j and include a line item for those costs in its budget requests for fiscal year 2017-2018.	Controller
R:VII.1-k.	The Mayor should approve these line item entries in the Controller's budget requests to establish systems and procedures to accomplish the items in Recommendation 1-a through 1-j and include them in the Mayor's proposed Budget for fiscal year 2017-2018.	Mayor, Mayor's Office of Public Policy and Finance
R:VII.1-l.	The Board of Supervisors, after review by the Budget and Legislative Auditor Office, should approve these line items in the Controller's budget requests to establish systems and procedures to accomplish the items in Recommendation 1-a through 1-j and include them in the approved budget for fiscal year 2017-2018.	Board of Supervisors
R:VII.2-a.	The Controller should include a discussion in its annual financial statements to describe what constitutes deferred maintenance and repair and how it is being measured.	Controller
R:VII.2-b.	The Controller should include a discussion in its annual financial statements to include amounts of deferred maintenance and repair for each major category of Property, Plant, and Equipment.	Controller

R:VII.2-c.	The Controller should include a discussion in its annual financial statements to include a general reference to specific component entity reports for additional information.	Controller
R:VII.3.	The Controller should immediately reassess the reported value of capitalized assets in its financial statements given the impact of the high level of deferred maintenance on reducing the useable life of these assets.	Controller
R:VII.4-a.	Beginning in FY 2017-18, the City's Capital Planning Committee should include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance.	City Administrator Director of the Capital Planning Program
R:VII.4-b.	The City Administrator and the Director of the Capital Planning Program should determine the additional time and manpower cost to accomplish the preceding Recommendation to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance, and include a line item entry for those costs in its Budget Requests for 2017-2018 and thereafter.	City Administrator Director of the Capital Planning Program
R:VII.4-c.	The Mayor should include in the Mayor's Proposed Budget for 2017-2018 and thereafter the line item entries in the Capital Planning Committee's Budget Requests to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance.	Mayor, Mayor's Office of Public Policy and Finance
R:VII.4-d.	The Board of Supervisors, after review by the Budget and Legislative Analyst Office, should approve these line item entries for the Capital Planning Committee to include in its annual report a complete and accurate update of the progress made in addressing deferred maintenance, and include these line items in the adopted Budget ordinance for 2017-2018 and thereafter.	Board of Supervisors

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GLOSSARY

Alterations: Work performed to change the interior arrangements or other physical characteristics of an existing facility or installed equipment so that it can be used more effectively for its currently designated purpose or adapted to a new use. Alterations may include work referred to as improvement, conversion, remodeling, and modernization but are NOT maintenance.

Arborist: A specialist in the care of woody plants, especially trees.

Best Practices: A set of guidelines, ethics or ideas that represent the most efficient or prudent course of action.

Cal OSHA: The California Occupational Safety and Health Program in the California Department of Industrial Relations.

Capital Project: A major construction and improvement project, including the planning and design phases. Examples include the resurfacing of a street and the construction of a new hospital, bridge, or community center.

Certificates of Participation (COPs): A commonly used form of lease financing for capital improvements projects or purchases of essential equipment in which the debt service on the financing is secured by an underlying lease structure.

Chart of Accounts: A listing of the accounts available in the accounting system in which to record entries.

City Services Auditor: A division of the Office of the Controller, consisting of two units: the Audits unit and the City Performance unit.

COMET (Condition Management Estimation Technology): An asset inventory and management system used by the Recreation and Parks department.

Cost of Ownership: The total of all expenditures a building owner will make over the course of the building's service lifetime.

Current Replacement Value (CRV): The total amount of expenditure in current dollars required to replace facilities to optimal condition. CRV does not include cost of contents.(Sometimes referred to as Calculated Replacement Value.)

Deferred Maintenance (aka Deferred Maintenance and Repair: **DM&R**): The maintenance and repairs that were not performed when they should have been or were scheduled to be and which are put off or delayed for a future period.

Deferred Project: A project not funded in the Capital Plan because of a lack of funding or because the timeline of the project falls outside the ten-year planning cycle. (Capital Plan 2015)

Eleventh Commandment – for public agency budget-deciders: Thou shalt not defer costs to the future nor use up accumulated resources to provide current-period services.(GASB 34)

Enhancement. Investment that increases an asset's value or useful life and/or changes its use.These typically result from the passage of new laws or mandates, functional changes, or technological advancements. Examples include: Purchasing or constructing a new facility or park; Major renovations of or additions to an existing facility; Accessibility improvements to comply with the Americans with Disabilities Act (ADA).

Enterprise Department: Enterprise departments are revenue-producing departments intended to recover all or a significant portion of their costs through user fees and other charges. San Francisco's Enterprise Departments are: SF Airport (SFO), SF Water Enterprise, Hetch Hetchy Water and Power, Port of SF, SF Wastewater Enterprise, SFMTA (6 funds), SF General Hospital Medical Center and Laguna Honda Hospital.

Facilities: Buildings and other types of structures (parking, storage, industrial) and the systems within them.

FAMIS: Financial Accounting and Management Information System.

FASAB: Federal Accounting Standards Advisory Board.

FRRM (Facilities Renewal Resource Model): an asset inventory and management program used by all General Fund departments, with the exception of Recreation and Parks department.

GASB: The Governmental Accounting Standards Board is the independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments, such as GASB 34.

General Fund: The chief operating fund of the City. In FY 2015-16, the General Fund was $4.7 billion, or 50.7% of the total City budget of $8.92 billion.

General Fund Department: A City department that relies primarily or entirely on the General Fund for funding. The General Fund departments are: California Academy of Sciences, Asian Art Museum, Art Commission, Department of Emergency Management, Department of Public Health, Department of Public Works, Department of Technology, District Attorney's Office, Fine Arts Museum, Fire Department, General Services Agency, Human Services Agency, Juvenile Probation, Police Department, Public Library, Recreation and Parks Department, Sheriff's Department, Superior Court of California, and the War Memorial and Performing Arts Center.

General Obligation Bonds (G.O. Bonds): A municipal bond secured by property tax revenues.

Infrastructure: facilities and systems required to deliver basic goods and services such as roads, sewers, water lines, bridges, transit rail, and open space.

Interperiod Equity: A government's obligation under GASB to disclose whether current-year revenues were sufficient to pay for current-year benefits (or did current citizens defer payments to future taxpayers).

ISFA (International Facilities Management Association): A professional facilities managers' association.

Life-cycle costing: An acquisition or procurement technique which considers operating, maintenance, and other costs in addition to the acquisition cost of assets.

Maintenance (aka Maintenance and Repair: **M&R**): The activity of keeping an asset in acceptable condition, so that it can continue to provide acceptable service and achieve its expected life. Maintenance *excludes* activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, those originally intended.

National Research Council: NRC, A body representing the U.S. National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine, which was established to further knowledge and advise the U.S. government.

Operational Accountability: The obligation of an organization to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner.

Operations: Those activities related to a building's normal performance of the functions for which it is used. The cost of utilities, janitorial services, window cleaning, rodent and pest control, and waste management are generally included within the scope of operations and are NOT maintenance.

Pay-as-you-go: The funding of capital projects with current revenues on an annual basis rather than long-term debt.

Renewal: Investment that preserves **or extends** the useful life of facilities or infrastructure.

Repair: Work to restore damaged or worn-out property to a normal operating condition.

SPUR: San Francisco Bay Area Research and Urban Planning Association.

Steward: A person who manages another's property or financial affairs. The City and County of San Francisco is responsible for safeguarding taxpayers' money and making the best use of its financial resources.

Street Trees: Trees lining municipal streets.

Structurally Deficient Bridge: Bridges are considered structurally deficient if they have been restricted to light vehicles, closed to traffic or require rehabilitation. The condition of different parts of a bridge is rated on a scale of 0 to 9 (with 9 being "excellent" and zero being "failed"). A structurally deficient bridge is one for which the deck (riding surface), the superstructure (supports immediately beneath the driving surface) or the substructure (foundation and supporting posts and piers) are rated in condition 4 or less.

Transparency: The full, accurate, and timely disclosure of information; a government's obligation to share information with its citizens.

Tree canopy cover: the amount of land covered by trees when viewed from above.

Urban Forest: the collection of trees and other vegetation found along San Francisco's streets and within the built environment.

"We were told ... ": In this Report, used as a signal to the reader that we heard the item that follows from only one or two sources we interviewed. Under Civil Grand Jury Report rules, if three or more people said the same thing to us in our investigation, it may be stated without the qualifier.

APPENDICES

Appendix A
Use of Funds FY 2015-2016 General Funds

	Gross		Net of Recoveries	
Type of Use	FY 2015 - 2016	% Total	FY 2015 - 2016	% Total
Personnel - Salaries & Wages	$1,493,905,280	32.6%	$1,457,856,185	32.6%
Personnel - Fringe Benefits	$586,289,616	12.8%	$572,141,992	12.8%a
Personnel - Subtotal	$2,080,194,896	45.3%	$2,029,998,177	45.3%
Non-Personnel Operating Costs	$736,760,672	16.1%	$718,982,065	16.1%
Aid Assistance	$361,166,177	7.9%	$361,166,177	7.9%
Grants	$263,026,693	5.7%	$263,026,693	5.7%
Transfers from General Fund	$929,615,338	20.3%	$929,615,338	20.3%
Capital & Equipment	$207,478,205	4.5%	$207,478,205	4.5%
Reserves & Fund Balance	$66,987,198	1.5%	$66,987,198	1.5%
Facilities Maintenance	$7,925,826	0.2%	$7,925,826	0.2%
Debt Services	$2,372,347	0.1%	$2,372,347	0.1%
Other Dept Services, Recoveries & Overhead	-$67,975,326	-1.5%	$0	-1.5%
Grand Total	**$4,587,552,026**	**100.00%**	**$4,587,552,026**	**100.00%**

Appendix B
Adopted Budget Use of Funds Facilities Maintenance 2005 - 2015

Year	General Funds	Facilities	Pct.	All Funds	Facilities	Pct.
		Maintenance			Maintenance	
2005	2,453,294,411	14,559,057	0.6%	5,343,296,087	26,725,206	0.5%
2006	2,664,546,000	13,269,967	0.5%	5,749,169,447	42,390,967	0.7%
2007	2,921,556,552	10,060,602	0.3%	6,079,785,411	34,923,674	0.6%
2008	3,053,918,165	11,973,148	0.4%	6,531,467,931	33,498,781	0.5%
2009	3,052,107,528	8,193,707	0.3%	6,586,787,453	29,655,176	0.5%
2010	2,967,374,828	8,552,985	0.3%	6,562,658,343	35,632,238	0.5%

2011	3,261,908,817	8,576,235	0.3%	6,833,766,939	37,971,557	0.6%
2012	3,486,709,000	8,742,000	0.2%	7,354,311,000	56,409,000	0.7%
2013	3,949,764,316	13,347,716	0.3%	7,908,801,656	63,764,446	0.8%
2014	4,270,953,200	9,604,428	0.2%	8,581,831,912	69,998,324	0.8%
2015	4,587,552,026	7,925,826	0.2%	8,938,774,083	67,799,093	0.8%

Source: sfcontroller.org/consolidated-budget-and-annual-appropriations-ordinance (Adopted Budgets)

Appendix C
Mixing of Maintenance and Non-Maintenance Budget Terms

In the 2015 Budget for General Fund departments there are many permutations and mixing of "Maintenance" and non-maintenance terms. For example:

#	Dept	Budg Code	Description
a.	AAM	CAA003	Emergency Leak Repair;
b.	AAM	CAAMRP	Museum Repair Projects
c.	ADM	FADFAV	Disability Access Maintenance & Renewal
d.	ADM	PSMDSR	Sidewalk Inspection & Repair
e.	ADM	60202	Fuel Sales & Maintenance Services
f.	DBI	PBIPTM	Permit Tracking System Maintenance
g.	DPW	PPCDVR	DVROS Development & Maintenance Fund
h.	DPH	CHLPNT	LHH Wards A B C & H Painting
i.	REC	CRPICP	Ina Coolbrith Path Repairs
j.	REC	REC12	Structure Maintenance – Overhead
k.	SHF	CSHITR	Interior Finish Repair
l.	SHF	CSHPFR	Perimeter Fence Repair
m.	SHF	PSH010	AB1109 Sheriff Vehicle Maintenance
n.	WAR	EEC	Oper & Main of Museums
SOURCE: SF Budget Ordinance 2015			

Appendix D1
Current Replacement Value by Category & Department (per FRRM Dec 2015)

#	Category and Department		CRV ($000)
1.	Economic and Neighborhood Development/ADM		$857,092
2.	General Government / ADM		1,446,696
3.	General Government / DEM		28,970
4.	General Government / DPW		337,514
5.	General Government / TIS		2,212
6.	Health & Human Services / DPH		2,131,462
	A. Laguna Honda Hospital	$752,244	
	B. San Francisco General Hospital	1,152,931	
	Sub-total LH + SFGH	$1,905,175	
7.	Health & Human Services / DPH		226,287
8.	Health & Human Services / HSA		196.026
9.	Public Safety / Fire		261,599
10.	Public Safety / Juvenile		124,735
11.	Public Safety / Police		82,531
12.	Public Safety / Sheriff		544,865
13.	Recreation, Culture & Education / AAM		186,048
14.	Recreation, Culture & Education / ART		46,260
15.	Recreation, Culture & Education / FAM		370,420
16.	Recreation, Culture & Education / Library		222,692
17.	Recreation, Culture & Education / Science		335,967
18.	Recreation, Culture & Education / War Memorial		694,698
	Total #1:		**$7,872,787**
	Exclude LH and SFGH		- $1,905,175
	Total #2:		**$5,967,612**
19.	Recreation and Parks Department		1,369,200
	Total #3 (per Method D below):		**$7,336,812**

Appendix D2
Estimating Current Replacement Value (CRV) for Recreation and Parks Department

Method A (no inflation adjustment)

1. Start with 2007 CRV calculated by COMET system: $927.2 million
2. Add portion of 2008 bond issue for Rec & Park 151.3
3. Add 2012 bond issue for Rec & Park 195

Total Method A: $1,273.5 millions

Method B (with inflation adjustment on 2007 CRV only)

1. Start with 2007 CRV calculated by COMET system: $927.2 million
2. Adjust for inflation 2007 – 2015 132.7
3. Add 2008 + 2012 Bond $$ 346.3

Total Method B: $1,406.2 millions

Method C (adjust 2007 CRV inflation + bond improvements):

1. Start with 2007 CRV calculated by COMET $927.2 million

2. Adjust for inflation 2007-2015 132.7
3. Add 2008 bond $$ 151.3
4. Adjust #3 for inflation 2008-2015 15.26
5. Add 2012 bond $$ 195
6. Adjust #5 for inflation 2012-2015 6.3

Total Method C: $1,427.76 millions

Method D (take average of Methods A + B + C divided by 3)

1. Method A total $1,273.5
2. Method B total $1,406.2
3. Method 3 total $1,427.8
4. Sum and divide by 3: $4,107.5 / 3 = $1,369.2 million

Total Method D: $1,369.2 millions

Appendix D3
Best Practices Guidelines: Maintenance Budget Percent of Departmental CRV

Definition: FCI = Facility Condition Index

A low score is good; a high score is bad. The ratio of the maintenance, repair, and replacement costs to replacement costs determines each asset's Facilities Condition Index (FCI); a lower FCI number indicates a lower need for maintenance funding relative to the facility's value.

^ = Industry standards indicate that a facility with an FCI greater than 0.30 is considered to be in "fair" to "poor" condition. (CSA RPD 2015)

^^ =Industry standards further indicate that a facility with an FCI of 0.65 or greater is more cost effective to replace than to repair.

2% Minimum Recommended; 4% Best Practice

#	Category & Department		CRV ($000)	1%	2%	4%
1	Econ/NBR Dev / ADM		857,092	8,571	17,142	34,284
2	General Government / ADM		1,446,696	14,467	28,934	57,868
3	General Governent / DEM		28,970	290	579	1,159
4	Gen Gov / DPW		337,514	3,375	6,750	13,501
5	Gen Gov / TIS		2,212	22	44	88
6	HHS / DPH		2,131,462			
	A) Laguna Honda Hosp	752,244				
	B) San Fran Gen Hosp	1,152,931				
	Sub-Total: LH + SFGH	1,905,175				
7	Net CRV: HHS / DPH		226,287	2,263	4,526	9,051
8	HHS / HSA		196,026	1,960	3,920	7,840
9	PS / Fire		261,599	2,616	5,232	10,464
10	PS / Juvenile		124,736	1,247	2,495	4,989
11	PS / Police		82,531	825	1,650	3,300

12	PS / Sheriff	544,865	5,449	10,898	21,796
13	RCE / AAM	186,048	1,860	3,720	7,440
14	RCE / ART	46,260	463	926	1,852
15	RCE / FAM	370,420	3,704	7,408	14,816
16	RCE/ Library	222,692	2,227	4,454	8,908
17	RCE / Science	335,967	3,360	6,720	13,440
18	RCE / War Memorial	694,698	6,947	3,894	27,788
19	Total #1:	7,642,928	76,429	152,859	305,717
	Exclude LH* and SFGH	- 1,905,175			
	Total #2	5,737,753	57,378	114,755	229,510
20	Rec & Park CRV (Method	$1,369,200	13,692	27,384	54,768
	Total 3 = Total 2 + #17	$7,106,953	70,617	141,233	282,467
	Total 4 = Total 3 x 1,000 =$	$7.107 billion	71.070 million	142.139 million	284.278 million

2015 General Fund budget for "Facilities Maintenance" as percentage of General Fund CRV = $7,925,816 / $7.062 billion = 0.112% - i.e. 1/10th of 1 percent.

Appendix D4
CRV and FCI Data Based on Backlog and 10-Year Need by Departmental Facility (FRRM December 2015)

D4-01.1: Economic and Neighborhood Development / Administration

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	Econ/Nbr Dev	ADM	Moscone (South)	1981	650,000	$269,005	0.07
2	Econ/Nbr Dev	ADM	Moscone (ballrm)	1991	126,000	52,146	0.13
3	Econ/Nbr Dev	ADM	Moscone (North)	1992	520,000	215,204	0.15
4	Econ/Nbr Dev	ADM	Moscone (West)	2002	775,000	320,737	0.10
		TOTAL: Economic & Neighborhood Development / Admin				$857,092	

D4-01.2: Economic & Neighborhood Development / Aggregate Category Total

#	CATG	DEPT	$ CRV (000)	
1	Econ/Nbr Dev	Administration	$857,092	
		TOTAL: Economic & Neighborhood Development	$857,092	

D4-02.1: General Government / Administration

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	Gen Gov	ADM	So Van Ness	1960	560,000	$254,934	0.13
2	Gen Gov	ADM	1650 Mission	1983	216,712	89,687	0.10
3	Gen Gov	ADM	1660 Mission	1990	72,000	32,777	0.41^
4	Gen Gov	ADM	240 Van Ness (EDP)	1907	15,950	6,601	0.04
5	Gen Gov	ADM	25 Van Ness OffBldg	1913	130,000	78,011	0.26
6	Gen Gov	ADM	30 Van Ness OffBldg	1965	180,939	74,882	0.34^
7	Gen Gov	ADM	3rd/Palou Op Rstrm (a)	1995	75	12	0.00
8	Gen Gov	ADM	555 7th St OffBldg	1985	32,000	13,243	0.30^
9	Gen Gov	ADM	Alemany Mkt #1	1951	9,720	1,609	0.00
10	Gen Gov	ADM	Alemany Mkt #2	1951	10.296	1,704	0.00
11	Gen Gov	ADM	Alemany Mkt Admin	1951	720	119	0.28
12	Gen Gov	ADM	Animal Control	1931	30,000	12,416	0.25
13	Gen Gov	ADM	BG Civic Auditorium (b)	1915	302,250)	156,359	0.25
14	Gen Gov	ADM	Brooks Hall	1956	90,000	37,247	0.39^

15	Gen Gov	ADM	City Hall	1915	516,484	288,561	0.18
16	Gen Gov	ADM	Hall of Justice	1959	700,000	318,667	0.43^
17	Gen Gov	ADM	HofJ Gas Station	1959	4,360	722	0.50^
18	Gen Gov	ADM	Main Shop Bldg-Central	1959	49,976	20,683	0.31^
19	Gen Gov	ADM	Office and sub-shops	1960	17,401	7,201	0.40^
20	Gen Gov	ADM	Produce Bldg South	1963	13,500	2,235	0.12
21	Gen Gov	ADM	Produce North Bldg L	1963	41,800	6,920	0.04
22	Gen Gov	ADM	Produce North Bldg N	1963	50,600	8,376	0.04
23	Gen Gov	ADM	Produce Dock 1	1963	2,600	430	0.04
24	Gen Gov	ADM	Produce Dock 2	1963	5,200	861	0.01
25	Gen Gov	ADM	Produce Dock 3a	1963	2,600	430	0.04
26	Gen Gov	ADM	Produce Dock 3b	1991	2,600	430	0.50^
27	Gen Gov	ADM	Produce Bldg 2101	2000	53,755	8,899	0.03
28	Gen Gov	ADM	Produce Bldg K	1963	41,800	6,920	0.04
29	Gen Gov	ADM	Produce Bldg M	1963	62,200	10,297	0.04
30	Gen Gov	ADM	Shed Area	1960	13,200	5,463	0.16
	Sub-Total General Government / Admin					**$1,446,696**	
	(s) Enterprise Funded (b Leased						

D4-02.2: General Government / Department of Emergency Management

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	Gen Gov	DEM	Emergency Ops Center	1998	56,000	$28,970	0.13
2	**Sub-Total General Government /Dept Emergency Mgt**					**$28,970**	

D4-02.3: General Government / Department of Public Works

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	Gen Gov	ADM	1680 Mission	1923	3,800	$1,573	0.23
2	Gen Gov	DPW	Conv/Visitors Bureau	1972	4,860	$805	0.50^
3	Gen Gov	DPW	DPW-Bldg B	1949	14,756	6,107	0.25
4	Gen Gov	DPW	DPW-Bldg C	1949	14,601	6.647	0.26
5	Gen Gov	DPW	DPW-Bldg D	1949	17,000	7,036	0.24
6	Gen Gov	DPW	DPW-Carport 1-F	1949	4,022	666	0.50^
7	Gen Gov	DPW	DPW-Carport 2-E & 1	1949	7,990	3,307	0.28
8	Gen Gov	DPW	DPW-Carport 3-G,H,J	1949	6,674	2,762	0.28
9	Gen Gov	DPW	DPW-Carport 4	1949	7,279	3,020	0.28
10	Gen Gov	DPW	DPW-BUF Trailer	2006	3,375	1,397	0.06
11	Gen Gov	DPW	DPW-CNG Carport	1990	5,433	2,248	0.21
12	Gen Gov	DPW	DPW-CNG Gas Stn	1999	589	98	0.50^
13	Gen Gov	DPW	DPW EHS Trailer	1990	2,250	372	0.00
14	Gen Gov	DPW	DPW-Emp/Rsrce Ctr	2009	1,434	237	0.00
15	Gen Gov	DPW	DPW-Equip Trailer	1990	480	79	0.50^
16	Gen Gov	DPW	DPW-Frt Gate Grdshack	2009	24	4	0.00
17	Gen Gov	DPW	DPW-Gas Station	1949	2,191	363	0.50^
18	Gen Gov	DPW	DPW-Lwr Gate Grdshack	2009	24	33	0.00
19	Gen Gov	DPW	DPW-Pump Station	1990	321	53	0.50^
20	Gen Gov	DPW	DPW-Training Trlr	1990	2,250	372	0.50^
21	Gen Gov	DPW	Power House	1915	2,025	335	0.50^
	Sub-Total General Government / Dept of Public Workst					**$37,514**	

D4-02.4: General Government / TIS - Central Radio Station

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	Gen Gov	TIS	Central Radio Station	1950	5,344	$2,212	0.68^^
	Sub-Total General Government / TIS - Central Radio Station					$2,212	

D4-02.5: General Government / Aggregate Category Total

#	CATG	DEPT	$ CRV (000)	
1	Gen Gov	Administration	$1,446,696	
2	Gen Gov	Department of Emergency Management	$28,970	
3	Gen Gov	Department of Public Works	$37,514	
		TIS - Central Radio Station	$2,212	
		TOTAL: General Government	$1,515,392	

D4-03.1: Health & Human Services - Dept Public Health (Group A - Various)

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	DPH	Alemany Emerg Hsptl	1932	5,247	3,909	0.17
2	HHS	DPH	Potrero Hill Health Ctr	1976	6,500	4,842	0.04
3	HHS	DPH	Child/Fam Health Ctr	1928	3,500	579	0.00
4	HHS	DPH	CHN HeadQtrs	1923	60,000	44,696	0.10
5	HHS	DPH	DPH Central Office	1932	104,000	58,105	0.12
6	HHS	DPH	Gas Station	1960	420	70	0.00
7	HHS	DPH	Health Ctr	1967	22,500	16,761	0.20
8	HHS	DPH	Health Ctr 5	1967	16,247	12,103	0.16
9	HHS	DPH	Health Ctr 1	1965	15,258	11,366	0.23
10	HHS	DPH	Health Ctr 3	1967	22,950	17,096	0.15
		Sub-Total: DPH (Group - A)				$169,527	

D4-03.2: Health & Human Services - Dept Public Health (Laguna Honda)

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	DPH	LH- Generator Bldg	2010	1,554	1,158	0.02
2	HHS	DPH	LH-Main Hosp #2	1930	60,000	49,166	0.15
3	HHS	DPH	LH-Main Hsp #3	1938	60,000	49,166	0.17
4	HHS	DPH	LH North Residence	2010	208,377	70,750	0.11
5	HHS	DPH	LH Pavilion Bldg	2010	148,039	112,485	0.13
6	HHS	DPH	LH South Residence	2010	156,993	130,984	0.11
7	HHS	DPH	LH Main Hosp #1 AB	1924	82,033	76,387	0.19
8	HHS	DPH	LH Main Hosp #1 C	1924	33,966	27,832	0.19
9	HHS	DPH	LH Main Hosp #1 D,E	1924	66,000	54,082	0.24
10	HHS	DPH	LH Main Hosp #1 H	1924	86,184	80,233	0.06
		Sub-Total: DPH (Laguna Honda)				$752,244	

D4-03.3: Health & Human Services - Dept Public Health (Group B - Various)

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	DPH	Maxine Hall Hlth Ctr	1966	20,590	15,338	0.18
2	HHS	DPH	N. Mkt Senior Ctr	1930	11,195	8,340	0.06
3	HHS	DPH	SF City Clinic 356 7th St	1930	8,000	5,959	0.21
		Sub-Total: DPH (Group B)				$29,637	

D4-03.4: Health & Human Services - Dept Public Health (S.F. General Hospital)

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	DPH	SFGH Bldg A	1986	2,084	345	0.50^
2	HHS	DPH	SFGH-Bldg D	1996	980	162	0.50^
3	HHS	DPH	SFGH-Bldg**	1999	2,880	477	0.50^
4	HHS	DPH	SFGH Bldg 1**	1915	63,488	59,118	0.18
5	HHS	DPH	SFGH-Bldg 10**	1915	56,130	56,448	0.28
6	HHS	DPH	SFGH Bldg 100	1915	89,159	83,022	0.30^
7	HHS	DPH	SFGH-Bldg 1A**	1915	6,600	6,146	0.22
8	HHS	DPH	SFGH Bldg 1B**	1915	9,900	9,219	0.22
9	HHS	DPH	SFGH Bldg 1C**	1915	4,400	4,097	0.20
10	HHS	DPH	SFGH Bldg 20**	1915	44,417	44,669	0.28
11	HHS	DPH	SFGH Bldg 30**	1915	53,417	53,720	0.30^
12	HHS	DPH	SFGH Bldg 4**	2004	5,500	4,097	0.15
13	HHS	DPH	SFGH Bldg 40	1915	44,740	44,993	0.14
14	HHS	DPH	SFGH Bldg 80	1935	66,832	67,211	0.23
15	HHS	DPH	SFGH Bldg 9**	1915	33,559	17,361	0.26
16	HHS	DPH	SFGH-Bldg 90	1935	39,159	21,878	0.31^
17	HHS	DPH	SFGH Main Bldg 5**	1974	617,400	561,107	0.33^
18	HHS	DPH	SFGH Mntl Hlth Nursing**	1994	62,490	25,862	0.24
19	HHS	DPH	SFGH Mntl Hlth SPRT**	1994	36,359	15,047	0.24
20	HHS	DPH	SFGH Path Bldg Add**	1991	45,119	33,611	0.17
21	HHS	DPH	SFGH Path Bldg orig**	1966	47,120	35.101	0.26
22	HHS	DPH	SFGH-Srvc Bldg #2**	1972	39,171	9,240	0.14
			Sub-Total: DPH (S.F. General Hospital)			**$1,152,931**	

D4-03.5: Health & Human Services - Dept Public Health (Group C - Various)

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	DPH	SE Amb Hlth Ctr	1979	14,604	10,879	0.14
2	HHS	DPH	Sunset Mntl Hlth Ctr	1949	5,500	2,276	0.11
3	HHS	DPH	Tom Waddell Clinic	1917	15,000	13,968	0.11
			Sub-Total: DPH (Group C)			**$27,123**	

D4-03.6: Health & Human Services - DPH / Aggregate Departmental Total

#	CATG	DEPT	$ CRV (000)	
1		Various Facilities - Group A	$169,527	
2		Various Facilities - Group B	29,637	
3		Various Facilities - Group C	27,123	
4		**Sub-Total:**	**226,287**	
5		Laguna Honda	752,244	
6		S.F. General Hospital	1,152,931	
		TOTAL: Health & Human Services / DPH	**$2,131,462**	

D4-03.7: Health & Human Services - Health Services Administration

#	CATG	DEPT	BLDG NAME	YR	GSF	$ CRV (000)	FCI
1	HHS	HSA	1030 Oakdale	1971	9,700	4,014	0.19
2	HHS	HSA	1235 Mission (leased)	1935	99,400	45,251	0.17
3	HHS	HSA	170 Otis/Office Bldg	1978	171,385	78,021	0.06
4	HHS	HSA	170 Otis garage	1978	35,000	3,187	0.11
5	HHS	HSA	260 Golden Gate Fmly	1966	50,000	22,762	0.08
6	HHS	HSA	Arendt Housing	2009	25	35	0.0
7	HHS	HSA	Mills Comm. Ctr	1971	5,000	6,208	0.23
8	HHS	HSA	Fifth ST Homeless Ctr	1924	25,600	10,595	0.17
9	HHS	HSA	ML King Childcare Ctr	1971	7,409	3,066	0.21

10	HHS	HSA	Polk ST Homeless Ctr	1913	37,125	20.742	0.15
11	HHS	HSA	Sojourner Truth Ctr	1971	5,184	2,145	0.24
					Sub-Total: HSA	**$196,026**	

D4-03.8: Health and Human Services / Aggregate Category Total

#	CATG	DEPT	$ CRV (000)	
1	HHS	Department of Public Health	$2,131,462	
2	HHS	Health Services Administration	196,028	
		TOTAL: Health & Human Services	**$2,327,490**	

D4-04.1: Public Safety - Fire Department

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	PS	Fir	Arson Task Force Ofc.	1958	15,000	6,208	0.41^
2	PS	Fir	Arson Task Force Whs	1958	60,000	9,932	0.45^
3	PS	Fir	AWSS Pipe Yard	1980	6,400	2,649	0.21
4	PS	Fir	Equip Hdqtr 2501 25th	1918	7,000	2,897	0.54^
5	PS	Fir	Fire Chief Residence	1921	4,500	2,328	0.25
6	PS	Fir	Fire Training Treasure Is	1953	5,040	2,294	0.34^
7	PS	Fir	Fire Station #10	1956	14,300	5,918	0.44^
8	PS	Fir	Fire Station #11	1956	14,000	5,794	0.48^
9	PS	Fir	Fire Station #12	1955	11,300	4,677	0.40^
10	PS	Fir	Fire Station #13	1974	18,790	7,778	0.35^
11	PS	Fir	Fire Station #14	1973	15,500	6,580	0.46^
12	PS	Fir	Fire Station #15	1957	12,138	5,023	0.34^
13	PS	Fir	Fire Station #16	1938	14,000	5,794	0.49^
14	PS	Fir	Fire Station #17	1955	12,100	5,008	0.43^
15	PS	Fir	Fire Station #18	1951	15,900	6,580	0.44^
16	PS	Fir	Fire Station #19	1951	16,920	4,759	0.48^
17	PS	Fir	Fire Station #2	1994	16,920	7,002	0.49^
18	PS	Fir	Fire Station #20	1963	10,300	4,263	0.49^
19	PS	Fir	Fire Station #21	1958	8,000	3,311	0.44^
20	PS	Fir	Fire Station #22	1962	5,900	2,442	0.50^
21	PS	Fir	Fire Station #23	1959	12,000	4,966	0.49^
22	PS	Fir	Fire Station #24	1914	7,600	3,145	0.48^
23	PS	Fir	Fire Station #25	1916	11,420	4,726	0.47^
24	PS	Fir	Fire Station #26	1968	15,000	6,208	0.45^
25	PS	Fir	Fire Station #28	1967	9,350	3,870	0.45^
26	PS	Fir	Fire Station #29	1956	8,300	3,435	0.44^
27	PS	Fir	Fire Station #3	1973	8,000	3,311	0.49^
28	PS	Fir	Fire Station #30	2014	6,600	3,414	0.00
29	PS	Fir	Fire Station #31	1913	8,500	3,518	0.42^
30	PS	Fir	Fire Station #32	1941	10,900	4,511	0.44^
31	PS	Fir	Fire Station #33	1973	5,900	2,442	0.48^
32	PS	Fir	Fire Station #34	1929	4,400	1,821	0.44^
33	PS	Fir	Fire Station #35/Boat	1908	2,500	1,293	0.40^
34	PS	Fir	Fire Station #36	1961	16,100	6,663	0.01
35	PS	Fir	Fire Station #37	1915	6,950	2,876	0.48^
36	PS	Fir	Fire Station #38	1960	13,400	5,546	0.31^

37	PS	Fir	Fire Station #39	1923	8,450	3,497	0.48^
38	PS	Fir	Fire Station #4	2014	17,000	7,036	0.00
39	PS	Fir	Fire Station #40	1931	7,350	3,042	0.38^
40	PS	Fir	Fire Station #41	1956	9,600	3,973	0.46^
41	PS	Fir	Fire Station #42	1979	9,300	3,849	0.42^
42	PS	Fir	Fire Station #43	1970	10,800	4,470	0.49^
43	PS	Fir	Fire Station #44	1915	8,450	3,497	0.44^
44	PS	Fir	Fire Station #48	1940	15,000	6,208	0.53^
45	PS	Fir	Fire Station #5	1954	12,600	5,215	0.50^
46	PS	Fir	Fire Station #6	1948	13,500	5,587	0.35^
47	PS	Fir	Fire Station #7	1954	16,488	6,824	0.44^
48	PS	Fir	Fire Station #7 Office	2000	3,360	1,391	0.42^
49	PS	Fir	Fire Station #7 Tower	1953	8,712	3,966	0.33^
50	PS	Fir	Fire Station #8	1940	8,000	4,139	0.45^
51	PS	Fir	Fire Station #9	1972	15,000	6,332	0.46^
52	PS	Fir	Old Engine 21	1893	5,600	2,897	0.25
53	PS	Fir	Pump Stn #1	1912	50,000	25,866	0.24
54	PS	Fir	Sunset Tank	1950	5,000	828	0.50^
			Sub-Total: Fire Department			**$261,599**	

D4-04.2: Public Safety - Juvenile Authority

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	PS	Juv	Admin/Culinary HV	1966	9,072	4,505	0.41^
2	PS	Juv	Autoshop-Log Cabin	1953	6,000	2,980	0.35^
3	PS	Juv	Cowbarn Log Cabin	1953	1,600	265	0.58^
4	PS	Juv	Dom. Water Plant	1953	450	74	0.58^
5	PS	Juv	Dormitory-Log Cabin	1953	7,000	3,476	0.29
6	PS	Juv	Dorm-Hidden Valley	1966	4,560	6,628	0.52^
7	PS	Juv	Equip/Haybarn L Cabin	1953	2,000	331	0.58^
8	PS	Juv	Green House L Cabin	1953	450	74	0.58^
9	PS	Juv	Gym-Hidden Valley	1966	5,880	2,920	0.35^
10	PS	Juv	HV School Bldg	1966	7,776	3,862	0.42^
11	PS	Juv	Hoffman Hall –L Cabin	1953	7,400	3,675	0.37^
12	PS	Juv	Juvenile Hall Campus	2006	82,551	37,580	0.12
13	PS	Juv	Kitchen-Log Cabin	1953	5,200	2,582	0.37^
14	PS	Juv	Lake Verde Pumphouse	1953	450	74	0.00
15	PS	Juv	Laundry/Medical L Cabin	1953	2,600	1,291	0.42^
16	PS	Juv	Log Cabin Ranch Admin	1953	2,280	1.132	0.36^
17	PS	Juv	Mindiego Pumphse	1953	450	74	0.58^
18	PS	Juv	Modular Receiving	2003	2,840	1,175	0.11
19	PS	Juv	Old School Log Cabin	1953	3,200	530	0.58^
20	PS	Juv	Pool House Log Cabin	1953	540	89	0.58^
21	PS	Juv	Rec Hall Log Cabin	1953	4,300	2,135	0.40^
22	PS	Juv	W-1 Cottage Bldg 19	1950	10,504	4,347	0.38^
23	PS	Juv	W-2 Cottage:Bldg 18	1950	6,700	2,773	0.39^
24	PS	Juv	W-3 Cottage: Bldg 17	1951	6,700	2,773	0.34^
25	PS	Juv	Wastewater Trtmt	1953	450	74	0.58^

26	PS	Juv	YGC Admin/Courts	1950	65,530	27,120	0.41^
27	PS	Juv	YGC Corridors Tunnels	1950	3,674	1,520	0.36^
28	PS	Juv	YGC Garage;bldg. 43	1950	2,452	406	0.50^
29	PS	Juv	YGC Service Bldg 2	1950	24,815	10,270	0.55^
			Sub-Total: Juvenile Authority			**$124,735**	

D4-04.3: Public Safety - Police Department

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	PS	Pol	Bayview Police Stn	1996	16,000	6,622	0.19
2	PS	Pol	Central Police Stn	1970	8,000	3,311	0.24
3	PS	Pol	GG stables	1935	11,800	4,883	0.19
4	PS	Pol	Ingleside Police Stn	1910	18,500	7,656	0.17
5	PS	Pol	McLaren Park Stables	1935	900	149	0.00
6	PS	Pol	Mission Police Stn	1994	25,000	10,346	0.13
7	PS	Pol	Northern police Stn	1988	18,000	7,449	0.21
8	PS	Pol	Park police stn	1910	13,700	5,670	0.21
9	PS	Pol	Police Academy	1966	19,332	8,001	0.24
10	PS	Pol	Police stables shed	1975	400	66	0.00
11	PS	Pol	Lake Merced pistol rng	1942	10,000	4,139	0.32^
12	PS	Pol	Richmond police stn	1910	13,000	5,380	0.12
13	PS	Pol	Taraval police stn	1929	18,070	7,478	0.11
14	PS	Pol	Tenderloin police stn	2000	27,500	11,381	0.14
			Sub-Total: Police Department			**$82,531**	

D4-04.4: Public Safety - Sheriff's Department

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	PS	Shf	Alternative programs	1959	5,920	2,450	0.31^
2	PS	Shf	County Jail #5	2006	283,257	232,109	0.02
3	PS	Shf	County Jail #6	1988	50,000	37,247	0.06
4	PS	Shf	San Andreas Pump stn	1932	150	25	0.59^
5	PS	Shf	San Bruno Bus Barn 111	1932	1,074	178	0.25
6	PS	Shf	San Bruno Greenhouse	1988	1,984	328	0.50^
7	PS	Shf	San Bruno large barn	1970	3,200	530	0.50^
8	PS	Shf	San Bruno old swg bldg	1950	238	39	0.50^
9	PS	Shf	San Bruno old swg Gen	1950	195	32	0.50^
10	PS	Shf	San Bruno red barn	1932	3,846	637	0.40^
11	PS	Shf	San Bruno Storage coop	1932	2,310	382	0.50^
12	PS	Shf	San Bruno water supply	1932	100,000	41,385	0.02
13	PS	Shf	San Bruno Electrical svc	2006	500	83	0.00
14	PS	Shf	San Bruno sewer pump	2006	400	66	1.09^^
15	PS	Shf	San Bruno Pump stn	2006	600	99	0.00
16	PS	Shf	Sheriff's Facility	1994	250,000	223,481	0.10
17	PS	Shf	Learning Center	1932	14,000	5,794	0.19
			Sub-Total: Sheriff's Department			**$544,865**	

D4-04.5: Public Safety - Aggregate Category Total

#	CATG	DEPT	$ CRV (000)	
1	PS	Fire Department	$261,599	
2	PS	Juvenile Authority	124,735	
3	PS	Police Department	82,531	
4	PS	Sheriff's Department	544,865	
		TOTAL: Public Safety	**$1,013,730**	

D4-05.1: Recreation, Culture & Education (RCE) - Asian Art Museum

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	AAM	Asian Art Museum	2003	185,000	186,048	0.05
			Sub-Total: Asian Art Museum			**$186,048**	

D4-05.2: RCE - Arts Commission

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	ART	AfrAmArt/Culture	1935	34,031	17,605	0.18
2	RCE	ART	ArtsComm Gallery	1914	4,163	689	0.50^
3	RCE	ART	Bayview Opera House	1888	14,000	7,242	0.08
4	RCE	ART	Mission Cultural Ctr	1948	32,230	13,339	0.29
5	RCE	ART	S. Market Cultural Ctr	1906	17,844	7,385	0.13
			Sub-Total: Arts Commission			**$46,260**	

D4-05.3: RCE - Fine Arts Museums

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	FAM	de Young Museum	2005	292,500	261,473	0.06
2	RCE	FAM	Legion of Honor	1924	117,000	108,947	0.14
			Sub-Total: Fine Arts Museums			**$370,420**	

D4-05.4: RCE - Libraries

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	Lib	Anza Branch library	1937	8,222	4,253	0.00
2	RCE	Lib	Bayview Branch library	2013	9,527	3,943	0.05
3	RCE	Lib	Bernal Heights library	1940	8,777	4,540	0.05
4	RCE	Lib	Chinatown Br. Library	1921	17,858	9,238	0.39^
5	RCE	Lib	Eureka Valley Br. Lib	1961	6,465	1,472	0.05
6	RCE	Lib	Excelsior Branch library	1967	8,302	3,436	0.21
7	RCE	Lib	Glen Park Br. Library	2007	7,185	2,974	0.07
8	RCE	Lib	GG Valley Br. Library	1917	7,432	3,845	0.00
9	RCE	Lib	Ingleside Br Library	2009	6,100	2,525	0.18
10	RCE	Lib	Main Library	1996	376,000	101,146	0.13
11	RCE	Lib	Marina Br. Library	1954	7,633	3,159	0.06
12	RCE	Lib	Merced Br Library	1958	5,832	2,414	0.00
13	RCE	Lib	Mission Bay Br. Library	2006	8,500	3,518	0.06
14	RCE	Lib	Mission Branch Library	1916	10,479	5,421	0.22
15	RCE	Lib	Noe Valley Br Library	1916	6,096	3,154	0.05
16	RCE	Lib	North Beach Br Library	2014	8,500	3,518	0.10

17	RCE	Lib	Ocean View Br Library	2000	4,794	1,984	0.15
18	RCE	Lib	Ortega Branch Library	2011	9,300	3,849	0.10
19	RCE	Lib	Park Branch Library	1909	8,825	4,565	0.10
20	RCE	Lib	Parkside Branch Library	1951	6,890	2,851	0.06
21	RCE	Lib	Portola Branch Library	2009	6,427	2,660	0.08
22	RCE	Lib	Potrero Branch Lib.	1951	6,410	2,653	0.06
23	RCE	Lib	Presidio Branch Lib.	1921	10,205	5,279	0.06
24	RCE	Lib	Richmond Br. Library	1914	13,900	7,191	0.14
25	RCE	Lib	Sunset Branch library	1918	9,434	4,880	0.14
26	RCE	Lib	Support Srvcs Bldg	1925	43,182	17,871	0.22
27	RCE	Lib	Visitacion Valley Br Lib	2011	9,945	4,116	0.00
28	RCE	Lib	West Portal Branch lib	1939	8,536	4,416	0.09
29	RCE	Lib	Western Addition Br L.	1966	8,000	1,821	0.05
					Sub-Total: Libraries	**$222,692**	

D4-05.5: RCE - Academy of Sciences

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	Sci	Academy of Sciences	2007	410,000	335,967	0.13
					Sub-Total: Academy of Sciences	**$335,967**	

D4-05.6: RCE - War Memorial Opera House and Related Facilities

#	CATG	DEPT	FACILITY	YEAR	GSF	CRV $000	FCI
1	RCE	WAR	Davies Symphony Hall	1980	203,500	204,653	0.03
2	RCE	WAR	War Memorial Opera	1932	315,700	341,006	0.13
3	RCE	WAR	War Mem. Veterans	1932	247,500	138,279	0.00
4	RCE	WAR	Zellerbach Rehearsal	1981	26,000	10,760	0.16
					Sub-Total: War Memorial Opera House & Related Facilities	**$694,698**	

D4-05.7: Recreation, Culture & Education - Aggregate Category Total

#	CATG	DEPT	$ CRV (000)	
1	RCE	Asian Arts Museum	$186,048	
2	RCE	Arts Commission	46,260	
3	RCE	Fine Arts Museums	370,420	
4	RCE	Libraries	222,692	
5	RCE	Academy of Sciences	335,967	
6	RCE	War Memorial Opera House and Related Facilities	694,698	
		TOTAL: Recreation, Culture and Education	**$1,856,085**	

Appendix D-5
Annual Maintenance Target Need
(Dollar in thousands)

DEPT	CRV (a)	% TARGET NEED (b)	$ ANNUAL NEED
AAM	$186,048	1%	$1,860
ACAD	335,967	2.4%	8,063
ADM (c)	2,303,788	1.5%	34,557
ART	46,260	1.25%	578
DEM	28,970	1.1%	319
DPH	226,287	1.3%	27,722
DPW	337,514	0.85%	305
FAM	370,420	1.0%	3,704
FIR	261,599	1.8%	4,701
HSA	196,026	1.8%	3,528
JUV	124,736	1.5%	1,853
LIB	222,692	1.5%	3,340
POL	82,531	1.4%	1,155
RPD	1,369,200	1.4%	19,196
SFH	544,865	0.95%	5,176
TIS	2,212	3.75%	83
WAR	694,698	0.9%	6,252
TOTAL:	$7,333,813	1.7% (d)	$122,392

a. CRV from Appendix D-3
b. Target Need extracted from Figure 4 (chart from FRRM training materials)
c. ADM/NBR/ADM $857,092 plus General Government/ADM $1,446,696 equals $2,303,788
d. Computed as 122,392 / 7,333,813 = ~ 1.7% average Target Need

Appendix E
What Would It Take to Eliminate the Backlog in Ten Years?

The General Fund department facilities, streets and other right-of-way assets in the "Renewal Investments" backlog is $1.1 billion. http://onesanfrancisco.org/the-plan-2016/ This backlog is projected to grow by $245 million over the next ten years, to $1.345 billion. The current Facilities portion of the backlog is $396 million. (2015 Ten-Year Capital Plan)

We were told there is widespread consensus on the need to do something about deferred maintenance, but it is so big -- how to chip away at it? One concept is to attack those items that will generate the highest costs in deferred maintenance and failure; but the City must continue to maintain the replacement facilities, or have the same problem in ten years.

According to the Plan, streets and other right-of-way assets will receive $1.094 billion over the next ten years, and end the ten-year period with a streets backlog of $695 million. Facilities Renewal Investments (including current backlogs) have a projected funding total of $595 million over ten years, but will end with a projected facilities backlog in 2025 of $650 million. (Capital Plan 2015)

To quantify the funding challenge, Facilities needs an additional $25.4 million in each of the next ten fiscal years in order to stop the backlog from growing. To erase its backlog by 2025, Facilities would need an annual budget increase of $65 million.

Using the Capital Plan numbers, the Facilities backlog could be eliminated over ten years, if the City were to budget an additional 0.17% of General Fund CRV annually (over and above the $1.094 billion for streets and other right-of-way assets):

a.	Projected funded budget $595 million = $59.5 million/year, plus
b.	Eliminate projected backlog $649 million = $64.9 million/year, sums to $124.4 million/year, produces
c.	$124.4 million divided by General Fund CRV of $7.337 billion = ~0.17%

The long-term "solution" to the General Fund departments' backlog of deferred maintenance:

1. keep the backlog from getting bigger by adequately funding maintenance and repair; and
2. gradually remove true DM&R items from the backlog list as the prematurely worn-out facilities and infrastructure become cheaper to replace with new capital assets.