THE CITY OF SAN DIEGO

REPORT TO THE CITY COUNCIL

DATE REPORT ISSUED: May 7, 2009 REPORT NO. 09-102

ATTENTION: Budget and Finance Committee

SUBJECT: Deferred Maintenance Update

REQUESTED ACTION:
No action, informational item only.

STAFF RECOMMENDATION:
None, informational item only.

EXECUTIVE SUMMARY:

I. Background

For many years, the City of San Diego's capital assets, including City facilities, streets, sidewalks, and storm drains, did not receive the funding levels necessary to properly maintain the condition of the assets. As a result, the backlog of required maintenance and repair work increased annually. Coupled with the lack of funding for needed repairs and maintenance, funding was not available to assess the condition of the assets on a periodic basis. Although there were obvious indications that the magnitude of the deferred maintenance backlog was becoming significant, resources and systems were not in place to either assess the backlog or address the needed maintenance and repair work.

"Deferred Maintenance" as used in this document, is a catch-all term that refers to several types of work on City infrastructure assets. It refers to all of the following categories:

- Items that are broken or need repairs prior to reaching the end of their useful service life (Example: a crushed storm drain).
- Items that have reached the end of their useful service life (Example: a 40-year old asphalt street with a badly deteriorated surface).
- Items that are presently not in place, or are not functioning correctly and should be installed (Example: a building without a fire alarm system).
- Items that are related to not conforming to the standard regulatory codes that apply to the asset (Example: a building without adequate egress).
- Items related to hazardous material in the asset (Example: a building with asbestos containing materials).

For purposes of this document, the deferred maintenance status of City street pavement, storm drain pipe system, and buildings will be discussed. The City's water and sanitary sewer infrastructure, airport assets, sidewalks, right-of-way features (street signs, traffic signals, guardrails and trees), drainage channels, and bridges will not be addressed. These are not included for a variety of reasons. Water and sewer infrastructure and airports assets are covered separately by the Enterprise funds for those functions. Condition assessments are not conducted for sidewalks because knowledge of sidewalk deficiencies constitutes constructive notice for the City for legal purposes. Due to safety and regulatory considerations, deficiencies in right-of-way features (street signs, traffic signals, guardrails and trees), must be corrected in a timely manner. In general, there is not a backlog of deferred maintenance for these items. Drainage channels have not been cleared and cleaned recently due to environmental permitting and mitigation requirements. The City is pursuing a Programmatic Environmental Impact Report to address all of the drainage channel maintenance requirements. Funding for bridge deferred maintenance is primarily provided by Federal Highway Administration through the California Department of Transportation (Caltrans).

In 2006, City staff estimated the City's deferred maintenance needs at approximately $800 to $900 million. This estimate was determined as follows:

a. Streets backlog: A 2003 condition assessment of a portion of the street system was used to estimate the number of miles of streets that require slurry seal, overlay and replacement. Estimated costs were then applied to the number of miles for each of these types of work.

b. Facilities backlog: An up-to-date condition assessment of the City's facilities did not exist. The backlog was determined by first estimating the facilities' current plant value and overall condition (i.e., good, fair or poor) based on age and maintenance history. There are industry standards that roughly predict the maintenance backlog based on the plant value and the facilities' overall condition. These standards were applied to determine an "order of magnitude" estimate of the facilities backlog of maintenance and capital needs.

c. Storm Drains backlog: An up-to-date condition assessment of the City's storm drain system did not exist. Additionally, the City's inventory of storm drains had not been updated for over five years. The oldest and most problematic part of the storm drain system generally is the corrugated metal pipes. Knowing that the system has approximately 38 miles of corrugated metal pipe, the cost of replacing the entirety of this part of the system was estimated and used as the backlog.

II. Condition Assessments of City Assets

Since Fiscal Year 2007, a number of condition assessments have been undertaken for these assets. The following assessments have been completed or are planned:

Streets

- FY 2007 - Assessment of all major City streets - completed in late 2007
- FY 2011 – Assessment of all City streets – completion anticipated in 2011

Buildings

- FY 2007 - Assessment of 26 public safety buildings – completed in 2007
- FY 2008 - Assessment of 380 buildings - completed in 2009
- FY 2010 - Assessment of remaining facilities – to be completed in 2011

Storm Drains

- FY 2008 - Assessment of CMP drains in easements - scheduled to be completed in 2009
- FY 2009 - Assessment of CMP drains in the ROW - to be completed in 2010

III. City Streets

The street network consists of 2,574 miles of asphalt streets and 111 miles of concrete streets. An assessment of the condition of the City streets was funded during FY2007 and completed in late 2007. After completion of the condition assessments, street pavement is assigned an Overall Condition Index (OCI) based on the surface condition, number of cracks, spalling, alligatoring, pot holes, etc. The following are the three classifications according to the OCI:

a. Acceptable – OCI of 70 or greater
b. Fair – OCI of 40 to 69
c. Poor – OCI of 39 or less

The results of the 2007 condition assessment indicated that 38% of the street network is "Acceptable", 45% is "Fair", and 17% is "Poor". The Citywide OCI was 61. The goal is to increase the Citywide OCI to 75, then maintain it at that level. Following is the overall OCI for each Council district.

Council District	Average OCI	Network Miles
1	67	422
2	60	384
3	55	239
4	57	289
5	65	411
6	61	394
7	62	329
8	56	267
Total Miles		2735

(Data from 2007 Condition Assessment)

The deferred maintenance/capital backlog is the work required to get 100% of the street network to "Acceptable" condition. The following summarizes the backlog:

Funding required to correct the entire backlog

	Miles Required	Cost
Slurry Seal[1]	1,260	$126 million
Asphalt Overlay	504	$176 million
Concrete Replacement	63	$189 million
TOTAL BACKLOG		**$491 million**

[1]Slurry seal is an essential part of the street program, but is not a capital cost. It is a maintenance item, and the cost of the work cannot be capitalized.

The estimated projects costs (FY09 dollars) are $100,000 per mile for slurry seal, $350,000 per mile for asphalt overlay, and $3,000,000 per mile for concrete replacement.

A more realistic goal is to attain industry standards for street condition. Industry standards for similar size street networks is 75% of the system in "Acceptable" condition, 20% in "Fair" condition, and 5% in "Poor" condition. The projects required to achieve this level are as follows:

Funding required to achieve industry standards

	Miles Required	Cost
Slurry Seal	700	$ 70 million
Asphalt Overlay	364	$127 million
Concrete Replacement	10	$ 30 million
TOTAL BACKLOG		**$227 million**

IV. City Storm Drain System

The storm drain system consists of approximately 70,000 structures, over 800 miles of drainage pipe, and approximately 80 miles of concrete and dirt drainage channels and ditches. Approximately 38 miles of the storm drain system is corrugated metal pipe, which is the oldest and most problematic part of the system. A condition assessment of the corrugated metal pipe (CMP) drains that are within easements (approximately 15 miles) was initiated in 2008, and will be completed during 2009. The assessment of the remaining 23 miles of CMP drains that are within the City's right-of-way will be initiated in 2009. Additional condition assessments will be funded each fiscal year as funds allow.

The storm drain condition assessments involve inspecting all inlet and outlet structures and televising the storm drain pipes. Presently, 9.4 miles of the 15 miles of City storm drains on private property within easements have been completed.

The following table summarizes the results of the assessment:

Storm Drain Section	Total Length Inspected (LF)	Urgent Construction Requirements
1	8,839	$951,050
2	9,362	$2,363,300
3	10,508	$1,622,398
4	6,643	$2,712,000
5	6,792	$3,013,100
6	7,661	$3,672,232
Total	**49,805 (9.4 miles)**	**$14,334,080**

V. City Buildings

The City has approximately 1,600 City-owned buildings and structures, totaling over 10 million square feet. These buildings include a large range of facilities, ranging from high rise office buildings, police and fire stations, libraries, community centers, museums, senior centers, and operations facilities to storage sheds, concession stands, picnic pavilions, and comfort stations. A large number of the City's 1,600 buildings are small, minor facilities that serve storage or recreation purposes.

A condition assessment of a small group of public safety facilities was completed in late 2006. The assessment was meant to serve as a proof of concept for future large-scale assessments. The initial assessment included eleven fire stations, eight police stations, and seven lifeguard facilities, totaling 234,000 square feet of facilities. The condition assessment of these 26 facilities identified the following deferred maintenance needs:

Fire stations: $1,025,281
Police stations: $2,506,262
Lifeguard facilities: $440,016

A condition assessment of an additional 380 major City facilities was initiated in 2008, and was completed in May 2009. The scope of this project was to assess the balance of the major buildings owned by the City. The following table summarizes the results of the assessment:

Facility Type	Critical / Immediate Need (0-3 Months)	Potentially Critical (3-12 months)	Necessary (1-3 Yrs)	Recommended (3-10 Yrs)	Total Capital Needs
Restroom Facilities (142)	$8,148	$623,941	$6,652,069	$193,286	$7,477,444
Fire Stations (34)	$12,834	$657,155	$7,983,160	$255,046	$8,908,195
Libraries (35)	$45,310	$2,024,298	$14,463,519	$59,529	$16,592,656

Recreation Centers (57)	$10,075	$973,406	$9,616,121	$212,765	$10,812,367
Senior Centers (18)	$7,748	$268,467	$2,399,342	$25,432	$2,700,989
Lifeguard Stations (1)	$0	$19,880	$522,451	$3,249	$545,580
Park Facilities (3)	$0	$42,149	$277,292	$24,362	$343,803
Police Department (5)	$8,259	$554,579	$6,506,079	$317,336	$7,386,253
Balboa Park (63)	$488,482	$3,078,278	$27,459,420	$223,293	$31,249,473
Swimming Pools (9)	$24,796	$98,133	$2,256,960	$41,514	$2,421,403
Operations Facilities (8)	$280,782	$271,255	$5,856,136	$12,237	$6,420,410
Field Office-Eng (2)	$0	$11,438	$120,192	$524	$132,154
Community Srvc Ctrs (1)	$762	$1,462	$46,746	$0	$48,970
Community Centers (1)	$0	$13,498	$356,877	$119,985	$490,360
Historical Facility (1)	$1,175,789	$10,676	$678,167	$0	$1,864,632
Total	**$2,062,985**	**$8,648,615**	**$85,194,531**	**$1,488,558**	**$97,394,689**

A facilities condition assessment of the five City-owned buildings within the San Diego Civic Center Complex (City Administration Building, City Operations Building, Civic Center Exhibition Building, Parkade Parking Garage, and Civic Center Plaza) was completed in April 2008 by Staubach, Inc. The cost to repair the deficiencies in five buildings totals approximately $99.7 million. The following is a summary of the type and priority of deficiencies in the five buildings.

	Priority					
Building System	**Mission Critical (Immediate)**	**Operational Impact (Within 1 yr)**	**Short term Condition (1-3 yrs)**	**Long term Requirement (3-5 yrs)**	**Aesthetic Enhancement (3-5 yrs)**	**Total**
Site	$ -	$ 75,926	$ 137,007	$ 332,363	$ 221,879	$ 767,175
Roofing	$ 1,569,762	$ 342,113	$ 818,316	$ 19,453	$ 102	$ 2,749,746
Exterior	$ -	$ 3,571,835	$ 1,025,980	$ 38,171	$ 4,025,653	$ 8,661,639
Structure	$ -	$ 934,479	$ -	$ 114,684	$ 204,692	$ 1,253,855
Interior	$ 22,960	$ 17,973,370	$ 8,861,038	$ 22,301,394	$ 1,147,660	$ 50,306,422
HVAC	$ 10,600	$ 6,272,874	$ 245,886	$ 1,552,137	$ 3,536,853	$ 11,618,350
Plumbing	$ 87,085	$ 94,785	$ 5,857,010	$ 560,827	$ 9,046	$ 6,608,753
Electrical	$ 242,963	$ 4,415,898	$ 1,140,528	$ 5,781,123	$ 122,148	$ 11,702,660
Technology	$ -	$ 8,942	$ 404,333	$ 15,635	$ -	$ 428,910
Fire & Safety	$ 805,212	$ 1,974,969	$ -	$ -	$ -	$ 2,780,181
Conveyances	$ -	$ 100,142	$ 1,032,554	$ 749,216	$ -	$ 1,881,912
Specialties	$ 327,801	$ -	$ 22,158	$ 566,725	$ -	$ 916,684
Other	$ -	$ -	$ -	$ -	$ 32,442	$ 32,442
Total	**$ 3,066,383**	**$ 35,765,333**	**$ 19,544,810**	**$ 32,031,728**	**$ 9,300,475**	**$ 99,708,729**

VI. Funding to address Deferred Maintenance/Capital Work

The funding set aside to address the deferred maintenance backlog has increased significantly over the last three fiscal years (FY 2007, 2008 and 2009). Private financing

in the amount of $103 million was secured from Bank of American late in FY 2009 for completing high priority projects. The current Five Year Financial Outlook indicates that additional deferred maintenance financing will be obtained via the public bond market in FY 2011 and 2013, each in the amount of approximately $100 million. The following is the past and planned future budget amounts for deferred maintenance projects.

	Annual Deferred Maintenance Funding		
Year	**Streets**	**Buildings**	**Storm Drains**
FY 2005	$2.0 million	$0	$2.0 million
FY 2006	$2.5 million	$0	$2.0 million
FY 2007	$18.7 million	$5.4 million	$3.8 million
FY 2008	$20.0 million	$5.0 million	$5.6 million
FY 2009	$79.2 million	$31.8 million	$11.6 million
FY 2010	$15.5 million	$11.8 million	$0.7 million
FY 2011	$66.9 million	$37.9 million	$15.6 million
FY 2012	$15.0 million	$11.8 million	$0.6 million
FY 2013	$66.9 million	$26.1 million	$15.6 million

A model is currently being developed to estimate the funding required to achieve and then maintain "industry standard" conditions for the City's assets. It is anticipated that this cost model will be developed in time for the FY 2011 budget.

VII. Backlog of Deferred Maintenance/Capital Work

Based on the condition assessments completed for the City's streets, storm drain system, and buildings, we have estimated the total backlog of maintenance and repair requirements. As described above, the backlog for streets is approximately $500 million. However, we believe that the City's objective should be to invest sufficient funds in the City streets to achieve industry standards, then adequately fund the street maintenance program to keep the streets at that standard. The work required to achieve this industry standards is approximately $227 million.

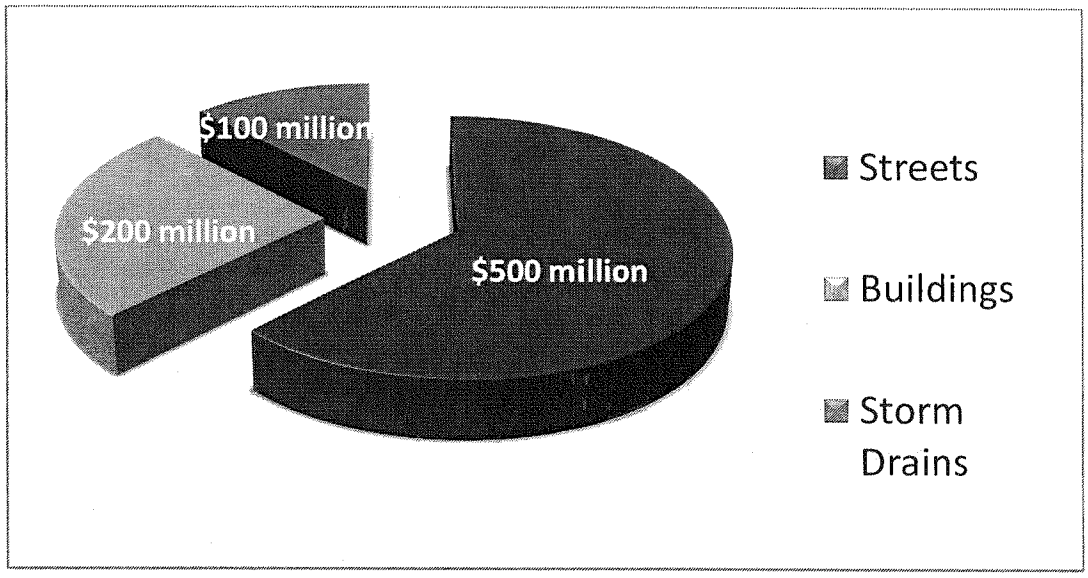
For the City's storm drain system, a backlog of over $14 million was identified for the 9.4 miles of the CMP assessed to date. The upcoming assessment of the remaining 5.6 miles of CMP within easements, along with an additional 23 miles of CMP within the City's right-of-way, will provide additional information on the backlog of work. After the assessment of the CMP portion of the system is completed, assessments will begin on the remainder of the system. Based on the initial assessments, it is estimated that the total backlog of storm drain work is approximately $100 million.

The deferred maintenance backlog for the 400+ buildings assessed to date totals over $100 million. Additionally, the backlog for the City Administration Building totals approximately $100 million. Therefore, the total backlog is approximately $200 million.

These estimates include only the construction costs of the projects, not the "soft" project costs such as design, permitting, environmental review and project management. Since the soft project costs are highly variable depending on the project type, it is difficult to

assign an estimated value for these costs. For instance, street resurfacing projects such as asphalt overlay and slurry seal require minimal design, permitting and environmental review. The soft costs for these projects are relatively small. Conversely, projects such as rebuilding a lifeguard tower, with significant geotechnical design, public outreach, environmental review, coastal review and permitting, and project management, have much higher soft costs. It would be safe to say that the $800 million construction program would have a total program cost of over $1 billion.

The following chart summarizes the deferred maintenance backlog (construction costs only) for the City's streets, buildings and storm drains.



FISCAL CONSIDERATIONS:

None.

David Jarrell
Deputy Chief Operating Officer, Public Works