

## Section 1.3: Capital Projects

- ◆ **In response to Budget Analyst recommendations to increase Phase II Master Plan funding for increased construction of capital projects, the Zoological Society has made design changes to the new Administration, Quarantine, and Holding facilities that will make available an additional \$687,000 for construction of animal exhibits.**
- ◆ **The current Phase II budget allocates approximately 4.9 percent of total construction costs of \$48 million to Program Management, which is being performed by an outside consultant, and 3.9 percent of such costs to Zoological Society Administration, for a total of approximately 8.8 percent, or \$4,215,434. Further, the current Phase II budget allocates approximately 7.8 percent of total construction costs, or \$3,747,052, to Construction Management, which would be performed by the Department of Public Works (DPW). Thus, the total budgeted cost for these functions is currently 16.6 percent of total Phase II funding, or \$7,962,486. We recommend that this combined total of 16.6 percent be reduced to 10 percent, or \$4,800,000, in accordance with attainable program and construction management cost containment practices and in accordance with the Zoo Bond Program Report, thereby allowing an additional \$3.16 million to be expended on construction of capital improvement projects.**
- ◆ **The current Phase II budget allocates approximately 13 percent of total construction costs to Design Fees, based on a combination of a 14 percent factor for specialized animal facilities design and a 12 percent factor for all other projects. The total amount allocated for Design Fees, is \$6,235,722. We recommend that the combined percentage of 13 percent be reduced to 12 percent, which would produce savings of \$480,000, which can be used for the construction of additional capital improvement projects.**
- ◆ **The current Phase II budget allocates two percent of allowable Phase II construction costs calculated at \$40 million, or \$800,000, to the Public Art Program. The Zoological Society should negotiate with the Art Commission to reduce the percentage to 1.5 percent, thereby saving \$200,000.**
- ◆ **\$800,000 of the approximately \$4.53 million in cost reductions identified above should be allocated to increase construction contingency for each individual project by 2.5 percent, or from 5 percent to 7.5 percent. The remainder of the \$4.53 million in savings, or the approximate amount of \$3.73 million, should be allocated to a Management Reserve Account to be used for the construction of additional capital improvement projects to further enhance the Zoo, and to offset increased construction costs resulting from the two-year delay in issuing Zoo bonds.**

As part of this management audit, the Budget Analyst reviewed and analyzed the Zoo's capital project expenditures since the SFZS took over management of the Zoo in 1993. We also reviewed the proposed capital project expenditures under the Zoo's \$73 million capital improvement project, known as Phase II of the Zoo's Master Plan. In order to assess the Zoo's past and proposed capital project expenditures, we:

- Met with the Zoo's Director, Deputy Director, Curator of Planning and Design, and the Program Manager of the Zoo's \$73 million capital project (known as Phase II of the Zoo's Master Plan);
- Interviewed personnel in the Department of Public Works, Department of Building Inspection, Planning Department, and Recreation and Park Department;
- Examined budgeted and actual capital project expenditures for the Zoo for FY 1998-99 and previous four fiscal years;
- Reviewed the Zoo's 1994 Master Plan;
- Examined planning, budget, and contractual documents for the Zoo's Phase II \$73 million capital project; and
- Obtained the services of (1) the Director of the Oakland Zoo and (2) a planning and construction consultant to evaluate Phase II plans and budgeted expenditures.

## **Background**

A revised Master Plan for the Zoo was completed in 1994. The plan describes a four-phase program to convert the Zoo into a world-class facility. It calls for a Zoo which is divided into geographic regions according to the part of the world that the animals come from and which contains natural habitats that allow the animals to roam undisturbed.

Under the terms of the Lease Agreement between the City and the SFZS, the SFZS is required to meet two goals with respect to fundraising for the Zoo's capital projects in order to implement the first two phases of the Master Plan. The first is to raise \$10 million from private donations for a "Founder's Fund" within the first five years of the Agreement. The \$10 million was to be allocated as follows: (a) \$5 million for capital improvements (separate from the Phase II total sum of \$73 million); (b) \$2 million for operating expenses; and (c) \$3 million for the SFZS's Endowment Fund. By June 30, 1996, the SFZS met this goal by raising approximately \$11.5 million toward the Founder's Fund, of which \$6.8 million has

been expended for capital improvements. These funds were allocated for improvements and new exhibits under Phase I of the Zoo's revised Master Plan.

The second requirement under the Lease Agreement is for the SFZS to raise \$25 million in private donations for Phase II of the Zoo's Master Plan. The \$25 million is to accompany the \$48 million in proceeds from a 1997 Zoo General Obligation Bond measure, for a total of \$73 million to be used for Phase II capital improvements at the Zoo. As of December of 1999, the SFZS has raised approximately \$21 million in cash, written pledges, contingency pledges, and verbal pledges, and reports that its goal is to raise the full \$25 million in private donations by December 31, 2000.

Finally, the Zoo has received a total of \$26 million in funds from the sale of Public Safety Improvement General Obligation Bonds (known as Earthquake Safety Program II or "ESP II" bonds) that were approved by the City's electorate in 1990. These monies were earmarked to replace broken and earthquake damaged water and sewer lines at the Zoo.

### **Capital Expenditures – 1993 to 1998**

In the five-year period since taking over management of the Zoo from the Recreation and Park Department (RPD), 1993 through 1998, the San Francisco Zoological Society (SFZS) has expended a total of \$8,627,211 on capital projects. Average annual expenditures over that time were \$1,725,000 annually. These figures include costs for professional services (such as architectural and design services), and exclude expenditures on the Zoo's Capital Campaign that totaled \$1,286,000 over the same period. Major improvements to the Zoo (over \$100,000) that were completed during this five-year period are shown in Table 1.3.1 on the following page.

As shown in Table 1.3.1, since 1993, the SFZS has expended \$4,507,931 on a total of 12 major projects including improvements to existing exhibits and the opening of new exhibits and attractions. The SFZS spent an additional \$1,827,886 on miscellaneous smaller capital improvement projects throughout the Zoo. The SFZS also expended \$858,943, or 10 percent of all expenditures on capital projects since 1993, on planning, design, and other expenses related to a proposed South American Gateway Exhibit which was never built due to lack of support and funding. A new South American Gateway exhibit is included under the Phase II project; however, it is a much scaled down version of the original exhibit, with a total cost of \$680,000 budgeted in Phase II.

**Table 1.3.1**  
**Zoo Capital Projects**  
**FY 1993-94 - FY 1997-98**

<b>Project</b>	<b>Cost</b>	<b>Fiscal Year Completed</b>
<i>Completed Major Projects (over \$100,000)</i>		
Otter Exhibit	\$ 234,736	1993-94
Australian WalkAbout Exhibit	561,987	1994-95
Feline Conservation Center	2,055,283	1995-96
Warthog Exhibit	105,481	1995-96
Demolition of Monkey Island and Cat Cage String	171,508	1995-96
White Alligator Exhibit	162,197	1995-96
Children's Zoo Renovation	148,216	1996-97
Elephant Exhibit Renovation	113,575	1996-97
Lion Cub Exhibit	296,478	1996-97
Lorikeet Exhibit	410,016	1997-98
Re-meshing of Primate Discovery Center	248,454	1997-98
Little Puffer Train	<u>112,737</u>	1997-98
<b>Subtotal</b>	<b>\$4,507,931</b>	
<i>Other Expenditures</i>		
South American Gateway Exhibit (exhibit was not built, majority of expenditures were for planning, design and architectural fees)	\$858,943	
Support Facilities	108,017	
Computer System	309,530	
Phase II Planning and Related Fees	902,167	
Miscellaneous Capital Expenditures	<u>1,827,886</u>	
<b>Total</b>	<b>\$8,627,211</b>	

Source: SFZS Final Trial Balance Sheets, by Program, July 1993 to June 1998.

Over this period, the Zoo also received \$26 million in Public Safety Improvement General Obligation Bonds (known as Earthquake Safety Program II or "ESP II" bonds), approved by the City's electorate in 1990. These bond monies were used for replacing and upgrading the Zoo's underground utility systems including the Zoo's sewer, water, gas, and electrical systems. As a mitigation measure, the work also included the construction of an Avian Conservation Center, a holding and breeding center for endangered birds. The vast majority of the Zoo's ESP II project was completed by early summer of 1999.

## **Phase II Capital Projects**

In June of 1997, San Francisco voters approved a ballot measure to issue \$48 million in General Obligation Bonds in order to modernize or build new Zoo facilities. In turn, the SFZS pledged to raise a minimum of \$25 million in private donations, bringing the total to \$73 million to renovate the Zoo. The \$73 million will be used to renovate and develop the western portion of the Zoo, known as Phase II of the Zoo's Master Plan.

Phase II includes several new major exhibit areas, improvements and expansion of the Children's Zoo, improvements to other existing exhibits and the construction of a new entryway, parking lot, and support buildings. As of August of 1999, the current budgeted costs for Phase II, by major program component, are as shown in Table 1.3.2 on the following page. Table 1.3.2 shows total planned expenditures of \$76,390,000, which is \$3,390,000 more than the original Phase II Program cost. The Zoological Society plans to contribute the additional \$3,390,000 through their Capital Campaign fundraising.

After passage of the Zoo bond measure, the first stages of Phase II construction were originally planned to take place in the fall of 1998. However, due to a court challenge concerning the election, sale of the bonds was not legally permitted until the dispute was resolved in the spring of 1999. In the interim, the SFZS used a portion of its privately raised funds and a \$500,000 loan from the Recreation and Park Department to proceed with planning and initial designs for Phase II. After a two year delay, in June of 1999, the first issuance of \$16.9 million of the \$48 million General Obligation Bonds were sold. The \$16.9 million is allocated to fund design and construction of the Zoo's support and administrative facilities in addition to design of the new entry plaza, parking lot, the first section of Zoo Street, Madagascar exhibit and Africa exhibit. According to the Phase II Program Manager, to date, approximately \$8.1 million has been expended or accrued on Phase II projects.

**Table 1.3.2**  
**Zoo Master Plan, Phase II**  
**Budgeted Cost by Major Program Component**

<b>Phase II Project</b>	<b>Budgeted Cost</b>
<b>A1 and Special Projects</b> – Includes recently completed exhibits (Lorikeets, Puente al Sur, Lorikeet Exhibit, and Little Puffer Train) as well as a yet to be determined small to mid-size exhibit slated to open in 2000.	\$ 1,850,000
<b>Facility Consolidation</b> – Building or rebuilding of support facilities including a warehouse, administration offices, Education Center, and Animal Resource Center.	10,580,000
<b>Entry &amp; Zoo Street</b> – A new parking lot and main entrance will be located along the Great Highway, western edge, of the Zoo which will lead to a main pedestrian walkway. The walkway will connect with trail loops to the major exhibit areas and will be lined with visitor services facilities including food, gifts, rentals, information kiosks, and restroom facilities.	13,180,000
<b>Zoo Street 2</b> – The second phase of the new entry and new Zoo Street.	1,120,000
<b>Quarantine &amp; Holding</b> – Construction of a new Zoo animal quarantine and holding facility.	3,390,000
<b>Madagascar</b> – Eight acres, including renovation of the existing Primate Discovery Center, which will display a forested lemur exhibit, reptiles, and other species and fauna of Madagascar to showcase the specific projects and conservation efforts being carried out by the Zoo in Madagascar.	3,870,000
<b>Children's Zoo</b> – The existing Children's Zoo will include interactive exhibits focused on North American animals renovated to include a second contact yard and a meerkat and prairie dog exhibit..	2,650,000
<b>Children's Zoo 2</b> – Second stage expansion of the Children's Zoo described above.	520,000
<b>Africa!</b> – A savanna area connected to the Savanna B area by an animal walkway to allow for rotation of animals through the exhibits. The exhibit will be designed to house giraffe, lions, zebra, gazelle, ostrich, and crowned crane.	9,200,000
<b>Great Ape Forest</b> – Large, grassy meadow areas, trees, shrubs, vines, climbing areas, and stream to display chimpanzees and orangutans.	8,190,000
<b>Savanna B/Grand Panorama</b> – Savanna B will consist of savanna landscape offering panoramic views of mixed animal habitats. The area is planned to house elephants, rhinos, and other animals. Grand Panorama is 8.5 acres of a multi-species viewing area (animals are separated by dry moats and waterways). It will house animals from Africa and Savanna B.	8,230,000
<b>South American Gateway</b> – Several habitats interconnected by pathways containing a seasonal forest, riverbanks with underwater viewpoints and walk-through aviary. Exhibit will display animals native to South America.	680,000
<b>Subtotal</b>	<b>\$63,460,000</b>
<b>Public Art Program</b>	800,000
<b>Repair and Replacement Projects</b> – Repair and replacement of existing facilities and exhibits.	2,810,000
<b>Completed Projects</b> – Various new exhibits and renovations completed since 1993.	500,000
<b>Other Expenses</b> – Includes funds for capital campaign, bond issuance costs, interest expenses, and other miscellaneous expenditures.	5,530,000
<b>Program Reserve</b>	3,290,000
<b>TOTAL</b>	<b>\$76,390,000</b>

### **Sequencing of Phase II Capital Projects**

The complete Phase II project is spread out over a seven-year period, with the final component to be completed by the close of 2004. According to the SFZS, Phase II construction will take place in stages in order to minimize disruption of normal operations at the Zoo and impact on the animals. New exhibits and attractions are sequenced so that a new exhibit opens each spring in order to maximize annual attendance, which peaks during the summer months. The table below shows the currently anticipated Phase II project sequencing and the projected completion dates for each segment.

<b>Project</b>	<b>Anticipated Completion Date</b>
Animal Resources Center	May 2000
Zoo Support Complex	Dec 2000
Education Building	Aug 2000
Administration Campus	Jan 2001
Quarantine & Holding	May 2001
Children's Zoo	May 2001
Parking Lot	Jun 2001
Hearst Plaza (Carousel, Café, 50% Zoo St.)	Jun 2001
Carousel (mechanical & electrical renovation)	Jun 2001
Primate Discovery Center/Madagascar	Jul 2001
Entry Plaza (remaining 50% of Zoo St.)	Aug 2001
Pachyderm Bldg.	Feb 2002
Zoo Street 2	Feb 2002
Africa!	Apr 2002
Great Ape Forest	Oct 2002
Savanna B	Oct 2003
Animal Walk	Apr 2004
Grand Panorama	Apr 2004
Children's Zoo 2	May 2004
South American Gateway	Oct 2004

### **Assessment of Phase II Capital Projects**

As described in the Facilities Maintenance (Section 6) section of this report, inspectors from the United States Department of Agriculture (USDA) have cited the Zoo for numerous ongoing violations. The majority of these violations relate to the condition of the Zoo's animal enclosures. As a part of this audit, we obtained the services of the Director of the Oakland Zoo, Dr. Joel Parrott, who included an assessment of the Phase II program's effectiveness in addressing such animal welfare concerns in his review.

In Dr. Parrott's assessment, all of the projects listed in the Phase II program are critical to the long-term health of the Zoo. The SFZS is under pressure to generate greater revenues to support the Zoo's operating expenses. Therefore, approximately \$11.5 million of the \$73 million Phase II program, or approximately 15.8 percent, is allocated to revenue-generating concessions, such as the new parking lot, entrance, and Zoo Street facilities. However, Dr. Parrott notes that it is important that the animal welfare issues not be overshadowed by these other Zoo needs. The need for improved animal facilities is very real and was the driving force behind passage of the \$48 million bond measure, according to Dr. Parrott.

According to Dr. Parrott, the Phase II plan will address many of the critical animal welfare concerns of the USDA and address the majority of the worst of the Zoo's exhibits. The most problematic exhibits are addressed in the Phase II program, including the chimpanzees, orangutans, African elephants, African lions, rhinoceros, giraffe, hoofstock holding and quarantine, and numerous repairs and maintenance relating to animal facilities deficiencies. However, Dr. Parrott notes that improvement in animal exhibits will drive attendance up (and therefore Zoo revenue) more than any other project and that a significant omission under the Phase II program is that of the bear grottos and sea lion pool.

The polar bears and Kodiak bear currently in the Zoo's animal collection do not appear on the Zoo's Master Plan. However the animal collection plan indicates maintaining the polar bears, with the possibility of replacing the Kodiak bear with a grizzly bear. This portion of the Phase II program is scheduled to be completed in approximately seven years. This means that the bears will be in the existing grottos for ten years and possibly longer (if future funding becomes problematic). The same scenario applies to the sea lion and harbor seal exhibits.

The SFZS advises that a total of \$600,000 to \$700,000 will be expended on improvements to, but not replacement of, the existing bear grottos during Phase II. Renovations include replacement of some of the concrete in the enclosures with soft materials, the addition of enrichment devices, and repairs to roofs and interior doors. With regard to the sea lion exhibit, the SFZS reports that no monies are currently earmarked for this exhibit, however it is exploring options for improving conditions for the animals and including them under the Phase II program. These options include building a new exhibit or renovating the existing exhibit. However, Dr. Parrott's recommendation is to replace the existing bear grottos and sea lion exhibit, or to relocate the animals to zoos with adequate facilities.

After a copy of Dr. Parrott's report was provided to the SFZS, the SFZS informed us that by making cost saving changes to the new Administration, Quarantine and Holding facilities, an additional \$687,000 will become available for expenditure on animal exhibits.



## **Phase II Capital Project Expenditures**

The breakdown of the expenditure of bond funds for the major Phase II exhibit areas reveals that non-construction expenses as a percentage of construction expenses are expected to be approximately as follows:

Construction Management	8.0%
Program Management	5.0%
Design	13.0%
SFZS Administration	<u>4.0%</u>
Total	30.0%

## **Phase II Program Management Review**

As a part of our review of the planning, implementation, and management of Phase II, the Budget Analyst obtained the services of Mr. Jason Yuen, an architect and planning and construction consultant. Mr. Yuen is currently Chairman, Master Plan Programs Advisory Board, for the San Francisco Airport's \$2.4 billion expansion program. Mr. Yuen's consulting experience includes that as Chairman, Value Engineering Panel, for the Toronto International Airport's \$2 billion expansion program, Peer Review Consultant for the Miami International Airport's \$3.7 billion expansion, and Expert for the Commission of Inquiry on the New Hong International Airport, which was convened to determine the causes and responsibilities for the chaotic opening of that US \$12 billion new airport. Mr. Yuen was San Francisco International Airport's Chief Airport Architect from 1968 to 1979 and Director of Planning and Construction from 1979 to 1992. Finally, Mr. Yuen was retained by the Zoological Society in 1970 as an independent architect to design the reconstruction of the Children's Zoo at the San Francisco Zoological Gardens.

The following analysis of the Phase II implementation is the responsibility of the Budget Analyst. However, Mr. Yuen provided the great majority of the information contained in this analysis.

## **Program Construction Budget**

Market conditions for construction work vary depending of the specific type of construction being performed. Current market conditions in the San Francisco Bay Area, in general, are driving construction costs to high levels. Although the proposed budget has taken current abnormal market conditions into account, it is not clear from the budget documents what portion of the cost forecasts are attributable to such market conditions.

Since market conditions will vary over the duration of this five-year program, a separate cost factor for market conditions should be identified and updated as conditions change. The Phase II Program Manager is knowledgeable about the current market conditions impacting on the cost forecasts of the individual projects.

This separation for market condition adjustments is also helpful in comparing the program's soft cost budget with other similar programs. Since the soft cost budget is presented as a percentage of the construction budget, a more accurate evaluation of the soft costs should be based on construction costs in a normal marketplace, not a temporarily inflated one. Although both costs are impacted by supply and demand, construction costs are much more sensitive to the marketplace than soft costs because 100 percent of the construction cost is derived from competitive bidding. Soft costs, on the other hand, are based mostly on salaries of existing employees and office overhead of professional services firms, which do not fluctuate as greatly as bid prices for construction work.

The current construction budget includes a 5 percent construction contingency, plus a \$3.29-million Program Reserve. These may not be sufficient. As the program proceeds, it is likely that additional unforeseen work will be required to accommodate site conditions, market conditions, misjudgment in planning, errors and omissions in design, contractors' claims, and the changing needs of the Zoo. Savings from the Public Art Program (see below) and Program Management/Administration (see below, also) could be applied to an enhanced Management Reserve Account.

Construction contingency should be increased from 5 percent to 7.5 percent for individual projects, an increase of approximately \$800,000, and the Program Reserve should be increased from \$3.29 million to \$5 million, an increase of approximately \$1.7 million, for a total increase of approximately \$2.5 million. The \$5 million should be set aside to establish a Management Reserve Account. The funds in the Management Reserve Account can be transferred to projects only with the approval of the Board of Directors of the San Francisco Zoological Society as needs arise. Any Management Reserve funds remaining at the completion of the program can be used for additional projects to further enhance the Zoo.

The current program budget also includes an \$800,000 allowance (2 percent of \$40-million in construction costs) for the Public Art Program. This allowance appears to exceed the requirements of Section 3.19 of the City's Administrative Code. The 2 percent set aside is required for buildings and aboveground structures only. The Code specifically exempts "landscape renovation projects" and "modifications to existing parks." The Code also sets forth a procedure in which the Society's Board may seek a lower percentage.

The Public Art Program budget should be recalculated based on costs for buildings and structures only, excluding all costs exempted by Section 3.19(d) of the Administrative Code. The Zoological Society should negotiate with the Art Commission to reduce the 2 percent Art Program to 1.5 percent. Reasons for the lower percentage are as follows: 1) there is a critical shortage of funds for construction; 2) in a zoo, the exhibition of animals takes precedence over the exhibition of art; and 3) in the past, the Art Commission had accepted 1.5 percent for major construction programs. Potential savings are \$200,000.

The current construction budget shows \$150,000 for design fees for the Art Program. This is not necessary. Under the City Charter, the Art Commission is the only City agency that can administer the Public Art Program. Therefore, the entire Public Art Program budget needs to be transferred to the Art Commission. The Art Commission will manage the entire procurement process, including the payment of design fees to the artists. Project designers retained by the Zoological Society should not charge fees for the Public Art Program.

### **Soft Costs**

We define “soft costs,” also known as “non-construction costs,” as costs for design (architect and engineer fees), construction management, and overall program management and administration. By trade or profession, “soft costs” are costs allocated to designers, construction managers, program managers, and the in-house team that monitors the approved program. “Soft costs” do not include costs for master planning, environmental studies, site analyses, fund acquisition, or other preparatory work that is required for the implementation of the program. Other non-construction costs, such as permit fees, topographical surveys, and construction material testing, should be included in the budget for individual projects and not included as “soft costs.”

The current budget projection for soft costs is 30 percent of the construction cost. When compared with other major and complex construction programs, this appears to be excessive. For example, the soft costs for the current \$2.4-billion expansion program at the San Francisco International Airport are approximately 25 percent (the program is more complex than the Zoo project; the program also experienced “waste” caused by delays). Soft costs for the existing International and South Terminals totaled approximately 15 percent. According to Oakland Zoo Director Dr. Joel Parrott, the Oakland Zoo’s recent capital improvement program had a soft cost budget of 16.5-18.5 percent.

Our evaluation of the S. F. Zoo’s proposed soft costs takes into consideration several factors, as follows:

1. Due to the lack of funding, the program was delayed for two years. This delay, in turn, caused a re-start of the program and necessitated discarding outdated schedules, cost estimates, phasing schemes, and other plans. The increased costs due to this re-start have not been identified but are included as a part of the overall proposed budget.
2. The design fees are higher than those for most construction projects due to the limited number of qualified firms with expertise in animal exhibition facilities. The fact that non-local design firms are used also contributes to the high cost.
3. Most individual projects in the Zoo Master Plan Program are phased to take place sequentially in loose groups due to operational requirements. Such a program requires project coordination at the program level. However, the proposed budget for program management and administration (9 percent of construction) appears to be excessive. The latest Organization Matrix shows a Program Manager, two project managers, one clerk, and as-needed personnel for scheduling, estimating, and other technical support. Given the nature of the program, the size of this program management group appears to be reasonable. What remains to be seen is the justification for the balance of the \$4.2 million in overhead administrative costs.

The proposed costs for program management and Zoological Society administration total more than \$4.2 million, or 9 percent of the \$48.6 million construction costs. This is on top of another 8 percent for construction management of individual projects. The administrative overhead of \$4.2 million over a 5-year program period would average \$840,000 per year. This amounts to 10,000 staff-hours per year at \$84 per hour, or approximately five high-salaried employees working eight hours a day everyday for the entire duration of the program — just for administrative work at the programmatic level.

As for project construction management, the grouping of projects as delineated in the phasing plans should generate savings due to the economics of increased productivity for the field staff (e.g., an inspector can monitor the contractors' work for several projects at the same time). With this in mind, the proposed 8 percent construction management fee is considerably higher than the traditional 5 percent for most projects. Regarding "soft costs," we make the following recommendations:

- Identify and separate (as a new line item) the wasted expenditures for re-starting the program due to the lack of funding for two years. Although these wasted expenditures are components of the program's overall cost, they should not be considered when judging the reasonableness of soft costs for implementing the projects.

- Make every effort to cap the design fees at a composite rate of 12 percent for specialized animal facilities work, and for all other projects. Potential savings if these percentages are realized are \$480,000.
- Reduce program management and administration costs from 9 percent to 5 percent of the construction costs. Since program management and owner's administration are somewhat commingled, where to draw the line dividing the two depends on the definition of the terms, not on what is contracted out and what is performed in-house (as currently shown in the budget). Potential savings are \$1.8 million.
- Identify and separate non-construction costs such as surveys and material testing for individual projects so that the budget for program management and administration reflects design and engineering fees, managerial expenses, and office overhead only.
- Negotiate with the Department of Public Works to reduce the construction management budget from 8 percent to 5 percent of the construction value, and explore the feasibility of consolidating projects for further reduction. Potential savings are \$1.4 million.

The recommended reductions for Program Management, Zoological Society Administration, and Construction Management from approximately 16.6 percent to 10 percent would reduce those "soft cost" allocations to the 10 percent allotted for such costs in the San Francisco Zoo Bond Program Report. We have attached the "Description of Cost Breakdown" from the Bond Program Report to this audit section as Exhibit 1.3.1.

The above recommendations should set the target for soft costs at 22 percent of an inflated construction budget. Since the current market conditions increase construction costs by perhaps as much as 10 percent, these recommendations amount to a soft cost budget of 24.2 percent of "normal" construction costs. In view of the extremely tight overall budget, the Zoological Society needs to establish challenging constraints for all expenditures at the commencement of the program. If justifiable as the program proceeds, the Zoological Society can modify the soft cost budget as necessary, transferring funds from the Management Reserve Account.

### **Management Oversight Issues**

To successfully complete the program within a budget that includes the above recommendations, the Zoological Society needs to structure the management organization in such a way as to assure cost effectiveness in the project team's performance. Presently, the Zoological Society has adopted a turnkey approach to program management and implementation, with an oversight committee consisting of members appointed by the Zoological Society's Board. The committee's

membership includes principals of major engineering and construction firms. These members have extensive knowledge and experience in construction, design, and management. However, since the Zoological Society depends on this committee for technical monitoring and oversight, it is crucial that the committee members exercise independent judgment and express contrary viewpoints, when appropriate.

Good management calls for trust and delegation of responsibilities. However, for a large public construction project, a mechanism should be established for checks and balances, especially on fiscal matters. A second and truly independent opinion on critical issues can go a long ways in helping the Zoo Director and the Zoological Society's Board of Directors make sound decisions.

Using a part of the administrative budget, the Zoological Society should appoint an in-house Program Administrator with construction management expertise to oversee the performance of the consultants. In particular, the Program Administrator should review the Program Manager's requests for funding and approve the Program Manager's invoices. The Program Administrator should have the construction experience, the technical knowledge, the personality of a prudent naysayer, and the authority to question and challenge all expenditures and proposed expenditures on behalf of the Zoological Society. The function of Program Administrator could possibly be performed adequately on a part-time basis.

## **CONCLUSIONS**

The San Francisco Zoological Society's Phase II Master Plan Program is an ambitious undertaking with a tight budget. However, if the Zoological Society can establish and maintain an efficient, cost-conscious management team, there are opportunities for reducing the proposed soft costs budget significantly. Any savings in soft costs would result in more funding for a better Zoo for San Francisco.

In response to Budget Analyst recommendations to increase Phase II Master Plan funding for increased construction of capital projects, the Zoological Society has made design changes to the new Administration, Quarantine, and Holding facilities that will make available an additional \$687,000 for construction of animal exhibits.

The current Phase II budget allocates approximately 4.9 percent of total construction costs of \$48 million to Program Management, which is being performed by an outside consultant, and 3.9 percent of such costs to Zoological Society Administration, for a total of approximately 8.8 percent, or \$4,215,434. Further, the current Phase II budget allocates approximately 7.8 percent of total construction costs, or \$3,747,052, to Construction Management, which would be performed by the Department of Public Works (DPW). Thus, the total budgeted cost for these functions is currently 16.6 percent of total Phase II funding, or \$7,962,486. We

recommend that this combined total of 16.6 percent be reduced to 10 percent, or \$4,800,000, in accordance with attainable program and construction management cost containment practices and in accordance with the Zoo Bond Program Report, thereby allowing an additional \$3.16 million to be expended on construction of capital improvement projects.

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\$800,000 of the approximately \$4.53 million in cost reductions identified above should be allocated to increase construction contingency for each individual project by 2.5 percent, or from 5 percent to 7.5 percent. The remainder of the \$4.53 million in savings, or the approximate amount of \$3.73 million, should be allocated to a Management Reserve Account to be used for the construction of additional capital improvement projects to further enhance the Zoo, and to offset increased construction costs resulting from the two-year delay in issuing Zoo bonds.

## **RECOMMENDATIONS**

The Zoological Society should:

- 1.3.1 Implement changes to the, Warehouse, Quarantine, and Holding facility construction plans thereby producing cost savings of \$687,000.
- 1.3.2 Reduce “soft costs” for program management and Zoological Society administration from 8.8 percent of construction costs to five percent of construction costs, thereby saving approximately \$1.82 million.
- 1.3.3 Reduce DPW construction management costs from 7.8 percent of construction costs to five percent of construction costs, thereby saving approximately \$1.34 million.
- 1.3.4 Reduce design fee costs from 13 percent of construction costs to 12 percent of construction costs, thereby saving approximately \$480,000.

- 1.3.5 Negotiate with the Art Commission to reduce Public Art Program fees from two percent to 1.5 percent, thereby saving \$200,000.
- 1.3.6 Allocate \$800,000 of the approximately \$4.53 million in cost reductions identified above to increase the construction contingency for each individual project by 2.5 percent, or from five percent to 7.5 percent.
- 1.3.7 Allocate the remaining \$3.73 million in cost reductions to the Management Reserve Account for further allocation to Phase II construction projects.
- 1.3.8 Develop a separate cost factor for market conditions and update it over the duration of the program.
- 1.3.9 Identify and separate as a new line item in the Phase II Program the wasted expenditures for re-starting the Program. Although these wasted expenditures are components of the Program's overall cost, they should not be included when evaluating the reasonableness of soft costs for implementing the projects.
- 1.3.10 Appoint an in-house Program Administrator with construction management expertise to oversee the work of the consultants. The function could possibly be adequately performed on a part-time basis.

## **COSTS/BENEFITS**

Potential cost savings from implementing the foregoing recommendations are approximately \$4.53 million, which is approximately 9.4 percent of the \$48 million construction budget. Such savings can be used for construction of additional capital project improvements at the Zoo.



# **Exhibit 1.3.1**

## **Zoo Bond Program Report**