

**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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 FILED  
 by the Board of Directors of  
 The Metropolitan Water District  
 of Southern California  
 at its meeting held

JUN 14 1994

May 27, 1994

EXECUTIVE SECRETARY

To: Board of Directors (Special Budget Committee--Information)  
 Board of Directors (Finance and Insurance Committee--Information)

From: General Manager

Subject: Responses to Special Budget Committee Recommendations Made at the  
 1994-95 Budget Workshop

### Report

At its 1994-95 budget review workshop held on May 2-3, 1994, the Special Budget Committee made a number of recommendations for staff consideration. This report summarizes the proposed action by management based on the Committee's recommendations.

1. It was requested that the current organization structure of the District be examined, especially the Engineering and Operations divisions.

A Request for Proposals has been issued to select a consultant to perform a comprehensive analysis of the Engineering Division. The study will examine the efficiency and effectiveness of each branch, personnel staffing and the mix of regular vs. temporary staff and consultant usage, and work flow. Recommendations for the development and implementation of a formal project management structure will also be part of the study. It is anticipated that the study will be completed by December 1994.

An organizational study of the Operations Division was completed by an outside consultant in the Fall of 1993 and a reorganization is scheduled to be implemented when Ed Means takes over as Chief of Operations. The proposed reorganization will take into account the Beck Report on Organizational Review of the Operations Division and the recommendations of the Blue Ribbon Committee and the Peer Review Committee. In addition, the Division has embarked on a process of developing tables of organization for each branch.

2. It was requested that staff evaluate the use of a line item budget format for inclusion in future budgets.

Staff will evaluate various methods of presenting line item information to the Special Budget Committee in future budgets.

3. With regard to water management programs, it was requested that a careful analysis of the quality of water in groundwater basins be performed to validate that the quantity of water projected to be produced under these programs will meet water quality standards that will allow the water to be sold.

Report 991, "A Regional Survey of Groundwater Quality in the Metropolitan Water District Service Area", which was submitted to your Board in May, 1994, evaluated the groundwater quality in 15 major groundwater basins in Southern California. A comprehensive assessment of groundwater quality conditions was made, and a groundwater database was established consisting of existing municipal water supply well data collected from Metropolitan's member agencies and other public agencies. This assessment is being used to determine the reliability of groundwater and opportunities to expand its usage.

The database will be used to evaluate quality, assess the extent of impacts, improve basin management, project quality standards impacts, determine research and development needs, and develop basin protection strategies. Copies of the report are available upon request.

4. It was recommended that Engineering continue to analyze the use of consultants versus adding permanent staff for design work to determine the most appropriate staffing level.

The Engineering Division continues to analyze the labor mix of consultants, regular staff, overtime, and temporary resources on an annual basis. Also, as design of capital programs commences this mix is again examined.

As noted in the response to No. 1, the labor mix will be a key component of the proposed organizational study.

5. It was requested that an analysis be prepared on the impact the Supervisory Control and Data Acquisition (SCADA) system might have on staffing in the Desert Region.

The primary intent of the SCADA system is to improve the efficiency and reliability of the Colorado River Aqueduct (CRA) operations by providing real-time information for operating visibility and decisions, emergency response and safety, and control of water movement. Automating the operations of the pump units is not currently included in this project. Therefore, no major impact is expected on staffing in the Desert region in the near term. However, a SCADA System Task Force has been set up and will include in its purview the impact of SCADA on staffing.

6. It was recommended that a presentation outlining the review process for computer equipment, including an explanation of when "top of the line" equipment is required, be provided.

The review process for PC acquisition is currently being re-engineered. By July 1994, the new procedures will be implemented to include review and approval by the Director of Information Systems for each workstation requested. The review process will ensure that high-end machines go to power users while lower-end machines are migrated to simpler tasks.

When comparing brands of PCs, the following requirements are analyzed: (1) modularity and upgradability of the system unit, (2) ability to use models of the same brand for desktop machines and local area network servers, (3) multi-year warranty, (4) reliability, and (5) a life expectancy of five years or better. The most recent evaluation resulted in the selection of Compaq. The current benefits of staying with Compaq include consistency of parts and supplies, avoidance of additional technician certification and training costs, and reduced maintenance costs due to a low product mix. In conclusion, due to the competitive nature of this business, we expect that over the next fiscal year Compaq prices will tend to fall at or below comparably equipped PCs.

7. It was recommended that the Director of Information Systems have the authority to approve/deny all automation requests.

The General Manager has delegated this authority to the Director of Information Systems.

8. It was suggested that a section be included in future budgets that explains the budget format.

In the final budget, as well as in future budgets, an explanation of the budget format and the budget process will be included.

9. It was recommended that a report be prepared that identifies the total costs associated with diversity programs for 1994-95.

It is estimated that approximately \$2 million will be spent on diversity programs in 1994-95, a large portion of which is a reallocation from other programs. Each division has committed a portion of its budget to promote diversity in the workplace through recruitment, selection, training and opportunities for advancement. Similarly, resources have been allocated in the budget to promote participation by MBE/WBE firms in the District's procurement, contracts and consulting activities. About one-half of the funding is for the Office of Diversity, which charged with coordinating this effort; and the balance is spread among the other divisions. The divisions with the most significant involvement include Human Resources, Administrative Services, Engineering, and Operations

10. It was noted that safety of principle should be a major consideration when making investments.

Metropolitan's investment policy has been, and will continue to be, a conservative policy guided by the three guiding principles of public fund management: safety, liquidity, and return, with safety as the most important principle. As stated in the Metropolitan Water District of Southern California Statement of Investment Policy dated January 11, 1994:

"In order of importance, three fundamental criteria shall be followed in the investment program:

a. Safety of Principal - investments shall be undertaken in a manner which first seeks to ensure the preservation of principal in the portfolio. The Treasurer shall evaluate or cause to have evaluated each potential investment, seeking both quality in issuer and in underlying security or collateral, and shall diversify the portfolio to reduce exposure to loss.

b. Liquidity - investments shall be made whose maturity date is compatible with cash flow requirements and which will permit easy and rapid conversion into cash without a substantial loss of value.

c. Return on Investment - investments shall be undertaken to produce an acceptable rate of return after first considering safety of principal and liquidity.

11. It was suggested that staff investigate the use of charge back systems for certain services provided by support programs.

The objectives of implementing charge back systems are to increase accountability, ensure competitiveness of the cost of services, and justify the cost and benefits. Consistent with these objectives, user divisions are currently charged for some services such as cellular phone and copier usage. An analysis is currently underway to identify other support services that meet the objectives and should be charged to user divisions.

12. It was requested that those objectives from the prior year budget which were not achieved be identified.

Objectives from the prior year budget which were not achieved will be identified in future budgets.

13. It was requested that an analysis be prepared of the purchase of the Allen McColloch and South Coast Pipelines compared to the cost if the District had designed and constructed these facilities.

An analysis of the Allen McColloch purchase will be completed by August and submitted to the Board. The South Coast Pipeline analysis will be prepared upon

conclusion of negotiations.

14. It was recommended that a policy on desalination be prepared and adopted by the Board of Directors.

The Ad Hoc Committee on Energy and Desalination is scheduled to meet in July 1994 and reports will be presented to the Committee on the District's demonstration project test unit and desalination system integration study along with status reports on other desalination projects. The agenda will include a staff presentation and an open discussion on seawater desalination as a local water supply and its role in the Integrated Resource Plan. It is anticipated that the Committee will develop a desalination policy over a series of meetings prior to proceeding with the design and construction of the five million-gallon-per-day demonstration plant. The policy will take into consideration (1) the results of Metropolitan's test unit operations in Phase 1 of the demonstration project, (2) the success of projects and desalination process developments conducted by others, and (3) Metropolitan's projected market share in local reclamation, local groundwater and imported water supplies vs. seawater desalination supplies as formulated through the IRP.

15. It was requested that the overall cost of preparing environmental impact reports (EIRs) be provided.

The total amount budgeted for preparing capital project EIRs for 1994-95 is \$1,221,800. This includes District labor, consultant costs, and printing costs. The projects include Chino Basin Groundwater Storage Program, Main San Gabriel Basin Groundwater Storage, Mills Filtration Plant Landfill, Skinner Filtration Plant Landfill, Central Pool Augmentation & Water Quality Project Study, and West Valley Area Study. In addition, \$605,000 is included in the O&M budget for CEQA documentation for miscellaneous projects and maintenance activities.

16. It was requested that a report be prepared on the continuing problems and proposed solutions associated with the Newhall Tunnel.

A study is currently being conducted to evaluate additional strengthening options for the buckled portion of the Newhall Tunnel liner. Once an option has been

selected, a board letter outlining the history of the tunnel and requesting authorization and funding to proceed with corrective actions will be submitted to the Board. It is estimated that a recommendation will be made to the Board by October 1994.

17. It was requested that a report be prepared outlining what the District learned from the 1971 earthquake, what changes were made as a result of that earthquake, and what new things did the District learn from the 1994 Northridge earthquake.

After the 1971 earthquake, a MWD Earthquake Committee was established composed of Engineering and Operations divisions personnel. The committee was charged with identifying specific projects and programs to mitigate seismic hazards within the District's operations. One of the recommendations was to prepare an Emergency Response Plan. The plan was published in 1976 and has been periodically updated.

Similarly, after the January 1994 earthquake, a Northridge Earthquake Assessment Task Force was formed. It is preparing a "Northridge Earthquake Assessment Report" for presentation to the Board in July. The report will contain an assessment of our response to the earthquake and proposed improvements to our Emergency Response Plan so that we are better prepared for the future. It will also include the measures taken after the 1971 earthquake.

18. It was suggested that the design of the desalination demonstration project should not proceed until all appropriate technologies have been explored.

As noted in the response to No. 14, at the July meeting of the Ad Hoc Committee on Energy and Desalination, reports on the District's demonstration project test unit, desalination system integration study, and an update of other desalination projects will be presented. In addition, the Committee will begin formulating a desalination policy. The design of the desalination demonstration project will not proceed until a policy has been adopted.

19. It was noted that the District is the highest rated water quality laboratory in the nation, and it was requested that information be provided as to what

benefit the District receives from this ranking.

The primary benefit that Metropolitan receives is customer confidence and the fact that the public is assured of receiving high quality of water 100 percent of the time. In addition, our reputation as one of the highest rated laboratories in the nation provides credibility when submitting information to regulators that could influence decisions that have very high fiscal impacts. Most recently, Metropolitan provided substantial information as part of the regulatory negotiation process for the Disinfectants/Disinfection By-product (D/DBP) Rule. This information has the potential to save Metropolitan and its member agencies hundreds of millions of dollars by avoiding granular activated carbon treatment of D/DBP formation.

Additionally since 1987, Metropolitan has obtained approximately \$800,000 in outside funding from the American Water Works Association (AWWA), AWWA Research Foundation, United States Environmental Protection Agency, and California Department of Health Services for applied research projects and participation in technical advisory work groups for projects that directly affect Metropolitan and its member agencies. For fiscal year 1994-95, the District has submitted proposals for approximately \$185,000 in funding for haloacetic acid methods development and to investigate control strategies for bromate and bromide. Metropolitan's status as a leader in the environmental science and engineering fields has facilitated the funding of projects and activities that are beneficial to the District.

20. It was suggested that consideration be given to patenting discoveries and technologies developed by the District and selling this information, when appropriate, to produce additional revenues.

In the future, when the opportunity to patent a discovery or technology occurs, staff will investigate the options of obtaining patent rights.

21. It was requested that amount of money budgeted in the Water Quality Division for basic research be provided.

Most of the research funded by Metropolitan is applied research that evaluates practical applications to

resolve specific water quality related issues and problems to comply with existing or future regulations. Basic research investigates the understanding of the laws of science and nature and may not have direct or immediate application benefits. Of the \$919,000 budgeted for professional services in 1994-95, \$33,000 is targeted to be used by the University of Michigan for basic research to study biochemical production of the taste-and-odor compound 2-methylisoborneol.

22. It was requested that staff evaluate the potential of using the Inductively Coupled Plasma Mass Spectrometer (ICPMS) to perform metal sampling for private industry.

The ICPMS costs approximately \$250,000 and has a projected payback period of seven years. While the Water Quality Division has the technical capability to provide analytical services to member agencies/subagencies and industry, this is a service that has not been provided in the past. It would require considerable change in the Division's organizational structure and operational philosophy, including additional staff, marketing development and expense, and other upfront investment.

23. It was requested that an analysis of the need for 486 model computers to run the local area network in Water Quality be conducted.

Between 1984 and 1993, the Water Quality Laboratory used a Digital Equipment Corporation computer system to support a laboratory information system (LIMS), word processing, and statistical analysis. In 1993 when new LIMS software was implemented, it was decided to use standard District hardware and software to provide compatibility with the rest of the District. To meet the memory requirements of the new software, Model 486 PCs are needed to support LIMS, statistical analysis, data transfer, data processing, data reporting, administrative accounting functions, and word processing.

24. It was requested that staff evaluate the potential of combining a microwave solution with the SCADA system.

A SCADA task force has been formed to oversee the short- and long-term requirements for an integrated District-wide SCADA system. One of the tasks that will be

accomplished by this group is a cost benefit analysis to determine if utilizing the existing microwave system best meets the communication requirements of the SCADA system. This analysis will be performed after the specifications for the SCADA system have been developed.

25. It was recommended that staff report to the Board on what steps are being taken to maintain the District's microwave frequencies.

The District operates microwave radio transmitters in the 2 Ghz frequency band between Big Maria repeater site, Black Metal repeater site, and Gene Headquarters. The Federal Communications Commission (FCC) has enacted regulations reallocating the 2 Ghz band on a shared basis to personal communications services. This regulation has the potential to require the District to stop using the 2 Ghz band. It should be noted if this were to happen, the personal communications service provider must reimburse the District. Additionally, as the District's 2 Ghz microwave radio transmitters are located in remote desert location, the possibility of this regulation affecting the District is small.

The regulations are being tracked through the law firm of Keller and Heckman and the Utilities Telecommunication Council (UTC). Keller and Heckman has represented the District before the FCC, responding to the proposed rule changes and presenting District opposition. District staff also joined with other utilities nationwide through the UTC to oppose the proposed rule changes. In addition, staff has lobbied U.S. Senators and Representatives to oppose the proposed rule changes, as well as the chairman of the FCC.

26. It was requested that a breakdown of computers by division be provided.

Please refer to Attachment 1 which shows computers by division.

27. It was recommended that better explanations of equipment requests be provided in future budgets.

Information related to equipment requests will be included in future budgets.

28. It was requested that staff explore expanding the low-flush toilet program to include school districts.

Low-flush toilets have been installed in several schools, and staff will continue to identify schools that are retrofit candidates.

29. It was requested that an analysis of the activities of the SWP & Conservation Division and the Public Affairs Division be performed to determine if there is an overlap of responsibilities in Sacramento and Washington, D.C.

As part of the development of an external affairs strategy, an analysis of the activities of these divisions will be performed. One way overlap is being addressed is through the Issues Management Program which enables issue management teams to address major issues in an integrated manner. An example is the Bay/Delta Issue Management Team which is comprised of personnel from the General Manager's office, State Water Project, General Counsel, the legislative representative. This team speaks as one voice when addressing Bay/Delta issues with outside agencies and has proved effective. (See No. 32)

30. It was suggested that the format used in the oral presentation of the Environmental Compliance budget be evaluated as a potential template for all divisions to use in future years.

Staff will evaluate the use of a standard template for oral budget presentations.

31. It was recommended that a review be performed to evaluate the value and success of the publication and education programs and that the methodology used to perform the analysis be explained.

The value of the education program is measured on an on-going basis through a required pre- and post-test for students learning the program. Additionally, virtually all of the extracurricular activities offered by this program are monitored through questionnaires collected from those teachers using the material. Statistical data regarding the value of this material is available for the past ten years as well as teacher surveys on workshops and printed material. The Education Program

publishes a comprehensive annual report that discusses the value of the program. Generally, this report is distributed to the Board in September or October of each year.

With regard to other printed materials, a survey of usefulness will be conducted and should be completed before the end of the calendar year.

32. It was suggested that staff evaluate the level of effort currently being devoted to activities in Sacramento and Washington, DC. to determine if additional resources should be dedicated to these activities.

It is management's intention to strengthen Metropolitan's presence in Sacramento and Washington, particularly in light of the issues effecting importing water sources at the federal and state levels. Staff has been included in the budget to provide an increased presence in Sacramento for Bay/Delta issues, and other staffing adjustments will be evaluated upon completion of the external affairs strategy. (See No. 29)

33. It was requested that the scope of Phase 1 and the estimated total costs be provided.

Phase 1 of the Information System Strategic Plan (ISSP) is a 37-month effort to replace the District's core business systems. The scope is outlined in the attached September 17, 1993 Board letter. Project work has begun and staffing is in place for the finance, Material, HR/Payroll and Technology projects.

34. It was recommended that the level of staffing of the Right of Way and Land Division for future years be reevaluated.

Since the Right of Way and Land Division is scheduled to join the Engineering Division, staffing levels for 1995-96 and 1996-97 will be reviewed by the Chief Engineer with regard to the number of employees required to support the Capital Improvement Program and to achieve the Strategic Plan objectives.

35. It was suggested that management carefully evaluate whether escalation clauses should continue to be incorporated into labor contracts.

Management considers a complete array of options in regards to terms and conditions of labor contracts. Escalation clauses are not required and are only used when appropriate. Traditionally, the District has collected and reviewed data from various sources to assist in the formulation of a negotiation strategy. The information may include, but is not limited to the following: 1) the 11-agency survey, 2) internal compression surveys, and 3) the Consumer Price Index.

36. It was requested that the level of auditing on large construction projects be evaluated.

The expansion of the Audit Department's efforts to audit significant construction and consulting agreements is a primary objective for 1994-95; however, such efforts are contingent on staffing and other work priorities. In addition, there has been budgeted a modest amount for contractual audit services which could be utilized to augment the audit staff on assignments of this nature. The Auditor has indicated that he expects and welcomes further discussion of this subject with the Special Audit Committee in July in connection with that committee's review and approval of the detailed Audit Work Plan for Fiscal Year 1994-95.

37. It was requested that a budget vs. actual report on capital projects for fiscal year 1993-94 be prepared and submitted to the Board of Directors.

A year-end budget vs. actual report on capital programs will be prepared and submitted to the Board in late summer.

#### Board Committee Assignments

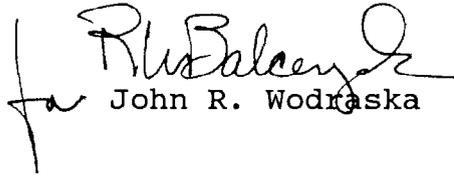
This letter is referred for information to:

The Finance and Insurance Committee pursuant to its authority to study, advise, and make recommendations with regard to preparation of budgets under Administrative Code Section 2441(a).

The Special Budget Committee pursuant to its authority to review proposed budgets under Administrative Code Section 2531.

Recommendation

For information only.

  
John R. Wodraska

MCF:lg  
SBCRSP

Attachment

# Computers by Division

	Projected 06/30/94	Budget 1994-95	
	Installations	Replacements	New
<b>Administrative Services</b>	147	11	11
<b>Auditor</b>	13	0	0
<b>Engineering</b>	539	200	88
<b>Environmental</b>	97	21	2
<b>Executive/Legal</b>	46	4	5
<b>Finance</b>	85	14	1
<b>Human Resources</b>	46	0	0
<b>Information Systems</b>	116	41	8
<b>Operations</b>	350	186	6
<b>Planning</b>	49	6	2
<b>Public Affairs</b>	40	1	0
<b>Resources</b>	53	32	0
<b>Right of Way</b>	49	16	0
<b>State Water Project</b>	60	13	5
<b>Water Quality</b>	93	33	4
<b>Total</b>	<b>1783</b>	<b>578</b>	<b>132</b>

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**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

September 17, 1993

To: Board of Directors (Engineering & Operations Committee-Action)  
(Organization & Personnel Committee-Action)  
(Finance & Insurance Committee--Action)

From: General Manager

Subject: Authorization of increases in Appropriations 099 and 634 and delegation of authority to the General Manager to enter into contracts required to implement Phase One of the Information Systems Strategic Plan.

### Summary

The process of replacing core business systems began with your Board's authorization of the Phase Zero project of the Information Systems Strategic Plan (Phase Zero Project) in February of 1992. In April of 1993, the Phase Zero Project completed the design of a comprehensive systems solution which incorporates industry standard software and hardware at a cost of approximately \$5.8 million. Consistent with the automation program outlined in the Capital Projects Program, funding of an additional \$23.2 million is now requested to implement nineteen (19) key business applications over the next 40 months. Consultants experienced with the selected software packages will lead the implementation process. Performance and contract costs will be strictly monitored. Major milestone review points have been established at which contractor performance will be evaluated and all contracts will be cancelable. The first checkpoint will be nine months into the project with subsequent check points every six months.

### Detailed Report

Due to their age, and the increasing volume of business activity, the capacity of Metropolitan's existing information systems to adequately support business operations continues to decline. This was the central finding of the Information Systems Strategic Plan (Andersen Report) prepared by Andersen Consulting in May 1991. This finding was confirmed by the priorities identified in the Phase Zero project and by our recent Strategic Plan.

The Andersen Report and Phase Zero generated the following conclusions:

- Thirty-five out of 43 business applications need improvement and 12 of these are in "acute need for improvement"
- The most significant of the "acute need for improvement" core business applications are in Finance; Human Resources; Health, Safety and Environmental and Materials

The selection and installation of effective core business systems is a prerequisite to achieving the strategic objectives of productivity enhancement, cost control and management accountability that are outlined in the Strategic Plan dated July 1, 1993.

The proposed Phase One work builds on the Phase Zero effort funded by your board in February of 1992. Over the past two years, Metropolitan has engaged in:

- **Priority setting:** A rigorous process to prioritize critical systems needs
- **Competitive search:** A competitive search for software application packages with solid marketplace acceptance that meet Metropolitan's basic functional requirements
- **Industry standard methods:** An assessment of industry standard approaches to application development to arrive at an efficient strategy for implementing the Phase One packages
- **Project management:** Establishment of project management control processes to increase the effectiveness of software development projects

The scope of Phase One is now established, consistent with our commitment to your Board in February 1992 when funding for the \$5.6 million Phase Zero project was approved. The requested increase in the existing appropriation is required to proceed with the next phase of Information Systems Strategic Plan implementation in accordance with the multi-year project scope outlined in Metropolitan's Capital Program.

A program management structure has been established to promote accountability of the Phase One project teams. It includes the following features:

- A sponsoring business division will have primary responsibility for the day-to-day management of each of the Phase One application development projects.
- Information Systems division has established a "program office" that will administer all Phase One activities to ensure that applications are implemented in an integrated fashion; that quality products are developed and implemented; and that project schedules and budgets are met.
- A Steering Committee comprised of senior management representatives and the Audit Department will provide project oversight and involvement to ensure that corporate policies are complied with and that strategic and project objectives are attained.
- Quarterly reports will be submitted to your Board throughout the duration of Phase One that outline the status of the project, including costs incurred and applications delivered.
- Major milestone review points will be established at which contractor performance will be evaluated and all contracts will be cancelable. The first checkpoint will be nine months into the project with subsequent check points every six month.

The total capital cost of the Phase One program is estimated to be \$23.2 million over its scheduled 40 month duration. While the fully implemented systems are expected to yield a total payback over ten years of about \$64 million, the intangible benefit of serving as a catalyst for widespread organizational changes is likely to be more extensive. Full benefits of the Phase One project will be achieved when all applications are fully implemented, although partial benefits will accrue prior to this time as systems are brought on-line. The detailed business case to justify the approval of Phase One is outlined in Attachment "A" to this letter.

The estimated cost of the Phase One program includes all activities necessary to fully install and implement the hardware and software selected for the core business areas. The program estimates do not include costs for the anticipated business productivity improvement efforts outlined in the draft Strategic Plan. The separate productivity improvement projects, which will be performed by individual divisions or by multi-divisional teams, will be proceeding prior to or concurrent with the implementation of Phase One projects outlined in Attachment "B".

The Phase One implementation plan developed during Phase Zero requires a steady deployment of the 19 key business applications on a prioritized but concurrent basis. The proposed implementation plan takes into account the condition of systems currently in use, application and technical requirements, and the need for early, tangible returns on Metropolitan's investment. The implementation plan leverages the skills and expertise of current staff by supplementing Metropolitan resources with significant consulting resources. A summary overview (Gantt Chart) of the Phase One Program Implementation Plan is outlined in Attachment "B" to this letter.

During Phase One, resources will be integrated across Metropolitan to create a strong partnership between personnel from the Information Systems division, other Metropolitan organizations, and the various consultants selected to assist on the projects. It is anticipated that completion of the Phase One Program will result in improvements in business processes and productivity enhancements that will result in personnel savings equivalent to forty-three (43) full-time positions throughout the organization when all applications are fully implemented. It is management's intention to utilize any personnel gains obtained through automation improvements to meet other future critical business needs, to perform more productive work activities, and to offset future pressures to increase permanent staffing levels. Any reduction in staff will be accomplished through attrition.

It is also expected that Phase One implementation will bring the so-called "shadow" Information Systems personnel out of the background and fully integrate such staff in the District's new distributed information systems environment. This will eliminate the need to maintain redundant data or staffing and is a recognized benefit of the program.

During Phase Zero, staff identified and evaluated a number of alternative hardware, software, and scheduling strategies for accomplishing the Phase One objectives. Attachment "A" outlines these various alternatives for your Board's information, as well as the conclusions reached as to preferable vendors.

Formal requests for proposal and other applicable competitive bidding procedures were, or will be, utilized in the acquisition of Phase One hardware, software and consultant services. However, in order to facilitate contracting efforts, staff requests that the Board delegate to the General Manager the authority to enter into all agreements necessary to complete the program. Factors that influence the decision to seek the delegation of contractual authority to the General Manager include:

- Direct contracting authority increases staff's negotiating leverage with vendors and should result in some lowering of costs.
- The number and interrelationship of hardware vendors, software vendors, and consulting firms that will be involved with the projects indicates that coordinating start dates with board dates may cause unnecessary or costly delays.
- Attaining early benefits through this program will require timely commencement of contracts to begin work, meet schedules and control costs.
- Work requirements have been defined in increments to promote business opportunities for smaller vendors with specific expertise, including minority and woman owned business enterprises.

Appropriation 634, which was established at the start of Phase Zero, will continue to be used to collect all applicable costs of the Phase One program. Appropriate work orders will be established for each major application project within the scope of the total program. While most project costs will be capitalized as part of continuing Capital Budget Appropriation 634, certain support and training costs may be charged to annual operations and maintenance work orders in accordance with established policy. Current cost estimates, excluding operating equipment costs, for Phase One total approximately \$21.1 million. Attachment "A" provides further detail on the breakdown of this cost estimate for the project.

As shown in Attachment "A", major additional components of computer hardware, costing approximately \$2.1 million, will also be required during the next fiscal year to successfully implement Phase One business applications. Accordingly, an increase of approximately \$2.1 million in continuing Appropriation 099, Operating Equipment, to a total of \$12,186,800 is required. This increase was not included in the operating equipment appropriation approved by your Board in June as part of the fiscal 1993-94 annual budget process.

Funds for the recommended increases to appropriations will be derived from the General Fund.

Board Committee Assignments:

This letter is referred for action to:

The Engineering and Operations Committee because it has jurisdiction over the contracting programs and the ordering of equipment or materials and selection of consultants to be used pursuant to Administrative Code Section 2431 (b) (h);

The Organization and Personnel Committee because it has jurisdiction over the selection of management and personnel consultants and the determination of the scope of their assignments pursuant to Administrative Code Section 2471(f); and

The Finance and Insurance Committee because it has jurisdiction over appropriations pursuant to Administrative Code Section 2441(d).

Recommendations:

**ENGINEERING AND OPERATIONS, ORGANIZATION AND PERSONNEL COMMITTEES FOR ACTION:**

It is recommended that the General Manager:

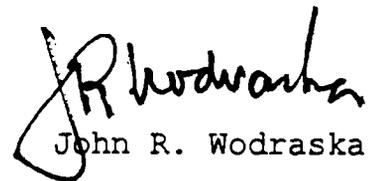
1. Be delegated the authority by the Board to enter into agreements without regard to the limitations contained in Administrative Code Sections 8115(b) and 8117 and in form approved by the General Counsel, for purchases of equipment or hiring of consultants consistent with the cost estimates shown in Attachment "A", and as necessary to complete the Phase One tasks as outlined in Attachment "B" to this letter;

2. Use formal requests for proposals and other applicable competitive bidding procedures to acquire the necessary Phase One hardware, software and services;
3. Issue quarterly reports to the Board on all contracts awarded by the General Manager that exceeded \$250,000; and
4. Issue quarterly reports to the Board on the status and costs incurred on the Phase One program activities.

**FINANCE AND INSURANCE COMMITTEE FOR ACTION:**

It is recommended that the Board authorize an increase in:

1. Continuing Appropriation 099 by the amount of \$2,100,000, to a total of \$12,186,800, for equipment purchases related to Phase One implementation; and
- X 2. Appropriation 634 by approximately \$21.1 million, for a total of \$26.8 million, to fund the estimated cost of implementing Phase One of the Information Systems Strategic Plan.

  
John R. Wodraska

DJS:sm  
Attachments

Attachment "A" - Business Case Supporting Phase One Proposal

*Overview Of The Needs For The Phase One Program*

The proposed Phase One program encompasses the implementation of a series of core business applications designed to aid the transformation of the District's standard business and administrative processes. Phase One facilitates the implementation of District's Strategic Plan and builds upon work completed during the two prerequisite projects previously approved by the Board.

The first study, conducted by Andersen Consulting, developed the Information Systems Strategic Plan (ISSP) in 1991. This plan assessed the District's 43 applications as being inadequate to support the business and laid out a plan for addressing the situation. Listed below are the grades the applications received:

- Eight (8) in good shape
- Twenty-three (23) need improvement
- Twelve (12) have acute need for improvement

Subsequently, District staff examined the applications in the "acute need for improvement category" to identify priorities for proceeding. Applications from the Finance, Human Resources, Materials and Health, Safety and Environmental areas became the focus for continued work. A second study, Phase Zero, which was authorized by the board in early 1992, was conducted with the assistance of IBM and Deloitte & Touche. Phase Zero resulted in the identification of specific application software and hardware necessary to meet the District's requirements in these four core business areas.

The motivation stimulating these prerequisite projects was the recognition that the District's current business practices are no longer adequate and these efforts identified ways to effect the needed changes. The need for change is driven by a shifting political and economic climate, the impact of the drought, an aggressive capital expansion program, general productivity expectations and the impossibility of the existing business systems to support the ongoing business operations. A complete overhaul of the District's existing business systems, coupled with a strong management directive to improve administrative and business practices, offers the best opportunity for achieving the level of productivity and cost containment implied by current objectives stated in the

recently developed Strategic Plan. While a systems upgrade alone will lead to minor efficiency gains, the selected applications serve as a catalyst in creating far greater benefit opportunities. The Strategic Plan's guiding principles cannot be supported with current applications, procedures, and policies.

The District's existing core administrative applications are incapable of supporting the transformation of the business. This is because they are decades old, difficult to maintain and are technologically obsolete. These weaknesses manifest themselves as follows:

- Information produced may be inaccurate or its reliability may be questioned
- Significant time delays incurred waiting for information
- Information from various applications is inconsistent
- Voids in necessary information depth and detail
- System users are required to develop extensive work around systems and procedures
- The difficulty and cost to maintain the systems.

Completion of the outlined Phase One projects will provide:

- The ability to manage an increasing workload with no or minimal staffing increases
- The ability to address the information needs of management and key decision makers by providing them timely, accurate, and consistent information
- Increased control and management accountability over the District resources applied to both capital and operational activities
- An opportunity to modify business processes, in conjunction with application implementation, to streamline inappropriate business practices and controls
- A suite of core business systems to replace our current ineffective systems and obviate the need for independent development and operation of localized business systems by multiple District organizations

- A standard for project management, systems development, and systems management that will facilitate increased accountability and cooperation across the District.

Management believes that for the foregoing reasons alone, and without regard to the significant cost/benefits to be realized by the implementation of Phase One, this essential program should be funded and completed as soon as possible.

### **Selected Software and Hardware Solutions**

The preferred software packages for the core business functions were selected during Phase Zero via a comprehensive process that involved individuals from across the District to ensure the systems will address the entire organization's needs. The rigorous process utilized a Package Selection Committee to oversee and guide activities. The committee was made up of representatives from seven (7) divisions including Operations, Engineering and the Audit Department. The selected software is listed below.

#### **Finance**

The selected financial packages, Oracle's Financials, represent a comprehensive, flexible solution to the District's accounting and financial reporting requirements. The projects in this area will address the budget and cost reporting functions, project accounting, accounts receivable, and all standard, ad hoc, and Board level reporting.

#### **Materials Management and Accounts Payable**

The selected materials management packages, Oracle's Financials, address the District's business needs related to inventory control, purchasing, and accounts payable. These packages are completely integrated with the accounting packages and will allow for complete encumbrance accounting and other advanced materials management functions.

#### **Human Resources and Payroll**

The selected package, PeopleSoft's Human Resources and Payroll, will address the processing and information requirements related to payroll, personnel management, benefits administration, training and development, and medical records.

## **Health, Safety and Environmental**

The selected packages, General Research's Flow Gemini, represent a comprehensive and flexible solution to the District's environmental compliance information needs. The projects in this area will establish a single health, safety and environmental database. In addition, they will address the areas of permits, hazardous materials inventory tracking, environmental audit, surface/waste water, air emission monitoring, asbestos monitoring, job hazard analysis and employee hazard communication.

The preferred hardware for the core business functions was selected during Phase Zero via a comprehensive process that involved individuals from across the District to ensure the systems will address the entire organization's needs. The process utilized a Technical Committee to oversee and guide activities. The committee was made up of representatives from seven (7) different divisions including Operations, Engineering and the Audit Department. The selected type of hardware is listed below.

### **Client Server Hardware**

The type of hardware that has been selected is consistent with the ISSP developed by Andersen Consulting. The hardware conforms to the open systems standard, it is not proprietary to any vendor, and it utilizes the client - server approach to computing. This course of action is consistent with industry trends as it will result in significantly lower cost of operation versus the other possibilities, i.e., IBM mainframes.

A wide variety of technology, hardware and software alternatives were evaluated during Phase Zero. The solutions above were derived from a rigorous process based on established needs and criteria and are believed to be optimum solutions to meet the District's current and future automation needs.

### ***Estimated Phase One Cost Summary***

The following table is a summary cost estimate for the implementation of the Phase One Program. The bulk of the program consists of capital costs, although some related costs for things such as user training will be treated as O&M expense in accordance with established policy. Funding for related O&M costs will be provided during the annual budgetary process.

Appropriation Summary	
Appropriation 634	\$21,100,000
Appropriation 099	\$ 2,100,000
<hr/>	
Estimated Total Phase One Capital Costs	\$23,200,000
Estimated Related O&M Cost to Implement Phase One	\$ 1,400,000
<hr/>	
Program Cost Summary	\$24,600,000

The required Phase One capital costs are detailed on the next page, by year for each of the four areas, as well as for Program Office administration, ISD's Service Delivery and the hardware and software acquisitions. For program management purposes, the Program Office is chartered to oversee all Phase One projects from a budgetary and a technical perspective.

## ESTIMATED PHASE ONE CAPITAL COSTS BY YEAR

Area	Year 1	Year 2	Year 3	Year 4	Totals
FINANCE	442,000	1,944,000	780,000	0	3,166,000
MATERIALS MANAGEMENT & ACCOUNTS PAYABLE	801,000	1,737,000	0	0	2,538,000
HUMAN RESOURCES & PAYROLL	911,000	1,443,000	226,000	0	2,580,000
HEALTH, SAFETY & ENVIRONMENTAL	538,000	922,000	922,000	449,000	2,831,000
PROGRAM OFFICE	1,027,000	2,258,000	440,000	160,000	3,885,000
ISD'S SERVICE DELIVERY	923,000	764,000	413,000	0	2,100,000
HARDWARE & SOFTWARE ACQUISITION	6,100,000	0	0	0	6,100,000
ANNUAL TOTAL	10,742,000	9,068,000	2,781,000	609,000	23,200,000

EX CPM                      9,819,000      8,304M      2,368M      609      23,100,000

Note, at the end of three years there may be a few systems running on the mainframe that will need to be migrated off.

## ***Summary of Benefits To Implement Phase One***

To the extent reasonably possible, the proposed \$23.2 million capital cost to implement Phase One has been justified based on projected savings from the reduced cost of ongoing operations. In addition, the overriding need to sponsor this investment comes from the essentially intangible nature of improved timeliness, quality, consistency and availability of data which will enable effective execution of the District's transformation strategies.

Computed Phase One benefits for the four core areas are detailed on the following pages, by year, for ten years. The information on each of the areas is broken into the following parts:

- FTE Dollar Savings -- refer to page 8 for a summary perspective on this area
- Other Dollar Savings
- Intangible benefits

Based upon the detail provided on pages 9 through 14, potential tangible dollars savings, in the four application areas, of approximately \$54 million have been projected. The downsizing of the IBM host will result in an additional \$9.5 million savings. The total potential savings of \$64 million excludes the value of the significant intangible benefits cited. The projected annual net benefits to ongoing O&M costs, which are summarized on page 17, approximate \$54 million over ten (10) years. Amortization expenses for Phase One Program costs are excluded from this analysis since they are a non-cash item. Even if the dollar projections included in this document are substantially discounted, management believes they provide strong justification for supporting and funding Phase One efforts as soon as possible.

Phase One Benefits -- FTE Savings			
Area	Year 1	Years 2 To 10	Division(s) Impacted
<b>I. MATERIALS AND ACCOUNTS PAYABLE</b>			
Paperless Receiving	2	2	Admin. Services - 2
Automatic back orders	1	1	Admin. Services - 1
Exception report monitoring	0.5	0.5	Admin. Services - 0.5
Key punch	1	1	Admin. Services - 1
Accounts Payable clerks	4	4	Finance - 4
<b>Subtotal Existing FTE Elimination</b>	<b>8.5</b>	<b>8.5</b>	
<b>II. HUMAN RESOURCES AND PAYROLL</b>			
Centralized labor cost analysis	12.25	12.25	Operations - 5.5 Engineering - 1.5 Others - 5.25
New payroll system	3.35	3.35	Info. Systems - 2.5 Finance - 0.85
Reports on-line & less data entry	3	3	Info. Systems - 0.67 Personnel - 0.33 Others - 2.0
Re-engineer Personnel	3.5	3.5	Personnel - 3.5
<b>Subtotal Existing FTE Elimination</b>	<b>22.1</b>	<b>22.1</b>	
<b>III. FINANCE</b>			
Eliminate the need for "shadow" cost/budget systems	3	7	Finance - 1 Operations - 2 Engineering - 1 Others - 3
Reduce the effort required to maintain the Cost Ledger	1	3	Finance - 3
Reduce the effort required to maintain the General Ledger	1.5	1.5	Finance -1.5
Reduce the effort required to maintain Accounts Receivable	1	1	Finance - 1
<b>Subtotal Existing FTE Elimination</b>	<b>6.5</b>	<b>12.5</b>	
<b>TOTALS</b>	<b>37.1</b>	<b>43.1</b>	

Note: The FTE savings in this document represent a reduced cost of future operations. It is management's intent to reinvest these savings in productive activities and thereby avoid future increases in FTEs. Any reduction in staff will be accomplished through attrition.

## MATERIALS MANAGEMENT AND ACCOUNTS PAYABLE BENEFITS

### I. FTE DOLLAR SAVINGS

Benefit Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
Paperless Receiving	0	146,970	152,114	157,438	162,948	168,651	174,554	180,664	186,987	193,531	1,523,858
Automatic back orders	0	73,485	76,057	78,719	81,474	84,326	87,277	90,332	93,493	96,766	761,929
Exception report monitoring	0	36,743	38,028	39,359	40,737	42,163	43,639	45,166	46,747	48,383	380,964
Key punch	0	73,485	76,057	78,719	81,474	84,326	87,277	90,332	93,493	96,766	761,929
Accounts Payable clerks	0	293,940	304,228	314,876	325,897	337,303	349,109	361,327	373,974	387,063	3,047,716
Subtotal FTE Savings	0	624,623	646,484	669,111	692,530	716,769	741,856	767,821	794,694	822,509	6,476,396

### II. OTHER DOLLAR SAVINGS

Stores inventory reductions	0	540,000	540,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	2,340,000
<b>TOTAL DOLLAR SAVINGS</b>	<b>\$0</b>	<b>\$1,164,623</b>	<b>\$1,186,484</b>	<b>\$849,111</b>	<b>\$872,530</b>	<b>\$896,769</b>	<b>\$921,856</b>	<b>\$947,821</b>	<b>\$974,694</b>	<b>\$1,002,509</b>	<b>\$8,816,396</b>

### III. INTANGIBLE BENEFITS

Opportunity for Material Requirements Planning (MRP) * Automatic generation of requisitions from bills of material with due dates calculated from scheduled event dates (e.g., assembly, fabrication)
Opportunity for immediate identity of obsolete materials * Associate spare parts with equipment ..... immediately dispose of spare parts when equipment is disposed
Opportunity for interface between Materials Management and Project Management * Project Management system automatically feeds due dates to Materials Management system, the Materials Management feeds order status back to Project Management
Opportunity for productivity gains from bar coding * On-line, real-time system provides environment suitable for bar coding several Materials Management transactions (e.g., inventory withdrawal, cycle count)
Opportunity for Electronic Data Interchange (E.D.I.) with vendors * Form trading partnerships with vendors so that all business is transacted electronically. Ultimately, this includes P.O., shipping advice, receipt, invoice and payment
Improved management of resources resulting from integrated, on-line data and ad hoc inquiry * E.g., immediate information regarding on hand and on order status of material will provide a level of confidence that material will be available when required, thus reducing the need for "safety" stock.
Improved vendor management * Tracking vendor on time deliveries, rejection percentage, etc., will improve ability to select and retain competent vendors
Improved inventory and procurement service levels * Enhanced ability to identify future requirements, rather than assume that demand patterns of the past accurately predict the future, will allow Purchasing and Stores to focus on real needs.

## MATERIALS MANAGEMENT AND ACCOUNTS PAYABLE BENEFITS [continued]

### III. INTANGIBLE BENEFITS [continued]

<p>Easier identification of items appropriate to Just-In-Time buys or Multi-Year contracts</p> <ul style="list-style-type: none"><li>* Improved ability to track usage, future requirements, material interchangeability, lead times and vendor performance enhance the ease of identifying candidates for Just-In-Time or Multi-Year procurement</li></ul>
<p>Reduced potential for hazardous material liability.</p> <ul style="list-style-type: none"><li>* Some of the inventory reduction will be hazardous materials ... the less hazardous materials in stock, the less handling thus less potential for liability</li></ul>
<p>Opportunity for standardization</p> <ul style="list-style-type: none"><li>* Integrated systems demand standard methods of operation. This standardization enhances efficiencies by improving communications and information flow reduces the training requirements, and simplifies re-engineering and development of procedures</li></ul>
<p>Reducing paperwork</p> <ul style="list-style-type: none"><li>* Some of the saving due to reduced paperwork is reflected in FTE reduction estimates attributable to paperless receiving. However, significant other savings of manpower and filing equipment will result from reduced paperwork due to immediate on-line access of real-time data</li></ul>
<p>Reduced Accounts Payable process time</p> <ul style="list-style-type: none"><li>* Accounts Payable processing efficiencies will expedite employee expense claims and vendor payment, thus reducing time required to make inquiries, and respond to them (This is in addition to estimated A/P clerk FTE savings)</li></ul>
<p>Improved cash management</p> <ul style="list-style-type: none"><li>* More effective Procurement and Accounts Payable systems provide greater opportunity to manage cash to take advantage of discounts, and invest funds more efficiently</li></ul>

## HEALTH, SAFETY AND ENVIRONMENT

### I. FTE DOLLAR SAVINGS

Benefit Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
None											

### II. OTHER DOLLAR SAVINGS

Improved Job Safety -- Reduction in Lost Time Injury Costs	155,000	309,000	309,000	309,000	309,000	309,000	309,000	309,000	309,000	309,000	2,936,000
Improved ECD efficiency accommodating the District's CIP	25,000	60,000	116,000	222,000	316,000	411,000	519,000	519,000	519,000	519,000	3,226,000
Hazardous Materials Physical Inventory Cost Reduction	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	800,000
<b>TOTAL DOLLAR SAVINGS</b>	<b>\$260,000</b>	<b>\$449,000</b>	<b>\$505,000</b>	<b>\$611,000</b>	<b>\$705,000</b>	<b>\$800,000</b>	<b>\$908,000</b>	<b>\$908,000</b>	<b>\$908,000</b>	<b>\$908,000</b>	<b>\$6,962,000</b>

### III. INTANGIBLE BENEFITS

#### AN MWD - ECD PERSPECTIVE:

- \* MWD is regulated by over 50 different Federal, State and Local agencies
- \* MWD is subject to and must respond to over 20,000 different environmental, health and safety agency requirements
- \* MWD engages in over 40 activities CAL OSHA regulates as "industrial"
- \* MWD uses over 7,000 hazardous and extremely hazardous chemicals which are stored and used at 30,000 different locations around the district
- \* MWD disposes over 1,000 tons of hazardous waste per year
- \* ECD conducts nearly 500 industrial surveys annually
- \* ECD maintains over 700 permits, pays \$250,000 in fees and produces 34 business plans per year
- \* ECD provides approximately 40 different health and safety training programs
- \* ECD analyzes and reports on over 700 proposed new and changes to existing EH&S laws and regulations per year

#### THE INTANGIBLE BENEFITS ARE:

- \* Facilitate compliance with Federal, State and Local regulations
- \* Reduce potential long term environmental liabilities -- toxic tort suit costs associated with potential remediation projects and superfund sites
- \* Support the District's mission and facilitate the accomplishment of the environment and work force guiding principles as outlined in the Strategic Plan
- \* Provide "process improvements" in District-wide acquisition, use, storage & tracking of hazardous materials -- reduce the number of materials and minimize the storage and handling risks

## HEALTH SAFETY AND ENVIRONMENTAL BENEFITS [continued]

### III. INTANGIBLE BENEFITS [continued]

HOW THE BENEFITS ARE ACHIEVED:
* Leverage targeted processes to protect public health and the environment
* Provide exposure & hazard information related to job duties and descriptions & medical surveillance to supervisors & employees so as to facilitate a safe working environment
* Access environmental, health and safety records at appropriate district locations for regulatory inspection on demand, i.e., monitoring equipment maintenance and calibration records and air emission records.
* Facilitate the standardization of common work functions and improve efficiency through the creation and availability of environmental, health and safety databases
* Reduce the time and effort required to perform many analyses and prepare regulatory reports due to the availability of data on-line

## HUMAN RESOURCES AND PAYROLL BENEFITS

### I. FTE DOLLAR SAVINGS

Benefit Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
Centralized labor cost analysis	869,750	900,191	931,698	964,307	998,058	1,032,990	1,069,145	1,106,565	1,145,295	1,185,380	10,203,379
New payroll system	237,850	246,175	254,791	263,709	272,938	282,491	292,378	302,612	313,203	324,165	2,790,312
Reports on-line & less data entry	213,000	220,455	228,171	236,157	244,422	252,977	261,831	270,995	280,480	290,297	2,498,787
Re-engineer Personnel	248,500	257,198	266,199	275,516	285,159	295,140	305,470	316,161	327,227	338,680	2,915,251
Subtotal FTE Savings	1,569,100	1,624,019	1,680,859	1,739,689	1,800,578	1,863,599	1,928,825	1,996,333	2,066,205	2,138,522	18,407,729

### II. OTHER DOLLAR SAVINGS

Reports on-line -- reduce the number of copies of computer reports	74,400	74,400	74,400	74,400	74,400	74,400	74,400	74,400	74,400	74,400	744,000
Recruitment -- shorten the recruitment time by one week	247,500	247,500	247,500	247,500	247,500	247,500	247,500	247,500	247,500	247,500	2,475,000
Sick leave tracking	713,550	713,550	713,550	713,550	713,550	713,550	713,550	713,550	713,550	713,550	7,135,500
<b>TOTAL DOLLAR SAVINGS</b>	<b>\$2,604,550</b>	<b>\$2,659,469</b>	<b>\$2,716,309</b>	<b>\$2,775,139</b>	<b>\$2,836,028</b>	<b>\$2,899,049</b>	<b>\$2,964,275</b>	<b>\$3,031,783</b>	<b>\$3,101,655</b>	<b>\$3,173,972</b>	<b>\$28,762,229</b>

### III. INTANGIBLE BENEFITS

* Managers having access to timely and accurate information for decision making <ol style="list-style-type: none"> <li>1. The new labor distribution reporting could provide managers with immediate access on their projects status. The current process does not allow a manager to see his/her project labor costs until at least six weeks after those costs have been incurred, resulting in possible cost overruns.</li> </ol>
* Reduction in the number of lost time injuries as a result of implementing a medical and job hazard analysis system <ol style="list-style-type: none"> <li>1. An average back injury costs over \$50,000</li> <li>2. The average death benefit exceeds \$100,000 on top of legal fees, medical costs, lost time and disability payments leading up to the industrial death</li> </ol>

# FINANCE BENEFITS

## I. FTE DOLLAR SAVINGS

Benefit Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
Eliminate the need for "shadow" cost/budget systems	213,000	514,395	532,399	551,033	570,319	590,280	610,940	632,323	654,454	677,360	5,546,502
Reduce the effort required to maintain the Cost Ledger	71,000	220,455	228,171	236,157	244,422	252,977	261,831	270,995	280,480	290,297	2,356,787
Reduce the effort required to maintain the General Ledger	106,500	110,228	114,085	118,078	122,211	126,489	130,916	135,498	140,240	145,149	1,249,393
Reduce the effort required to maintain Accounts receivable	71,000	73,485	76,057	78,719	81,474	84,326	87,277	90,332	93,493	96,766	832,929

## II. OTHER DOLLAR SAVINGS

None											
<b>TOTAL DOLLAR SAVINGS</b>	461,500	918,563	950,712	983,987	1,018,427	1,054,072	1,090,964	1,129,148	1,168,668	1,209,571	9,985,611

## III. INTANGIBLE BENEFITS

<p>Improved management of district resources</p> <ul style="list-style-type: none"> <li>* Allow MWD to control costs, improve management reporting and budget control accountability through the use of encumbrance accounting</li> <li>* Provide enhanced capability to monitor budget performance and implement performance measures</li> <li>* Facilitate standardization of cost and variance reporting across MWD, thereby improving visibility and communication of performance measures and results across MWD and to the Board</li> </ul>
<p>More useful and timely information</p> <ul style="list-style-type: none"> <li>* Significantly enhanced analysis and reporting capabilities will facilitate improved decision making as a result of an integrated, on-line, real time system</li> <li>* Provide immediate visibility of cost and variance information, versus the six to eight weeks it now takes for information to move through the system</li> <li>* Provide the ability to more quickly respond to special requests for financial information from internal and external parties</li> </ul>
<p>Enhanced integrity of financial data</p> <ul style="list-style-type: none"> <li>* All data entered into the system will be validated at the time of entry thereby reducing errors versus today's night batch system with no input validation</li> <li>* Makes use of a single corporate financial database, thereby reducing/eliminating data redundancy, reducing electronic storage requirements, and providing all users of such data the same information</li> <li>* Allow Audit staff to reduce recurring effort now spent reconciling non-integrated batch systems</li> <li>* Provide assurances that financial data and representations in District-issued annual reports, financial and official statements are consistent, reliable and materially accurate.</li> </ul>

### ***Projected Impacts Of The Phase One Program On O&M Costs***

The ten (10) year annual impact of Phase One on O&M costs is summarized on page 17. Dollar benefits are specified for each of the four key business areas as well as for ISD. The costs are made up of application software maintenance, hardware maintenance and annual Phase One amortization.

The net effect of this program over ten (10) years provides the District with over a \$54 million net benefit in excess of costs requiring a cash outlay. This information is presented in the graphs on pages 18-20.

### **Key Assumptions Used In Deriving Phase One Cost And Cost - Benefit Estimates**

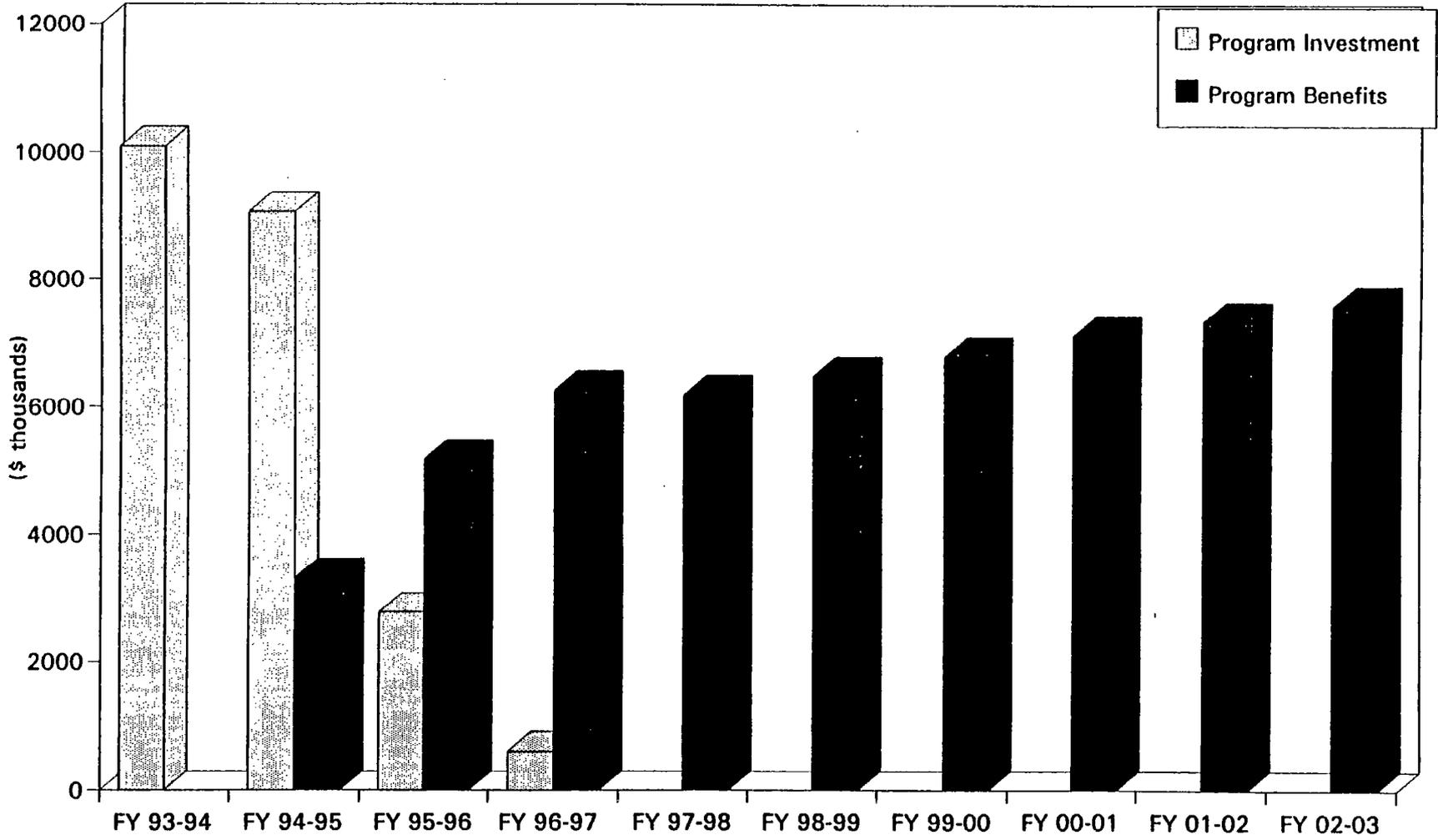
- Purchased application software maintenance charge starts at 18% per year of the purchase price and increases at 3.5% per year starting in year three of the analysis. This is based on the District's intent to negotiate a cap on price increases that is tied to a measure of inflation.
- Purchased UNIX hardware annual maintenance fee starts at 15% of the purchase price and increases at 3.5% per year starting in year three of the analysis. This is based on the District's intent to negotiate a cap on price increases that is tied to a measure of inflation.
- IBM mainframe maintenance cost increases by 8% per year starting in year four of the analysis. This is based on the District's many years of experience with this vendor.
- The current median annual cost of an employee who is expected to be impacted by the benefits of the proposed applications is estimated at \$71,000 including fringe benefits.
- Employee salary and benefits will increase by 3.5% per year starting in year two of the analysis based on expected inflation projection.
- Direct workers compensation costs will increase by 3.5% starting in year two of the analysis based on expected inflation projection.

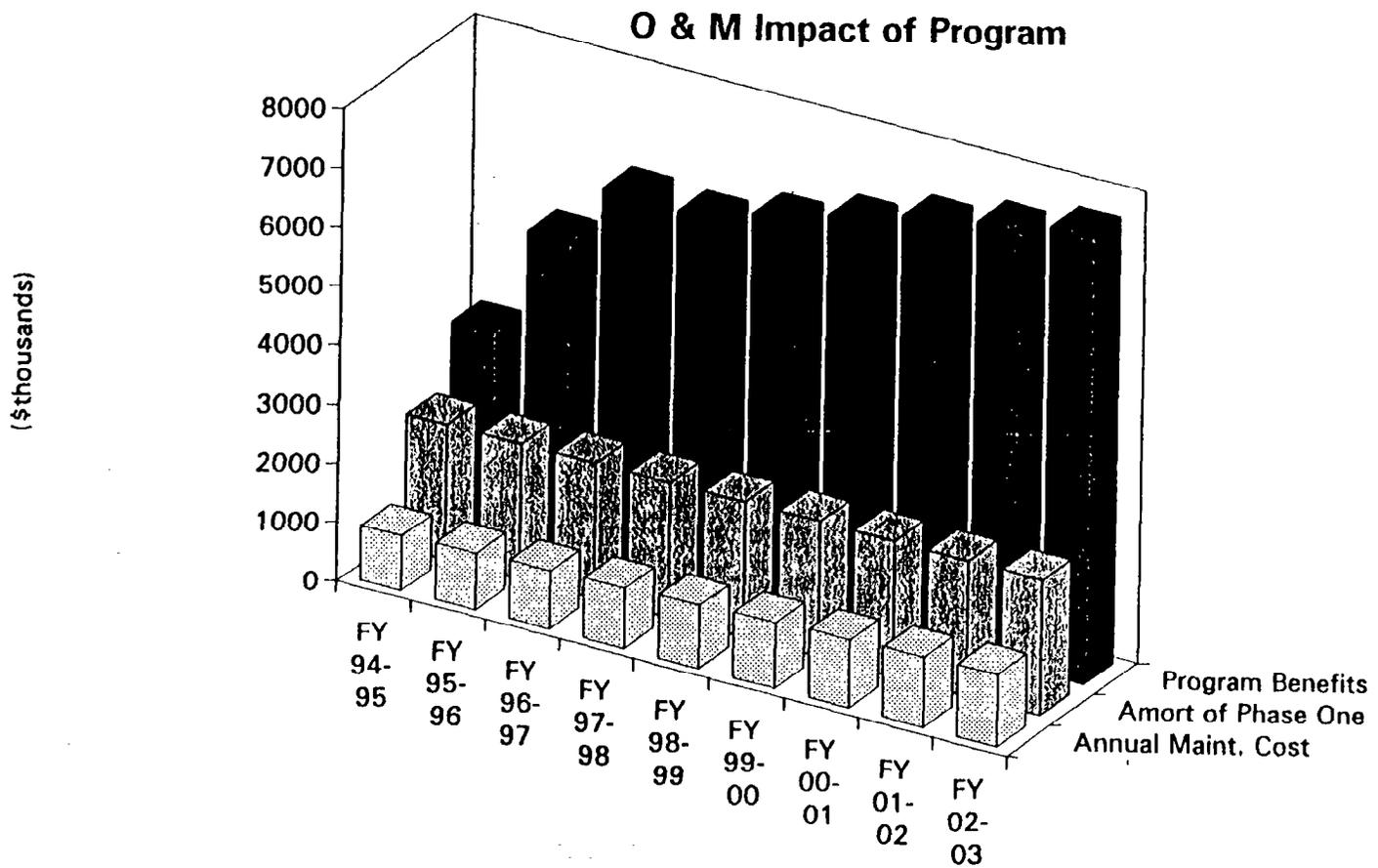
- The Phase 1 program will provide District employees with training over three years in the amount of 27,000 hours. This will be funded out of the existing 1993/1994 and future year O&M budgets.
- The internal labor rate for staff expected to be involved in the Phase One effort is estimated at \$50 per hour including fringe benefits.
- External labor rate for Phase One is estimated to average \$100 per hour.

## NET BENEFITS OF PHASE ONE

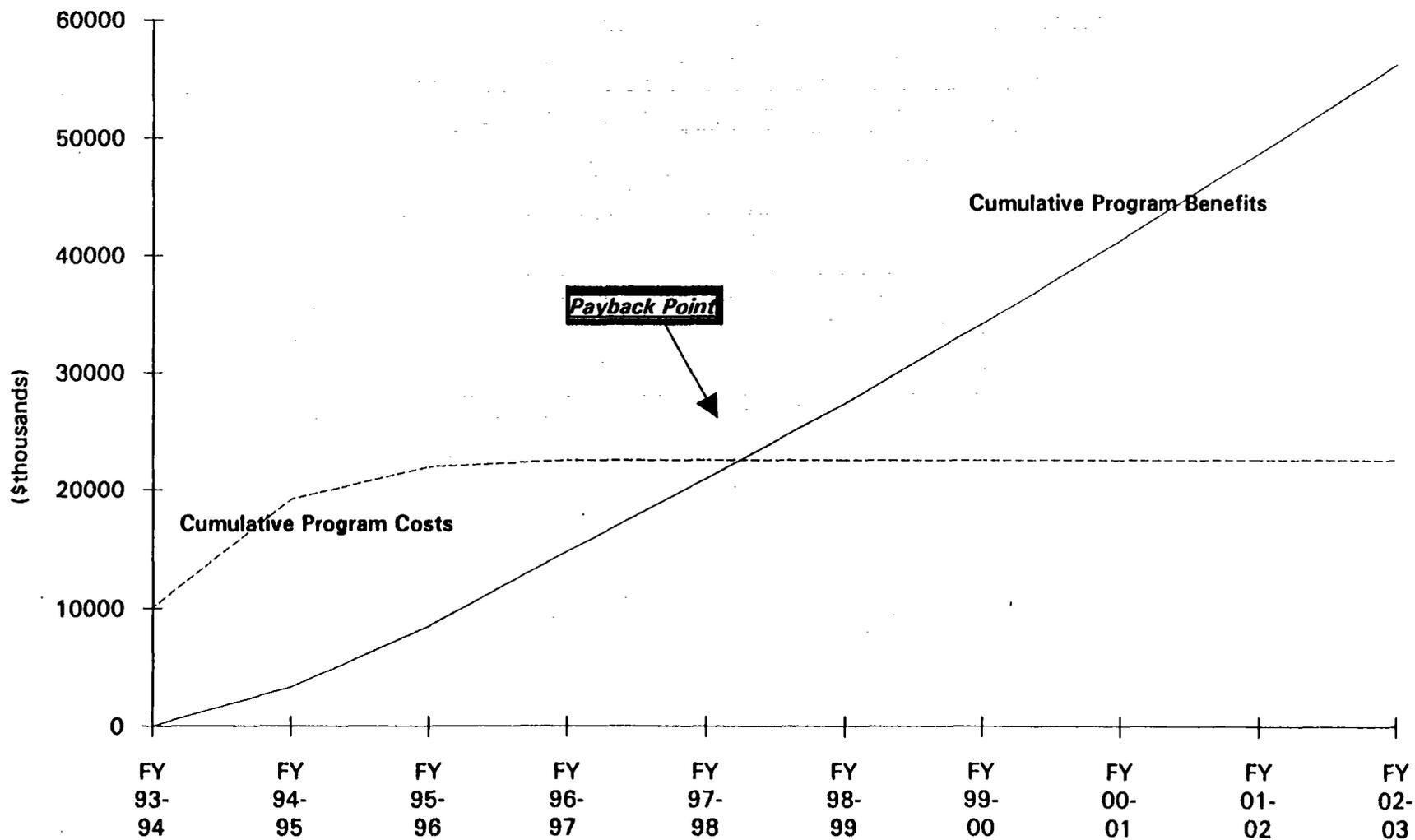
Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
<b>PHASE ONE BENEFITS</b>											
IBM MAINFRAME DOWNSIZING	0	0	900,000	972,000	1,049,760	1,133,741	1,224,440	1,322,395	1,428,187	1,542,442	9,572,965
FINANCE	461,500	918,563	950,712	983,987	1,018,427	1,054,072	1,090,964	1,129,148	1,168,668	1,209,571	9,985,611
MATERIALS MANAGEMENT & ACCOUNTS PAYABLE	0	1,164,623	1,186,484	849,111	872,530	896,769	921,856	947,821	974,694	1,002,509	8,816,396
HUMAN RESOURCES & PAYROLL	2,604,550	2,659,469	2,716,309	2,775,139	2,836,028	2,899,049	2,964,275	3,031,783	3,101,655	3,173,972	28,762,229
HEALTH, SAFETY & ENVIRONMENTAL	260,000	449,000	505,000	611,000	705,000	800,000	908,000	908,000	908,000	908,000	6,962,000
ANNUAL BENEFIT TOTALS	3,326,050	5,191,654	6,258,506	6,191,238	6,481,745	6,783,630	7,109,534	7,339,147	7,581,204	7,836,494	\$64,099,201
<b>ONGOING COSTS*</b>											
APPLICATION SOFTWARE MAINTENANCE	0	720,000	745,200	771,282	798,277	826,217	855,134	885,064	916,041	948,103	7,465,317
UNIX HARDWARE MAINTENANCE	0	210,000	217,350	224,957	232,831	240,980	249,414	258,144	267,179	276,530	2,177,384
ANNUAL TOTAL COSTS	0	930,000	962,550	996,239	1,031,108	1,067,196	1,104,548	1,143,207	1,183,220	1,224,632	9,642,701
<b>ANNUAL NET BENEFITS</b>											
NET BENEFITS	3,326,050	4,261,654	5,295,956	5,194,998	5,450,638	5,716,433	6,004,986	6,195,940	6,397,985	6,611,862	\$54,456,500

### Return On Initial Program Investment





### Payback Period for Phase One Program



## **Discussion Of Alternatives To The Proposed Phase One Approach**

Management believes the best route to facilitate the accomplishment of the Strategic Plan's guiding principles is to approve and fund the Phase One Program as soon as possible. However, listed below are various alternatives to this plan that have been considered for Phase One.

### **I. Fund only some of the applications**

This alternative was eliminated for the following reasons:

- The four areas within Phase One were picked as a unit because they were the most important to change among all of the areas identified by the ISSP developed by Andersen Consulting. In addition, there is a substantial amount of integration between these four areas from both a business and a computer application standpoint.
- The determination of how to break up Phase One into meaningful pieces is extremely difficult, i.e.,
  1. In order to implement Finance's encumbrance accounting the other areas must be operational first or they must be implemented in parallel
  2. Human Resource's payroll and labor distribution reporting application cannot be implemented before the Finance applications
  3. Materials Management's inventory control and Health, Safety and Environmental's hazardous materials inventory tracking are needed to ensure the management of hazardous materials
  4. Human Resource's medical and Health, Safety and Environmental's job hazard analysis are needed to ensure effective management of employee health and safety
- The total cost of implementing these four areas in some serial fashion will be higher than Phase One's because of:
  1. The significant number of computer interfaces that have to be built and maintained between the new and old systems, e.g., between Finance applications and the existing electronic time keeping system
  2. The increases in cost of vendor and consulting products and services due to smaller commitments

- The existing systems are so unresponsive to current business needs that each area not funded will be required to undertake a significant alternative action to streamline and modernize business operations
- The cost of the hardware and software, currently at \$2.1 million and \$4.0 million respectively will increase; i.e., the District is currently being offered a 40% discount from Oracle Corporation because of the number of modules to be purchased. This discount would shrink significantly if fewer modules were purchased.

## II. Fund Phase One on a fiscal year basis

This alternative was eliminated for the following reasons:

- The projects within each of the four areas do not naturally have fiscal year boundaries, thus, this alternative would result in work being partially completed and if approval were not granted for subsequent fiscal years then the value of the completed work would be minimal
- The cost of the hardware and software, currently at \$2.1 million and \$4.0 million respectively will increase; i.e., the District is currently being offered a 40% discount from Oracle Corporation because of the number of modules to be purchased. This discount would shrink significantly if fewer modules were purchased.

## III. Approve Phase One but extend the implementation schedule

This alternative was eliminated for the following reasons.

- The overall cost of implementation will be higher than the current plan. This must be expected because a proven information systems methodology is being used to manage the implementations. The methodology breaks up a project into standard tasks and standard deliverables. Thus, splitting up a project into non-standard pieces increases the overall cost and amount of work.

## IV. Remain Status Quo

This alternative was rejected as unacceptable due to the exposure it would subject the District to over time. Current systems have been determined to be ineffective in meeting key business requirements. This was a finding of The Information Systems Strategic Plan, The Phase Zero project and The Strategic Plan.



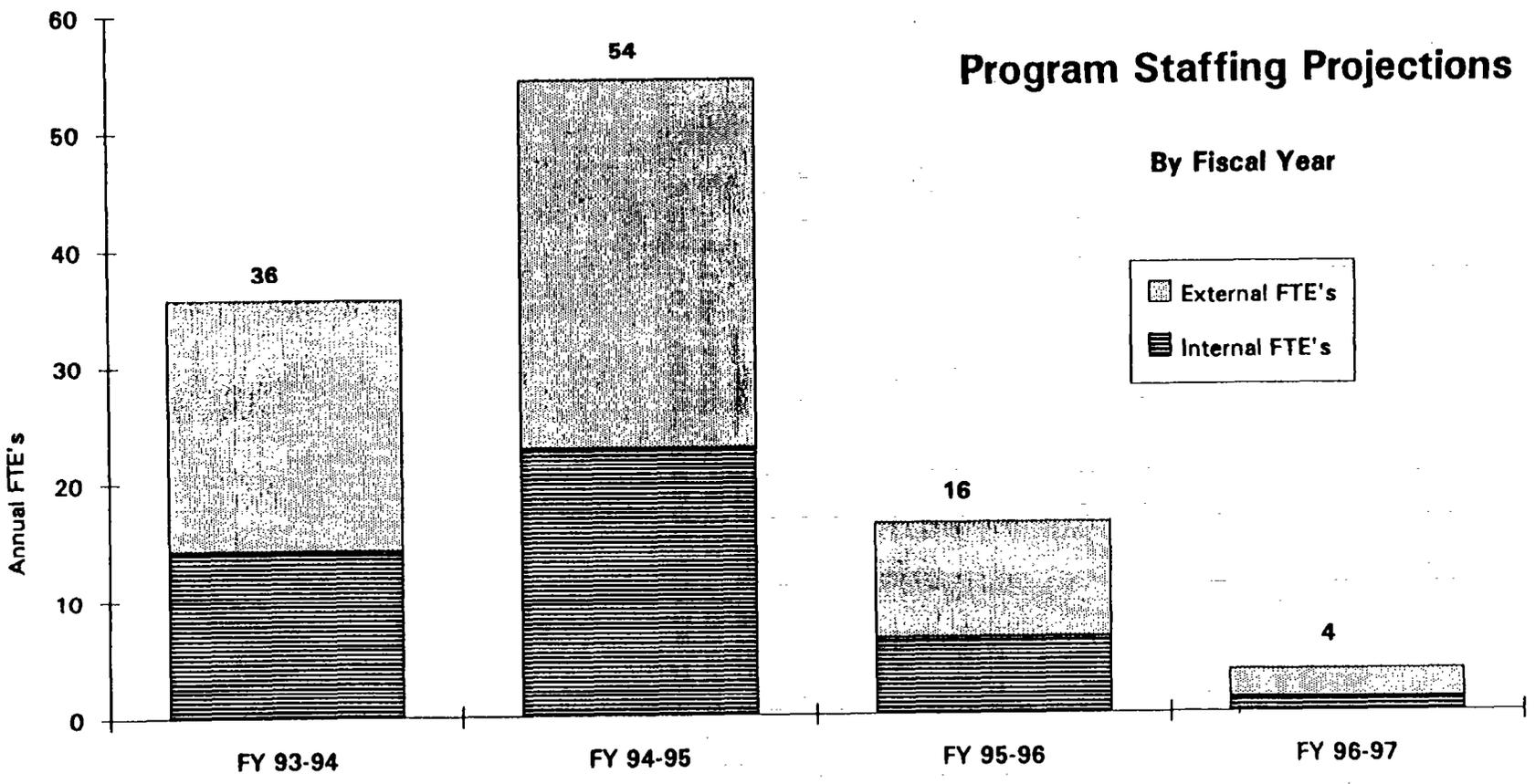
Attachment "C" - Capital Cost Financial Summary

Capital Cost Financial Summary		
<b>Summary by Key Business Area*</b>		
Finance		\$ 7,000,000
Materials Management		6,600,000
Human Resources / Payroll		5,200,000
Health, Safety and Environmental		<u>4,400,000</u>
<b>TOTAL:</b>		<b>\$23,200,000</b>
<b>Summary By Cost Detail</b>		
Implementation Services:		
Consulting	\$11,100,000	
Internal Labor	3,900,000	\$15,000,000
Technical Services:		
Consulting	1,700,000	
Internal Labor	400,000	2,100,000
Software Purchases:		4,000,000
Hardware Purchases:		<u>2,100,000</u>
<b>TOTAL:</b>		<b>\$23,200,000</b>
<b>Summary by Appropriation</b>		
Appropriation 634		\$21,100,000
Appropriation 099		<u>2,100,000</u>
<b>TOTAL:</b>		<b>\$23,200,000</b>

\*Includes an allocation of software, hardware and program office and service delivery costs to the respective business areas.

### Program Staffing Projections

By Fiscal Year



Attachment "E" - Overview of Information Systems Strategic  
Plan Estimates and Completed Work

Original Andersen Estimate for ISSP	\$ 37.0 million
Phase Zero Project (completed)	5.8 million
Phase One Project (current proposal)	23.2 million
ISSP Projects remaining* (estimated)	7.0 million
Wide Area Network upgrades** (estimated)	.8-1.4 million

\* Projects in the ISSP that will be addressed subsequent to Phase One projects include an Executive Information System, Document Management, Property Management and other minor applications.

\*\* Staff anticipates that a portion of the planned work for implementing the wide area network at all facilities impacted by the Phase One Program may need to be accelerated. Funding for this additional work, if required, will be provided by a separate appropriation established for this purpose.