



**Review of the Project and Construction  
Management Process for Measure C  
Bond-Funded Projects**

**Final Report  
Foothill-De Anza Community College District**

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## Appreciations

MGT of America, Inc. and WLC Architects and Construction Services could not have completed this review without the assistance of the dedicated staff at the Foothill De Anza (FHDA) Community College District and the Gilbane, Inc. and MAAS Companies, Inc. Joint Venture (Gilbane-MAAS).

We wish to thank Charles Allen, Executive Director of Facilities, Operations, and Construction Management and Andy Dunn, Vice Chancellor of Business Services for their leadership and guidance throughout the project.

We also wish to thank all District and Gilbane-MAAS staff for their willingness to participate in interviews and to respond quickly and cheerfully to our requests to clarify our understanding of issues or processes. They are enthusiastic about affecting positive change at FHDA and we are impressed with their commitment to improving the bond processes. Staff who provided input for this review includes:

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## Executive Summary

The Foothill De Anza Community College District (District) hired MGT of America, Inc. (MGT) and WLC Architects and Construction Services, Inc. (WLC) to conduct a performance review of the District's Measure C bond-funded projects. Specifically, the review team was to examine the District's project and construction management processes, and financial management processes. The team began its review in June 2009 and completed the final report in November 2009.

In June 2006, the District went to voters to request bond financing. The voters approved a \$490.8 million bond (Measure C). This bond measure was designed to allow the District to upgrade electrical, heating, ventilation systems, fire, and seismic safety; repair leaky roofs; improve disabled access; repair and expand classrooms for nurses and paramedics; upgrade technology; and repair, construct, acquire, equip buildings, classrooms, libraries, sites, and science and computer labs.

Overall, the review team found that the District has a number of opportunities to make improvements to streamline practices, better use existing technology, and increase the effectiveness and efficiency of its management of projects completed with bond funds. The District's processes are not so weak that it is unable to deliver any projects or that those projects are failing to meeting quality standards and District expectations. However, the review team found that the District has opportunities to improve and adjust current practices, and to adopt others, to improve the effectiveness and efficiency of operations and better optimize the use of limited bond proceeds.

In conducting the performance review, we looked for best practices promulgated by a number of sources, including industry leaders, construction or community college associations, and through the District's policies and procedures. For each item, the review team compared District performance against the expected practices derived from industry or recognized best management practices or from requirements in bond documents, state laws, regulations, and District policies. The team gave a color ranking to describe, in general, how the District had performed against the practice, to indicate whether the District is performing:

- ◆ Strongly in comparison to expected practices (● buttons)—generally these areas have commendations on the District's performance.
- ◆ Marginally in comparison to expected practices, with issues that prevent the District from operating as effectively or efficiently as possible (● buttons)—these areas have recommendations for improvement.
- ◆ Weakly in comparison to expected practices, with issues or performance that could hamper the District's ability to deliver projects timely and well (● buttons)—these areas have recommendations for improvement.

The review team notes that this project was not an audit. The issues and recommendations presented here were developed based on high-level reviews of data and documents, interviews with staff and consultants, and observations by the review team.

We found that the District had some areas where it was performing strongly in comparison to best practices. A number of these areas fell within the project planning and delivery methods functional areas. Specific areas that the team reviewed that showed examples of strong practices were as follows.

Item Number	Functional Area	Description	Team's Evaluation of District Performance
14	Project Planning	Complete feasibility studies prior to defining budget and scope.	●
15	Project Planning	Utilize a project prioritization process.	●
17	Project Planning	Complete environmental assessment and permitting process timely.	●
18	Project Planning	Adapt successful designs to project sites when possible.	●
21	Delivery Methods	Perform a value engineering study for projects larger than \$1 million.	●
23	Delivery Methods	Include a formal dispute resolution procedure in all contract documents.	●
25	Delivery Methods	Assign a client or user representative to every project.	●
27	Project Packaging	Bundle small projects together whenever possible.	●
37	Financial Management— Integration with Project Management and Reporting	Present summary bid reports in presenting the results of formal bidding.	●

In the majority of functional areas, the team found that there were areas where the District was not performing as strongly as it could, or where it had opportunities to make improvements to the effectiveness or efficiency of how it delivers projects. These areas were not so weak as to prevent the District from delivering any projects timely or within user's expectations. Rather, these are areas where, for the most part, the District can "fine tune" existing processes or better use existing systems to remove obstacles to project delivery and management. The areas that fell within this category were as follows.

Item Number	Functional Area	Description	Team's Evaluation of District Performance
1	Project Cost Control	Create and update a clear, precise scope, schedule, and budget.	●
2	Project Cost Control	Establish and track contingency line items by major phase.	●
3	Project Cost Control	Create accurate, independent, and complete cost estimates and bid documents.	●
4	Project Cost Control	Review and fine tune cost estimates with key staff and/or trade contractors.	●
5	Project Cost Control	Clearly communicate project vision and expectations to users.	●
6	Project Cost Control	Modify procedures for small-dollar projects on a cost-benefit basis.	●

Continued

Item Number	Functional Area	Description	Team's Evaluation of District Performance
8	Reporting	Monitor and track consultant and contractor performance.	●
9	Reporting	Establish performance metrics tied to bond and project goals and objectives.	●
10	Reporting	Track and report costs by project phase or category.	●
11	General Project Management, Governance, and Oversight	Set approval authorizations at an appropriate level.	●
12	General Project Management, Governance, and Oversight	Coordinate information and data requests.	●
16	Project Planning	Identify project resource (funding) needs in a Capital Improvement Plan.	●
20	Delivery Methods	Develop and use a standardized project delivery manual.	●
22	Delivery Methods	Perform and use post-project reviews and document lessons learned.	●
24	Delivery Methods	Use a contractor prequalification process on large or complex projects.	●
28	Change Order Management and Controls	Submit requests for changes to scope, schedule, or budget to the Board.	●
29	Change Order Management and Controls	Maintain a potential change order log tracked by change order category.	●
30	Constructability Reviews	Use a formal quality management system.	●
34	Financial Management—Integration with District's Accounting and Purchasing System	Implement an electronic progress payment system.	●
35	Financial Management—Integration with Project Management and Reporting	Implement a work breakdown structure to measure project deliverable progress.	●
36	Financial Management—Integration with Project Management and Reporting	Adhere to the established and Board-approved budget.	●

Finally, in some areas, the team found that the District had areas of weakness that were creating obstacles to successful, efficient, or effective project delivery. Resolving these issues first should be a priority based on the team's assessment. These areas were as follows.

Item Number	Functional Area	Description	Team's Evaluation of District Performance
7	Technology Exploitation	Provide bond oversight and managers with timely, accurate, and detailed reports.	●
13	General Project Management, Governance, and Oversight	Create and update a resource-loaded master schedule.	●
19	Delivery Methods	Define construction requirements and project roles prior to project initiation.	●
31	Financial Management—Technology Exploitation	Make bid documents available online.	●
32	Financial Management—Technology Exploitation	Board and Committee should monitor all direct and indirect costs.	●
33	Financial Management—Technology Exploitation	Adopt and use a project control system on all projects.	●

In creating our report, the review team recognized that there are aspects to the District's culture that have to be considered both in the evaluation of the District's performance against best practices, but also in developing workable recommendations to address issues. The District has a culture that places a high emphasis on user feedback and participation. Additionally, in part due to problems with a prior bond measure, the District has shown to be risk-averse and seeks to minimize risks associated with project delivery to the extent possible. Although both of these aspects provide benefits to the District, there are costs and issues that arise from them as well. The review team describes these in the report as well as recommendations for improvements or changes to help the District accomplish its goals of effective and efficient project delivery, while still working within the operational style and culture that is endemic to the organization.

The team also noted that there appears to be opportunities for the District to resolve issues or frustrations through more open communication with the consultant. The District staff meets with consultant staff weekly, and often daily on projects. However, the team noticed that communication between the two organizations does not always work—staff from both organizations reported instances where they felt that they had clearly conveyed concepts or issues, only to have problems arise because of miscommunication. The District and the consultant need to make sure that they are clearly conveying messages, including communicating frustrations about problems that are not working as well as they could, or at all for either party. Only by discussing and addressing these issues openly will the District be able to find resolution to problems and clear the way for improved effectiveness and efficiency in project delivery.

# Introduction

This chapter describes, at a high level, the project background and how the work was performed. This section also provides an overview of the Foothill-De Anza Community College District's (District's) current bond management and construction management processes. Following sections contain the review team's findings and recommendations.

## Background

The District was formed in 1957 to provide educational options to residents in the communities of Cupertino, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford, Sunnyvale, and portions of San Jose, California. The District first provided classes in 1958 from an unused elementary school in Mountain View. Voters approved a \$10.4 million bond during the school's first year of operations and trustees used a portion of the proceeds to purchase land for the Foothill College campus. Following construction, the Foothill College opened on September 5, 1961. In 1962, voters approved a second bond for the construction of a second campus in Cupertino. Building commenced on this location, and the De Anza College began offering classes in September 1967.

## Recent Bond Measures

In November 1999, voters in the District's service area approved a \$248 million bond (Measure E) to finance construction and maintenance of facilities at the two colleges. Tasks funded by this bond included renovating and expanding college facilities to meet current health, safety, and instruction standards; replacing aging roofs, deteriorated plumbing, and electrical systems; refurbishing classrooms, science laboratories, and restrooms; and constructing science and high-tech computer labs, classrooms, and school facilities. Among other projects, the measure funded new construction of the Krause Center for Innovation at Foothill College, and the Kirsch Center for Environmental Studies at De Anza College. Although the majority of planned projects were completed with Measure E funds, some projects were not completed and were deferred to a new bond measure. These included projects such as the De Anza Campus Site Lighting, Forum, and Signage projects.

In June 2006, the District went to voters to request bond financing. The voters approved a \$490.8 million bond (Measure C). This bond measure was designed to allow the District to upgrade electrical, heating, ventilation systems, fire, and seismic safety; repair leaky roofs; improve disabled access; repair and expand classrooms for nurses and paramedics; upgrade technology; and repair, construct, acquire, equip buildings, classrooms, libraries, sites, and science and computer labs. The projects funded by this measure are expected to continue through 2024.

## Proposition 39

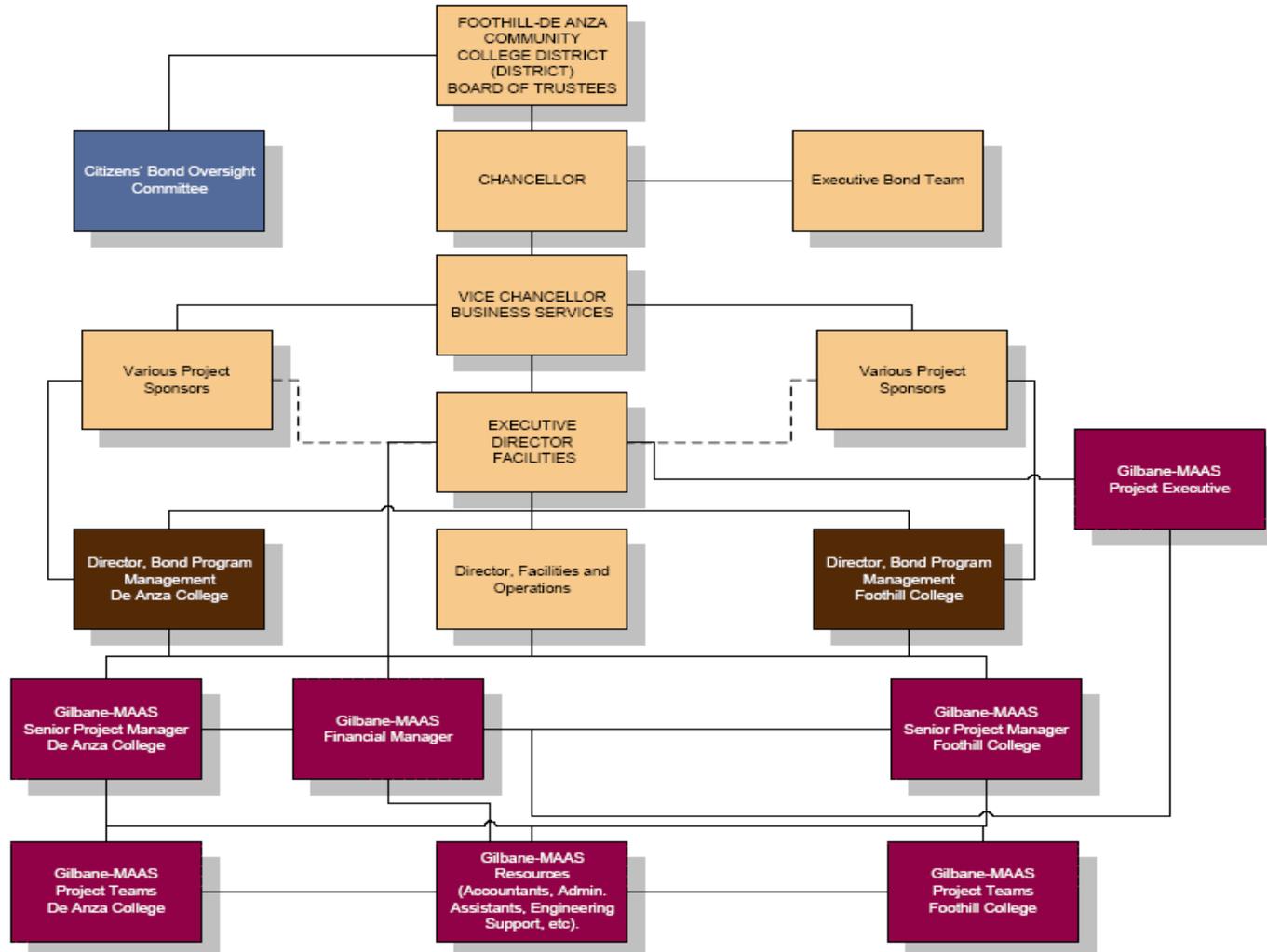
Unlike prior bond measures, Measure C is governed by Proposition 39 requirements. “The Smaller Classes, Safer Schools and Financial Accountability Act of 2000,” or Proposition 39 was a measure put before California voters in November 2000. This measure reduced from two-thirds to a 55 percent super majority, the vote that school Districts and community colleges needed to authorize local general obligation bonds for school construction. The measure had more structure and requirements that college Districts had to meet than in prior bond requirements. First, the bond funds could only be used for the construction, rehabilitation, or replacement of school facilities; the acquisition of school sites; or the furnishing and equipping of schools. The bond funds could not be spent for any other purpose, such as teacher and administrator salaries or other school operating expenses. The measure also required that the community college District—prior to a bond election—publicize a list of the intended projects, along with a certification that it had evaluated safety, class size reduction, and information technology needs before preparing the list. Proposition 39 also requires two independent audits each year until the bond money is spent—a performance audit to ensure that the funds were spent only on the specific projects listed; and a financial audit to track the expenditures until all proceeds were exhausted. Proposition 39 also enabled requirements signed into law in June 2000 with Assembly Bill 1908. This law established restrictions on the amount of the bond, and also required a District board to appoint a citizens’ oversight committee to monitor how the money is spent and to alert the public to any waste or improper expenditure.

## Overview of the District’s Bond Management Structure

To help District and college staff oversee projects, the District hired a consultant—the Gilbane, Inc. and MAAS Companies, Inc. Joint Venture (the Gilbane-MAAS team)—to provide system-wide coordination and oversight of all capital improvement projects, and selected maintenance or scheduled maintenance projects performed under the Measure C program. The District has divided the roles and responsibilities over bond management between its consultant and various District and college staff and managers. The figure on the following page illustrates the reporting and working relationships between the District and College staff and its Consultant.



**Figure 1: Relationships between District, College, and Consultant Staff Working on Measure C Bond-Funded**



Projects

At a high level, the roles and responsibilities of each of the persons or groups shown in Figure 1 above are as follows:

- ◆ **Board of Trustees:** The Board of Trustees (Board) has the highest level of responsibility for the success or failure of the program. The Board's duties require it to make well-informed decisions to guide the program and enhance the District's learning environment. The Board is responsible for approving the sale of the bonds and the projects identified for inclusion in the bond measure. To carry out its duties, the Board reviews and has the power to approve construction contracts and change orders; project budgets and schedules; deferred maintenance plans; and facilities master plans, among other documents. The Board also hires the Chancellor, who administers and oversees District administrative and educational functions and hires staff to operate various programs and functions.
- ◆ **Executive Bond Team:** The Executive Bond Team consists of the vice chancellor of Business Services, the vice chancellor of Technology, the executive director of Facilities, the Foothill vice president of Educational Resources, and the De Anza vice president of Finance and College Services. The review team is responsible for establishing a cost control process, monitoring major construction projects to minimize project cost overruns beyond budgeted contingencies, and establishing a reporting mechanism to the Board, Audit and Finance Committee, and Citizens' Bond Oversight Committee (Committee).
- ◆ **Citizens' Bond Oversight Committee:** The seven-member Committee is responsible for reviewing expenditures related to the Measure C bond and reporting to the public, including presenting an annual report to the Board on the use of the Measure C funds and expenditures. Committee members help to provide ideas or suggestions on bond project reporting, and can provide input to District staff and managers. However, the Committee does not have a management role in the bond management process (that is, the Committee cannot approve or deny expenditures or changes to projects).
- ◆ **Vice Chancellor, Business Services:** The District's vice chancellor of Business Services oversees administrative and support functions that assist the colleges in carrying out their goals and objectives. Among other services overseen by this position are Accounting, Budgets, Environmental Compliance, Finance, Payroll, Facilities and Operations, and Risk Management.
- ◆ **Executive Director, Facilities, Operations, and Construction Management:** The executive director oversees the Facilities and Operations function—which provides maintenance and repair services to both colleges and custodial services and ground maintenance to Foothill College—and the Construction Management function—which executes the Capital construction program and oversees major renovations, repairs, and maintenance projects. Among other tasks, the executive director oversees the creation and update of the Facilities Master Plan, helps to ensure that all maintenance, repair, and construction activities in the District comply with environmental regulations and requirements, and oversees the execution of the Measure C bond-funded projects.
- ◆ **Directors, Bond Program Management:** The two Bond directors—one at each college—report to the executive director. The Bond directors are responsible for planning and directing the implementation of the District's bond and construction projects for each college, providing management oversight in collaboration with campuses, technical input, and coordination between the District management and staff, vendors, contractors, and campuses for the successful implementation of multiple projects from

inception to completion. The director of Facilities, in addition to overseeing the facilities and operation functions for the District, also meets with Consultant staff and provides input for maintenance or scheduled maintenance projects.

- ◆ **Project Sponsors:** Project sponsors are responsible for helping to define scope, schedule, budget, and to establish priorities. Project sponsors are responsible for ensuring that project plans define results that support the users' mission and that meet the project objectives. Project sponsors work closely with Bond directors and user representatives to identify and define project specifications and review feasibility, options, estimates, and expectations.
- ◆ **Gilbane-MAAS:** The District's primary consultant is responsible for providing system-wide coordination and oversight of all capital improvement projects, and selected maintenance and scheduled maintenance projects performed under the Measure C program. Among other tasks, the consultant provides full-service program management, design-phase management, construction-phase management, and project management services. Additionally, the consultant provides accounting support through the use of the Prompt system. The consultant processes invoices and purchase requests and assists in the bidding, contracting, and purchase process.

## Overview of the Measure C Process

There are several phases of capital projects. The California Community Colleges Chancellor's Office (CCCCO)—Facility Planning Unit has issued a *Facilities Planning Manual* for community colleges. This manual identifies distinct phases of capital projects. These phases and the District's processes are described in this section.

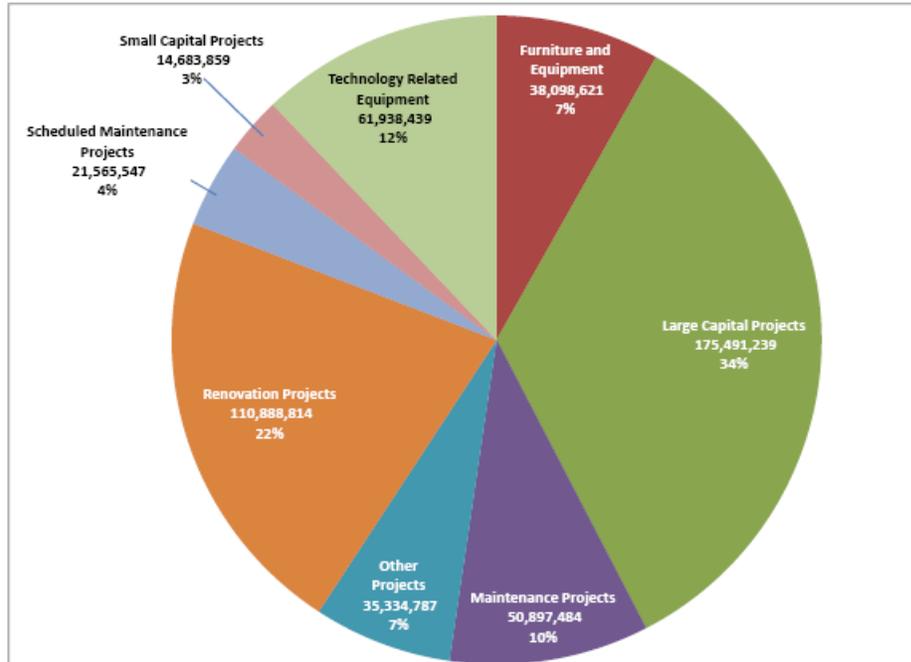
### PROJECT ORGANIZATION

Project organization begins with the establishment of the project management team. During this phase, the District plans for managing the project or projects, and prepares for the programming and design phases. Efforts made during this phase include selecting design and construction professionals; selecting a project delivery method; developing a work plan; setting up scope, cost, and quality controls; reviewing applicable regulatory requirements; and setting up reporting methods.

The District's project organization phase for Measure C projects began before the District presented the measure to District voters for approval. As part of Proposition 39, the District is required to publicize a list of the intended projects, along with a certification that it had evaluated safety, class size reduction, and information technology needs before preparing the list. The District used information gathered during its Facilities Master Plan update and development processes as well as information from District and college staff and stakeholders, and analyses of the results of the Measure E Bond program, updated educational planning forecasts, and site and facility needs expected following the completion of Measure E projects.

The voters approved a list of projects provided by the District. With interest earned on bond proceeds, the District now has \$512.6 million in proceeds that it has allocated to various projects. The three largest categories, as shown in Figure 2 below, were large capital projects; renovation projects; and technology, instructional equipment, and vehicles.

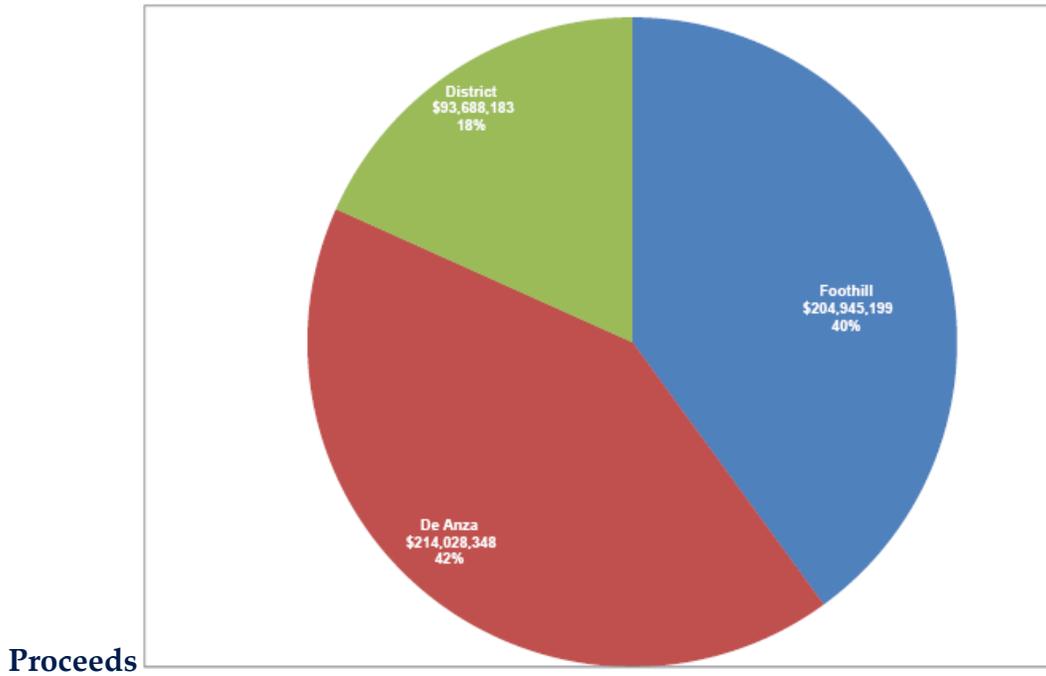
**Figure 2: As of June 2009, the District Has Allocated \$512.6 Million in Bond Proceeds to Various Project**



Categories

Additionally, as shown in Figure 3, the two colleges have a fairly even split of the bond projects, with the District receiving a smaller share for centralized projects.

**Figure 3: The Two Colleges Share the Majority of the \$512.6 Million in Measure C Bond**



Following the identification of projects and voter approval, and to help District and college staff oversee projects, the District made the decision to hire a consultant—the Gilbane-MAAS team—to provide system-wide coordination and oversight of all capital improvement projects, and selected maintenance or scheduled maintenance projects performed under the Measure C program. Project management phases are as follows:

- ◆ **Programming:** Once the initial project proposal is approved, the programming phase begins. This phase involves a review of previous planning and the development of more detailed programming of the project in preparation for starting the design phase. Occurring during this phase is the site analysis, initial environmental studies, program development, regulatory and code analysis, and feasibility reviews as needed.
- ◆ **Schematic Design:** During this phase, a schematic design, prepared by the architect, engineer, or other design professional is completed by creating and evaluating alternative design approaches to the project until a single design has been selected, illustrated, and approved by the faculty, staff, students, and administration.
- ◆ **Design Development:** Design development is the continued development of the chosen design, incorporating elements, systems, materials, and details until all significant design decisions are resolved and approved. This phase involves detailed analyses of alternative systems, including life-cycle costing.
- ◆ **Preliminary Plans:** Although preliminary planning can be considered the same phase as design development, it also involves the completion of environmental requirements, and preparation, submission, and approval of preliminary plans by the Chancellor's Office and the State Public Works Board.
- ◆ **Construction Documents:** Upon approval of the preliminary plans, the construction document phase begins. It involves translation of the design documents by the architect, engineer, or other design professional into construction drawings and detailed specifications for use by the contractor for the construction of the project.
- ◆ **Bidding and Award:** The bidding and award phase includes submittal of the construction documents to the Chancellor's Office for approval, the approval to bid, the bid process, submittal to the Chancellor's Office for approval to award, and the award of the contract to the contractor.
- ◆ **Construction:** Construction of the project includes all work specified by the contract documents as well as any changes made through change orders during the construction phase. It also includes equipment and system activation commissioning, close-out procedures, and post-occupancy evaluations.

## Review Scope and Methodology

MGT and WLC—which combined constitute the review team—were hired by the District to conduct a performance review of the Measure C Bond program to evaluate the manner in which the District is managing projects and to assess the effectiveness of the management. MGT began its evaluation in June 2009, issued draft findings and recommendations for the District staff's review in October 2009, and produced the draft report in early November 2009. This final report incorporates any comments or corrections provided by

executive staff and bond managers, and are issued in mid-November 2009 with presentations to the Board and Committee in early December 2009.

To perform the analysis, the review team performed a number of tasks, as follows:

- ◆ **Review Initiation and Planning:** During this phase, the review team initiated the project and held planning meetings with the executive director of Facilities and the vice chancellor of Business Services. The review team also held a kickoff meeting with key staff from the District and from the District's primary construction and project management consultant—the Gilbane-MAAS team. During these meetings, we discussed the timing of the review and established key contacts. We also discussed the sequence and duration of the work tasks and the completion date of deliverables. We reached a consensus that both phases of the review—the Project and Construction Management Review Phase and the Financial Management Review Phase—would be conducted simultaneously. We also provided the District with our preliminary document request and interview list.
- ◆ **Preliminary Survey:** During this phase, we reviewed pertinent materials such as laws and regulations, policies and procedures, and recent reports in order to understand the environment pertaining to this review and to the District's operations. Team members were provided access to, and used documents located on the ProLog and Prompt systems used by the District and Gilbane-MAAS. The team later found that there are additional systems that we did not have access to (internal servers maintained by the District or Gilbane-MAAS). To the extent that data or reports were not on these drives, the team had to request information separately or was not provided with the information in time for this review. In addition, we interviewed key staff and relevant external entities to learn about controls and processes pertinent to the District's operations. The intent of the preliminary survey was to gather information to determine the best approach to conduct the fieldwork and to modify the work-plan tasks, as necessary.
- ◆ **Detailed Review:** During the detailed review phase, team members expanded on tasks and information identified during the preliminary review phase. This entailed conducting the fieldwork, including interviewing staff in more detail; reviewing source documents; reviewing and assessing internal controls and practices; analyzing data; and testing transactions for compliance with applicable policies, laws, regulations, and best practices.
- ◆ **Preliminary Presentation of Issues:** Prior to the issuance of the draft report, we held two meetings at the Foothill District office to discuss preliminary findings and recommendations—the first meeting was with the District's executive director of Facilities and the vice chancellor of Business Services; the second meeting was with the District's executive director of Facilities and bond managers for each campus. The purpose of these meetings was to provide a formal setting to discuss all the relevant issues and recommendations with District management and to give these individuals the opportunity to hear and discuss the issues before being presented the draft report. The second purpose of this meeting was to give District management an opportunity to provide the review team with additional information and perspective on the issues.
- ◆ **Writing the Draft Report:** Following the preliminary presentation of the issues, the District management provided the review team with their comments to the findings and recommendations. Using these comments, the review team conducted additional research or reviews as needed, and incorporated the findings and recommendations,

modified as necessary, into a draft report. A senior member of our staff then independently reviewed the draft report and related work to ensure the conclusions drawn by the review team are supported. The review team provided the draft review report to District management for their review and comments.

- ♦ **Writing the Final Report.** After discussing the contents of the draft report and comments made by District management, the team determined whether we needed to make any changes to the report. We also made changes that originated from our quality control and editing processes. The review team prepared and submitted the final report to District management, and will present the findings and recommendations in meetings in early December 2009 to the District Board and Citizens' Bond Oversight Committee.

## Review Team Members

### MGT of America, Inc. Team Members

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Celina M. Knippling, CPA—Project Director  
John Storey, PMP—Team Member  
Michael Beebe, Ph.D, CPA—Technical Advisor

### WLC Architects and Construction Services, Inc. Team Members

Paul Bonaccorsi—Team Lead  
Jeff Miller—Team Member

# Findings and Recommendations

## Introduction

This chapter identifies the MGT and WLC team's (review team's) findings and recommendations related to the bond and construction management process used by the District.

The review team organized its findings by functional areas. In some instances, findings or recommendations applied to multiple areas. For these items, we have referenced the finding in each section, but have not repeated the entire text of the finding. An appendix at the end of this report cross-references each item to all functional areas to which it belongs.

For each item, the review team has presented expected practices derived from industry or recognized best management practices or from requirements in bond documents, state laws, regulations, and District policies. Next to each expected practice, the review team presents its analysis of the District's actual procedures with an indicator of whether the District is performing:

- ◆ Strongly in comparison to expected practices (● buttons)—generally these areas have commendations on the District's performance.
- ◆ Marginally in comparison to expected practices, with issues that prevent the District from operating as effectively or efficiently as possible (● buttons)—these areas have recommendations for improvement.
- ◆ Weakly in comparison to expected practices, with issues or performance that could hamper the District's ability to deliver projects timely and well (● buttons)—these areas have recommendations for improvement.

The review team notes that this project was not an audit. The issues and recommendations presented here were developed based on high-level reviews of data and documents, interviews with staff and consultants, and observations by the review team.

The review team notes that the District has hired a consultant to provide construction and project management services for Measure C projects. In many instances, the review team's findings and recommendations relate to services provided and systems maintained by this consultant. However, the review team's recommendations are directed at the District rather than at the consultant. This is because the District is ultimately responsible for overseeing its consultant's work, establishing the consultant's scope, and directing the provision of services. Therefore, it will be the District's responsibility to oversee the implementation of recommendations, including those that will be implemented in part or in full by the consultant. Similarly, although two of the primary systems the District uses for bond management activities (Prompt and ProLog) are maintained by the consultant, the review team referred to them as the "District" systems or directed recommendations to the District. Ultimately, the District in implementing these recommendations will most likely provide direction to the consultant to address the review team's findings.

## Overall Assessment

### OVERALL ASSESSMENT

The review team found that the District has some opportunities to make improvements to streamline practices, better use technology, and increase the effectiveness and efficiency of its management of projects completed with bond funds. The District's processes are not so weak that it is unable to deliver any projects or that those projects are failing to meeting quality standards and District expectations. However, the review team found that the District has opportunities to improve and adjust current practices, and to adopt others, to improve the effectiveness and efficiency of operations and better optimize the use of limited bond proceeds.

In creating our report, the review team recognized that there are aspects to the District's culture that have to be considered both in the evaluation of the District's performance against best practices, but also in developing workable recommendations to address issues. The District has a culture that places a high emphasis on user feedback and participation. Additionally, in part due to problems with a prior bond measure, the District has shown to be risk-averse and seeks to minimize risks associated with project delivery to the extent possible. Although both of these aspects provide benefits to the District, there are costs and issues that arise from them as well. The review team describes these in the report as well as recommendations for improvements or changes to help the District accomplish its goals of effective and efficient project delivery, while still working within the operational style and culture that is endemic to the organization.

Finally, we note that there appears to be opportunities for the District to resolve issues or frustrations through more open communication with the consultant. The District staff meets with consultant staff weekly, and often daily on projects. However, the team noticed that communication between the two organizations does not always work—staff from both organizations reported instances where they felt that they had clearly conveyed concepts or issues, only to have problems arise because of miscommunication. The District and the consultant need to make sure that they are clearly conveying messages, including communicating frustrations about problems that are not working as well as they could, or at all for either party. Only by discussing and addressing these issues openly will the District be able to find resolution to problems and clear the way for improved effectiveness and efficiency in project delivery.

## Project and Construction Management Assessment

<b>OVERALL ASSESSMENT</b>	
◆ <b>Project Cost Control</b>	
◆ <b>Technology Exploitation</b>	
◆ <b>Web-Based Project Management</b>	
◆ <b>Reporting</b>	
◆ <b>Construction Management</b>	

In the following sections, the team identifies for each of the functional areas, the best practice, the team’s evaluation of the District’s performance against best practices, and any recommendations or commendations related to the performance. The team notes that in many instances, findings relate to multiple areas. For these findings, the team placed the description of the issue and recommendation in the section for which the team felt it was most appropriate. However, the team also provided a note at the start of each section to indicate that other findings also related to this area, with a brief description of how those findings applied to the areas shown below. The team has also included as an appendix to this report, a crosswalk of the findings and areas to which they apply.

**A. PROJECT COST CONTROL**

**PROJECT COST CONTROL – OVERALL PERFORMANCE** ●

The review team found that the District has opportunities to make improvements in the area of Project Cost Control. Most of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Project Cost Control category reported elsewhere in the report.

Item Number	Category Reported	Team’s Evaluation of District Performance
21	Delivery Methods	●
28	Change Order Management and Controls	●
32	Financial Management—Technology Exploitation	●
36	Financial Management—Integration with Project Management and Reporting	●

**ITEM 1: CREATE AND UPDATE A CLEAR, PRECISE SCOPE, SCHEDULE, AND BUDGET.**

- ◆ *Note that **Item 1** also applies to the Technology Exploitation; Reporting; Project Planning; Delivery Methods; and Financial Management—Integration with Project Management and Reporting categories reviewed.*

<p><b>Best Management Practice:</b>                  Provide a detailed, clear, and precise scope, schedule, and budget. Entering and tracking planned projects into a system that is available to all private- and public-sector project planners will reduce the potential for conflicts and rework. Establish expectations early and review often as a best practice. The first line of defense in controlling costs is to know what is being built and why.</p> <p>When tracking a project from initial concept to design phase, changes that occur should be tracked by reason (passage of time, increased costs, changes in laws or regulations, or changes in educational style and District goals and objectives,</p>	<p><b>District Performance</b></p> <p>●</p>
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for example). Changes should also clearly document and identify the rationale for the change and net value received (or costs avoided) as a result.

The District has procedures to help control costs. These include processes for reviewing and approving change orders, competitive bidding requirements, and obtaining and reviewing estimates. However, in practice, the District's ability to effectively and efficiently control project costs is hampered by reporting and tracking mechanisms for projects that do not currently meet staff's needs. Although the system appears to adequately track required information, the reports as currently designed do not provide sufficient information to evaluate bond performance. Additionally, for some projects, to address scope or schedule changes that resulted in increases to project budget needs, the District has augmented the budgets through transfers from other projects, funds from other revenue sources or from bond interest earnings. This creates a situation where budgets are a continuous moving target. This is not, however, a realistic view of how efficiently the District is using its resources and delivering projects.

In establishing project definitions, the District works with its primary consultant and user groups to identify projects' scope, schedule, and budget. These items are documented in a Project Approval Document (PAD), which is routed to key managers, project sponsors, and District bond staff for review and approval. However, this document is maintained as a hard-copy document and is only stored electronically as a scanned PDF file. As will be discussed later, this document is not always updated or readily available. The District and its consultant also create and track budget and schedule information in an electronic reporting system (Prompt).

As projects progress and changes are needed, the District submits the change requests to District executive staff and the board for review and approval. After board approval, changes in project budgets or schedules are recorded in the Prompt system, which updates reports monthly. However, in updating the reports and systems, changes to the projects, including budget, scope, or schedule changes, are not adequately reflected on reports used by bond managers. This is because the reports show the revised numbers only, and do not show the original budgets or a full summary of all changes.

In reviewing notes for projects, the review team found that some projects in the electronic systems and reports showed budget transfers or identified changes. However, the notes were not always clear, and it did not appear that the notes to projects were consistently made or updated by all project managers. This makes it difficult for District staff, stakeholders, and members of the general public to identify the extent to which project budgets are changing (increasing or decreasing), and the related reasons without going to multiple sources. For example, the review team reviewed a sample of projects that were either closed or that were close to completion. The budget and accounting reports for the sample of projects reflected the following information as of October 2009.

Project	Project Budget	Contracts, Change Orders, and Reimbursables	Project Balance
Foothill College (FH)—Fire Alarm System Replacements, Phase II	\$1,706,752	\$1,391,342	\$384,722
FH—Mainline Irrigation, Phase II	368,703	149,795	218,908
FH—Choral Rehearsal Hall	169,476	127,870	39,931
FH—Renovate Existing Footbridge	653,693	614,837	38,856

*Continued on the following page*

De Anza College (DA)—Campus Site Lighting, Phase I	1,015,626	793,321	222,305
DA—Forum	2,555,798	2,403,885	151,913
DA—Signage, Phase I	802,720	632,365	176,125

As can be seen in the table above, in all instances, the project expenditures and outstanding contracts or amounts due are within the project budget reported and there is a project balance remaining, indicating that all funds budgeted for the project were not exhausted.

However, budgets by category and project have seen a large amount of fluctuation over time. The review team used the Bond List Revision worksheet to show changes that occurred from project inception to November 2009 for the projects shown above. Increases in project budgets have generally been offset through transfers from other projects or supplemented via interest earnings from bond proceeds. Over time, as the District exhausts bond proceeds, it will have fewer interest earnings to supplement changes to existing projects.

Project	Project Budget February 2006	Project Budget November 2009	Budget Increase or (Decrease)
Foothill College (FH)—Fire Alarm System Replacements, Phase II	\$609,644	\$1,706,752	\$1,097,108 +179.96%
FH—Mainline Irrigation, Phase II	914,424	368,703	(545,721) -59.68%
FH—Choral Rehearsal Hall	157,343	169,476	12,133 7.71%
FH—Renovate Existing Footbridge	216,511	653,693	437,182 201.92%
De Anza College (DA)—Campus Site Lighting, Phase I	988,665	1,015,626	26,961 2.73%
DA—Forum	2,285,055	2,555,798	270,743 11.85%
DA—Signage, Phase I	844,968	802,720	(42,248) -5.00%

As shown above, there were significant changes to the District's project budgets. In some cases project budgets were increased significantly, while in other instances, budgets decreased. The changes appeared reasonable based on the review team's examination of specific project documents. However, gaining this understanding, requires a review of multiple sources of data

housed in various locations and formats. The reports generated from the systems are not designed to provide information quickly for bond managers unless they spend time drilling down in project Web pages. For example, to identify the reasons for the reduction in the FH – Mainline Irrigation Phase II project (Project 129), the team had to review the following documents and reports:

- First, the team opened the Budget Cost Report for Project 129. At the bottom of the report was a note stating, “09/08/2008 - Please reference PAD for Project #144 (Central Campus Site Improvements) Programming.9.8.08 - remaining avail. budget consolidated.”
- The team navigated to Project 144 in Prompt and went to the Attachments Tab. Under the Attachments tab, the team expanded the “PADS” folder and opened the September 9, 2008 PAD for this project. In this document, on page 3, there is a line item showing a transfer of \$500,000 from Project 129 to Project 144.
- The team then navigated back to Project 129 in Prompt, went to the Attachments Tab, expanded the “Project Approval Docs” folder, and opened the PAD document dated May 9, 2008. In this PAD, on page 2, there is a bullet stating that the project scope has been reduced and that branch irrigation and controllers were removed from the scope of the project. A second bullet states that anticipated savings from this project will be transferred to Project 144, which will complete the branch irrigation and controllers.

This documentation accounted for \$500,000 of the reduction. The team could not locate information for the reasons behind the additional \$45,721 reduction that was shown in the table above.

As illustrated above, it is difficult to easily identify project changes, including budget amendments, and the reasons for the changes. Without clear reports, the board and stakeholders have difficulties in judging project results. The District does not have a report that summarizes changes to show the value added or costs avoided as a result of the changes, or alternatives that were considered in lieu of changes selected in a readily accessible format. Without a report of this information it is difficult to evaluate how effective the District has been in its efforts to control costs related to projects and optimize its use of bond funds—that is, did they make good decisions based on sound information.

#### RECOMMENDATIONS

**Recommendation 1:** The District should work with its consultant to determine whether required information is adequately tracked in the systems available. To the extent that information is not available, the District should determine the modifications or reporting systems needed to collect and report data. To the extent that data is available but not reported in a fashion that meets users’ needs, the District should work with the consultant to obtain customized reports that allow bond managers to quickly obtain information without going to multiple sources.

**Recommendation 2:** In making changes to projects, the District should ensure that it is tracking and documenting its deliberation of alternatives considered, the value added, or costs avoided as a result of the decisions.

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**ITEM 2: ESTABLISH AND TRACK CONTINGENCY LINE ITEMS BY MAJOR PHASE.**

- ◆ Note that **Item 2** also applies to the Reporting; Project Planning; Delivery Methods; Change Order Management and Controls; and Financial Management—Technology Exploitation, and Financial Management—Integration with Project Management and Reporting categories reviewed.

<p><b>Best Management Practice:</b>                  Project budgets should contain contingency line items by major phase—design and construction, for example—to cover unforeseen budget changes. The organization should establish realistic performance and financial management goals and contingencies that take into consideration the operating and environmental constraints related to specific projects. Contingency fund usage should be separately tracked and identified. This helps to better evaluate and manage change orders and budget transfers to determine whether problems are occurring that could be avoided on future projects.</p>	<p><b>District Performance</b></p> 
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The District has established a contingency fund for each of the three project locations—the District, Foothill, and De Anza and for individual projects. Project construction contingencies are routinely established as 5 percent for new construction and 7 percent for renovations, with Bond Managers and project managers adjusting these as necessary depending upon the complexity of the project or the nature of the work. However, the review team had difficulty in determining whether the District’s contingency amounts and percentages are appropriate. As discussed in the prior section, the system reports used by the District and its consultant generally reflect revised budgets by project or line item. Identifying changes requires a review of several reports in various formats, making it difficult for the review team or the District staff to readily identify and track changes in project scope, schedule, or budget from a historical perspective.

Currently, the District’s reports do not reflect the amount of contingency funds used. When the District needs to move funds from the contingency object code to other line items (such as design or construction costs), the system reports do not reflect any usage of the contingencies. At the end of a project, contingencies that are exhausted show as having a zero dollar budget and zero usage.

For example, on a project that has exhausted its available construction budget and needs to draw on its contingency funds, the budget cost report shows the following prior to any changes being made.

Project	Budget	Expenditures	Remaining Balance
Principal Construction	\$450,000	\$450,000	\$0
Contingency	\$200,000	\$0	\$200,000

After the change is made, the budget cost report shows no usage of contingency funds and a new budget for construction:

Project	Budget	Expenditures	Remaining Balance
Principal Construction	\$650,000	\$450,000	\$200,000
Contingency	\$0	\$0	\$0

As illustrated above, the changes result in reports that do not show prior budget information and do not adequately reflect the District’s usage of its contingency funds. To an external reviewer, it is not readily apparent that the construction budget had to be augmented. Further, the District’s cost control ability is reduced because it lacks a means to readily track the usage of contingency funds or movement of funds from project to project. In discussions with consultant staff, the review team found that the system does track changes and can produce reports showing usage or movement between budgets and line items. However, this information is not currently in a report that was accessible to the bond managers or the review team.

Further, as discussed in the prior section, the District has made significant changes to some of its projects. Currently, any changes that have resulted in project budget increases can be covered by the interest earnings from bond funds that the District allocates to colleges and projects quarterly. However, in the long-term, this income source will shrink as bond funds are depleted and the District will be unable to rely on this back-up as a way of covering cost increases. The District will have to resort to reducing scope or canceling projects when budgets increase. Therefore, the District’s need to carefully plan and control the use of funds, including contingency funds, is critical in the long-term.

The contingency range used by the District of 5 percent to 7 percent falls with the ranges used by others in the same geographic area and industry and does not appear unreasonable. However, determining whether this is too low or too high specifically for the District given the District’s moving budget and object code report issues described earlier, was difficult. For completed projects, the District generally shows that contingency funds for the projects have been exhausted. However, it is unclear whether this is because all contingency funds were used in their entirety; were used and supplemented by other funds (such as bond interest funds); or were not used and were transferred out to other projects.

District and consultant staff reported that the District updates the contingencies (increase or decrease) when the District accepts changes to construction estimates. However, because the reports do not show how much or when contingency funds are used or modified, it was not possible for the review team to verify the frequency based on the information provided to us during our review.

Finally, the District tracks contingencies for projects in total rather than by major category. Breaking out and tracking contingency use by major category would help the District gain information on whether and when it needs to implement improvements to budgeting and estimate review procedures for future projects. Tracking and reporting contingencies between development (design) and construction phases would give the District more information to allow it to better estimate and predict future costs. District staff reported that although the contingency is by project, they are monitoring and allocating contingency amounts by phase. However, they acknowledged that this is not readily evident from the current reports produced by the system.

**RECOMMENDATIONS**

**Recommendation 3:** The District should modify its project documentation requirements to ensure that it has an adequate way to evaluate the history of the project, including changes to scope, schedule, or budget as well as the use of contingency funds.

**Recommendation 4:** The District needs to conduct periodic analyses of its completed phases and projects in more detail to identify any causes of changes in cost. This will help the District to determine if it should expect similar changes in other bond-funded projects (and thus, should modify contingency funds for these projects as well).

**Recommendation 5:** The District should document and clearly track contingencies related to soft costs (design) separately from hard costs (construction) to improve its ability to forecast costs for future projects.

**Recommendation 6:** The District should work with its consultant to determine how to produce reports that meet the needs of bond managers and that will allow them to adequately evaluate the use of bond funds.

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**ITEM 3: CREATE ACCURATE, INDEPENDENT, AND COMPLETE COST ESTIMATES AND BID DOCUMENTS.**

**Best Management Practice:**

Establish criteria for the preparation of bid documents and independent cost estimates that takes into consideration both project characteristics and the volatility of the market. Having to redesign and rebid a project on which bids come in over budget, or an insufficient number of vendors qualify based on the specificity of project criteria can significantly impact project delivery cost. Accurate estimates at the end of each design phase, performed by unbiased, independent, qualified professionals with an understanding of local market conditions will reduce the potential for receiving unexpected bids. Well-defined project bid documents will also streamline and facilitate the prequalification or bidding processes.

**District Performance**



At the District, the bid process is managed by the Purchasing Services Division. The division obtains bid documents and specifications from requesters—either the District or its consultant—which it uses to create advertisements and requests for proposals. This division also assists in prequalifying vendors for services or products.

The District has had to cancel two prequalification efforts in the most recent year due to issues related to specifications. For example, in February 2009, the District reported to the Board that it had cancelled the prequalification process for two De Anza College projects since no bidders met the minimum requirements. Later, in May 2009, the District reported that it was seeking prequalification of vendors for synthetic turf. Staff reported to the review team that the District ultimately had to cancel this process because the project specifications were so specific that the District could not prequalify any vendors. The District modified its requirements and posted a

new prequalification request in October 2009, five months after beginning the process. The review team notes that this does not happen on the majority of prequalification efforts; however, these types of problems can result in increased costs and project delays. Therefore, the District has opportunities to work with the division to identify lessons that can be learned from these issues and improve future prequalification efforts.

District and consultant staff reported that they believe there are opportunities to improve the bidding process and reduce the amount of time needed to advertise for bids and award contracts. The minimum time for an advertised public bid process, per the District's purchasing division's requirements is 10 weeks, plus any time needed for negotiations. District staff reported that in practice, this typically results in at least 12 weeks needed between initiation of the process and the issuance of a purchase order to the selected vendor.

The review team found that although there appear to be community colleges with processes that result in shorter time frames for advertised public bidding, a 12-week time frame is not unreasonable. The time needed to complete a bid proposal process depends on the type of competitive bidding methods used, the complexity of the services required, the number of bids or proposals received, whether a bidders'/proposers' conference is held, whether protests are received, and other factors. Other agencies the review team examined have reported that a three-to-eight month process is to be expected for some projects. Because the division processes were not included within the scope of the review, we did not analyze their processes to determine whether this division has opportunities for improving or streamlining their processes. However, based on staff and consultant comments, the District may wish to consider working with bond and purchasing staff to identify opportunities for process improvements.

**RECOMMENDATION**

**Recommendation 7:** The District bond staff should work with the Purchasing Services Division to determine if there are ways to streamline the prequalification and bidding process to improve outcomes and avoid having to restart the prequalification process.

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**ITEM 4: REVIEW AND FINE-TUNE COST ESTIMATES WITH KEY STAFF AND/OR TRADE CONTRACTORS.**

- ◆ *Note that **Item 4** also applies to the Project Planning category reviewed.*

<p><b>Best Management Practice:</b>                  Cost estimates should be used as a tool and critiqued or evaluated by project managers and key stakeholders in addition to the architect or construction managers. These should be fine-tuned for updates at each phase and compared to the current construction schedule and bidding climate, and past change orders or not-in-contract (NIC) costs for similar projects.</p>	<p><b>District Performance</b></p> <p style="text-align: center;">●</p>
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The District is obtaining independent estimates. However, the team's review found that the District has opportunities to improve its review and reconciliation of these estimates to ensure that they are accurate and complete, especially for inclusions and exclusions.

For higher-value projects, the District obtains estimates from an external professional consultant to compare against the architect-provided estimates. District and consultant staff reported that they review these estimates and adjust them based on discussed and authorized changes. However, the review team found that the documentation trail of the reviews was not always clear to identify who has reviewed the estimates, all comments they have made, and the result of those comments (actions taken). The planning and construction managers should be reviewing estimates in detail, aligning them with the project schedule, and comparing them to specifications. Without tracking or documentation of reviews and comments, however, it is difficult to ascertain who is reviewing these, how they are being used, and what changes have been incorporated from draft estimates into the final versions. The District has seen a large number of change orders to its budgets over the project life cycle for completed projects. Improving its review process for estimates could be one way to create better budgets and reduce changes.

In reviewing specific projects, the review team found instances where projects appear to have had a review of estimates that was too high-level in nature, resulting in some estimate areas being missed that should have been included. For example, the review team found the following:

- ◆ The construction estimate contained the costs for the security system conduit, but no related budget items for system switches, conductors, or installation of the system.
- ◆ The construction estimate lacked line items for District-supplied insurance, builders' risk, or required construction contingency.
- ◆ The audio visual construction estimate did not include the cost of wiring or details (conduit and attachments only were included).
- ◆ The estimate did not include fire-proofing costs for the classroom.
- ◆ The estimate did not include shades for the classroom—one area that District staff often results in add-on costs at the end of projects.

Although these are not high-dollar findings, they are areas that with proper review procedures by trained, experienced staff or consultants could have been detected to save future change orders or additional costs.

Further, in some instances, the documentation on project estimates stated that the specifications were provided via verbal communications with the architect. The lack of written documentation creates difficulties in aligning the specifications of the estimates. Additionally, the estimates reviewed did not always include site and schedule limitations and restrictions, which best practices recommend including as a way of documenting and fully identifying construction costs.

The review team found that other agencies have used a reconciliation process to improve their estimating processes. For example, organizations can require the architect to independently provide an estimate in addition to having an estimate created by the District's professional estimator. Reconciling the two estimates can be a way of ensuring all items have been considered and that the District has not missed key areas.

**RECOMMENDATIONS**

**Recommendation 8:** The District should incorporate requirements related to the documentation and tracking of estimate reviews and comments, including changes requested.

**Recommendation 9:** The District should ensure that it is consistently taking into account the special nature of projects and using cost-estimating tables that are valid for the construction type and environment in the District. The District should also ensure that detailed furniture and equipment lists by line item are included in the estimates.

**Recommendation 10:** The District should ensure that it is consistently and completely reconciling architect-provided estimates to in-house or third-party estimates.

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**ITEM 5: CLEARLY COMMUNICATE PROJECT VISION AND EXPECTATIONS TO USERS.**

- ◆ *Note that **Item 5** also applies to the Technology Exploitation; Project Planning; Project Packaging; and Change Order Management and Controls categories reviewed.*

**Best Management Practice:**

Best practices recommend defining capital projects carefully with respect to scope, schedule, and budget. This includes establishing expectations early and reviewing them often with users and managers. The first line of defense in controlling costs is to know what is being built and why. Defining a project and establishing expectations is a serious first step toward making a project successful. Managing expectations and communicating with owners is key. Users should be kept fully informed of the cost impact of every decision made and change requested.

**District Performance**



The District's processes for planning and design rely on heavy input from user groups and key stakeholders. However, those providing input often lack the sophisticated knowledge or training to understand how design or change requests can affect the budget or schedule. The District has tried several ways of educating user groups to ensure that the final products meet the user's needs, but has still seen a large number of scope and budget changes as well as "NIC" costs at the end of projects.

The District has used various strategies to help user groups visualize the final product. Among other processes, the District has used Building Information Modeling (BIM) on larger or higher-risk projects. The BIM processes involve generating and managing building data with three-dimensional, real-time, dynamic building modeling software. Additionally, the District has tried other ways to translate design plans and requests for user groups. In one instance, the District built a full-size mock-up of the proposed project (the Dental Hygiene Renovation) for users to review. However, these processes are not used on all projects, and District staff stated that there are opportunities to use BIM on other projects.

Despite its numerous efforts to educate users on the end product expectations, the District has experienced increased costs and additional changes near the end of construction when user groups request changes. It appears that many of these occur because users did not fully

understand the information or diagrams provided to them early in the project lifecycle. Users' requests for changes are based on what they would like or need for the finished project, but do not reflect an understanding of the extent to which their design elements or change requests affect not only the scope and budget of their project, but also other projects funded by bond proceeds. The District has been able to cover many of the changes that resulted in budget increases with proceeds from bond interest payments. However, as it exhausts bond proceeds, it will be unable to rely on this source in the long term.

In part, some issues derive from the District's culture. The District places a high emphasis on user input and participation. However, the extent to which the District has allowed users to have control over the scope and budget of projects appeared to be more than the review team saw in some other community colleges. Users should be allowed to provide *input* to guide the design and planning, but the ultimate *decision* should be made by those with the knowledge and experience to make balanced decisions that consider not only the user requests, but the needs of the college and District, the value added or costs avoided by making changes, and the projects or tasks that must be foregone to accommodate changes. Allowing users too much control over project scope decisions can increase costs if users do not understand what must be given up to make the change.

When users request changes after the construction is complete, the District's costs for these items increases greatly. District staff referred to NIC costs as a problem that resulted in part from users' lack of understanding. Industry practice uses this term generally for unforeseen items—items that are out of the scope or beyond the expectations of the project as designed by users and the client. However, District and consultant staff reported that, in practice, the NIC costs relate to items that should have been foreseen or expected during the planning and design phases. Because these costs occur after the completion of the project, the additional charges can add to the cost of the project significantly. For example, if a user requests a different door at the end of the construction phase, the District faces increased costs that can more than double the price it could have paid had this been included in the original contract and estimates. This is because the District has to go through the bond purchasing process. The District will incur additional costs for the new item, but will also incur administrative overhead and construction management (CM) fees related to the item and the new request.

One best practice used by other organizations and community colleges to offset the impact of NIC costs at the end of projects is to create and use a contract cash allowance. An allowance in a construction contract is a set dollar value that is assigned to a contract or item of work. With allowance items, if the value of the allowance in the contract is greater than what is needed to make the actual purchase, the District will recognize a "credit change order," which will allow the funds to be used for other projects. The allowance is included in the bidding documents and requests for bids so that it meets competitive and low-bid requirements.

To illustrate the allowance concept, a particular construction job may be estimated to cost \$1 million. The District solicits bids and adds an allowance to the contract based on its estimate of what it will need to cover unforeseen costs and changes based on prior similar projects. In this instance, the District establishes an allowance of \$100,000.

Line Item	Budget
Principal Construction Contract	\$1,000,000
District Construction Allowance	\$100,000
Total Construction Contract Amount	\$1,100,000

When the District awards the contract and submits it to the board for approval, it submits the contract amount of \$1.1 million, which includes the allowance. As work progresses, if there are no unforeseen items or changes, the contractor performs the work up to the maximum of the \$1 million. The \$100,000 allowance would be credited back to the District's budget and not paid to the contractor. However, if the District identifies changes that were not included in the construction documents and requirements (out of scope), then it can authorize the contractor to perform additional work or provide additional products up to the maximum of the allowance approved by the board (\$100,000), without adjusting the construction contract amount. The District can establish controls related to the authorization and use of allowance amounts that still allow for proper review and control of these funds. District staff reported that they have used allowances on projects in the past. However, given reports from staff about problems with NIC costs at the end of the projects, the District may need to examine whether it should expand using these on more contracts or projects in the future.

Finally, the review team identified an opportunity for the District to improve user education via the building component survey document that is included in the construction documents' cost estimate. The review team noted that for projects reviewed, the District's construction documents estimate contains item descriptions for projects as a whole. For example, one project reviewed had the following:

Line Item Description	Quantity
<b>Interior Partitions, Doors, and Glazing</b>	
<b>Partition Surfacing</b>	
Gypsum board	130,668 SF
Level 5 finish to Central Corridor	20,000 SF
Underlayment	27,685 SF
Shaft liner	17,437 SF

This shows users the amount of materials to be provided in total, but does not provide information on individual rooms or sections. In other organizations and delivery methods, the review team found that construction documents break out work or items in more detail. For example, we found the following on a project with another community college:

Line Item Description	Quantity
<b>Room 198—Community Meeting Room</b>	
Shared walls, 20 Ga. Metal Framing 16'	704 SF
Wall Insulation	704 SF
Paint Interior	1624 SF
T-Bar Ceiling	730 SF
Carpet	1150 SF
Carpet Base	50 EA
Security Cameras	1EA
Card Readers	1EA
Room Signage	1 EA
Pair Storefront Doors	1 EA
Tackable Wall At Rear Wall	330 SF
<b>Room 151</b>	
8" CMU Walls	688 SF

*Continued on the following page*

Line Item Description	Quantity
Shared CMU Walls	208 SF
Non-Shared Walls, 20 Ga Metal Framing 16' H	112 SF
Wall Insulation	112SF
Paint Interior	1072 SF
T-Bar Ceiling	180 SF
Epoxy Floor	180 SF
Vinyl Base	75 SF
Base Cabinets	32LF
Lights Under Uppers	3 EA
Epoxy Counter Tops	32 LF

Breaking out construction documents in greater detail may be a way of giving users a better picture of what the final space will include. The review team notes that it is not always possible to educate users to the extent that no changes or modifications will be requested during or after construction. However, the extent to which changes can be reduced will ultimately reduce costs for the District. The California Multi-Agency CIP Benchmarking Study reported that the later that changes in project scope or budget occur in the life of the project, the greater the increase reported by their participating agencies.

#### RECOMMENDATIONS

**Recommendation 11:** The District should consider expanding the use of 3-D drawings, modeling programs, and perspectives for a clear description of the spaces and materials designed for acceptance by user groups. 3-D modeling can be considered during the design development phase only for critical educational and user-requested spaces in the program. The use of full BIM modeling can be considered on a risk or cost-benefit basis that includes consideration of the complexity or cost of the project.

**Recommendation 12:** The District could consider modifying its Building Component Summary documents to break down the components by room rather than in total.

**Recommendation 13:** The District should establish protocols for minimizing scope creep related to user group's comments. This would include the increased leadership role of project sponsors or bond managers and increased authority to make final decisions based on cost-benefit analyses related to the college, District, or projects.

**Recommendation 14:** The District should ensure that scope changes are approved only after carefully considering both the benefits and costs (including costs of projects that must be foregone) due to the changes.

**Recommendation 15:** The District should consider expanding its use of construction allowances in project bid documents to cover NIC costs and unforeseen items.

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**ITEM 6: MODIFY PROCEDURES FOR SMALL-DOLLAR PROJECTS ON A COST-BENEFIT BASIS.**

- ♦ *Note that **Item 6** also applies to the Reporting; Delivery Methods; Project Packaging; and Financial Management—Integration with Project Management and Reporting categories reviewed.*

**Best Management Practice:**

Projects with lower total construction cost (TCC) are typically more expensive to deliver than projects with higher TCCs. Therefore, organizations should expect to incur higher percentages of soft costs, including administrative costs, for lower dollar projects. To mitigate against a higher percentage of soft costs, agencies can adopt modified procedures or documentation requirements to reduce the administrative work.

Create an in-house project management team for small projects. It has been documented that the cost of project delivery of small projects is a higher percentage of the construction cost. Establishing a project management team that specializes in smaller projects may lead to economies such as grouping similar projects during permitting and bidding, thus reducing project delivery cost.

**District  
Performance**



The District generally uses the same procedures—including project management, administration, documentation, and reporting—for all projects, regardless of the size of the project. In some instances, this is unavoidable because the District will have to continue to perform key administrative tasks (contracting, recording invoices, reporting milestones and progress, etc) for all projects. However, the review team did find that the District has opportunities to reduce some of the administrative work and associated costs related to lower-dollar projects, including many of the maintenance or scheduled maintenance projects.

For example, in initiating maintenance or scheduled maintenance, the District’s consultant will often create and route a PAD to stakeholders to document the understanding of the project. Establishing expectations via the PAD is a best practice, although, as discussed later in the report, the District has opportunities to improve this document’s use. However, for smaller-dollar projects, the value provided by the PAD appears to be less than the time and cost associated with creating, routing, and updating this document. The District could consider a modified sign-off procedure for the smaller-dollar projects that could involve a review and approval process with a limited number of individuals from the District and its consultant or authorizing a single person, such as the Director of Facilities, to serve as a global user representing the District.

The review team found that some other community college Districts combine small projects together, especially those related to deferred or scheduled maintenance. These projects can also be managed in a “stripped down” style since there the users who are providing input are generally experienced facility staff knowledgeable in what is required. For these reasons, a less complicated style of management for these items, similar to that used by other Districts, could be beneficial to the District. The team’s review found that in early years of the Measure C process, the District had initially defined as some projects separately that it eventually consolidated based on type of work performed. As discussed later in the Project Packaging section of the report, the District also had instances where it presented multiple contracts for a single vendor to the Board rather than consolidating these into one contract. We note, however,

that the District has taken steps to remedy this and appears to be performing strongly in grouping projects together and bundling similar projects together.

The District has not moved to implement an option available to it via Public Contract Code sections 22030 et seq. State law allows Districts to implement alternative purchasing procedures under the Uniform Construction Cost Accounting (UCCA) procedures set forth in Article 2 (commencing with Section 22010) of the Public Contract Code. To qualify, a board must adopt a resolution that it has elected to become subject to this code, and must notify the Controller of that election. Under these standards, the District can increase its ability to spend funds on public projects without going through a formal bid process. Under the terms of this section, the District is permitted to do the following without seeking formal bids:

- ◆ Perform public projects of \$30,000 or less by employees of the District using a force-labor account, a negotiated contract, or purchase order.
- ◆ Let public projects of \$125,000 or less to contract using informal procedures established in state law.

District staff reported that the Executive Bond Committee considered the UCCA process, but did not decide to adopt it since it felt that it would result in increased accounting procedures for the entire District. However, this may have been a misconception or may have been a conclusion based on the District's older financial system. Per the State Controller's Office, "an agency with no or an antiquated cost accounting system may need to invest in a system that will satisfy the relatively simple cost accounting procedures of the program." Since the District has recently implemented a new financial system, the Committee and the District may wish to reconsider adopting the UCCA. Per the State Controller's Office, "UCCA procedures follow normal accounting in the industry and in many cases are not much different from those already in place at the agency." Adopting these procedures would expand the District's ability to more quickly perform or contract for smaller dollar projects.

#### RECOMMENDATIONS

**Recommendation 16:** The District should consider using modified procedures for smaller-dollar or lower-risk projects, especially related to the PAD documentation, to decrease administrative time needed to manage these projects.

**Recommendation 17:** The District should consider adopting the UCCA procedures to give staff increased flexibility in performing smaller dollar projects.

\* \* \* \* \*

## B. TECHNOLOGY EXPLOITATION

### TECHNOLOGY EXPLOITATION — OVERALL PERFORMANCE ●

The review team found that the District has opportunities to make improvements in the area of Technology Exploitation. Some of the issues related to this area are reported in this section. However, for other items, the review team's findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain

findings and recommendations related to the Technology Exploitation category reported elsewhere in the report.

Item Number	Category Reported	Team's Evaluation of District Performance
1	Project Cost Control	●
5	Project Cost Control	●
9	Reporting	●
12	General Project Management, Governance, and Oversight	●
19	Delivery Methods	●
22	Delivery Methods	●
33	Financial Management—Technology Exploitation	●

**ITEM 7: PROVIDE BOND OVERSIGHT AND MANAGERS WITH TIMELY, ACCURATE, DETAILED REPORTS.**

- ◆ Note that **Item 7** also applies to the *Web-Based Project Management; Delivery Methods; and Financial Management—Technology Exploitation* categories reviewed.

<p><b>Best Management Practice:</b>                  District and college staff responsible for overseeing bond performance should be provided periodic reports on planned and actual expenditures to date for each project and cost category. These reports should be timely, accurate, and detailed.</p>	<p><b>District Performance</b></p> <p>●</p>
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The District is not provided with accurate and updated reports because of issues with District and consultant staff, vendors, and contractors, not using available systems to the full extent and as designed.

The District's primary consultant uses a Web-based application to track budgeted and actual expenditures. This system (Prompt) has electronic work flows that the consultant established to route contractor and vendor invoices for review and approval. Prior to the District's conversion to a new accounting system in July 2009, the Prompt system was able to link and transfer payment requests electronically to the accounting software. This functionality was lost in the conversion, however, and the District anticipates it will not be restored until early in 2010.

District staff reported that they do not feel they can rely on the information in Prompt—that it is often outdated or inaccurate. The consultant has two accounting staff assigned to process transactions into these systems. However, District staff stated that they believed that the system does not always update reports as frequently as the District needs the information to be maintained, and therefore reports can be outdated or inaccurate. Consultant staff, however, stated that inaccuracies or missing information are often due to delays in its staff receiving data from the District. The review team notes that regardless of whether the fault lies with the District, with the Consultant, or with both entities, District and Consultant staff will need to communicate more effectively with each other to identify a solution to the problem. The team notes that the District has worked with the consultant to modify reports from the system to include revised projections of future budget needs. However, these do not fully meet the District's needs and

further modifications will most likely be required. Identifying and implementing these modifications will only come through constructive, guided, and focused discussions between the two groups.

Additionally, the primary project management system used by the District and its consultant is missing a large amount of documentation and reports needed by bond managers. The ProLog system is used by some District contractors, including its primary consultant. The system has the capability of storing and tracking meeting minutes, change orders, project information, project assignments, request for information (RFI) logs, and submittals. With the exception of RFI tracking, the review team found that the system is not updated and many documents the review team expected to be in the system are tracked on other servers, systems, or in hard-copy format. District staff reported and the review team found that submittal logs, which the ProLog system can track and maintain, are often kept in Excel files stored on the consultant's server. This has caused issues for bond managers who need the information to oversee bond projects. The team noted that some completed projects we reviewed lacked documents such as the PAD documents for any phase, construction estimates, and constructability review files.

#### RECOMMENDATIONS

**Recommendation 18:** The District needs to work together with its consultant to identify ways to improve the reporting process and use of key systems to identify goals, objectives, and annual targets for reporting purposes. Reports should include data and charts to demonstrate changes (negative or positive) in performance through the year, and future plans to correct past or current deficiencies.

\* \* \* \* \*

### C. WEB-BASED PROJECT MANAGEMENT

#### WEB-BASED PROJECT MANAGEMENT—OVERALL PERFORMANCE ●

The review team found that the District has opportunities to make improvements in the area of Web-Based Project Management. The review team's findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. The team also notes that although many of the items shown below are yellow, the overall category rating is listed as red. This is because the extent of problems surrounding Web-based project management use were such that the team felt that this needed a stronger rating to show the urgent need for improvements to the use of these systems.

Specifically, the following items contain findings and recommendations related to the Web-Based Project Management category reported elsewhere in the report.

Item Number	Category Reported	Team's Evaluation of District Performance
7	Technology Exploitation	●
9	Reporting	●
19	Delivery Methods	●
22	Delivery Methods	●
28	Change Order Management and Controls	●
29	Change Order Management and Controls	●
33	Financial Management—Technology Exploitation	●

\* \* \* \* \*

**D. REPORTING**

**REPORTING — OVERALL PERFORMANCE ●**

The review team found that the District has opportunities to make improvements in the area of Reporting. Some of the issues related to this area are reported in this section. However, for other items, the review team's findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Reporting category discussed elsewhere in the report:

Item Number	Category Reported	Team's Evaluation of District Performance
1	Project Cost Control	●
2	Project Cost Control	●
6	Project Cost Control	●
13	General Project Management, Governance, and Oversight	●
19	Delivery Methods	●
22	Delivery Methods	●
28	Change Order Management and Controls	●
33	Financial Management—Technology Exploitation	●

**ITEM 8: MONITOR AND TRACK CONSULTANT AND CONTRACTOR PERFORMANCE.**

- ◆ *Note that **Item 8** also applies to the General Project Management, Governance, and Oversight category reviewed.*

**Best Management Practice:**

Institutionalize project manager performance and accountability. Recognize that professional project management requires specific education, training, and experience. Provide for Project Management Institute, CCM, or other formal training and certification and establish performance measures for project delivery personnel. The performance of consultants should be tracked so that those who deliver quality services at reasonable costs can be adequately considered for future awards.

**District  
Performance**



The District has a high-level performance evaluation system that it uses to evaluate and track the performance of its primary consultant. Annually, the college bond managers fill out employee evaluations on behalf of the consultant to provide feedback to the company on how each staff person has performed. Additionally, the District rates the consultant's performance quarterly. The District rates the consultant on Responsiveness; Project Planning and Packaging; Financial Management; Schedule Management; Quality Control; Reporting; Safety; Communications; and Project Closeout. The review forms have the District rate the consultant on each item using one of four categories—Excellent; Good Solid Performance; Needs Improvement; and Unsatisfactory.

The system is qualitative and does not have specific quantitative performance metrics that could be used to supplement the District and College staff's ratings. Additionally, the District does not reconcile duties and work performed by its primary consultant to duties outlined in contracts. As will be discussed later in the report, this is because the District lacks a means of easily determining which consultant staff are assigned to a particular project.

Lacking a reconciliation process or performance targets and goals indicates that there is a reduced incentive for contractors to expedite projects. Creating and using a performance measurement system that includes quantitative metrics would benefit the District by allowing it to demonstrate value received to the Board, the Committee, and members of the general public for these contracted services. It would also help the District to determine the amount of services needed for future projects, something that will become even more critical as the District moves more projects into the construction phase. Common quantitative performance metrics could include the following:

- ◆ Number of projects delivered on time.
- ◆ Number of projects delivered within budget.
- ◆ Staff utilization metrics (number of projects managed or worked on by each staff person with explanations for variances)..

The review team notes that the Executive Bond Team, as described in the Introduction, has been tasked by the Board to, among other items, establish a reporting mechanism to the board and establish performance measures to define success. However, the Executive Bond Team

members are executive District and college staff with multiple competing demands for their time. Therefore, it does not appear that they have the time needed to develop the metrics. The task may be better suited to the bond managers, who can present and refine the metrics with the assistance of the Executive Bond Team.

**RECOMMENDATIONS**

**Recommendation 19:** The District needs to consider refining its system of monitoring and reporting on contractor and consultant performance. This system should include quantitative performance metrics as well as qualitative ratings.

**Recommendation 20:** The District should consider tasking the bond managers with developing the metrics in collaboration with the Executive Bond Team.

\* \* \* \* \*

**ITEM 9: ESTABLISH PERFORMANCE METRICS TIED TO BOND AND PROJECT GOALS AND OBJECTIVES.**

- ◆ *Note that **Item 9** also applies to the Technology Exploitation; Web-Based Project Management; and Financial Management—Integration with Project Management and Reporting categories reviewed.*

<p><b>Best Management Practice:</b>                  The Board and/or Committee should establish annual goals and objectives that are tied to outcome measures, are aligned with available resources, and that include staff input and support. The Board should review reports on programs and services that demonstrate links to the organization’s purpose and that track progress towards desired outcomes.</p>	<p><b>District Performance</b></p> <p style="text-align: center;">●</p>
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The Board and Committee review reports of expenditures, but have not established formal performance metrics. Performance metrics should provide information that allow the board and users to easily identify the District’s overall performance in a given time frame (a quarter or a year). Metrics give the Board and stakeholders a way to quickly identify focus areas—both for areas of strength as well as areas of weakness. The annual report, as discussed later in this document, has no information on outcomes or compliance with expected schedules. The expenditure data it provides is from the program’s inception and does not give any measures of how well the District has performed in the most recent reporting cycle.

Examples of performance metrics used by other organizations to measure construction related activities include the following:

- ◆ Total projects by type.
- ◆ Number and dollar value of projects by phase (preplanning, planning, design, preconstruction, construction, or close-out, for example), and comparisons to prior year or prior quarter amounts.

- ◆ Number of projects delayed by reason code (the District could use general reason codes and would not list every specific reason that projects were delayed), and amount of time delayed.
- ◆ Budgeted versus actual expenditures for the reporting period.
- ◆ Number, dollar amount, and percentage of change orders by project type and/or change order reason.
- ◆ Energy consumption or savings achieved by the District via green building project completion.

These are only a few of the measures used by other Districts or organizations that the District could consider to provide additional information and resources. In many instances, other Districts that the review team examined publish their metrics on a dashboard through web-based software and applications. The metrics are tied to the Districts' main accounting and construction project management applications to provide dynamic, real-time data.

The metrics could and should be tied with the District's long-term strategic goals and facilities master plan objectives to allow the Board a means of measuring the District's progress in accomplishing those goals and objectives. The review team notes that the information required to create these metrics appears to be information already tracked by the District in the Prompt or ProLog systems, the District's accounting system, and worksheets maintained by the District's consultant. Therefore, it would simply be a matter of organizing the data to produce the metrics periodically rather than having to recreate systems to capture, track, and report required data.

#### RECOMMENDATION

**Recommendation 21:** The Board and District should work together to identify goals, objectives, and annual targets for reporting purposes. Reports should include data and charts to demonstrate changes (negative or positive) in performance through the year, and future plans to correct past or current deficiencies.

**Recommendation 22:** The District and its consultant should create performance metrics aligned with bond and District strategic plans and goals that could incorporate elements or data from Measure E projects. Metrics could include the following: percentage of direct cost; percentage of indirect costs; percentage of projects in compliance with established schedules or cost; number and dollar amount of change requests by type; and average expenditures by major cost category.

\* \* \* \* \*

**ITEM 10: TRACK AND REPORT COSTS BY PROJECT PHASE OR CATEGORY.**

<p><b>Best Management Practice:</b>                  The District should track and identify costs separately by category—soft costs are distinguished from construction costs.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em; color: yellow;">●</p>
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The District uses the Prompt system to track construction costs by category. This system groups object (accounting) codes into one of four main categories: Group II Costs, Hard Costs, Soft Costs, and Overhead. The District’s consultant provides reports that summarize expenditures in total by these categories, and also that allow managers and District staff to drill down into specific categories, object codes, or locations. The review team notes that the discussion here refers only to the system’s capabilities, and is not a reflection on the actual data included in the system. As discussed in *Item 1*, the main financial system produces reports with revised budgets once changes are entered into the system. Further, as discussed in *Item 7*, District staff reported that some data in the Prompt system is outdated or inaccurate and thus, does not provide accurate information on these costs, even though they are tracked by category.

COMMENDATION
<p><b>Commendation 1:</b> The District has a system that can meet best practices related to cost tracking.</p>

RECOMMENDATIONS
<p><b>Recommendation 23:</b> The District should ensure that the data in the primary tracking and reporting systems, whether entered by District staff, vendors, or consultant, is kept updated and contains accurate information to assist bond managers, the Board, and key stakeholders in overseeing project work.</p>

\* \* \* \* \*

**E. CONSTRUCTION MANAGEMENT**

<b>OVERALL ASSESSMENT—Construction Management</b>	●
♦ General Project Management, Governance, and Oversight	●
♦ Project Planning	●
♦ Delivery Methods	●
♦ Project Packaging	●
♦ Change Order Management and Controls	●
♦ Constructability Reviews	●

a. General Project Management, Governance, and Oversight

**General Project Management, Governance, and Oversight – Overall Performance** ●

The review team found that the District has opportunities to make improvements in the area of General Project Management, Governance, and Oversight. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the General Project Management, Governance, and Oversight category discussed elsewhere in the report.

Item Number	Category Reported	Team’s Evaluation of District Performance
8	Reporting	●
19	Delivery Methods	●
20	Delivery Methods	●
21	Delivery Methods	●
22	Delivery Methods	●
23	Delivery Methods	●
25	Delivery Methods	●

**ITEM 11: SET APPROVAL AUTHORIZATIONS AT AN APPROPRIATE LEVEL.**

<p><b>Best Management Practice:</b>                  Establish criteria and identify those responsible for approval of project design, expenditures, change orders (including changes to scope, schedule, and budget), and communication to user groups. The approval should be set at the lowest appropriate organizational level in order to expedite data requests and project approvals. A single person or a small group should not be responsible for final decision making if they also have multiple other functional areas and responsibilities that compete for their time and attention. Designate a responsible person or group and establish a process of notifications and milestones for project oversight and management.</p>	<p><b>District Performance</b></p> <p>●</p>
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The team’s review of the District’s current practices—as outlined in its draft policies and procedures documents and based on discussions with District and consultant staff—found that the processes for obtaining approvals are not clearly defined to avoid confusion and routing of requests through multiple channels. Ultimately, most approval requests currently route through individuals or groups with competing demands and responsibilities. Having unclear process workflows means that decisions could be funneled to these groups that may be better

addressed or managed by staff or managers in lower levels of the organization. Streamlining approval and communication protocols could also help to ease project delivery and ensure efficient movement through the approval chain of project documents and decisions.

In reviewing policy documents, the review team found that the policies and procedures were not always clear on who was to perform selected tasks, and what those tasks include. For example, in the Program Administration section of the policies and procedures document the District’s consultant has provided a matrix to outline roles and responsibilities. However, it is difficult from the matrix to differentiate between those with responsibility for **creating** documents or vetting decisions from those with responsibility for **reviewing or commenting** on documents or proposed decisions and from those with responsibility for **approving** the documents or decisions. The “General Management Procedures” program task showed the following for roles and responsibilities:

ROLES AND RESPONSIBILITIES MATRIX															
Program Tasks	Foothill -De Anza District	Program Executive	Program Director	Finance Manager	Construction Manager	Design Manager	Superintendent	Project Engineer(s)	Project Accountant	Program Scheduler	Administration	Inspector Of Record (IOR)	Design Professional(s)	Contractor	Communications Manager
<b>General Management Procedures</b>															
Board Agenda Item (Informational Items/Calendar Consent)	x	x	x			x									
Citizens’ Bond Oversight Committee	x	X	X	X											x
Annual Audit	x			x											
Contracts and Contract Invoices	x		x			x									
General Invoices				x		x		x							
Invoice Approval	x		x			x						x	x		

Looking at the matrix above, it is clear that there is some responsibility at the Foothill De Anza District for board agenda items, annual audits, contracts and contract invoices, and invoice approval, but it is not clear what this responsibility is. It is also difficult to determine **who** in the District is responsible for what item. Moreover, there are multiple staff and managers in the District involved in the bond management and oversight process, and lumping them into a single category makes it difficult to determine who should be included in key decisions. Further, the line for “Citizens’ Bond Oversight Committee” is unclear as to what task this line item is supposed to represent.

The District’s consultant has also created procedures to define approval work flows for invoice approvals or purchase requests. However, these are still marked as “draft” more than a year after being posted to the system. Further, the procedures outlined in the documents are not always clear. For example, the purchasing process for *design contracts and specialty consultants* shows the following:

- The Requester (Project Engineer or Bond Director) submits District purchase requisition.
- The Requester (Project Engineer or Bond Director) attaches appropriate documentation.
- Consultant project accountant reviews and verifies object code, funds, and attachments.
- Consultant project accountant scans the purchase requisition and uploads it into Prompt.
- Consultant project accountant meets weekly with signatories to review and obtain approval on outstanding purchase requisitions.
- If the request is denied by the signatories, the consultant project accountant returns the purchase requisition to the requester (project engineer or bond director).
- If the request is approved by all signatories, the project accountant uploads the approved purchase requisition into Prompt, and distributes copies of “C/O’s” or Agreements as required.

Later in the procedures document, there is a “purchase requisition signature matrix”. However, this matrix does not define the signatories—the individual or group with institutional signature authority—for design contracts and specialty consultants. Further, the documents do not describe what happens if the signatories deny the purchase request. Per discussions with staff, generally, what occurs is that the requester re-evaluates and discusses with the signatories or appropriate consultant staff the reason for the request’s denial and then resubmits and makes modifications as needed.

Additionally, the approval limits for bond managers may be low. For example, according to the policies and procedure documents, all purchase requisitions for “Large Capital” or “Renovation and Small Capital” projects require the approval of the Executive Director and either the Vice Chancellor of Business Services; the Foothill College Vice President of Educational Resources and Instruction; or the De Anza College Vice President of Finance and College Services. The policy and procedure documents do not specify a minimum threshold for these requirements, so this could result in a large number of low-dollar requests having to be channeled to executive District staff.

#### RECOMMENDATIONS

**Recommendation 24:** The District should clearly define approval requirements and work flows to ensure that approvals are set at levels low enough to keep project delivery work to continue unhampered, but high enough to ensure compliance with the District’s risk assessments and internal controls over expenditures.

**Recommendation 25:** In defining approval requirements and work flows, the District should consider whether the current authority levels for bond managers are set too low to allow effective project delivery. For example, the District could consider allowing bond managers to have a higher dollar value for approving contracts on smaller projects. This could be supplemented with authority provided under the UCCA methodology as well. The additional authority to provide to bond managers would have to be established through discussions with the Board, the executive director, and the vice chancellor of Business Services based on the level of risk weighed against the expected benefits in operating efficiency to be gained.

\* \* \* \* \*

**ITEM 12: COORDINATE INFORMATION AND DATA REQUESTS.**

- ◆ Note that **Item 12** also applies to the *Technology Exploitation* category reviewed.

<p><b>Best Management Practice:</b>                  Establish criteria and identify those responsible for approval of project design, expenditures, change orders (including changes to scope, schedule, and budget), and communication to user groups. Designate a responsible person or group and establish a process of notifications and milestones for project oversight and management.</p> <p>Identify a communication plan or methodology that establishes a sole point of contact (to the extent possible), who will coordinate information and data requests and communications between contractors, consultants, user groups, and the District.</p>	<p><b>District Performance</b></p> 
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Identifying the correct people or groups for communication and decisions is not always readily apparent to District or consultant staff and their vendors. The District has attempted to create electronic communication work flows and formal communication matrices on several occasions. However, these efforts have not generally proven effective, nor are they used consistently.

Communication to user groups, project sponsors, and District staff does not route through a central point of contact. This means that often, both consultant and District staff must submit information and requests to multiple parties to ensure that the correct person or group is reached. Staff interviewed by the review team reported that this is often ineffective. Even with a wide dissemination of data or requests, issues arose because of missed notices or miscommunication. The difficulties are illustrated, in part, in the organizational chart shown in the Introduction of this report on *page 5*. On projects that are moving quickly and that require changes, the notices and requests for changes are not always communicated to the correct parties either. For example, staff at the District reported issues with the fire alarm project. After obtaining approval of schedules and buy-in from users, the schedule was changed without notification provided to the correct District staff. Contractors showed up to perform work only to find classes being held in the rooms that they were assigned to work on.

Further, District staff may face e-mail overload because of the lack of a clear communication work flow. Consultant and District staff broadcast e-mails to a wide distribution of persons to ensure that the information goes to the right party. However, this practice creates so much e-mail traffic that staff become overloaded and may not pay as much attention to communications as warranted. This causes issues down the line when communication fails to reach the correct decision makers or user groups timely. For example, several consulting staff mentioned issues in communicating with Plant Services, because it is not always clear to whom in Plant Services they need to address communications and requests.

Lack of consistency and defined communication trails increases the District's administrative costs related to bond management. Staff interviewed reported that two administrative staff of the District's consultant, who are paid for by bond funds, spend the majority of their time scheduling

and rescheduling meetings and distributing data and requests to various District staff. Missed and incorrect communications also add to the time required to meet with and obtain consensus from various parties. Consultant staff reported that although final approval remains with the board, they still had to meet with and reach a consensus with more than 22 managers and executives at the District over a one-year period to produce one key section of the policy manual. The cost of the meetings and discussions is charged to the bond's administrative costs, reducing funds available for construction or purchases.

In part, communication problems could be alleviated through the use of a centralized forum or bulletin board for project announcements and distribution of materials. The District has several electronic, on-line systems that it could use or request modifications to so that these could serve as a centralized communication site. Alternatively, the District could consider commercially available collaboration tools such as Microsoft SharePoint or BaseCamp® for posting project-specific announcements and communications.

**RECOMMENDATIONS**

**Recommendation 26:** The District should continue its efforts to create and update regularly, a communication matrix that clearly identifies roles and contacts. To the extent that users or staff are not following the communication matrix once it is approved, executive management should follow up with these staff to ensure they understand the need to follow protocols.

**Recommendation 27:** The District should consider using online bulletin boards for project stakeholders either in ProLog or through commercially available collaboration tools such as Microsoft SharePoint or BaseCamp®.

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**ITEM 13: CREATE AND UPDATE A RESOURCE LOADED MASTER SCHEDULE.**

- ♦ *Note that **Item 13** also applies to the Reporting and Delivery Methods categories reviewed.*

**Best Management Practice:**

Establish criteria and identify those responsible for project performance at each phase of the project life-cycle. Establish a process of notifications and milestones for project oversight and management. Clearly identify project staff, customers, and stakeholders in organizational structure documents.

Resource-load all Capital Improvement Plan (CIP) projects for design and construction. The resources required to deliver projects according to the master CIP schedule mandated by the Board should become part of the CIP. This will facilitate defining performance measures and ensure that there is a common understanding of the resources required to deliver the CIP.

The success of a project is influenced significantly by the education and skills of the project manager. Agencies should verify that project managers know and use the tools available within an agency, and that they are current with industry practices.

**District  
Performance**



The District lacks a means of tracking consultant staff who are assigned to projects. The District reported that it has a resource-loaded master schedule. However, neither the schedule nor other documents available to District managers provide information on allocation of consultant staff to individual projects. Ultimately, this hampers the District's ability to assess the effectiveness and efficiency of their consulting staff and to gain information on the value provided by these staff.

Included in the District's contract with its primary consultant, is an organization chart that identifies, by name, the senior project managers, regional resources, and project managers. Support staff, including the superintendents, project engineers, and office engineers are grouped together but not listed by name or location in the organizational chart. In a separate exhibit, the consultant provides a resource schedule for the year, which identifies the number of work hours by personnel type at each location and their applicable rates. Although more senior-level staff are identified by their initials, other staff, such as project and office engineers are listed as "To Be Determined (TBD)." Although consultant staffing and assignments appear relatively constant, District staff expressed concern with their reduced ability to identify and track who is working on projects.

The District's consultant maintains the project master schedule. However, District staff reported that although this is generally updated for start and end dates, the resources assigned to the master schedule are not kept current. As resource needs change, the information is not reflected on the updated master schedules, which hampers bond managers' ability to review and assess District needs and performance and to report on progress to the Board and key stakeholders.

To determine the specific consulting staff assigned to a particular project, District bond staff can look the information up in the electronic system (ProLog), which maintains a list of key staff from the District, the consultant, and primary contractors on the main project page. The information is also recorded in the hard-copy PAD. However, trying to determine who is doing what on the project is not readily apparent from the electronic list. For example, on one project, the review team found that the front project page listed six consultant staff: an office engineer, a project engineer, a senior project engineer, a senior preconstruction manager, a project executive, and a superintendent.

Ultimately, the tracking systems in place do not allow the District to measure the value added by individual consulting staff or the consultant as a whole. The District's contract with its consultant does not establish criteria, such as the number of projects that must be managed for the level of effort described in the contract. In reviewing other Districts, the review team found that many agencies create tables that identify staff assignments and projects in such a way to allow the District to measure level of efforts and performance. For example, the review team found the schedule on the following page for another District to be an example of best practices used by other organizations (names of projects and proposed staff have been changed).

Project Description	Phase	Program Value	Proposed Staff
Project A—Upgrade	Planning	\$13,620,000	J. Smith—Project Manager (PM)
Project B—Expansion	Planning	3,800,000	J. Smith—PM
Project C—Renovation 1	Planning	2,300,000	J. Smith—PM
Project D—New Construction	Construction	38,200,000	B. Adams—PM D. Jones—Construction Engineer
Project E—Renovation 2	Design	2,000,000	J. Smith—PM
<b>TOTAL ACTIVE PROGRAM VALUE FOR QUARTER</b>		<b>\$59,920,000</b>	

Using a matrix similar to the one shown above, the District could identify who is working on what project, and can also review level of effort. It would be able to determine whether it needs to request additional staff from the contractor, or if it appears it has too many staff assigned to work on a particular project given the phase in the project’s lifecycle. Additionally, the District could ask questions if it appears that program managers are not carrying workloads at expected levels.

Additionally, the review team noted that there is a lack of clarity around the role of project sponsors. The District’s project organizational chart does not clearly define the customers that project sponsors represent and lines of reporting authority from sponsors to bond staff or managers. The District created a presentation to the Board in January 2008 that identified some of the sponsors and their roles. However, this document is not maintained on the District’s Measure C Web site or in the policy and procedure documents. It is also not updated as changes occur. Finally, it was vague for some areas—project sponsors for maintenance projects and capital projects by location were clearly defined as to the specific position (“Vice President of Educational Resources - Foothill,” for example). However, project sponsors for “Instructional and Technology Equipment” were listed as “Respective Organizations.” The sponsors’ roles are also not clearly defined in the presentation or the policy documents. Therefore, it is not clear what expectations the District has of their roles, responsibilities, and duties.

**RECOMMENDATIONS**

**Recommendation 28:** The District should direct its consultant to provide and maintain a matrix that clearly identifies staff assignments and level of effort expected from consulting staff by reporting periods (quarter and year). The District can then use this matrix to assess staff assignments and performance to compare against benchmarks or prior performance.

**Recommendation 29:** The District should ensure that it clearly identifies the roles, responsibilities, and duties of project sponsors and bond-staff in its policy documents. It should update this document as changes occur to roles or positions.

**Recommendation 30:** The District should ensure that its master schedule is updated for all key elements, including resources as scope, budget, or schedule changes occur.

\* \* \* \* \*

**b. Project Planning**

**Project Planning—Overall Performance**



The review team found that the District has opportunities to make improvements in the area of Project Planning. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Project Planning category discussed elsewhere in the report.

Item Number	Category Reported	Team’s Evaluation of District Performance
1	Project Cost Control	
2	Project Cost Control	
4	Project Cost Control	
5	Project Cost Control	
33	Financial Management—Technology Exploitation	

**ITEM 14: COMPLETE FEASIBILITY STUDIES PRIOR TO DEFINING BUDGET AND SCOPE.**

<p><b>Best Management Practice:</b>                  Complete feasibility studies on projects prior to defining budget and scope. Feasibility studies should be completed early in the process so that issues are identified and either resolved or accommodated within the final definition of scope, budget, and project delivery schedule. This will also reduce overall project delivery costs. Early feasibility studies are particularly important on complex projects and projects with a construction budget greater than \$5 million.</p>	<p><b>District Performance</b></p>
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The District is ensuring that it has received or is receiving feasibility studies of its large capital and some small capital projects. The review team did not identify any findings or issues related to the District’s performance in this area compared to best practices.

**COMMENDATION**

**Commendation 2:** The District should be commended for its best practices in ensuring that feasibility studies are performed timely in accordance with best practices.

\* \* \* \* \*

**ITEM 15: UTILIZE A PROJECT PRIORITIZATION PROCESS.**

<p><b>Best Management Practice:</b>                  Utilize a project prioritization system. Departments responsible for project delivery have limited resources. A system will ensure that resources are directed to meet the community’s most critical needs.</p>	<p><b>District Performance</b></p> <p style="text-align: center;"></p>
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The District has created and continually updates its master planning schedule. This schedule identifies the order in which projects will be completed. The District created the priority list through discussions with user groups and the Board to identify and prioritize projects based on District and college needs. The District updates this schedule based on changes during project delivery.

COMMENDATION	
<p><b>Commendation 3:</b> The District should be commended for its best practices in ensuring that it has prioritized projects using a master planning schedule that is updated when changes to projects occur.</p>	

\* \* \* \* \*

**ITEM 16: IDENTIFY PROJECT RESOURCE (FUNDING) NEEDS IN A CAPITAL IMPROVEMENT PLAN (CIP).**

<p><b>Best Management Practice:</b>                  The resources required to deliver projects according to the master CIP schedule mandated by the Board should become part of the CIP.</p>	<p><b>District Performance</b></p> <p style="text-align: center;"></p>
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The District has a facilities master plan, but has not created a CIP. Although there are similarities between the two types of plans, a CIP is key tool needed to identify and plan for future funding needs, beyond the information and projects tracked in the facilities master plan.

The purpose of a facilities master plan (master plan) is to help organizations assess their program needs and facilities and plan for short- and long-term construction, purchase, maintenance, and replacement of buildings, facilities, vehicles, and equipment. Organizations track all their facility projects through the master plan. The master plan is a way of providing guidance to staff and a framework for prioritizing work and making decisions.

A CIP is a short-range plan, which identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan. The plan is a link between the facilities master plan and the budget. A well-designed and used CIP allows for a systematic evaluation of all potential projects, provides the ability to stabilize debt and to consolidate projects as needed, and places a focus on preserving the organization’s infrastructure while ensuring the efficient use of public funds.

The District does not create or maintain a CIP. There are some elements in the District’s facility master plan that are similar to CIP elements. However, utilizing the CIP process would be a tool

to help make improvements to the District's planning processes related to finance and funding needs.

**RECOMMENDATION**

**Recommendation 31:** The District should create a CIP that is linked to its facilities master plan in accordance with best practices. This CIP should be used in developing budget forecasts and identifying funding and future needs.

\* \* \* \* \*

**ITEM 17: COMPLETE ENVIRONMENTAL ASSESSMENT AND PERMITTING PROCESS TIMELY.**

**Best Management Practice:**

Make an early determination on which environmental document is required and incorporate into the schedule. Completing the environmental assessment and permitting process influences project schedules and costs. Establish a checklist of potential environmental and permit requirements and examine each project scope against the list early in the planning process. Train in-house staff to use Green Building Standards. Successful designs should be reused when possible.

**District Performance**



The District has ensured that it has completed the environmental assessment and permitting process in a timely manner for those projects to date for which it has been needed. The District completed the Environmental Impact Report (EIR) processes for the District, Foothill College, and De Anza College projects and has posted the results on its Web sites for the District and each college. District and consulting staff are trained and aware of the District's commitment to green building. The Board has issued a policy stating that it is committed to stewardship of the environment and to reducing the District's dependence on nonrenewable energy sources and commitment to sustainable practices. Overall, the District's administrative policy requires all new construction to meet or exceed Leadership in Energy and Environmental Design (LEED) certification. Individually, each college has established its own goals to meet or exceed the District's goals.

**COMMENDATION**

**Commendation 4:** The District should be commended for its best practices in ensuring that it has committed to sustainable building practices that will help it reduce its dependence on nonrenewable energy sources.

\* \* \* \* \*

**ITEM 18: ADAPT SUCCESSFUL DESIGNS TO PROJECT SITES WHEN POSSIBLE.**

<p><b>Best Management Practice:</b>                  Adapt successful designs to project sites, whenever possible. Reliability, maintenance, operational requirements, and standard materials and equipment should be clearly defined in advance, approved by the user/client, and included in the design professional’s contract when a consultant is used.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em; color: green;">●</p>
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The District has built on its experience with Measure E projects to make improvements to Measure C projects and processes. Additionally, the culture of the District, which places a high emphasis on user input, has provided benefits to its planning efforts. The District’s process has been to solicit input from a variety of users, representing educational staff, maintenance staff, and project sponsors, among others. During the design phase, for the projects we reviewed, many important and necessary issues were exposed that would not have been foreseeable in the project concept, even for projects similar in size or scope to prior projects. The District’s processes help to ensure this is taken into consideration during the design and planning phase.

COMMENDATION
<p><b>Commendation 5:</b> The District should be commended for its best practices in ensuring that it has adapted and improved on projects that have worked in the past, solicits user input to ensure that projects are well-planned and will meet user needs, and has learned from past engagements and projects to implement improvements to future projects.</p>

\* \* \* \* \*

**c. Delivery Methods**

<b>Delivery Methods—Overall Performance</b>	●
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The review team found that the District has opportunities to make improvements in the area of Delivery Methods. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in those areas. Specifically, the following items contain findings and recommendations related to the Delivery Methods category discussed elsewhere in the report.

Item Number	Category Reported	Team’s Evaluation of District Performance
1	Project Cost Control	●
2	Project Cost Control	●
6	Project Cost Control	●
7	Technology Exploitation	●

*Continued on following page*

Item Number	Category Reported	Team's Evaluation of District Performance
13	General Project Management, Governance, and Oversight	●
33	Financial Management—Technology Exploitation	●

**ITEM 19: DEFINE CONSTRUCTION REQUIREMENTS AND PROJECT ROLES PRIOR TO PROJECT INITIATION.**

- ◆ *Note that **Item 19** also applies to the Technology Exploitation, Web-Based Project Management; Reporting, and General Project Management, Governance, and Oversight categories reviewed.*

<p><b>Best Management Practice:</b>                  Define requirements for reliability, maintenance, and operation prior to design initiation. Design professionals will work more efficiently if given a clear scope when contracted to provide the design services. Clear scope and budget should be defined in advance and made a part of the design professional's contract if and when a consultant is used. Establishing clear expectations and roles will assist District and consultant staff in carrying out their duties.</p>	<p><b>District Performance</b></p> <p>●</p>
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The District and its consultant use PADs to document project information, time lines, and roles and expectations of District and consultant staff. The document has a clear definition of scope and project operations. In reviewing the intent of the PAD, the review team found that it appears to be a concept and tool that represents a potential best practice, but there are several issues that need to be resolved before this tool translates into an actual best practice.

The document can be time-consuming to create and update due to the number of staff or users who must sign and agree to the terms. As discussed earlier in *Item 6*, using the document on small dollar projects, such as small capital, maintenance, and scheduled maintenance projects has increased the administrative workload of District and consultant staff without providing a measurable benefit in return.

Further, the document itself is hard copy and is only stored in the electronic online system (Prompt) as a PDF scanned document. To gain reviews and approvals, staff route a hard-copy document around the college. District and consultant staff reported that the hard-copy documents are frequently lost and misplaced, requiring them to be recreated and re-circulated. The District could improve this by either creating an electronic form in the systems it currently uses, or by considering a document warehousing application or service, such as Microsoft SharePoint or BaseCamp® as discussed earlier. The team noted that some active projects lacked any scanned PAD documents even for projects in close out, such as the De Anza Signage – Phase I project.

The document itself tends to require a large number of reviews. In addition to the consultant project manager, senior project manager, project engineer, and possibly financial manager sign-offs, the District also routes the PAD to the bond manager, the project sponsor, the Executive director, and occasionally to other key stakeholders. The number of sign-offs did not appear to be cost-effective, especially as some of those to whom the document is routed have limited time

and competing demands for their attention. The District can consider adopting a “representative democracy” concept, where a small number of signers represent a larger group of users to avoid the paralyzing effects of having too many sign-offs.

Additionally, any changes to the scope, schedule, or budget of a project require consulting staff to seek re-approval of the PAD document for responsible parties. In some instances, especially for smaller projects, the work continues on without the PAD (or while it is being routed around for approval), because the District could incur additional costs from delaying projects if it were to wait for all parties to approve the modified document.

The PAD reflects the District’s attempt to capture and present a detailed, clear, and precise scope, schedule, and budget for major project phases. However, in practice, the PAD can be a “moving target” updated both within and the start of various phases rather than a static guide. As District staff or its consultant identify changes, the document is updated with the new information and re-circulated for approval. However, the revised document does not always contain historical information to track what has been changed, and the reasons for doing so. Tracking historical information, including changes to expectations and project requirements is a tool not only to help bond managers on current projects, but a way to identify needs for future projects as well. Additionally, some projects had multiple PADs with different dates, but with apparently the same information.

Overall, the review team found that the PAD does have the potential to represent a good and strong practice to help the District deliver quality projects and identify requirements. However, the PAD appears to be incorporating too much information and requiring too many sign-offs to be an effective document currently.

#### COMMENDATION

**Commendation 6:** The District and its consultant should be commended for creating a document that could represent a best practice in delineating project requirements and defining roles and responsibilities of all parties.

#### RECOMMENDATIONS

**Recommendation 32:** For smaller or medium-sized projects, the District may wish to consider modifying the PAD requirements so that only one iteration of the document is required, rather than requiring approval at each phase, or to limit the number of staff who review and approve PAD documents for smaller projects.

**Recommendation 33:** The District may wish to delegate approval for PAD changes to the bond managers or facility director, so that if changes to scope, schedule, or budget are required, the consultant will only have to route the document to a sole point of contact for one signature.

**Recommendation 34:** The District should determine if there are options to route the PADs electronically (for example, by creating a document warehouse for these documents that appropriate staff has access to).

*Continued on the following page*

**RECOMMENDATIONS**

**Recommendation 35:** The District should ensure that it tracks changes on PAD documents so that the documents reflect current as well as historical information and are concurrent with design phases.

**Recommendation 36:** The District should consider implementing procedures to limit the amount of changes that end users can make to this document once all parties have signed off and approved the document.

\* \* \* \* \*

**ITEM 20: DEVELOP AND USE A STANDARDIZED PROJECT DELIVERY MANUAL.**

- ◆ *Note that **Item 20** also applies to the General Project Management, Governance, and Oversight category reviewed.*

<p><b>Best Management Practice:</b>                  Develop and use a standardized Project Delivery Manual. Standardized procedures streamline project design, bidding, and construction processes. Standardized design management procedures will reduce scope creep and delays in construction document preparation. During construction, standard procedures will reduce response times, and add overall clarity and efficiency to the construction management process. Having a standard manual will also reduce the time necessary for project documentation training.</p> <p>The organization should have procedures to ensure continuity of operations if key staff transition off the project.</p>	<p><b>District Performance</b></p> 
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The District does not have a standardized and approved project delivery manual that is current and up-to date for almost three years. This document is key to ensure continuity of operations if key staff transition off the project, and to establish expectations. In response to Board and District concerns about issues that arose during the implementation of Measure E projects, the District directed its consultant to produce a policy and procedure manual to formalize project management requirements. Over approximately a one-year period, the District’s consultant created a series of policy and procedure documents. The documents covered areas and specifications related to communications, project priorities, change orders, billing, authorizations, and scheduling, among other tasks. The consultant team created these documents after numerous planning and discussion sessions with college and District staff to ensure they had received adequate input and that the final documents reflected the District’s goals and objectives. The documents were intended to provide a single, comprehensive strategy for the colleges and District to control, direct, coordinate, and evaluate the work performed before, during, and after each phase of the Measure C bond program. The first section (Section 4—Design and Construction) was posted in April 2008. The newest section (Section 3—Policies and Procedures) was last updated in November 2008.

District staff reported concerns with the policy and procedure manuals. First, District staff reported that the manuals were not updated. The communication matrix does not include

updated staff lists and contact information. Additionally, as of October 2009, almost one year after being created, the section related to administrative policies and procedures (Section 3) is still shown as “Draft” on the Prompt system. The board has not yet seen or approved this section or the manual in its entirety. Additionally, District staff reported that District and consultant staff are not consistently following procedures, even those encapsulated in the draft versions. For example although the procedures for design and construction require that notes be documented in ProLog following planning or preconstruction meetings, the review team found that the minutes were not available in this system for many of the projects we reviewed. This difficulty could be, in part, because the policies are not clear on “who” is to be entering the minutes into the system.

**RECOMMENDATIONS**

**Recommendation 37:** The District needs to continue working with its consultant to refine and finalize policy and procedure documents and expectations. The District in reviewing the procedures should ensure that these are specific both as to the expectation, and as to who is to perform the required activity.

**Recommendation 38:** Once these policies and procedure documents have been reviewed and approved by the Board, the District should ensure that District staff or consultants comply with the requirements identified in the policies.

\* \* \* \* \*

**ITEM 21: PERFORM A VALUE ENGINEERING STUDY FOR PROJECTS LARGER THAN \$1 MILLION.**

- ◆ *Note that **Item 21** also applies to the Project Cost Control and General Project Management, Governance, and Oversight categories reviewed.*

<p><b>Best Management Practice:</b>                  Perform a formal Value Engineering Study for projects larger than \$1 million. Value engineering identifies life cycle costs of design elements included in a project and certain alternatives. While the cost of the value engineering process may initially add costs to project delivery, overall project costs will be reduced.</p>	<p><b>District Performance</b></p> <p style="text-align: center;">●</p>
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The District’s policies require it to seek value engineering on an as-needed basis. The District has generally performed this on higher-dollar or higher-risk projects. Value engineering is an organized approach to identify and eliminate unnecessary costs on projects. That is, the purpose is to identify those items or processes that do not provide values related to use, life, quality, appearance, or customer features. The District’s practices appear to be effective for those projects for which it has performed value engineering. The review team found that for one closed project the District had obtained value-engineering services—the De Anza College Forum project—the final budget for the project was almost \$450,000 lower than initial estimates.

COMMENDATION

**Commendation 7:** The District should be commended for its best practices and success in using value engineering on some of its projects that appear to have resulted in lower-than-expected project costs.

RECOMMENDATION

**Recommendation 39:** The District should continue to identify opportunities to perform value engineering studies and align scope and budget with value provided.

\* \* \* \* \*

**ITEM 22: PERFORM AND USE POST-PROJECT REVIEWS AND DOCUMENT LESSONS LEARNED.**

- ◆ *Note that **Item 22** also applies to the Technology Exploitation, Web-Based Project Management, Reporting, and General Project Management, Governance, and Oversight categories reviewed.*

<b>Best Management Practice:</b>	<b>District Performance</b>
Perform and use post-project reviews to identify lessons learned. Project Managers (PMs) should develop formal post project reviews and identify lessons learned. These documents should be made available to PM's on projects of similar scope and nature. This practice will make future project management and delivery more efficient and cost effective.	

The District has a policy that addresses project close-outs. The policy is largely aimed at addressing administrative close-out procedures, however. The policy mentions a “lessons learned” document, but does not specify what these documents are to look like or who is responsible for drafting the documents. Informally, team members from the District and the consultant meet to discuss current and prior projects and to identify ways to make improvements. However, the results of these discussions are not formalized or tracked in the Prompt or ProLog systems, although some information may be tracked on the consultant’s server. Because this is not readily accessible to District staff, however, it limits the effectiveness of this material for future improvements.

RECOMMENDATIONS

**Recommendation 40:** The District should work with its consultant to develop a robust lessons learned policy that stipulates what is required in the lessons learned document. For instance, lessons learned would include key findings for each construction phase, and what the project manager would do again in a similar situation.

**Recommendation 41:** The District should ensure that once the lessons-learned document is created, this is maintained and stored on the Web-based systems used to track projects so that it is readily accessible to both District and consultant staff.

\* \* \* \* \*

**ITEM 23: INCLUDE A FORMAL DISPUTE RESOLUTION PROCEDURE IN ALL CONTRACT AGREEMENTS.**

- ◆ *Note that **Item 23** also applies to the General Project Management, Governance, and Oversight category reviewed.*

<p><b>Best Management Practice:</b>                  Include a formal dispute resolution procedure in all contract agreements. Construction is acknowledged as a dispute-prone industry. As such, it makes sense to provide options in the contract documents to avoid litigation and to expedited dispute resolution using alternatives to litigation.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em; color: green;">●</p>
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The District’s contracts and agreements include a conflict resolution clause that complies with best practices.

RECOMMENDATIONS
<p><b>Commendation 8:</b> The District should be commended for meeting the best practice related to conflict resolution clauses in it agreements and contracts.</p>

\* \* \* \* \*

**ITEM 24: USE A CONTRACTOR PRE-QUALIFICATION PROCESS ON LARGE OR COMPLEX PROJECTS.**

<p><b>Best Management Practice:</b>                  Establish a prequalification process for contractors on large, complex projects. Prequalification helps screen contractors for prior performance on similar projects, safety and financial capability thus reducing risk and, ultimately, project delivery cost.                   Implement as-needed, rotating, or on-call contracts for design and construction management work that allow work to be authorized on a task-order basis to expedite the delivery of smaller projects. Establishing an on-call list of qualified consultants with expertise in a variety of design disciplines will expedite the start of the design process.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em; color: yellow;">●</p>
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The District has used a prequalification process for selected large or complex projects, such as the Mediated Learning Center or Forum. This has enabled the District to identify those consultants who meet minimum qualifications prior to issuing bids. However, as discussed earlier in *Item 3*, the District had to cancel two efforts in 2009 for prequalification due to problems with obtaining sufficient qualified bidders.

The District has signed Project Stabilization and Construction Careers Agreements (PSAs) with a number of trade contractors. The purpose of these agreements are to promote the efficiency of construction operations and provide for peaceful settlement of labor disputes and grievances without strikes or lockouts. These agreements also serve a prequalification role, in part, because they attempt to address labor issues prior to the contracting and construction process. However, the agreements can also result in increased costs for projects, and can limit some nonunion or open shop contractors who do not bid due to the requirements. The District made a concerted effort to ensure that it addressed board and labor concerns in forming the PSAs and that the agreements and process complied with best practices and District standards.

**COMMENDATIONS**

**Commendation 9:** The District should be commended for meeting the best practice related to pre-qualifying contractors to ensure a higher-quality end product, satisfied users, and cooperative and amiable working relationships with trade contractors.

**RECOMMENDATIONS**

**Recommendation 42:** The District should continue to work with the purchasing department to identify lessons learned from the two failed prequalification efforts to avoid future issues.

**Recommendation 43:** The District should evaluate the use of PSA's periodically to ensure that the contracts are working as designed to provide benefits to the District's project management processes.

\* \* \* \* \*

**ITEM 25: ASSIGN A CLIENT OR USER REPRESENTATIVE TO EVERY PROJECT.**

- ◆ *Note that **Item 25** also applies to the General Project Management, Governance, and Oversight category reviewed.*

<p><b>Best Management Practice:</b>                  Assign a client representative to every project. Client and user representation during the life of the project will expedite decisions on submittals, substitutions, and changes. Their involvement will also help determine intent and streamline the commissioning and occupancy process.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em; color: green;">●</p>
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The District assigns a project sponsor based on the type of project and/or location. These user representatives and sponsors help to champion the project and assist in coordinating user comments and requests. As discussed earlier, however, the District has not formally defined project sponsors for all project types, and has not defined project sponsor roles sufficiently. Consequently, there is some variation in the level of effort, types of decisions, and roles and responsibilities of various sponsors in the District. Standardizing and defining project sponsor roles will be a way of helping to ensure that communications and expectations are clear and understood.

**COMMENDATION**

**Commendation 10:** The District should be commended for ensuring it obtains users' input and participation and that it has the support of knowledgeable project sponsors.

**RECOMMENDATION**

**Recommendation 44:** The District should better define the roles of project sponsors to ensure that expectations are clear.

\* \* \* \* \*

**ITEM 26:            CONSIDER ALTERNATIVE PROJECT DELIVERY METHODOLOGIES.**

<p><b>Best Management Practice:</b>                  The state provides options for Districts to use the lease-leaseback methodology for project delivery.</p>	<p><b>District Performance</b>  <b>N/A</b>  <b>Information Only</b></p>
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Recent legislation allows for community colleges to use the lease-leaseback methodology for project delivery, an option not previously available under state law and bond requirements. According to a white paper for Hanson Bridgett, LLP, by David S. Gehrid, entitled: *Alternative Project Delivery Methods for Public Works Projects in California*,

“The lease/lease-back project delivery method resembles a public-private partnership in some ways. The most common form of lease/lease-back involves a public agency leasing real property to a contractor for a nominal sum, who then agrees to construct facilities and lease them back to the public agency. The lease payments made by the public agency to the contractor under the facilities lease generally amount to the cost of construction and the contractor’s overhead and profit. At the conclusion of the facilities lease (which may be terminated shortly after construction is complete), ownership of the real property and newly constructed facilities revert to the public agency.”

School and community college Districts have statutory authority to award construction projects on a lease-leaseback basis through California Education Code Sections 17406 and 81335. These statutes generally do not provide limitations on how the Districts must award construction work under these provisions (low bid, request for proposal, or direct negotiation, for example). However, Proposition 39 bond provisions in the California Constitution and Public Contracts Code do establish specific requirements that the District must comply with in using this methodology. Bond money can be used for leased building expenses under the following conditions: the use must be consistent with the statement of the bond program; and the three-year rule on contracts cannot be violated. This latter limitation can be avoided in certain ways, and bond money can be made available for longer periods. However, bond counsel should be consulted to ensure that this is correctly designed to comply with bond language in the ballot measure.

Several community colleges have used the lease-leaseback methodology for construction project delivery in the most recent year, including Sierra and Yuba Community College Districts. However, the process is so recent, that the review team could not quantify the extent to which these Districts have experienced success or savings using this project delivery methodology.

Districts using this methodology have cited a number of expected benefits of using lease-leaseback, such as lower upfront costs, reduced administration during construction, and lower cost facilities. While these benefits may be valid, the California Department of General Services has identified what it believes to be the major strengths and weaknesses of the lease-leaseback methodology, as shown on the following page:

Advantages of Lease-Leasebacks	Disadvantages of Lease-Leasebacks
District can use the lease-leaseback methodology as a way of moving projects forward with lower-up-front financing needs.	The Office of Public School Construct and State Allocation Board has raised concerns with the flexibility allowed in California state law regulating lease-leaseback usage, stating that the flexibility could lead to faulty contracting practices.
District can participate in selecting the developer contractor as well as all of the trade contractors and suppliers.	There are questions as to whether Districts can sign lease contracts with developer-contractors prior to the DSA stamp-out of plans.
District can solicit cost-saving ideas from trade contractors and suppliers as part of the selection process.	The methodology is new and not as well understood by the design and construction community.
District has more flexibility on who directs the architect.	

Other states using this methodology have reported similar advantages and disadvantages. However, there is a growing trend for schools and community colleges to use this methodology and thus the District can consider adopting this for future projects.

RECOMMENDATIONS
<p><b>Recommendation 45:</b> The District should consult with its bond counsel to identify the requirements needed for it to use the lease-leaseback project delivery methodology. To the extent that the requirements appear feasible, and the benefits outweigh the costs and potential risks associated with using this project delivery methodology, the District can consider using this on future construction projects.</p>

\* \* \* \* \*

**d. Project Packaging**

**Project Packaging—Overall Performance** ●

The review team found that the District has opportunities to make improvements in the area of Project Packaging. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Project Packaging category discussed elsewhere in the report:

Item Number	Category Reported	Team’s Evaluation of District Performance
5	Project Cost Control	●
6	Project Cost Control	●

**ITEM 27: BUNDLE SMALL PROJECTS TOGETHER WHENEVER POSSIBLE.**

<p><b>Best Management Practice:</b>                  Bundle small projects whenever possible. Bundling small projects so that they are designed, bid, and constructed together will reduce project delivery cost proportionately.</p>	<p><b>District Performance</b></p> <p>●</p>
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It appears that the District is moving in this direction and implementing best practices. The review team’s review of board minutes and project documents found that early in the process, due to a misunderstanding of what the District and bond requirements were, some smaller projects that could have been bundled were not always combined to obtain optimal pricing and choice. However, there have been fewer occurrences in the recent year. Although both colleges’ bond managers are working with consultant staff to identify opportunities for bundling projects, there is still some education and discussion that is continuing to occur. Based on our review of board minutes, we found that the Foothill campus often bundles several projects with similar work scopes together to seek a consolidated contract. The De Anza college had more instances where it created multiple contracts (one per project) even when awarding the contracts to the same vendor. The De Anza District staff reported working closely with consultant staff, however, to reduce the instances of these occurrences.

**COMMENDATION**

**Commendation 11:** The District should be commended for implementing improvements to the project bundling process.

**RECOMMENDATIONS**

**Recommendation 46:** The District should continue looking for opportunities to bundle similar projects together, both on campuses and for similar work between the two campuses.

\* \* \* \* \*

e. Change Order Management and Controls

**Change Order Management and Controls—Overall Performance** ●

The review team found that the District has opportunities to make improvements in the area of Change Order Management and Controls. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Change Order Management and Controls category discussed elsewhere in the report:

Item Number	Category Reported	Team’s Evaluation of District Performance
2	Project Cost Control	●
5	Project Cost Control	●
33	Financial Management—Technology Exploitation	●

**ITEM 28: SUBMIT REQUESTS FOR CHANGES TO SCOPE, SCHEDULE, OR BUDGET TO THE BOARD.**

- ◆ *Note that **Item 28** also applies to the Project Cost Control, Web-Based Project Management, and Reporting categories reviewed.*

<p><b>Best Management Practice:</b>                  Requests for changes to scope, schedule, or budget should be submitted in advance to the Board for its review and approval prior to execution of changes to contracts.</p>	<p><b>District Performance</b></p> <p>●</p>
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In reviewing Board documents related to Measure C projects, the review team found that the District generally does well in ensuring that it submits to the Board for its approval, contracts and change orders related to bond-funded projects. However, the documentation of the Board’s approval in the electronic system, especially as related to change orders, is poor and needs to be better maintained. In reviewing contract reports in the Prompt system, for example, the review team found 314 change orders with no Board approval date documented. Reviewing Board minutes and attachments, however, the review team was able to find that most of these actually had been submitted and approved appropriately.

Additionally, as discussed earlier in *Item 6*, the District has opportunities to use the UCCA as a way of increasing the District staff’s authority to quickly implement and award smaller-dollar projects.

**RECOMMENDATIONS**

**Recommendation 47:** The District and its consultant should ensure that all change requests approved by the board are properly logged into the system.

**Recommendation 48:** The District should consider adopting the provisions of UCCA to enhance staff's ability to deliver smaller projects quickly.

\* \* \* \* \*

**ITEM 29: MAINTAIN A POTENTIAL CHANGE ORDER LOG TRACKED BY CHANGE ORDER CATEGORY.**

- ◆ *Note that **Item 29** also applies to the Web-Based Project Management category reviewed.*

<p><b>Best Management Practice:</b>                  The organization should maintain a potential change order (PCO) log to help staff estimate and evaluate the probability of future risk and added costs to projects.</p> <p>The organization should track change orders by category. Classification of change orders into categories such as changed conditions, unforeseen conditions, owner requests, or design changes for owner use improves understanding of the project. Lessons learned from the data may improve project delivery on similar projects.</p>	<p><b>District Performance</b></p> 
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The District has opportunities to improve its use of available information in current systems to help address frustrations in reporting and tracking future costs reported by District staff.

Information related to future estimated costs, including potential change orders, is maintained in several locations, systems, and ways. District staff reported frustration with having to seek information from multiple sources, or to request information from the consultant because the information is not maintained or updated in the two systems (Prompt and ProLog).

Consolidating and streamlining processes would facilitate bond managers' requests and help improve their ability to oversee the bond projects for their colleges.

Project information is generally maintained in the ProLog system. This system tracks specific documents and data related to project work, including change order requests, and potential change orders. The District's bond managers can pull information from this system to review potential and actual change orders, contract amounts, and budgets using the system's reporting capabilities.

Additionally, the Prompt system maintains records of contract amounts and details, including changes made to the contracts (change orders). The Prompt reports track change orders by reason codes, but these are not always maintained, and are high level or vague compared to the categories reported in ProLog. The review team's examination found that the systems do

have the ability to create ad hoc or customized reports that may better meet the needs of District staff or stakeholders.

At the District's request, the District's consultant modified the financial and accounting reports in the Prompt system to show forecasted budget. This request was designed to help bond managers identify anticipated increases that have not yet resulted in budget changes, new contracts, or change orders for contracts. District bond managers can pull information by individual projects in ProLog, and can review anticipated budgets in Prompt, but wanted some link between the two, or additional reports to ensure that they would not need to access both systems to identify future costs.

### RECOMMENDATIONS

**Recommendation 49:** The District should work with its consultant to gain an understanding of the report functionality contained in the ProLog system and to determine if there is a way to transfer information between the ProLog and Prompt systems to improve reporting capabilities related to anticipated funding needs and change orders.

\* \* \* \* \*

#### f. CONSTRUCTABILITY REVIEWS

### Constructability Reviews – Overall Performance

#### ITEM 30: USE A FORMAL QUALITY MANAGEMENT SYSTEM.

##### Best Management Practice:

Use a formal Quality Management System. Quality management should include all activities from the preparation of design documents through the closeout of construction. (Constructability reviews, independent cost estimates, classification and auditing of change orders, etc.) The implementation and tracking of quality control should be formalized on a checklist to ensure application.

##### District Performance



Although the District and its consultant are performing constructability reviews, it does not appear that the reviews are being done as effectively as possible to ensure that solutions for all reviewer comments are identified.

A constructability review is a review of the construction plans and specifications to determine whether the projects are both "biddable" as well as "buildable." These reviews can be done in-house, or contracted out to external reviewers. However, those doing the reviews should have the expertise and knowledge of the project type, goals, project systems, and requirements to be able to effectively assess the final plans.

District staff reported that constructability reviews do not appear to be as effective as possible. The review team found that reviews are performed by a large number of District staff, including bond managers. This District involvement represents a good practice that is not often seen at other agencies and should be maintained. The bond managers' comments were detailed and to

the point on the projects examined by the review team. However, the review team did not find that the District was including reviews by staff or outside trade consultants with the technical expertise to evaluate conflicts in the plans and review of building systems effectively. Specifically, the review team found reviews by “trade” experts (those knowledgeable in areas such as structure, water-proofing, plumbing, HVAC, energy management systems, electrical, etc.), were often missing or incomplete. Using trade experts already known to the District, through vehicles such as partnering with local trades known to the District from prior projects or who are part of the PSA agreements, would help the District to prepare a coordinated bid set and identify current technical issues from the intended design prior to bidding and construction. However, the team acknowledges that vendors may be reluctant to participate in commenting via the PSA agreements since it could preclude them from future bidding on the project due to a loss of independence or perceived conflicts of interest. Alternatively, the District could seek on-call consultants who are trade experts who would be available as needed to provide input.

Additionally, District staff reported, and the review team found that architects or engineers are not addressing all comments in full. In several instances, the reviews had blanks or indications that the review comments would be addressed later during the next phase, via addenda, or outside of the design scope. However, addressing issues verbally can result in enforcement problems if issues arise later related to construction based on the plans. In part, this could be ameliorated by allowing the architects or engineers additional time to respond to comments, especially if there are a large number of detailed questions or comments to the plan reviews.

The District’s consultant stated that it does review plans at each design phase, but only conducts formal constructability reviews when they are at 90 percent completion of construction documents (CD). Some agencies in California have adopted requirements that constructability reviews be performed at specific milestones, such as detailed review of high-risk or high-dollar projects at completion of design development (DD) and 50 percent and 95 percent construction bid document, or at agency plan check submittal stages; detailed review at the 50 percent and 95 percent design stages for medium risk projects, and a higher-level review at the 95 percent design stage only for low-risk, less complex projects.

#### RECOMMENDATIONS

**Recommendation 50:** The District should consider obtaining input from local “trade” contractors as needed to assist in the constructability reviews of higher-risk or more complex projects and at 100 percent DD and architectural milestones in CD.

**Recommendation 51:** The District should require that architects or engineers fully respond to all comments for the construction manager to verify that these are complete and allow them to determine how they will affect the project’s budget or scope. If the time provided for response is insufficient, the District should allow more response time for these consultants to fully and completely address all items and obtain approvals by users.

**Recommendation 52:** The District should consider requiring more in-depth and frequent reviews by its consultant of projects based on the risk or complexity associated with these projects.

\* \* \* \* \*

## Financial Management Assessment

<b>OVERALL ASSESSMENT—Financial Management</b>	
◆ <b>Technology Exploitation</b>	
◆ <b>Integration with District’s Accounting and Purchasing System</b>	
◆ <b>Integration with Project Management and Reporting</b>	

### A. FINANCIAL MANAGEMENT—TECHNOLOGY EXPLOITATION

<b>Financial Management—Technology Exploitation—Overall Performance</b>	
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The review team found that the District has opportunities to make improvements in the area of Financial Management Technology Exploitation. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Financial Management Technology Exploitation category discussed elsewhere in the report.

Item Number	Category Reported	Team’s Evaluation of District Performance
2	Project Cost Control	
7	Technology Exploitation	

#### ITEM 31: MAKE BID DOCUMENTS AVAILABLE ONLINE.

<p><b>Best Management Practice:</b>                  Make bid documents available online. Making bid documents available online will reduce agency printing costs. It may also increase bidder participation by making documents easily available to a larger pool of potential bidders and subcontractors.</p>	<p><b>District Performance</b></p> <p></p>
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The District’s purchasing department uses the Bay Area Purchasing System to publish bid documents. This system is online and is broadcast to a wide variety of bidders and potential vendors through this site. However, the system publishes only the announcement of the bid and not the bid documents. District staff reported that they have to spend a great deal of time and effort copying and scanning in hard-copy documents to create packages to mail to prospective bidders. Commercially available software to facilitate public bidding on public works projects is available and used by a number of community college Districts and public agencies.

**RECOMMENDATIONS**

**Recommendation 53:** The District should explore options, including looking at purchasing software or subscriptions to online services, to publish bid documents online and help reduce administrative costs and to expand the pool of potential bidders and subcontractors.

\* \* \* \* \*

**ITEM 32: BOARD AND COMMITTEE SHOULD MONITOR ALL DIRECT AND INDIRECT COSTS.**

- ◆ *Note that **Item 32** also applies to the Project Cost Control and Financial Management—Integration with District’s Accounting and Purchasing; and Financial Management—Integration with Project Management and Reporting categories reviewed.*

<p><b>Best Management Practice:</b>                  The Board and/or Committee monitor all direct and indirect costs, including the allocation of District and college staff’s time to projects.</p>	<p><b>District Performance</b></p> <p style="text-align: center;"></p>
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Tracking indirect and soft costs, including overhead and District staff allocations, has been hampered or delayed somewhat for both bond managers and the District’s consultant. In several instances, information related to District staff’s charge-backs, such as from plant services, has not been provided to its consultant or bond managers for projects until several months after the costs were incurred. This means that the consultant and District staff either had to guess what the expected costs would be or face unexpected cost over-runs when final numbers came in. Some project managers reported getting stacks of time-cards up to six months after the charges occurred, which has not allowed for timely review and reconciliation of these charges.

The District implemented a new accounting system in July 2009. During the implementation process, the District was unable to maintain the link between the new system and the Prompt system related to electronic work flow and invoice approvals. The District is in the process of reactivating this functionality and expects to have it back in early 2010. However, losing this functionality means that delays in reporting and tracking direct and indirect costs may increase during this time. The District, in addressing this issue, may also wish to look at ways to pull information from the District accounting system related to charge-backs in an easier and more timely fashion so that the information is available to the consultant’s project managers and District bond managers.

**RECOMMENDATIONS**

**Recommendation 54:** The District and consultant staff should work with the District’s Accounting and Plant Services departments to identify ways to streamline the collection and reporting of District staff charge-backs to projects.

*Continued on the following page*

RECOMMENDATIONS

**Recommendation 55:** The District should provide sufficient information to project managers to allow them to reasonably account for anticipated charges, while still meeting the District's requirements for employee confidentiality related to salary data (for example, the District could consider using a standard hourly rate for all charges).

**Recommendation 56:** The District should explore options in its new accounting software to determine if more timely information related to charge-backs can be provided for staff and consultants managing bond projects.

\* \* \* \* \*

**ITEM 33: ADOPT AND USE A PROJECT CONTROL SYSTEM ON ALL PROJECTS.**

- ◆ *Note that **Item 32** also applies to the Technology Exploitation, Web-Based Project Management, Reporting, Project Planning, Delivery Methods, Change Order Management and Controls, and Financial Management—Integration with Project Management and Reporting categories reviewed.*

**Best Management Practice:**

Adopt and use a Project Control System on all projects. A Web-based project control system will improve collaboration and documentation during the design and construction process. Questions, answers, proposals, and decisions can be expedited using a collaborative system. Maintain and regularly update electronic standard contract specifications and related documents, as well as technical/special provisions. Standard contract specifications and technical special provisions need to be regularly maintained and updated in order to reduce the amount of time required to create contract bid documents. If an organization implements new requirements, the standards should be modified for every project one time instead of each manager having to modify these documents of every project. Additionally, the District should have a system for tracking expenses that complies with government reporting and Proposition 39 requirements and that meet the Board and Committee's needs for accurate and easy-to-understand financial reporting.

**District Performance**



The District has two electronic systems used for tracking project-related information: Prompt and ProLog. As discussed earlier in this report, however, the systems are not always maintained or current and District staff reported frustration with the reliability and accuracy of information and reports coming from these systems.

As discussed in *Items 1 and 7*, District staff reported that the Prompt system reports show outdated or inaccurate information related to some projects. Additionally, the review team found that the system reports show only revised information when changes are entered, which makes it difficult for bond managers to view historical information through current reports on projects

and line items. Historical information is available, but requires users to open and view several reports by reporting period to gain a log of all changes that have occurred by project or in total.

Additionally, the District and its consultant use the ProLog system for electronic data and document tracking related to project management, and request that contractors also use it to update documents. However, this system requires a certain amount of sophistication by end users. Many smaller contractors have difficulty in using the system or lack the resources to update it timely. The District's consultant has made efforts to use its own staff to upload and update documents and data for these smaller contractors, but has not always been able to keep the site current for all projects. This has resulted in communication issues as District staff rely on the site to be maintained so that they have accurate, complete, and timely information on specific projects.

Finally, some information is not tracked consistently in the ProLog system. The review team observed that the submittal logs for projects reviewed were maintained as an Excel spreadsheet on a shared server. The District's consultant updates these logs and will periodically print or upload them to ProLog. However, this is a critical document that should be readily available. District staff reported frustration because they could not easily access an updated version of this information. Storing documents on a consultant shared drive rather than the ProLog system means that the bond manager must continually request updates from various staff rather than having a single Web site or location to go to for obtaining critical information.

#### RECOMMENDATIONS

**Recommendation 57:** The District needs to work with its consultant to identify ways to improve processes for updating documents in the Prompt and ProLog systems.

**Recommendation 58:** To the extent that data is already in the system, but is in separate reports and not in the format needed by District staff, the District should work with its consultant to design usable reports that meet bond managers and stakeholder needs.

**Recommendation 59:** The District should task a staff member with reviewing a sample of projects in ProLog each month to ensure compliance with the above.

\* \* \* \* \*

#### B. FINANCIAL MANAGEMENT – INTEGRATION WITH DISTRICT ACCOUNTING AND PURCHASING SYSTEMS

##### Financial Management – Integration with District Accounting and Purchasing Systems – Overall Performance

The review team found that the District has opportunities to make improvements in the area of Financial Management—Integration with District Accounting and Purchasing Systems. Some of the issues related to this area are reported in this section. However, for other items, the review team's findings and recommendations seemed to tie more closely in with other review categories discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and

recommendations related to the Financial Management—Integration with District Accounting and Purchasing Systems category discussed elsewhere in the report:

Item Number	Category Reported	Team’s Evaluation of District Performance
32	Financial Management—Technology Exploitation	●
36	Financial Management—Integration with District’s Accounting and Purchasing Systems	●

**ITEM 34: IMPLEMENT AN ELECTRONIC PROGRESS PAYMENT SYSTEM.**

<p><b>Best Management Practice:</b>                  Implement an electronic progress payment system to improve efficiency. Reduction in the length of time and inefficiencies in processing of progress payments through the use of electronic means.</p>	<p><b>District Performance</b></p> <p style="font-size: 2em;">●</p>
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Prior to the changeover with the District’s new financial management software in July 2009, the Prompt system contained electronic work flows that routed documents for review and approval and expedited transfer of purchasing or payment requests to the District’s accounting and purchasing systems for processing. With the implementation of the new system, however, the District lost this functionality as the new system did not include some required features. Consequently, processes that had been streamlined and working well electronically reverted to paper-based methodologies that are time-consuming and inefficient for District approvals. The District is working to restore the functionality and anticipates it will restore the link between the two systems, including electronic work flow and processing of information from Prompt, in calendar year 2010. The District’s consultant has implemented additional procedures to help speed the flow of paperwork and approvals in the meantime.

**RECOMMENDATIONS**

**Recommendation 60:** The District should continue working with its software implementation team to restore the electronic work-flow process that existed with the prior accounting system.

\* \* \* \* \*

**C. FINANCIAL MANAGEMENT—INTEGRATION WITH PROJECT MANAGEMENT AND REPORTING**

<p><b>Financial Management—Integration with Project Management and Reporting—Overall Performance</b></p>	●
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The review team found that the District has opportunities to make improvements in the area of Financial Management Integration with Project Management and Reporting. Some of the issues related to this area are reported in this section. However, for other items, the review team’s findings and recommendations seemed to tie more closely in with other review categories

discussed in this report. Therefore, the review team felt that the issues were better discussed in these areas. Specifically, the following items contain findings and recommendations related to the Financial Management Integration with Project Management and Reporting category discussed elsewhere in the report:

Item Number	Category Reported	Team’s Evaluation of District Performance
1	Project Cost Control	●
2	Project Cost Control	●
6	Project Cost Control	●
9	Reporting	●
32	Financial Management—Technology Exploitation	●
33	Financial Management—Technology Exploitation	●

**ITEM 35: IMPLEMENT A WORK BREAKDOWN STRUCTURE TO MEASURE PROJECT DELIVERABLE PROGRESS.**

<p><b>Best Management Practice:</b>                  Implement a Work Breakdown Structure (WBS) to measure progress on project deliverables. Getting accurate data on the cost of project delivery depends upon being able to capture and classify expenses to the phases of construction on each project. Ideally, costs would be identified by each of five project delivery phases and coded to particular milestones or deliverables.</p>	<p><b>District Performance</b></p> <p>●</p>
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The PAD contains a work breakdown structure (WBS) for each project. As phases are completed and projects transition to the next phase, its consultant staff update the PAD to reflect changes to the WBS. The consultant also updates this information in the ProLog system. District staff, however, reported frustration with trying to use either the PAD or ProLog systems to obtain current WBS information. Staff reported that the information is not updated and is often out-of-date.

**RECOMMENDATIONS**

**Recommendation 61:** The District should work with its consultant to identify ways to improve the frequency with which the WBS information is updated and stored electronically.

\* \* \* \* \*

**ITEM 36: ADHERE TO THE ESTABLISHED AND BOARD-APPROVED BUDGET.**

- ♦ *Note that **Item 36** also applies to the Project Cost Control and Financial Management—Integration with District Accounting and Purchasing categories reviewed.*

<p><b>Best Management Practice:</b>                  The organization should adhere to the established and Board-approved budget. Budget variance reports are reviewed by staff, the primary consultant, and Board/Committee members on a regular basis.</p>	<p><b>District Performance</b></p> <p style="text-align: center;">●</p>
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The consultant and bond managers work closely together to evaluate expenditures and change requests and to ensure that projects are budgeted appropriately. However, District staff reported that the information in the Prompt system does not always contain updated information that meet their needs. District staff reported that although they meet weekly with consultant staff; they cannot discuss budgets and expenditures because the information is not updated weekly.

**RECOMMENDATIONS**

**Recommendation 62:** The District needs to work with its consultant and accounting staff to determine if there are ways to improve the timeliness and accuracy of information and reports in the Prompt system.

\* \* \* \* \*

**ITEM 37: PRESENT SUMMARY BID REPORTS IN PRESENTING THE RESULTS OF FORMAL BIDDING.**

<p><b>Best Management Practice:</b>                  In presenting the results of formal bidding processes to the Board for approval, the staff provides summary bid reports. The reports contain information on the approved budget, the actual cost and low bid, the variance between the actual and budgeted cost, and total bids received.</p>	<p><b>District Performance</b></p> <p style="text-align: center;">●</p>
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The review team found that for larger contracts and formal bids, the District procurement staff are presenting formal action items and reports to the Board detailing the number of bids received, responsive bidders, and bid amounts. These presentations are documented in Board minutes and handouts. The District’s practices agree with best practices and meet Board expectations.

**COMMENDATION**

**Commendation 12:** The District should be commended for its reporting of purchasing results to the Board that comply with best practices.

## Appendix A

**Foothill De Anza Community College District  
Bond Management and Construction Management Process Review  
Appendix A**

To provide clarity and to assist the reader in identifying the functional areas for which each item relates, we have presented this table showing a brief description of the best practice, the District’s performance against that best practice, the page of the report in which that item appears, and the functional areas that the item is reported under and relates to.

Item	Description	Rating	Page	PROJECT AND CONSTRUCTION MANAGEMENT										FINANCIAL MANAGEMENT		
				Project Cost Control	Technology Exploitation	Web-Based Project Management	Reporting	General Project Management, Governance, and Oversight	Project Planning	Delivery Methods	Project Packaging	Change Order Management and Controls	Constructability Reviews	Technology Exploitation	Integration with District’s Accounting and Purchasing System	Integration with Project Management and Reporting
1	Create and update a clear, precise scope, schedule, and budget.	●	14	⊗	•		•		•	•						•
2	Establish and track contingency line items by major phase.	●	18	⊗			•		•	•		•		•		•
3	Create accurate, independent, and complete cost estimates and bid documents.	●	20	⊗												
4	Review and fine-tune cost estimates with key staff and/or trade contractors.	●	21	⊗					•							
5	Clearly communicate project vision and expectations to users.	●	23	⊗	•				•		•	•				
6	Modify procedures for small-dollar projects on a cost-benefit basis.	●	27	⊗			•			•	•					•
7	Provide bond oversight and managers with timely, accurate, detailed reports.	●	29		⊗	•				•				•		
8	Monitor and track consultant and contractor performance.	●	32				⊗	•								
9	Establish performance metrics tied to bond and project goals and objectives.	●	33		•	•	⊗									•
10	Track and report costs by project phase or category.	●	35				⊗									

Note: In the table shown in this appendix, each item discussed in the report is shown. The symbol “⊗” indicates the area in which the Item was reported. The symbol “•” indicates that the Item was not reported in that functional area, but does relate to the area.

**Foothill De Anza Community College District  
Bond Management and Construction Management Process Review  
Appendix A**

Item	Description	Rating	Page	PROJECT AND CONSTRUCTION MANAGEMENT										FINANCIAL MANAGEMENT		
				Project Cost Control	Technology Exploitation	Web-Based Project Management	Reporting	General Project Management, Governance, and Oversight	Project Planning	Delivery Methods	Project Packaging	Change Order Management and Controls	Constructability Reviews	Technology Exploitation	Integration with District's Accounting and Purchasing System	Integration with Project Management and Reporting
11	Set approval authorizations at an appropriate level.	●	36					⊗								
12	Coordinate information and data requests.	●	39		•			⊗								
13	Create and update a resource loaded master schedule.	●	40				•	⊗		•						
14	Complete feasibility studies prior to defining budget and scope.	●	43						⊗							
15	Utilize a project prioritization process.	●	44						⊗							
16	Identify project resource (funding) needs in a Capital Improvement Plan (CIP).	●	44						⊗							
17	Complete environmental assessment and permitting process timely.	●	45						⊗							
18	Adapt successful designs to project sites when possible.	●	46						⊗							
19	Define construction requirements and project roles prior to project initiation.	●	47		•	•	•	•		⊗						
20	Develop and use a standardized project delivery manual.	●	49					•		⊗						
21	Perform a value engineering study for projects larger than \$1 million.	●	50	•				•		⊗						
22	Perform and use post-project reviews and document lessons learned.	●	51		•	•	•	•		⊗						

Note: In the table shown in this appendix, each item discussed in the report is shown. The symbol “⊗” indicates the area in which the Item was reported. The symbol “•” indicates that the Item was not reported in that functional area, but does relate to the area.

**Foothill De Anza Community College District  
Bond Management and Construction Management Process Review  
Appendix A**

Item	Description	Rating	Page	PROJECT AND CONSTRUCTION MANAGEMENT										FINANCIAL MANAGEMENT		
				Project Cost Control	Technology Exploitation	Web-Based Project Management	Reporting	General Project Management, Governance, and Oversight	Project Planning	Delivery Methods	Project Packaging	Change Order Management and Controls	Constructability Reviews	Technology Exploitation	Integration with District's Accounting and Purchasing System	Integration with Project Management and Reporting
23	Include a formal dispute resolution procedure in all contract agreements.	●	52					•		⊗						
24	Use a contractor pre-qualification process on large or complex projects.	●	52							⊗						
25	Assign a client or user representative to every project.	●	53					•		⊗						
26	Consider alternative project delivery methodologies.	Info Only	54							⊗						
27	Bundle small projects together whenever possible.	●	56								⊗					
28	Submit requests for changes to scope, schedule, or budget to the Board.	●	57	•		•	•					⊗				
29	Maintain a potential change order log tracked by change order category.	●	58			•						⊗				
30	Use a formal quality management system.	●	59										⊗			
31	Make bid documents available online.	●	61											⊗		
32	Board and Committee should monitor all direct and indirect costs.	●	62	•										⊗	•	•
33	Adopt and use a project control system on all projects.	●	63		•	•	•		•	•		•		⊗		•
34	Implement an electronic progress payment system.	●	65												⊗	

Note: In the table shown in this appendix, each item discussed in the report is shown. The symbol “⊗” indicates the area in which the Item was reported. The symbol “•” indicates that the Item was not reported in that functional area, but does relate to the area.

Foothill De Anza Community College District  
 Bond Management and Construction Management Process Review  
 Appendix A

Item	Description	Rating	Page	PROJECT AND CONSTRUCTION MANAGEMENT										FINANCIAL MANAGEMENT			
				Project Cost Control	Technology Exploitation	Web-Based Project Management	Reporting	General Project Management, Governance, and Oversight	Project Planning	Delivery Methods	Project Packaging	Change Order Management and Controls	Constructability Reviews	Technology Exploitation	Integration with District's Accounting and Purchasing System	Integration with Project Management and Reporting	
35	Implement a work breakdown structure to measure project deliverable progress.	●	66														⊗
36	Adhere to the established and board-approved budget.	●	67	•											•		⊗
37	Present summary bid reports in presenting the results of formal bidding.	●	67														⊗

Note: In the table shown in this appendix, each item discussed in the report is shown. The symbol “⊗” indicates the area in which the Item was reported. The symbol “•” indicates that the Item was not reported in that functional area, but does relate to the area.