August 10, 2017

STEPHEN JACKSON Director Facilities Management 0908

Subject: Renovations and Alterations

Report 2017-02

The final report for Renovations and Alterations Report 2017-02, is attached. We would like to thank all members of the department for their cooperation and assistance during the review.

UC wide policy requires that all draft reports be destroyed after the final report is issued. We also request that draft reports not be photocopied or otherwise redistributed.

David Meier Director Audit & Management Advisory Services

#### Attachment

cc: Judith Bruner

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# **AUDIT & MANAGEMENT ADVISORY SERVICES**

Renovations and Alterations Report No. 2017-02 August 2017

FINAL REPORT

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#### I. EXECUTIVE SUMMARY

Audit & Management Advisory Services (AMAS) has completed a review of renovations and alterations as part of the approved audit plan for Fiscal Year (FY) 2016-17. This report summarizes the results of our review. The objective of our review was to assess the effectiveness of construction management, compliance with policies and procedures, and internal controls related to the administration of renovation and alteration activities. Specific emphasis was placed on project management activities, costing methodology, recharge practices and the application of recharge revenue, and the timeliness of project completion.

We concluded that construction management processes were generally effective, in compliance with policies and procedures, and internal controls related to the administration of renovation and alteration activities were adequate. We noted that FM's current overhead rate was structured and implemented to provide support for FM renovation and alteration operations.

We noted external client perspectives on project management activities provided opportunities for improvement, specifically relating to transparency, costing methods, customer service and communication, and project timelines. We also noted that a draft Renovation Effectiveness Report (RER) was issued in April 2016 by a campus working group that provided a number of recommendations aimed at reducing costs and project timelines. While a few of the RER recommendations were being addressed, the report was never finalized, and recommendations were not fully reviewed and implemented. However, if fully implemented, the RER stated that UCSD could "realize an estimated \$10 million to \$21.7 million in annual savings and a 5-6 month reduction in a renovation's lifecycle." We suggest that the RER be considered by senior management with a specific timeframe for implementation of recommendations that have not yet been addressed.

Observations and supporting comments are described in greater detail in section V. of this report.

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#### **II. BACKGROUND**

Audit & Management Advisory Services (AMAS) has completed a review of renovations and alterations as part of the approved audit plan for Fiscal Year (FY) 2016-17. This report summarizes the results of our review.

Renovations and alterations include a wide range of construction modifications and building improvements involving architectural; electrical; plumbing; and heating, ventilations, and air conditioning services (HVAC). Examples range from painting and wiring for electricity to installing fume hoods, rerouting plumbing, and installing safety equipment. Per the University of California, San Diego (UCSD) Policy & Procedure Manual 530-1 Policy on Facilities Management Office Functions, construction or alteration of University buildings "must be accomplished by Facilities Management Department personnel, Facilities Design and Construction, or a licensed contractor under direction of the Facilities Management Department or Facilities Design and Construction. No work in this category may be done by departmental staff or students."

Facilities Management (FM) is responsible for providing the routine maintenance of UCSD buildings<sup>1</sup> and grounds, managing the Campus Machine Shop, and giving design and construction expertise on campus building renovations. Services provided by FM consist of the following:

- Building Operations
- Building and Landscape Services
- Project Management
- Energy, Utilities, & Building Commissioning

The FM Work Management Customer Relations (Work Management) help desk processes customer-initiated work requests for campus maintenance and renovation projects. Requests involving health or safety issues receive the highest priority, and non-urgent work orders are prioritized in the order they are received. The help desk processes an average of 908 work orders each fiscal year via phone, email, and the online work request system.

Facilities Design & Construction (FD&C) is the primary campus service provider charged with implementing large-scale campus planning, building, and alteration projects and consists of the following major functions:

- Project Management
- Inspection Services
- Contracts
- Fiscal Management
- Administrative Services

The UC Facilities manual provides information related to how projects are classified. Non-state<sup>2</sup> projects with an estimated cost in excess of \$750,000 are classified as major capital improvement

<sup>&</sup>lt;sup>1</sup> Facilities Management does not maintain Housing, Dining, and Hospitality buildings, RIMAC arena, or University Centers.

<sup>&</sup>lt;sup>2</sup> Thresholds for projects funded with State funds are adjusted biennially.

projects, while construction projects with an estimated cost of less than \$750,000 are minor capital improvement projects. On campus, projects are further segregated according to delegated approval by University of California, Office of the President (UCOP), as depicted in Table 1.

Table 1

Classification	Budget	Approval Level	Project Management Assignment
Non-Capital Improvement Renovation & Alteration	\$35,000 or less	Campus Architect	Facilities Management
Minor	\$35,001- \$750,000	Campus Architect	Facilities Management (1)
Mini Major	\$750,001- \$10,000,000	Chancellor	Facilities Design & Construction (2)
Delegated Campus	\$10,000,001- \$70,000,000	Chancellor (with endorsement from UCOP and OGC)	Facilities Design & Construction
Regental	\$70,000,001+	Board of Regents – Finance & Capital Planning Strategies Committee	Facilities Design & Construction

In general, (1) FM is responsible for maintenance, and minor renovation and alteration projects valued up to \$750,000, whereas (2) lab renovations and mini major capital improvement projects, such as new buildings and major additions, are managed by FD&C. However, FD&C's Director of Architectural Services and FM's Assistant Director of Project Management discuss certain minor and mini major projects that may be outside of the \$750,000 threshold to determine if one unit versus the other would better serve the project. For example, a maintenance project valued at \$1 million may be managed within FM based on scope, complexity, and resources. Conversely, FD&C may decide to manage a project valued under the threshold if it is mutually determined to be a better management fit. Currently, there are no formal processes to prioritize tenant improvement projects, including faculty lab renovations, for either FM or FD&C. As a result, projects are assigned to project managers (PM) as the job requests are received.

In October 2015, at the request of the Chief Financial Officer and the Vice Chancellor for Resource Management and Planning, a cross-functional work group was established to identify ways to reduce renovation costs and project delivery times. The recommendations were forwarded in April 2016 as a Renovation Effectiveness Report (RER) in draft form. In March of 2016, Senior Leadership also requested a comprehensive review by an outside consulting group<sup>3</sup> to focus on existing FD&C practices related to customer service, project management activities, financial budget projections and associated system, organizational structure, as well as staffing resources and associated workload. As a result, the RER was never issued as a final report as focus shifted toward the external review and reported recommendations. We noted no plans to finalize the RER or commitment to implement the report recommendations. However, if fully implemented, the RER stated that UCSD could "realize an estimated \$10 million to \$21.7 million in annual savings and a 5-6 month reduction in a renovation's lifecycle."

<sup>3</sup> Attain is a management, technology, and strategy consulting firm delivering market leading results to customers in the government, healthcare, education, and nonprofit markets.

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### III. AUDIT OBJECTIVE, SCOPE, AND PROCEDURES

The objective of our review was to assess the effectiveness of construction management, compliance with policies and procedures, and internal controls related to the administration of renovation and alteration activities. Specific emphasis was placed on project management activities, costing methodology, recharge practices and the application of recharge revenue, and the timeliness of project completion. The scope of our review excluded procedures performed during the external consulting review. In order to achieve our objective, we performed the following:

#### Reviewed:

- Applicable UC and UCSD policies and procedures including the UCSD Policy & Procedure Manual and the UC Facilities Manual,
- o the Stull Act,
- Relevant prior AMAS reports,
- o the external consulting audit report,
- o The RER, and
- The organizational structures for FM and FD&C;
- Interviewed the following FM personnel:
  - o Assistant Director Project Management,
  - Assistant Director Building Operations,
  - o Senior Manager Financial Services,
  - Work Management Manager, and
  - Project Managers;
- Interviewed the following FD&C personnel:
  - Senior Director Construction Services,
  - Director Architectural Services,
  - o Department Business Officer,
  - o Fiscal Manager,
  - o Contract Manager,
  - Project Manager, and
  - Pre-Design Manager;
- Interviewed the following Business & Financial Services Procurements and Contracts personnel:
  - Associate Director, and
  - Assistant Director Technology and Project Management;
- Interviewed the following Scripps Institution of Oceanography (SIO) personnel:
  - Assistant Vice Chancellor, Finance and Operations,
  - o Director of Facilities Operations and Planning,
  - Facilities Manager, and
  - Capital Planning and Space & Facilities Management Analyst;
- Interviewed the following:
  - Associate Vice Chancellor Research Administration, Academic Affairs, and
  - Associate Director, Housing Dining & Hospitality;
- Interviewed the following UCSD Medical Center personnel:
  - o Director, Facilities Planning and Management, and

- Contract Analyst;
- Reviewed:
  - o FD&C's current recharge rate methodology and application of recharge revenue;
  - o FM's current and proposed overhead rate methodology; and
  - Two representative renovation projects, one managed by FD&C and one by FM.

#### IV. CONCLUSION

#### **Internal Control Perspective**

Based on our review, we concluded that construction management processes were generally effective, in compliance with policies and procedures, and internal controls related to the administration of renovation and alteration activities were adequate. We noted that FM's current overhead rate was structured to provide support for FM renovation and alteration operations. However, the rate was in the process of being replaced by a recharge rate based on direct hours charged to the project versus a percentage applied to the total project budget.

#### **Customer Service Perspective**

We noted external client perspectives on project management activities were often negative. Customers cited a number of opportunities for improvement, specifically relating to transparency, costing methods, customer service and communication, and project timelines. There was confusion surrounding the process for assigning project managers and the distinction between FD&C and FM. Concerns also related to how project budgets were identified and how/why budget increases occurred. While these concerns have begun to be addressed in part, by both FD&C (via the external review recommendations) and FM (via the RER recommendations), numerous recommendations made in the RER had not been fully reviewed and endorsed. Full implementation of these recommendations would increase the understanding of project management processes, reduce project costs and timelines, and lead to improved client satisfaction.

Observations, supporting comments, and recommendations are provided in detail in the remainder of this report.

#### V. OBSERVATIONS and SUPPORTING COMMENTS

#### <u>Client Perspectives on Renovations and Alterations</u>

During our review, we interviewed senior leadership from Academic Affairs, SIO, and Health Sciences to gain their perspective on renovation and alteration processes and how they were administered to support the UCSD campus.

Several positive remarks were given regarding FM's maintenance units, such as their communication, work responsiveness, and customer satisfaction with completed projects. Additional praise was provided regarding specific PMs and their proactive approach to completing a project with an emphasis on customer service. However, some shared experiences in which PMs could have provided more

clarity regarding the project process or more detailed explanations for rising costs and time delays.

Overall, we noted that feedback regarding improved clarity related to three general areas: customer service, project costs, and project timelines. Clients were unclear on current processes involved in the assignment of project management as well as the distinction between FM and FD&C. Additionally, clients felt that regular status updates would have provided more clarity.

Feedback indicated that costs were not clearly explained to include what was necessary and how contingent costs were applied. Additionally, they were concerned that budgets continued to increase as estimates were updated throughout the process without receiving a clear explanation of how and why the budget increases occurred. Questions regarding the 15% overheard charged to FM projects were a recurring theme among clients who were unsure how the fee was used as well as how appropriate it was given the added markups already included for design and contract fees.

With regards to timelines, clients were unsure how project schedules were mapped from beginning to end, including why a seemingly simple lab renovation would take upwards of eight months or more to complete. Clients also observed an excessive number of lengthy reviews included in the project scope, regardless of the job complexity.

#### Overhead and Recharge Rates

All expenses incurred by FD&C construction projects were recovered using a full cost recovery model that has been in place for several years. The recharge model was based on an annual estimated budget for expenses, and expenses were classified as either direct or indirect project costs. The model used direct labor hours, tracked and charged on a project basis, to recover direct costs. All indirect costs were recovered based on the calculated (budgeted) overhead rate assessed on the direct labor charges.

Expenses incurred by FM in support of project management were recovered using a single flat rate overhead charge determined by the total project value. The overhead charge was dependent on the cost of the project: 15% for projects up to \$750,000 and 5% for projects greater than or equal to \$750,000. The overhead charge was used to cover all expenditures related to FM's renovations and alteration activities, including shared administrative expenses in support of renovations and alterations (Information Technology support, Human Resources, Purchasing, etc.), and travel and training as well as direct labor and material costs, with the majority of expenses charged to contract services. The overhead charge was not used to subsidize other unrelated services, and rates are now consistent with the FD&C model of charging direct labor hours to individual projects.

#### **Project Costs**

FD&C and FM both provide preliminary estimates to clients in the pre-design phase of each project. FM PMs have access to a database of contract work which they use to generate their estimates, to include a 10% contingency for unexpected expenses that arise during construction. The contingency amount is only charged to the client if the amount is used. FD&C creates a project charter that includes all known project information, as well as cost estimates based on comparable projects and a timeline. The client then decides whether to move forward with the project based on the estimate or project charter, respectively. However, a number of unknown factors at the beginning of a project may

require more detailed surveys of the space by relevant engineers to a) ensure the space is suitable for the scope of work, and b) accurately assess the costs involved in altering the space to meet the needs of the client. For both FM and FD&C managed projects, if the customer chooses to move forward, the next step is to hire a Designer.

Every renovation and alteration at UCSD must comply with state and local building codes, University of California and campus policies, disabled access guidelines, fire marshal and fire and life safety issues regulations, and environmental mitigation measures required by the California Environmental Quality Act (CEQA). Additionally, new guidelines were recently developed and issued by UCOP for the implementation of gender inclusive restroom facilities in UC-owned buildings for privatized projects developed on UC-owned land where the project is to be used for University-related purposes. As the new mandate is unfunded, new construction and renovation projects will likely bear the additional costs.

#### **Project Timelines**

Once a project request has been submitted, the FM Work Management unit creates a work order and forwards it to the either FM or FD&C based on the \$750,000 threshold described in Table 1. The turnaround time for a work order is usually within one business day. The receiving unit (FM or FD&C) then assigns a PM to the project, as appropriate, and the PM contacts the client to perform a review in order to provide a basic cost estimate (from FM) or project charter (from FD&C) as described above.

During our review, we evaluated a lab renovation project for the Structural and Materials Engineering (SME) Building. In November 2016, the project was initially assigned to a PM within FM based on an initial budget under \$750,000 (per Table 1). The FM PM created a preliminary cost estimate after meeting with the client as well as an engineer and architect to discuss the scope. During this process, the scope of the project increased from the need of three or four fume hoods to eight fume hoods that the existing mechanical structure of the space could not satisfy. This change in scope pushed the budget over the \$750,000 threshold. In April 2016, representatives from FD&C and FM met with the client to discuss the details and added scope of the project, and it was mutually decided that the project would be managed by FD&C going forward. After an additional meeting with the client, FD&C produced a project charter, which included two estimated budget ranges for two options that the client had not yet decided between: the conversion of either three (\$1.3-\$1.6 million) or four (\$1.7-\$2 million) audio visual labs to engineering labs. For FD&C managed projects, once the pre-design phase is complete and the client has agreed to move forward, the design phase begins. Attachment A outlines an estimated timeline for this SME project that was generated during the pre-design phase. As noted, the longest process in the timeline was related to the design and Construction Manager/General Contractor4 (CM/GC) phases. In order to save time and gain efficiencies during the design, the CM/GC process was selected, to ensure that bidding began as soon as the campus process to approve the project was completed. This project also included an HVAC study during the pre-design phase to ensure that the requested number of fume hoods could be installed in the labs without requiring major mechanical upgrades. Examples of other pre-design studies included analyzing existing space to determine the suitability of the intended research or the preparation of concept sketches to confirm that spatial needs can be accommodated. These pre-design studies assist clients in determining how/if

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<sup>&</sup>lt;sup>4</sup> CM/GC process contracts with a construction manager during the design and bidding phases to assist with identifying risks, providing more accurate cost projections, and refining the project schedule.

to proceed. The design and CM/GC timelines for this project are further broken down by task in **Attachment B**.

The project timeline also accounts for a number of document reviews. Certain construction documents are subject to internal review and approval by various campus units as well as external review and approval by state or federal agencies. This is to ensure adherence to necessary environmental documentation in addition to compliance with CEQA, fire and life safety codes and standards as well as disabled access requirements. The UC Facilities Manual outlines the University and external reviews required.

Timelines may be impacted when scope changes are made during construction. Campus Departments that request a renovation need to recognize that scope changes may severely impact their project timelines. We reviewed one SIO project (managed by FM) that was initially scheduled to begin work in January 2017, with work lasting one month. Construction began as scheduled; however, the project was not completed until May 2017. The delays were primarily due to five scoping changes requested by the client that took place throughout the construction period. Additionally, the construction schedule was impacted when the building occupants had not yet been relocated by the scheduled start date. Our review also revealed structural issues that affected both the budget and timeline that were unknown prior to the start of construction, due to the age of the structures. While the scope changes were initiated by the client, they felt that regular status updates by the PM on timeline and cost impacts would have provided more clarity in the process.

#### FD&C Management's Response to the External Review Report

We noted that FD&C has taken action to review and revise their processes and structure based on the recommendations provided in the external audit report. Activities include implementing dashboard reports for projects that contained all pertinent information and notable achievements, developing an independent client satisfaction survey, establishing clear project management roles between FM and FD&C and communicating thresholds to clients, implementing cost saving measures identified in workshops, implementing industry benchmarking data to establish target budgets, reviewing delegations of authority, and implementing a new organizational structure.

#### FM Renovation Effectiveness Report

The FM RER was issued in draft form in April 2016, and provided a number of recommendations to reduce time and costs for renovation projects and improve client service delivery. In our view, the recommendations were very valuable and could significantly improve operations. FM has begun to take action, in part, to address recommendations provided in the RER, and FD&C has identified current process reviews that would address additional recommendations. However, we noted a number of recommendations remained unaddressed, such as simplifying budget approval, automating contract management tasks, and reducing the construction "plan check<sup>5</sup>" review cycle.

FM is currently in the process of in-sourcing projects under \$50,000 and eliminating the 15% overhead rate. State law allows in-house services to perform construction on projects up to \$50,000, with a

<sup>&</sup>lt;sup>5</sup> Plan check involves reviews by FD&C architects, engineers, and the Fire Marshall of the construction plans for building impact and ADA compliance and occurs at multiple stages of a project.

\$25,000 limit for painting projects. However, FM's Building Operations unit did not have the resources to complete these projects, and the task of managing the projects became the responsibility of the FM PM unit. Currently, the FM PM portfolio is approximately 35 projects, with 90% comprised of projects that are less than \$50,000. FM is also in the process of hiring a new Building Operations Project Team of 16 tradesmen, two Project Planners, and a new Superintendent who will be able to take on the project workload from the Project Management team. This transfer of work will better enable FM PMs to focus on larger and more complex alteration and renovation projects. In-sourcing will also reduce project costs as hourly rates for internal skilled labor are an average of 48% lower than external skilled labor, which is bound by the prevailing wage program<sup>6</sup> administered by the California Department of Industrial Relations. In conjunction with this effort, FM is also in the process of hiring five new PMs to manage the total project portfolio.

While there is no set standard for the ideal ratio between projects to PMs, one industry best practice recommended applying the percentage of time spent on project management to the total hours of annual effort to determine how many projects a PM could effectively manage. However, this benchmark would not account for the complexity of the project or the experience of the PM, administrative staff available, and other associated variables.

In addition to in-sourcing projects, FM is in the process of aligning the recharge rate more closely with expenses, based on FD&C's rate methodology of charging direct labor hours to individual projects. This will eliminate project time being charged to overhead in favor of PMs charging time directly to their respective project. Once approved by the Budget & Rate Review Committee, the plan is to implement the new rate system immediately.

In addition to the actions noted above, FD&C has stated they plan to review delegations of authority to possibly include FM. Currently, there is only one campus delegated authority to approve minor capital project contracts, which creates longer cycle times for projects. The review will include delegating authority for budget, finance, design, and environmental approvals, with the intended outcome of addressing long project timelines.

FD&C has also stated they will be reviewing the executive architect selection process to possibly include a pool of qualified architects familiar with scientific needs. However, the discussion of using inhouse services, has not yet occurred.

While a few of the RER recommendations were being addressed, the report was never finalized, and all recommendations were unable to be fully reviewed and endorsed by leadership. See **Attachment C** for a summary of client concerns, comments, and audit conclusions.

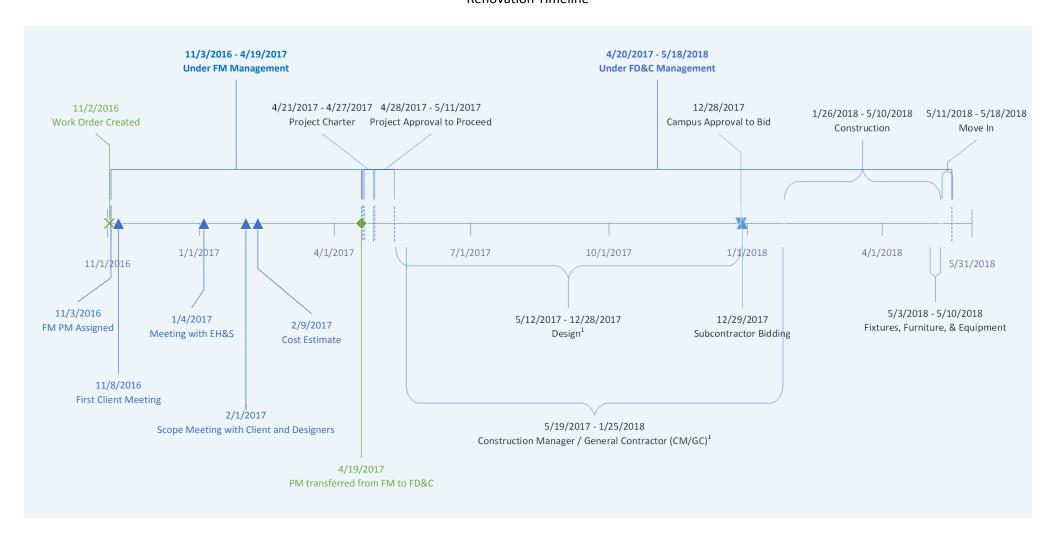
Pursuing all identified strategies (external audit report and RER) aimed at reducing cost and cycle times will increase efficiencies and improve client satisfaction.

We suggest that the RER be considered by senior management with a specific timeframe for implementation of recommendations that have not yet been addressed.

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<sup>&</sup>lt;sup>6</sup> The program sets construction hourly wage minimums for public works projects to ensure contracts are not selected based on paying lower wages than a competitor.

# Renovations and Alterations Report 2017-02 Structural and Materials Engineering Building (FM and FD&C) Renovation Timeline



<sup>&</sup>lt;sup>1</sup>The Design and CM/GC phases are broken down into additional detail by task in **Attachment B** 

# Renovations and Alterations Report 2017-02

Structual and Materials Engineering Building (FD&C)
Renovation Timeline: Design and CM/GC Details

	Task	Responsible Party <sup>1</sup>	Duration	Start	Finish
Design			160 days	5/12/2017	12/21/2017
1	Executive Architect Selection	FD&C	6 weeks	5/12/2017	6/22/2017
2	Program/Schematic Design (SD)/Design Development (DD)	External Architect	8 weeks	6/23/2017	8/17/2017
3	Agency Review and Approval	Various Campus	2 weeks	8/18/2017	8/31/2017
4	Estimate of SD/DD Package	External Independent Estimator	2 weeks	8/18/2017	8/31/2017
5	Construction Documents (CD)	External Architect and Engineers	up to 12 weeks	9/1/2017	11/23/2017
6	Estimate of CD	External Independent Estimator	2 weeks	11/24/2017	12/7/2017
7	Agency Review and Permit Approval		3 weeks	11/24/2017	12/14/2017
8	Plan Check	FD&C, Fire Marshall, External Architect			
9	Americans with Disabilities Act	External CA Access Specialist			
10	Structural Engineer	External Consulting Engineer			
11	Fire Safety Review	UCSD Fire Marshal			
12	UCSD Environment Health & Safety (EH&S) Review	EH&S			
13	Campus Approval to Bid	Client	2 weeks	12/15/2017	12/28/2017
CM/GC			175 days		1/18/2018
14	CM/GC Prequalification	FD&C	6 weeks	5/19/2017	6/29/2017
15	CM/GC Selection	FD&C	6 weeks	6/30/2017	8/10/2017
16	Subcontractor Qualification	FD&C	1 month	11/30/2017	12/28/2017
17	Subcontractor Bidding	FD&C	1 month	12/29/2017	1/18/2018

- 1 Includes three weeks of advertising and a two week notification prior to interviewing architects on the short list.
- 2 This timeline is dependent on the architect and includes meeting with the clients to gain an understanding of the project.
- 3 Client and FD&C review of architect's supplied SD and DD. Additionally, EHS and Fire Marshall perform code compliance reviews.
- 4 Concurrent with the client review, an independent estimator prepares a budget.
- 5 Once task # 3 is complete and the client is satisfied with the estimates, the architect prepares plans and specifications for bidding.
- 6 Independent Estimator ensures CDs are complete.
- 7 Concurrent with task # 6, includes a number of internal and external reviews for compliance.
- 8 Internal and external reviews, including inspection by External Independent Estimator of the design and details of the architectural, structural, mechanical and electrical systems.
- 9 Plans must be certified by an external third party to be in compliance with disabled access regulations.
- 10 A consulting engineer reviews documents for conformance to policy on seismic safety.
- 11 The Fire Marshall reviews documents for conformance to applicable fire protection regulations and standards.
- 12 EH&S reviews documents for conformance to environmental health and safety policy.
- 13 This is a milestone step that occurs after clients have reviewed and accepted the CD and CD estimate. All documents are prepared and submitted for client review to commit funding for construction.
- 14-15 CM/GC method allows for FD&C to advertise and secure the contractor during the design phase.
- 16-17 The subcontractor bid process begins directly after the campus approval to bid is received at task #13. The bid process duration is determined by advertising requirements based on the type of contract.

<sup>&</sup>lt;sup>1</sup>FD&C is the responsible party for all tasks. However, they facilitate with additional internal and external parties, as indicated.

# Renovations and Alterations Report 2017-02 Summary of Observations

Client Concerns	Comments	Audit Conclusion <sup>1</sup>
Service Lack of: •Transparency in processes, •Involvement, •Client focus, •Clearly defined roles between FM and FD&C, •Regular status updates	<ul> <li>FD&amp;C has begun to implement recommendations from the external audit report including creating a project dashboard with pertinent information and milestones, identifying monthly development of client communication as a measurable goal to achieve merit for PMs, implementing a new Client Satisfaction Survey, and communicating proposed PM roles to clients.</li> <li>FM has begun evaluating PM job performance during performance reviews and is reviewing ways to update the client survey in an effort to increase the response rate.</li> <li>FM could improve client satisfaction by publishing more informed content for clients and adding a client portal, per the Renovation Effectiveness Report.</li> </ul>	Improvements in process/Additional improvement suggested
Costs Lack of clarity in: •15% overhead charge, •Regulatory and out-sourced cost contributors, •High project costs, •Added costs as the project progresses	<ul> <li>FD&amp;C has begun implementing identified cost saving measures in waves and providing industry benchmarking data to establish target budgets.</li> <li>FM is implementing a new rate structure in FY18 as well as in-sourcing low dollar projects to reduce costs previously burdened by prevailing wages.</li> <li>FM could further improve costs by exploring construction spend management and inhouse design options, per the Renovation Effectiveness Report.</li> </ul>	Improvements in process/Additional improvement suggested
Timeline Lack of understanding of:  •Project start delays, •Long project timelines, •Long processing for plan checks, •Why in-house design services cannot be used	<ul> <li>FM will be in-sourcing low value projects with a new Building Operations team, which will lighten the workload of PM, allowing them to devote more time to higher value projects.</li> <li>FM will be hiring additional PMs, and FD&amp;C's plan to hire additional FTEs is in process.</li> <li>FD&amp;C is planning to review Delegations of Authority for budget, finance, design, and environmental approvals.</li> <li>FD&amp;C is reviewing the design selection process.</li> <li>Timelines could be shortened by simplifying budget approval, streamlining and automating the plan check, and front-loading project plans for incoming faculty.</li> </ul>	Improvements in process/Additional improvement suggested

<sup>&</sup>lt;sup>1</sup> Scale: Satisfactory – Improvement Suggested – Improvement Needed - Unsatisfactory