

## Minutes of the Facilities, Support Services and Technology Committee

April 30, 2013

Attendees: Whittum-Hudson, Matthew, MacArthur, Reddy, Madigan, Withey, Avrutsky, and Sawasky

Excused: Saydain, Golodner, Bray, Kumasi

Absent: George, Moore, Rappolee, Gondapi

Guests: Rick Nork, Jim Sears and Stephen Pecec from FP&M

The meeting was called to order at 2:35 p.m.

Representatives from FPM attended the FSST committee meeting to respond in detail to the memo sent from FSST regarding lack of satisfaction of faculty with the methods of billing for various services. Mr. Avrutsky took the lead in generating a memo for the committee (attached) as he articulated some specific examples of unjustified, excessive charges in his College. Mr. Nork began the meeting with some brief remarks about how pricing for contractor/renovation activities are mandated.

Mr. Sears and Pecec elaborated on the Powerpoint slides (attached in pdf) which provided details of state bid rates, the selected vendors chosen by the University, the FPM staffing which is involved in all projects (eg, the new Biomedical Research Building or small projects). The major points raised in the FSST memo were addressed as follows:

### 1. High Project Costs

There are different construction delivery methods ranging from 'Just do it' with or without a cost estimates for Time and Materials, or lump sum for jobs under \$25,000. Classrooms or resident halls have a category 'The Fire Marshall' because of safety impact on construction plans. There may be Job Order contracting (JOC) with unit prices based on state bids and contractors awarded by the state (there are ~25,000 activities on this list). Finally Design Build involves more extensive planning and execution. The design fees are from about 20 designers chosen from a much larger list and would amount to about ~12% over an original \$350,000 project (see slide 10).

Mr. Sears described in detail the State-required payment of prevailing wage minimum hourly rates. The final hourly rate includes not just salary minimum (Labor ~\$30 and benefits ~\$23, but ~\$8 for Burden (insurances, FICA, etc), and ~\$15 for overhead: tools/vehicles/profit) so that the total hourly rate today is ~\$76/hr.

The majority of grants submitted with new equipment installation or space renovations have not been discussed with FPM at the time of submission. There is now a Financial Responsibility Form for sign offs by deans, chairs and (new) faculty; the form has a facility line item that must be completed regarding new labs. Most faculty (and higher) probably are unaware that one can include the costs to install newly funded equipment or facilities in grant applications.

### 2. High construction costs

Part of the reason for this issue is that Detroit is the 22<sup>nd</sup> most expensive city in the US to do construction. Those costs have undergone inflation of 34% over the past 10 years.

### 3. Lack of faculty involvement in price negotiation

There was extensive discussion about the need for faculty to be involved in the discussion of costs, the decisions on vendors, and options to reduce overall costs. One thing out of the control of the university and faculty is the prevailing wage discussed earlier; the later prevailing wages are approximately 51% higher than in open shops. Some potential solutions based on the various concerns in the memo are detailed below and in slide 17.

#### 4. Transparency of the bidding process

It was strongly suggested by the committee that faculty have the opportunity to meet with contractors to discuss costing. Further, one strategy likely to be adopted, as is being done with other vendors in Wayne Buy, will be for FPM to sit with several vendors to discuss real cost reductions by value-added.

#### 5. The project management fee (PMF)

The larger the project, the lower the PMF. These fees are not covered by the General Fund nor Indirect Cost Recovery. The flow chart of staffing in the D & CS department is shown on slide 12; there are some temporary positions which allow expansion or contraction in staffing with changing construction needs. It is important to note that a list of tasks are done for all projects (slide 13). The PMF is derived by actual staff time.

As shown on slide 17, FPM has identified opportunities to work more and better with faculty on project planning.

1. Self-perform project planning/schematic design IN HOUSE before outsourced (small and medium projects)
2. Improve thoroughness of project scoping with more customer involvement. This would reduce change orders which are not bid.
3. Time and material contractors which work on smaller projects. Bring in from outside but not to insert into larger projects already in progress (delays, lose warranties, etc)
4. Better interrogate/challenge components of lump sum proposals. Include itemized cost and time of labor; itemize cost of materials; include profit margin information
5. Improve accuracy of cost-estimates. Re-compete Time and Materials contracts with a target of hourly labor rates. New contracts will be in place by September. It was discussed that target pricing is needed and project managers should be in the field to eliminate cost-overruns in time.

Mr. Avrutsky suggested that Mr. Sears and Pecec take this presentation to the colleges to expand the understanding of these issues, the proposed solutions and to identify new solutions.

Respectfully submitted,

Judith Whittum-Hudson  
Chair, FSST Committee

Facilities, Support Services, and Technology Committee of Academic Senate

To: University Facilities

Re: External contracts price control

Mr. Nork

The Facilities, Support Services, and Technology Committee of the Academic Senate is concerned by rising prices of Facilities operations performed by external contractors in research labs run by faculty members and university units such as departments, schools and colleges, and centers.

Many observations indicate that various projects – electrical, plumbing, structural, moving, and others – often appear to be a lot pricier than anyone could expect. This most likely indicates that mechanisms for price control are either nonexistent at all, or do not work properly, or, perhaps, the business model of Facilities operations may even sometimes prefer more expensive contracts over the less expensive ones.

When faculty members puzzled by project estimates try to decipher the origin of an unexpectedly large invoice, a pattern appears that Facilities do not question contractors' requests for resources and time needed to complete the project. Alternative bids from other contractors that are supposed to compete for the jobs are practically never presented to faculty. Faculty end up paying any price requested by a contractor regardless how reasonable it is, have no input in the price negotiation process, and, in addition, they are also required to pay Facilities the management fees as a percentage of the contractor invoice. This takes away valuable financial resources that otherwise could be used to support students working in the labs, update research equipment, or purchase research supplies. With budgets of departments and colleges already overstretched, and research grants getting more and more competitive, the overpriced Facilities projects take a real toll on research at Wayne State.

The FSST Committee recommends that the mechanisms to control the prices of external contracts should be strengthened significantly.

Implementation of the following procedures may help solve the problem:

For the contracts exceeding some threshold level – we think \$5,000 is a reasonable level– there must be alternative bids. When presenting the project estimate to a faculty member or university unit, Facilities should show the multiple bids and provide a list of approved contractors that are qualified to perform the requested job even if they did not bid for the job. Every estimate should be itemized.

A list of all approved contractors should be easily available for faculty and units administrators.

Faculty, departments, colleges – those who ultimately pay the bill – should be able, if they wish so, to negotiate with contractors. In this case, Facilities would bring qualified contractors, and then faculty, (or departments, colleges) would negotiate the price and cut the deal. Research-active faculty routinely negotiate prices when acquiring research equipment or setting up service contracts. Faculty are already actively involved in management of research accounts. Some may choose to be more involved in the negotiations with contractors in order to save on the lab

renovation projects. Others may prefer just to pay the Facilities bill. Both options should be available.

Management fee polices should be changed. Research-active faculty are already paying for Facilities operations through the indirect cost deducted from the research grants and contracts. If, on top of this, additional payments can be justified, they should be based upon actual time spent on the project rather than set up as a percentage of the contractor's price.

The FSST Committee invites you to report on implementation of the price control mechanisms, both outlined above and those currently practiced by Facilities, later in this academic year.

Committee members

Judith Whittum-Hudson, Immunology & Microbiology, Committee Chair

Ivan Avrutsky, Electrical & Computer Engineering

Tamara Bray, Anthropology

Nancy George, Adult Health & Administration

Kafi Kumasi, School of Library and Information Science

Rodger MacArthur, Internal Medicine

Brian Madigan, Art and Art History

Howard Matthew, Chemical Engineering

Brian Morrow, Athletics

Daniel Rappolee, Obstetric & Gynecology

T.R. Reddy, Immunology & Microbiology

Ghulam Saydain, Internal Medicine

Jeffrey Withey, Immunology & Microbiology

Memo prepared by

Ivan Avrutsky

Feb. 11, 2013

# FSST Committee

## FP&M

April 30, 2013

## FPM Performance Concerns of FSST Committee

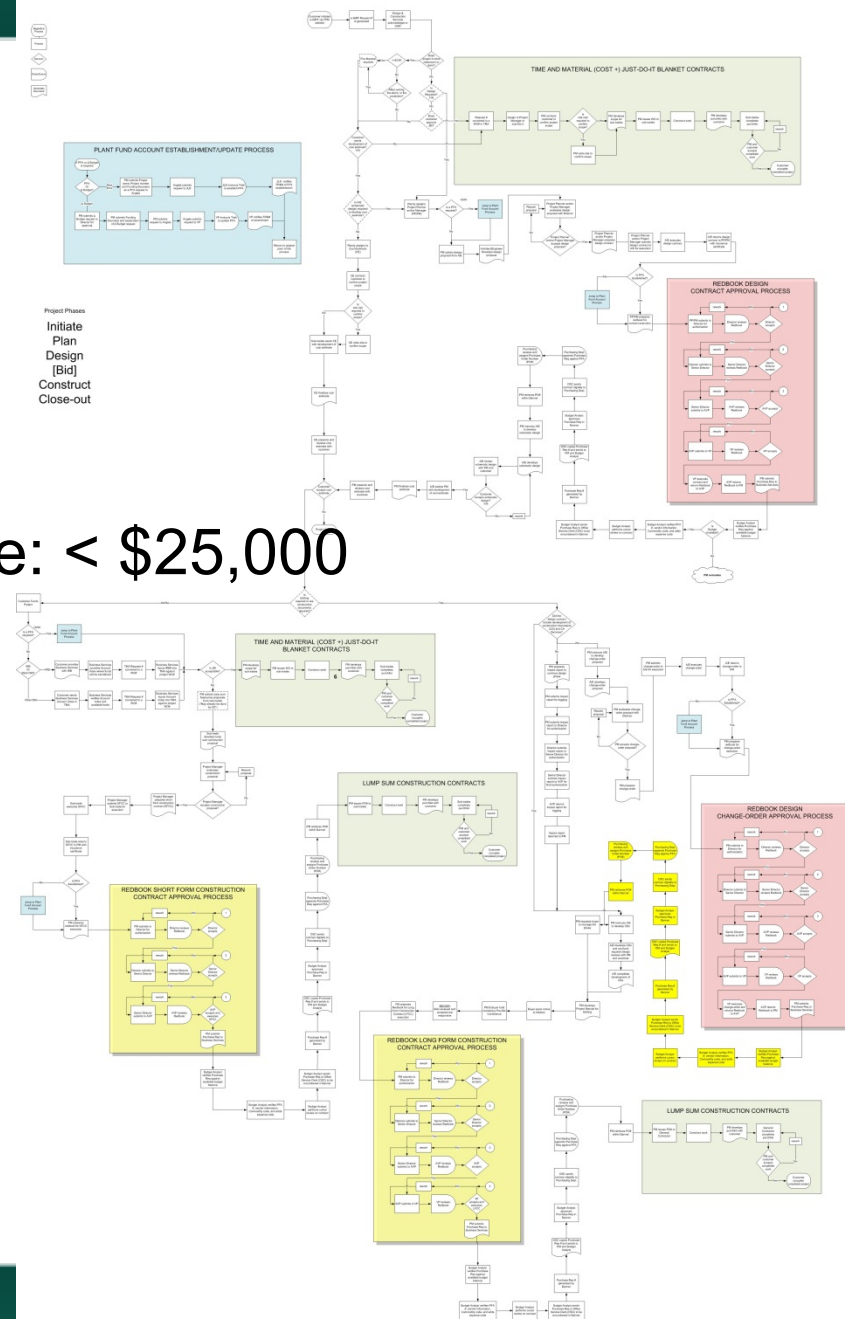
- High Project Cost Estimates
  - Lack of Itemization
- High Construction Costs
  - Cost Controls
  - Apparent Lack of Challenging Contractor Price Proposals
- Lack of Faculty Involvement in Price Negotiation
- Transparency of Bidding Process
  - Bid Limits
- Project Management Fee

## Possible Opportunities to Improve Cost Performance

- Continue to Self-Perform Project Planning and Schematic Design vs. Outsourcing
  - Until Recently This Was All Outsourced to A/E Firms
- Improve Thoroughness of Project Scoping to Minimize Cost of Change Orders
  - Change Orders are NOT Bid
- Better Interrogate Components of Lump-sum Proposals
  - Itemized Cost and Time of Labor by Trade
  - Itemized Cost of Materials
  - Profit
- Consider Establishing Crew of Self-Performing Construction Trades
  - Ownership
  - Productivity
  - Taxes and Mark-up on Cost of Materials
  - Bonds and Insurance
  - Travel
- Improve Accuracy of Cost Estimates
- Re-compete T&M Contracts with Target Hourly Labor Rates

# Construction Delivery Methods

1. T&M Just-Do-It: < \$25,000
2. T&M Do-It After Cost Estimate: < \$25,000
3. Lump-Sum: < \$25,000
4. Competitive Bid: > \$25,000
5. The Fire Marshal
6. Job Order Contracting (JOC)
7. Construction Management
8. Design-Build





## 2013 Time and Material Wage and Fringe Benefit Comparison

| Journeyman Labor  |                                  |                       | BID                 | STATE P.W. |            |
|---|----------------------------------|-----------------------|---------------------|------------|------------|
| TY-FY2013-xx  | Company                          | Trade                 | Labor and Wage Rate |            | Difference |
| 1   | National Maintenance             | Carpentry             | 53.21               | 51.19      | 2.02       |
| 2   | DE Maynard                       | Carpentry             | 51.19               | 51.19      |            |
| 4   | Industrial Electric              | Electrical            | 57.09               | 56.51      | 0.58       |
| 5   | Macomb Mechanical                | Plumbing              | 66.61               | 57.58      | 9.03       |
| 6   | Conti Corp                       | Plumbing              | 63.61               | 57.58      | 6.03       |
| 7   | Macomb Mechanical                | Sheetmetal            | 61.22               | 58.32      | 2.90       |
| 8   | Morris Sheetmetal & Ventillation | Sheetmetal            | 60.22               | 58.32      | 1.90       |
| 9   | Detroit Boiler Comp              | Boilermaker           | 58.07               | 54.70      | 3.37       |
| 10  | Macomb Mechanical                | Pipefitter            | 68.16               | 63.33      | 4.83       |
| 11  | Conti Corp                       | Full Svc Mechancial   |                     |            |            |
| 12  | IXL Glass                        | Glazier               | 46.21               | 46.21      |            |
| 14  | Capital Flooring                 | Carpentry - Carpeting | 47.41               | 46.04      | 1.37       |
| 18  | Detroit Spectrum Paint           | Painters              | 42.47               | 41.32      | 1.15       |
| 19  | Accurate Paint                   | Painters              | 41.62               | 41.32      | 0.30       |
| 20  | Conti Corp                       | Fire Suppression      | 64.52               | 61.92      | 2.60       |
| *** These rates are not inclusive of burden, consumables, vehicles, OH&P. |                                  |                       |                     |            |            |

## 2013 Hourly Charge Rate for Time – Carpentry by NMS

- Labor: \$53.21
  - Base Wage: \$29.76
  - Fringe Benefits: \$23.45
- Burden: \$7.93
- Tools / Vehicle / O&P: \$14.85
  
- TOTAL HOURLY RATE: \$75.99

Fringe Benefit Components and Hourly Cost – Carpentry by NMS

|                               |               |
|-------------------------------|---------------|
| Health and Welfare            | \$6.55        |
| Health and Welfare Supplement | \$0.50        |
| Pension                       | \$14.36       |
| Pension Supplement            |               |
| Annuity                       | \$1.48        |
| Apprenticeship                | \$0.17        |
| Training                      | \$0.19        |
| Industry Advancement          | \$0.10        |
| Dues                          |               |
| BAC Fund                      | <u>\$0.10</u> |
| TOTAL                         | \$23.45       |

## Burden Components and Hourly Cost – Carpentry by NMS

|                             |               |
|-----------------------------|---------------|
| FICA Medicare               | \$2.27        |
| Federal Unemployment        | \$0.23        |
| State Unemployment          | \$3.29        |
| Workers Comp Insurance      | \$1.98        |
| General Liability Insurance | <u>\$0.14</u> |
| TOTAL                       | \$7.93        |

## Overhead and Profit Components and Hourly Cost – Carpentry by NMS

|                             |               |
|-----------------------------|---------------|
| Capitalized Equip and Tools | \$2.66        |
| Truck / Vehicle             | \$7.00        |
| Profit                      | <u>\$5.19</u> |
| TOTAL                       | \$14.85       |

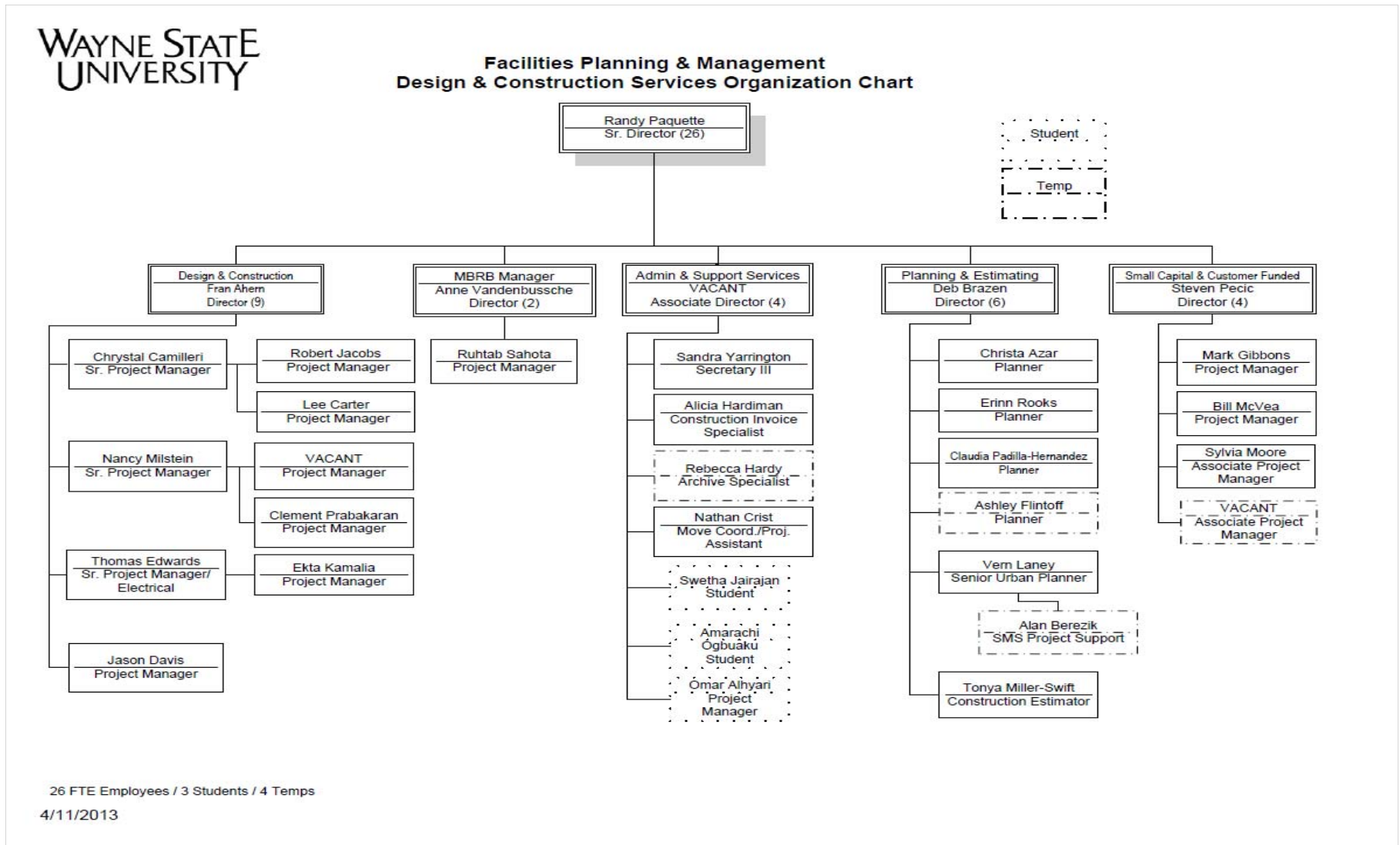
## Architect / Engineer Design Fees Percentage of Cost of Construction

| Project Type                      | Construction Value of Work<br>(in Dollars) | Full Service Architecture & Engineering |            | Full Service Architecture Only |            | Full Service Engineering Only |            |
|-----------------------------------|--|---|------------|--------------------------------|------------|-------------------------------|------------|
|                                   |  | New Const.                              | Renovation | New Const.                     | Renovation | New Const.                    | Renovation |
|                                   |  |   |            |                                |            |                               |            |
| Office, Classroom, Lecture Hall   | 0-99,999                                   | 10.5                                    | 11.6       | 7.5                            | 8.7        | 6.9                           | 8.4        |
|                                   | 100,000-499,999                            | 9.0                                     | 10.1       | 6.5                            | 7.5        | 5.9                           | 7.2        |
|                                   | 500,000-3,999,999                          | 7.7                                     | 8.7        | 5.5                            | 6.3        | 4.9                           | 6.1        |
|                                   | 4,000,000 +                                | 6.8                                     | 7.8        | 4.7                            | 5.6        | 4.3                           | 5.4        |
| Scientific, Laboratory & Research | 0-99,999                                   | 12.2                                    | 13.4       | 8.1                            | 9.5        | 8.7                           | 9.5        |
|                                   | 100,000-499,999                            | 12.6                                    | 11.8       | 7.3                            | 8.2        | 6.9                           | 8.0        |
|                                   | 500,000-3,999,999                          | 9.1                                     | 10.1       | 6.0                            | 6.8        | 5.7                           | 6.8        |
|                                   | 4,000,000 +                                | 8.2                                     | 9.3        | 5.2                            | 6.1        | 5.2                           | 6.7        |

## Other Typical Costs for Construction Value of \$350,000

|                               |                                  |
|-------------------------------|----------------------------------|
| Builder's Risk Insurance      | \$350 or 0.10%                   |
| Insurance Costs               | \$6,825 or 1.95%                 |
| Performance and Payment Bonds | \$6,650 or 1.90%                 |
| CM Contingency                | \$15,365 or 4.39%                |
| CM O&P Fee                    | <u>\$5,250</u> or <u>1.50%</u>   |
|                               | \$34,440 or 9.84%                |
| Design Fee                    | \$44,100 or 12.60%               |
| University Contingency        | <u>\$35,000</u> or <u>10.00%</u> |
|                               | \$113,544 or 32.44%              |

# Design and Construction Service Team



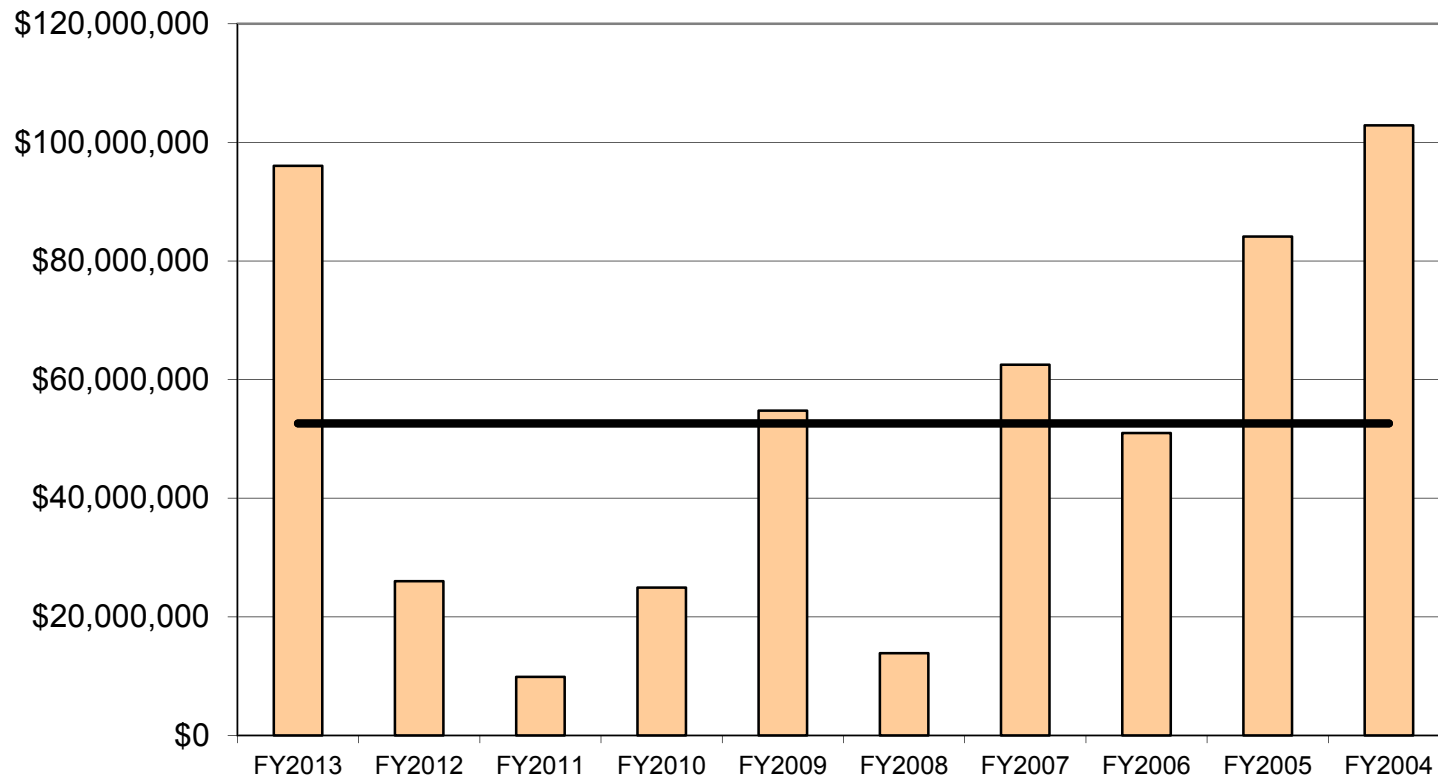


Project Management Fee: 5%  
D&CS Department Budget: \$2,110,900

- Manage Design Phase
- Customer Scoping Meetings
- Solicit and Qualify Bids
- Prepare and Execute Contracts
- OGC and Purchasing
- Construction Coordination
- Respond to RFI's
- Payment Applications
- Scheduling
- Site Visits
- Safety
- Change Orders
- Financial Performance
- Complaints
- Claims
- Training
- Close-out

## Ten Year History of BOG Approved Capital Projects

Annual Capital Appropriations



**Construction Project Cost / Square Foot  
Wayne State University**

| Project Title  | Year Authorized | Cost              |
|--|-----------------|-------------------|
| 1. Welcome Center <small>new construction</small>                                      | 1999            | \$273.90 / sq.ft. |
| 2. Ghafari Residence Hall <small>new construction</small>                              | 2001            | \$171.55 / sq.ft. |
| 3. Atchison Residence Hall <small>new construction</small>                             | 2002            | \$181.69 / sq.ft. |
| 4. Towers Residence Hall <small>new construction</small>                               | 2004            | \$168.77 / sq.ft. |
| 5. Engineering Development Center <small>new construction</small>                      | 2006            | \$334.65 / sq.ft. |
| 6. Education Common <small>new construction</small>                                    | 2007            | \$284.12 / sq.ft. |
| 7. Mott PRB Lab Renovation <small>gut existing</small>                                 | 2002            | \$355.82 / sq.ft. |
| 8. Chemistry Lab Renovation <small>gut existing</small>                                | 2004            | \$352.45 / sq.ft. |
| 9. Scott Hall Lab Renovation <small>gut existing</small>                               | 2005            | \$331.03 / sq.ft. |
| 10. Mott NCCR Lab Renovation <small>gut existing</small>                               | 2007            | \$234.34 / sq.ft. |
| 11. TT HFHS Lab Development <small>shell &amp; core build-out</small>                  | 2007            | \$204.07 / sq.ft. |
| 12. TT 3 <sup>rd</sup> Floor Lab Development <small>shell &amp; core build-out</small> | 2008            | \$208.13 / sq.ft. |
| 13. TT NCS Lab Development <small>shell &amp; core build-out</small>                   | 2008 for 2001   | \$196.24 / sq.ft. |

**FY09 State Capital Outlay Project Requests**

|   |                |
|---|----------------|
| A. University of Michigan Biology Building                    | \$875 / sq.ft. |
| B. University of Michigan Mechanical Engineering Lab Building | \$591 / sq.ft. |
| C. University of Michigan Health Sciences Building            | \$813 / sq.ft. |
| D. Central Michigan University Bio-technology Building        | \$915 / sq.ft. |
| E. Wayne State University Bio-medical Research Building       | \$600 / sq.ft. |
| F. MBRB Actual Budget   | \$446 / sq.ft. |

## Other Statistics

- Of 200 US Cities, Detroit Ranks 22 Most Expensive
  - Grand Rapids Ranks 181
- During Last 10 Years US Construction Inflation Was 34.1%
  - Deflation Occurred in 2009 and 2010
- Mackinac Center for Public Policy 2005 Study
  - Prevailing Wage Rates Were 51.9% Higher Than Open / Merit Shops
  - WSU Bid \$6,575,000 For National Children's Study Bio-repository.  
Open / Merit Shop Labor Rates May Have Saved ~\$978,800 or 14.9%
- 2011 and 2012 Construction Industry Profits Before Taxes
  - 1.5% Loss for Foundation and Structures Contractors
  - 8.5% Gain for Pipeline, Gas and Oil Contractors
  - 2.0% Gain on Average

## Possible Opportunities to Improve Cost Performance

- Self-Perform Project Planning and Schematic Design for Small / Medium Projects
  - Began Implementing 2011 – 2012
- Improve Thoroughness of Project Scoping to Minimize Cost of Change Orders
  - Need Higher Level of Customer Involvement
  - Change Orders are NOT Bid
- Better Interrogate / Challenge Components of Lump-sum Proposals
  - Itemized Cost and Time of Labor by Trade
  - Itemized Cost of Materials
  - Profit
- Improve Accuracy of Cost Estimates
- Re-compete T&M Contracts with Target Hourly Labor Rates
  - New Contracts in Place September

# Thank you

# Q & A

[www.facilities.wayne.edu](http://www.facilities.wayne.edu)