



## CCFC 18<sup>th</sup> Annual Conference Workshop Descriptions

Tuesday, November 1  
10:25 a.m. - 11:40 a.m.

### Workshop #1

#### **Advantages of Design-Build for Bundled Campus Modernizations (AIACES)**

While a smart capital spending decision for lean times is to bundle multiple individual campus modernization projects into one consolidated campus-wide project; it can make for a Frankenstein monster without seamless integration and collaboration. By amalgamating the projects under one design-build contract, not only can you avoid the monster, but also gain all the advantages that an integrated delivery method promises, including customization of design to fit diverse user group needs. Through a case study of LACCD's Los Angeles Harbor College Campus Wide Modernization project, with disparate projects ranging from a Theater Renovation to a Nursing Building upgrade, this presentation will demonstrate how bundling under design-build: 1) optimizes the available dollars across various needs, 2) mitigates disruption to campus operations by shortening the overall duration; and, 3) delivers a coordinated solution.

Learning Objectives:

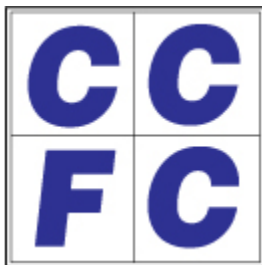
- Learn how to effectively “package” the individual projects into a design
- Learn the advantages of the “shopping list” approach to prioritizing and finalizing scope needs
- Learn how to apply LEAN Construction techniques as part of this approach
- Learn advanced collaboration and communication strategies for multi

### Workshop #2

#### **BIM to FiM – The Do's and Don'ts for Today's Information Planning to Best Manage Your Facilities Tomorrow (AIACES)**

This workshop will take an in-depth look at Building Information Modeling as it is handed over to Owners and what the possibilities and potential pitfalls are of using three-dimensionally accurate as-builts for Facility Information Management (FiM) of a building. Owners, Designers, and Contractors will gain an understanding of the critical importance of successful information planning procedures for projects from design and pre-construction through facility management and maintenance.

- 1) Attendees will be exposed to a number of possibilities and case studies in keeping information viable after construction to avoid “Data Rot”.
- 2) Owners will achieve a deeper understanding of the power they have in requiring BIM deliverables for their projects, regardless of size and scope, as well as pulling current virtual information as it exists to streamline new projects.
- 3) The value of useful and accurate information in regard to energy savings, time savings and equipment maintenance will be explored through a series of case studies.
- 4) Creating real value from information not only to manage and maintain your facility, but also to best utilize and align with FUSION. Panelist to include Kimon Onuma, FAIA, President and Founder of ONUMA, Inc. - a leading architectural firm that is revolutionizing architecture by using integrated solutions built on open standards. Onuma specializes in integrated facility data processes for use in new construction or renovations.



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### Workshop #3

#### **5 ZERO: An Affordable, Realistic and Practical Approach To Planning A Highly Sustainable Campus (AIACES/HSWSD)**

How do you make the most of your construction capital and build sustainably? How do you pick your way through all the hype surrounding planning a "net zero" building or campus? This workshop will show a very practical and adaptable method for evaluating the many choices facing facilities planners when it comes to choosing a site, the design team and systems for Energy, Water Use, Waste Stream, Carbon Reduction and Materials. In this workshop we will discuss;

1. Partnering with local Municipalities and Developers to Obtain a Site
2. Partnering with Agencies and other Educational Institutions to develop program
3. Choosing the right Integrated Design Team-getting the right people at the planning table
4. Establishing Policy, Performance Targets and Vision
5. Understanding and embracing the challenges and opportunities of a given building site
6. Developing a Matrix for evaluating 5 ZEROS and Criteria for immediate planning and future growth

### Workshop #4

#### **State Capital Outlay Projects: Pre-Funding Process (AIACES)**

This is the first section of a two part presentation on the state capital outlay budget process given by the Chancellor's Office staff.

- Gain an understanding of the State Capital Outlay program.
- Learn how the State Capital Outlay budget cycle works.
- Learn about Capital Outlay project documents: Five-Year Construction Plans; Initial Project Proposals (IPP); and Final Project Proposals (FPP).
- Understand how projects are prioritized, and how leveraging local funds enhances project eligibility.

### Workshop #5

#### **Phase II Small MS4 Permit: Don't Get Caught in the Rain (AIACES/False/False)**

"The California State Water Resources Control Board released its Draft General NPDES Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), which is referred to in shorthand as the Phase II Small MS4 Permit and is anticipated to be adopted in January 2012. For the first time, this draft permit specifically names community colleges as required permittees. This workshop will highlight the new requirements that community colleges will have to implement, cost-effective ideas to meet these requirements, and potential expensive pitfalls. The panel includes the drafters of the permit from the State Water Resources Control Board, a community college district representative, a storm water consultant, and an attorney moderator."



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Tuesday, November 1  
2:00 p.m. - 3:15 p.m.

### **Workshop #6**

#### **Integrated Project Delivery, Lean Construction and BIM through Design Build at San Diego Community College District (AIACES)**

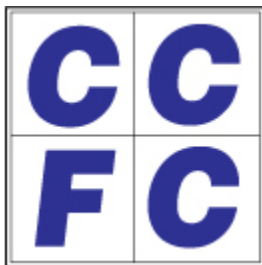
The San Diego Community College District (SDCCD) is \$900 million into a \$1.55 billion capital bond program with more than \$200 million in ongoing design/build projects. The District has migrated from traditional delivery to alternative project delivery methods over the course of the past three years. Learn how the San Diego CCD is leveraging design/build to create a collaborative integrated project delivery with early involvement of specialty trade contractors to pursue set-based design, reduce life cycle costs and reduce waste in the construction process. Learn how San Diego CCD is using target value budgeting to deliver projects with end user engagement, life cycle cost analysis and sustainability as goals without creating conflict. Lean enterprise systems and tools are also fostered through design-build delivery with pull planning, value stream mapping, and A3 reporting. The District requires the use of Building Information Modeling (BIM) for design and construction of all new buildings. BIM standards have been developed and published to facilitate constancy in modeling, but with flexibility to the design/build team

1. Learn how to structure design/build solicitations to evaluate technical expertise, life cycle costs, safety, price, labor force availability, design excellence and small and disadvantaged contractor participation as the basis for award.
2. Learn how to encourage integrated project delivery practices into design/build by requiring dedicated, exclusive architect/builder teams with early identification of key subconsultants and specialty trade subcontractors (e.g. MEP, fire protection, glazing, framing and drywall, pre-cast concrete, and structural concrete).
3. Learn how lean construction techniques are encouraged as part of the design/build delivery including target value budgeting, set-based design, pull planning, the A3 process, and value stream mapping.
4. Learn how the utilization of 81M standards is leading to better design/build proposals and project delivery.

### **Workshop #7**

#### **Lean Construction (AIACES)**

- How to use Lean Construction regardless of the delivery method – D/B, GC Hard Bid, etc.
- The benefits of Lean to not just the general contractor but to the subcontractors, owners, architects, and consultants.
- Showcasing how Lean and BIM work together in this process.
- Showing examples of using all BIM in the D/B method, or using the most critical components of it to help in the GC Hard Bid world.



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### Workshop #8

#### **A Grid Positive Living Lab for the Next Generation (AIACES/HSWSD)**

Aside from offering a Sustainability Studies Certificate, Butte College raises the bar through their visionary planning by changing students' current habits to sustainable ones through their surrounding learning environment, campus programs and policies. This workshop will describe how Butte College serves as a sustainable living laboratory for students including transportation, waste diversion, LEED buildings, active education, organic/locally harvested foods served in the cafeteria, and the on-site renewable power generation system that will make Butte College the nation's first grid-positive college.

The campus is on track with achieving its goal of climate neutrality by 2015. A grid-positive campus does not start with on-campus production; rather it starts with retrofitting existing buildings and incorporating energy efficiencies into new construction using the LEED rating system. New building construction and renovation must exceed Title 24 by 15% and 10% respectively which has resulted in a campus-wide energy reduction of 15%, based upon 2002 energy usage.

Installing on-site solar panels for the campus has been a multi-phased accomplishment using different financial vehicles including traditional financing, traditional bonds, Clean Renewable Energy Bonds (CREBs) and monetary rebates including the California Solar Initiative and the Self-Generation Incentive Program. Installation has been a collaborative working effort between Butte College, DPR Construction and Chico Electric. Solar installation has been spread over three phases: Phase I (2005) - 1.1 MW, Phase II (2009) - 0.75MW and Phase III (2009) - 2.7MW. In the past three years, utility rates at Butte College have escalated 10% each year. With this rate of escalation, the College plans on saving \$27M over the next 20 years and \$101M in 30 years.

#### Learning Objectives:

1. Understand how a living lab environment stimulates the next generation of industry leaders
2. Regenerative campus-wide sustainability is achievable through visionary planning
3. Availability of a variety of financing options for solar installation
4. Costs, benefits and return-on-investment of solar production

#### Framework Description

### Workshop #9

#### **State Capital Outlay Projects: Post-Funding Process (AIACES)**

This is the second section of a two part presentation on State Capital Outlay budget that will cover processes after state funding is approved.

- Gain an understanding of the Budget Act, types of appropriations and the shelf life of an appropriation.
- Gain an overview of the Capital Outlay process timeline and the different project approval phases.
- Identify project approval phases: Preliminary Plans, Working Drawings; bid authorizations, bid awards, and equipment releases.
- Become familiar with Capital Outlay processes including DF14D, Pool Money Investment Board (PMIB) Risk Letter, Cost History, and scope changes.



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2:00 p.m. - 3:15 p.m.

### Workshop #10

#### Advancing the Value of Campus Planning (AIACES)

Facility planning has always been based on supportive data leading to smart decisions. But, the data has been static, representative of a point in time, and the resulting planning is not relevant for very long, usually completely reevaluated within 3-4 years. But, imagine if the data used in the planning was capable of being live and campus leadership was empowered to evaluate alternate options to adjust the data within desired parameters, whether the data is energy and water consumption, space utilization, asset management, facility condition, capital funding & expenditures, or staffing. Peralta Community College District is expanding its master planning at Laney College to capture existing and projected data for use in evaluating and prioritizing their facility space needs, maintenance, operations, energy production, asset management, security, and more. With live linkage to utility companies, M&O staff, the State FUSION database, campus scheduling, or community partners, the campus and district find themselves in the position of being able to evaluate and make educated decisions with real-time effects and long term benefits

Learning objectives:

1. Learn what live-data is available to Districts and campuses in evaluating their facility and operational actions
2. Learn how the availability of live-data has affected decision-making within the Peralta Community College District
3. Learn how this planning approach has changed decision-making in Campus Design, and lessons-learned a Peralta CCD
4. Learn of the State Chancellor's Office alignment of FUSION, BIM, GIS, and additional data tools.



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Tuesday, November 1  
3:25 p.m. - 4:50 p.m.

### Workshop #11

#### **Everything You Wanted to Know about Alternative Project Delivery Methods, but were Afraid to Ask (AIACES)**

Come and discuss the do's and don'ts; What you must do; what you cannot do; and hear from a panel with vast experience in Alternative Project Delivery Methods and school construction that has probably not been assembled before. The presentation will be fast paced and hard hitting. However, the audience will be full participants. Ask your special question and actually get a straightforward answer. Come learn the specifics and the pragmatic and time proven solutions for ADPM construction in California.

#### Learning Objectives:

1. Many Community Colleges are asking whether or not Lease Lease Back is legal to use. The answer is yes! This panel will review the Ed Code that allows CCDs to utilize this delivery method.
2. What you can and cannot do utilizing Lease Lease Back Delivery.
3. Case studies of Lease Lease Back projects that have been done in California including lessons learned.
4. This workshop will briefly touch on several other Alternate Delivery Methods being utilized in the State of California.

The Panelists are: Paul Bunton, AIA—BCA Architects; John Dacey, Esq.—Berman & Dacey, Inc.; CBO with Lease Lease Back experience to be identified. Collectively, this panel has completed more than 20 California public works projects in the last 18 months successfully utilizing Alternate Delivery Methods.

### Workshop #12

#### **The Role of BIM in the Project Continuum (AIACES)**

BIM is a data base that facilitates the entire planning, design, construction and post-construction process. This class will focus on how to best maximize the benefits of BIM from the idea stage through occupancy and beyond.

#### Learning Objectives Include:

1. How BIM can facilitate a strong and efficient programming and master planning process, helping ensure user group understanding and buy-in at this early stage, reducing user-generated changes later in construction.
2. How BIM can enhance a community information/feedback process, improving the odds of successful bond elections.
3. How BIM can facilitate planning, design, and procurement with alternative project delivery methods such as Design/Build and CM at Risk.
4. Securing a better understanding of who has custody of the BIM model as the project progresses from programming through design, construction, occupancy and post-occupancy.

Examples from actual projects will be provided. The content will be coordinated with and complimentary to any other presentations on the BIM/FUSION interface.



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### Workshop #13

#### **Good Design is Good Business: How to Reduce Energy & Operational Costs by Building Smart (AIACES/True/False)**

With limited resources and the state's financial crisis profoundly affecting the world-renowned California Community College system, the Palomar Community College District, now more than ever, is relying on high performance facilities and sustainable design to make a difference in its bottom line. In addition to substantial fiscal savings, learn how the new 110,000 gross-sq.-ft. Multi-Disciplinary Building at Palomar College's San Marcos campus creates value and enriches lives through tangible sustainable strategies.

Learning objectives include:

1. Do Less: True understanding of the building program and efficient planning provided opportunities to minimize the assignable-to-gross square feet ratio, harvest natural daylight to all occupied spaces, and low impact outdoor social spaces that are highly functional.
2. Zoom Out: From a macro scale, evaluating the regional climatic influences inform solutions that leverage and maximize the gifts of the site. These include solar, topography, wind, and water.
3. Prove It: Quantifiable results which provide maximized utility rebate incentives, exceed California's Title-24 energy consumption standards by over 30%, and reduced overall maintenance costs.
4. Enrich Lives: Sustainable buildings enrich lives. They provide healthy learning and working environments through indoor air quality via natural ventilation and efficient mechanical systems, natural daylight, and views.

### Workshop #14

#### **Facilitating Sustainability Planning: The Citrus Community College District Template Plan for use Statewide(AIACES)**

As with many public sector agencies, the California Community Colleges recognize the economic, environmental, and social benefits of resource efficiency and sustainability. The passage of the California Global Warming Solutions Act (AB-32) adds urgency and complexity to Districts working toward these goals. Many Districts are well along the path to sustainability, but others are working to find the resources to tackle the problem. To assist with the current and anticipated challenges in the realm of sustainability, Citrus College has partnered with the CCC Chancellor's Office to lead the development of the Sustainability Template Plan. The Sustainability Template Plan will be designed as a comprehensive toolkit to be used at Citrus College and other CCC Districts and campuses to better enable them to satisfy state regulations, take advantage of available resources and complimentary programs, and adopt the Best Practices of others who are further along this path. The details of this new Sustainability Template Plan and valuable lessons learned through its development will be shared at the Community College Faculty Coalition Conference. Come learn how your District can benefit from this groundbreaking program designed to simplify, improve and expedite sustainability planning for campuses throughout the state!



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Tuesday, November 1  
3:25 p.m. - 4:50 p.m.

### Workshop #15

#### **The Planning Process - A Formula for Success in Running a Community College (AIACES)**

1. Planning Overview - Overview of the basic fundamental principles for developing a successful plan. Be it the master planning or planning a budget cycle, you will learn what comprises a typical successful plan and what and who should be involved in the process.
2. Systematic Approach - Understanding the thought and written processes to achieve an effective and feasible plan that will work during these times, forever changes requirements, and funding challenges.
3. Five Basic Steps - The planning process is typically comprised of Five Basic Steps regardless of the objective: Situation, Mission, Execution, Administration/Logistics, and Point-of-Contact. We will teach what each step contains and review its importance. Though these seem abstract, they are infinitely applicable to the management of Community Colleges.
4. Summary and Interactive Trail- An overview of the planning process and the ability to apply the Five Basic Steps to any type of scenario offered by the audience. This will allow for audience engagement and open discussion. Members of the panel will present examples of plans that have worked, and those that needed more planning.



## CCFC 18<sup>th</sup> Annual Conference Workshop Descriptions

Wednesday, November 2  
9:15 a.m. - 10:30 a.m.

### **Workshop #16**

#### **Maximizing Your Capital Project Budget Through Smart Up-Front Investment (AIACES)**

In lean times there is explicit pressure to save money on all fronts and at all times during the life of a capital construction project. But that pressure creates the risk of being penny-wise and pound foolish. No where is this more evident, and potentially more costly an error, than in the selection of a project delivery method and the development of a project management team. Listen to industry veterans (including a post-capital project community college facilities director) discuss where and how to spend your development dollars up-front, in order to maximize your investment and minimize down-stream costs. Our discussion will include: key "success/failure" attributes of any project, regardless of project delivery method; what to consider in selecting a project delivery method; how to assess the strength of your project management team; and how to ensure you have the right contract documents for your project.

### **Workshop #17**

#### **Using BIM through Multiple Project Delivery Methods (AIACES)**

Regardless of which delivery method is used on a project, Building Information Modeling (BIM) has proven to be an effective tool for architects, engineers, and contractors. Building owners also receive multiple benefits from this tool as it provides them with useful information to make decisions during the design and construction phases. This panel of owners and industry experts will discuss the benefits they received from BIM through the various alternative project delivery methods that each has personally experienced at their respective district, including Design-Build, Design-Bid-Build, and CM at Risk.

Learning Objectives:

- How the use of BIM benefits a project through alternative project delivery methods
- How BIM is adapted to maximize efficiency for each alternative project delivery method at the respective college district
- Comparison of the benefits that BIM provides for each alternative project delivery method
- Owner's perspectives on the future use of BIM in each respective alternative project delivery method



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Wednesday, November 2  
9:15 a.m. - 10:30 a.m.

### Workshop #18

#### **“Near Net Zero, Smart Decisions in Lean Times”, Sustainability means more than counting Points! (AIACES/HSWSD)**

This workshop will discuss a case study for the LEED Gold, Near Net Zero facility at Pierce College. This uniquely sustainable facility is the largest and first educational service facility in the United States planned as a Near Net Zero-Energy Building (ZEB). This innovative facility uses solar thermal and solar photo voltaic technologies in its effort to generate more energy than it uses.

A number of sustainable processes are incorporated into the project over and above the LEED Gold rating:

- Storm water conservation and retention - In an era of water rationing the California Green Code encourages this approach and benefits their Horticulture department education training program
- Vehicle wash water recycling treats run off water for reuse.
- Highly efficient LED lighting.
- A look at new strategies for composting

Attendees will learn about the following learning objectives:

1. Sustainability features, energy efficiencies and costs, Integrated Project Design (IPD) and BIM modeling will be included.
2. Strategies that will reduce operating expenses with only a minimal increase in capital outlay.
3. How design can formulate new operations efficiencies
4. How the ZEB approach can benefit you.

### Workshop #19

#### **DSA on the New Title 24 Community College Structural Building Code (AIACES)**

### Workshop #20

#### **You've opened your new buildings, now what? Heating, maintaining and keeping the lights on In your ever expanding inventory (AIACES)**

The Learning objectives include:

1. Obtain knowledge of developing the "Total Cost of Ownership" for each new building, and the impacts on your general fund. This is to include staff costs, energy costs and projected on-going maintenance.
2. Learn about alternatives other public agencies are using to decrease staff cost of O&M.
3. Obtain tools used to discuss excess inventory (old buildings) and reasons for surplusng them
4. Understand strategies that districts have used to discuss Inventory management in the Participatory Governance Structure.

The session will be an interactive discussion that includes a director of facilities and financial staff that discuss the planning, staff worle sessions, and review all Issues that surround our ever expanding inventory and ways to have faculty understand why old buildings should be retired.



## CCFC 18<sup>th</sup> Annual Conference Workshop Descriptions

Wednesday, November 2  
10:45 a.m. - Noon

### Workshop #21

#### **Sustainable Master Planning: An Integrated Design Approach To Creating The Campus Of The Future (AIACES)**

Mt. San Jacinto College District and LPA Inc. leverage integrated design to envision a financially-viable future for the District's three campuses. Each campus illustrates a unique case study in sustainable planning: The "Blank Canvas" Dilemma, Lessons in Adaptability and Complete Transformation.

Based on a collaborative process and harnessing the collective knowledge of a multidisciplinary firm, the team addresses the challenges and opportunities of the years ahead.

Learning objectives:

- 1-A successful collaborative process
- 2-Turning constraints into opportunities
- 3-Maximizing resources
- 4-Sustainability as a business model: the driving force of future campus planning

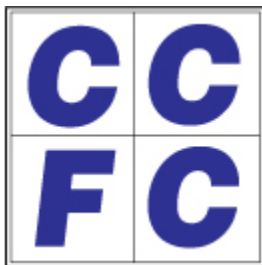
### Workshop #22

#### **Using Building Information Modeling to Improve Efficiency of Community College Facility Maintenance (AIACES)**

The advantages of utilizing BIM technology in design and construction of new Community College facilities extends beyond the time when the doors of the shiny new buildings are first opened. By now, everyone has heard that BIM is a fantastic tool for helping to control construction costs and schedule. What Facilities Management generally has not yet realized is that once these models are virtually built, they can be a great tool for cash-strapped facility departments to maintain their new buildings. Current budget limitations are forcing facilities maintenance to become leaner and more efficient. The status quo of building turnover has been to provide as-built drawings and Operations & Maintenance (O&M) manuals spread over a series of binders, compact disks, and perhaps even websites. Utilizing the 3D model, the contractor can now prepare a single visual database of all the relevant information that was previously spread across several media. This avoids the need to look through rolls of drawings and indexes of binders to determine which piece of equipment is being referenced. This improvement in efficiency and accuracy will lead to fewer costs and less down time and confusion.

Primary learning objectives include:

1. Take a virtual tour through the BIM model of the new City College of San Francisco's Chinatown North Beach Campus currently under construction.
2. See the benefits of having a model in place for systems commissioning with Facility Department's participation.
3. Demonstrate the advantages of having as-built drawings O&M manuals in one remotely accessible electronic document in lieu of archived reams of paper.
4. See the future of BIM in Facilities Maintenance.



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Wednesday, November 2  
10:45 a.m. - Noon

### Workshop #23

#### **Reducing Operating Costs Of New Buildings Through The Implementation Of Buoyancy-Driven Hvac (AIACES/HSWSD)**

De Anza College's new Mediated Learning Center (MLC), seeking United States Green Building Council (USGBC) LEED Platinum certification, will provide state of the art classrooms in a building that will serve as a source of education in itself. The crowning feature of the project's sustainable features is a buoyancy-driven HVAC system that operates on the principle of enhanced natural ventilation. The system will distribute high rates of one-hundred percent outside air at a comfortable temperature without the use of mechanical fans or ductwork.

The workshop will present attendees with a description of current trends in passive HVAC and explanation of the buoyancy design being implemented on this project and in similar buildings elsewhere.

The principles of designing these systems will be discussed including approximate areas and architectural treatments needed, applicability for different building types and climate suitability.

Anticipated annual energy cost savings associated with the MLC design will be reviewed, in addition to how the performance of the building is anticipated to relate to the campus population's typical expectations for mechanically-cooled spaces.

Attendees will learn how to apply efficient water-side solutions and hear more about maintenance cost / benefits, to include the unique requirements for maintaining a building featuring these systems, and how this type of design might evolve going forward.

### Workshop #24

#### **FUSION + GIS + Onuma Platform: Working with FUSION Data in 3D (AIACES)**

FUSION has been linked to campus maps and building CAD files to create campus aerial views and 3 dimensional building views in a new web platform. The new FUSION+GIS+Onuma Platform covers all California community colleges.

This workshop will demonstrate:

- Detailed models developed for several districts and basic models already created for all campuses
- How FUSION Space Inventories can be more easily reviewed and updated
- Linking to local district data and third-party web software to extend the use of FUSION data for master planning, project design, energy monitoring, space scheduling, and maintenance job ticketing
- Plans the districts have for using this platform and the cost and time-saving opportunity it offers to districts and their contractors

### Workshop #25

#### **Everything You Have Always Wanted to Ask Your Attorney (AIACES/MCLE)**

This workshop is an interactive session that gives participants an opportunity to ask questions of a panel of attorneys about college facilities and business issues. Bring a list of questions with you to this informative session where current legal issues facing colleges will be discussed.