

# ASHRAE Ottawa Valley Chapter

## Chapter Meeting #4 – 21 Jan 2014

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Meeting Date:	21 Jan 2014		
Location:	Restaurant International, Algonquin College		
Attendance:	Total: 68		
	Members: 55	Guests:7	Students: 6
Theme:	Research		
Tour:	None		
Tech Session:	None		
Table Top:	Futech		
Program:	<b>Panel Discussion: The Construction Tendering Process</b>		
Speakers:	Mechanical Contractor, Brad McAninch - Modern Niagara General Contractor, Mark Fazio – Ellis Don Owner, Frank Jefferies – National Research Council Canada Consultant, Ross McIntyre – Goodkey Weedmark & Associated Ltd. Architect, David Bull – Cuhaci & Associates		
Prepared by:	Abbey Saunders		

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### **Social** (17:30 – 18:35)

### **Business Session** (18:35 – 18:45)

- President Rod Potter introduced the Board of Governors and Executive.
- Abbey Saunders introduced the guests for the evening.
- Adam Moons welcomed new members.
- Adrienne Mitani indicated the student career fair planning is underway and is anticipated to be held between 3-4pm at Algonquin College Restaurant International prior to the March Program Meeting. Adrienne encouraged anyone interested in having a booth at the career fair to contact her.
- Sylvain Boyer introduced the Futech table top.
- Senators tickets donated by SK Sheet Metal were raffled off raising \$280 for ASHRAE Research with Brad McAninch of Modern Niagara being the lucky winner of the tickets for the Jan 30 game.

### **Dinner** (18:45 – 20:25)

### **Evening Program** (20:25 – 21:30)

- Following dinner, the main program event took place. The panel discussion was mediated by President Rod Potter with a panel of speakers assembled of representatives from the various local players in the construction industry to discuss the construction tendering process. Representatives were introduced as follows:
  - o Brad McAninch of Modern Niagara – Mechanical Contractor;
  - o Mark Fazio of Ellis Don – General Contactor;
  - o Frank Jefferies from National Research Council Canada – Owner;

- Ross McIntyre of Goodkey Weedmark & Associated Ltd. – Consultant; and
  - David Bull of Cuhaci & Associates – Architect.
- Design-Bid-Build was the first tendering process discussed. Also known as design-tender, traditional method or hard bid, Design-Bid-Build is a project delivery method in which the Agency or Owner contracts with separate entities for both the design and construction of a project. Ross McIntyre opened the discussion with rebuttals and questions from the floor following. A summary of the discussion regarding Design-Bid-Build is outlined below.
- From the consultant’s point of view this is the most favorable construction tendering process. However, in order to provide Owner’s with desired outcomes definition of scope and trust of consultants is key.
  - This method allows Owners to seek competitive bids for lump sum project costs. However, one major disadvantage to this method is that if a design is poor, modifications during construction period are costly and may lead to litigation or arbitration being required to resolve issues.
  - Often times funding or budget constraints do not allow Owners and consultants adequate time to accurately define project requirements and this more often than not has negative effect on the construction outcomes.
  - Panelists agree a good design and well defined project requirements from the Owner are key in ensuring Owner’s obtain the desired project outcome with this construction tendering method.
- Construction Management (CM) was discussed next. In a Construction Management arrangement, the client selects a head contractor who manages the entire project on behalf of the client. The CM contractor coordinates all design, procurement and construction works to ensure the entire project is completed as required, and on time. The CM contractor may or may not undertake actual site work. Mark Fazio commenced discussions with rebuttals and questions from the floor following. The CM method summary of discussion is outlined below.
- At a high level the main advantage of the construction management method is it allows a project team to capitalize on constructor’s (builder’s) and designer’s knowledge through an advanced collaborative approach and if executed properly this method typically allows for identification and remedial action to rectify any design flaws in the most cost effective manner.
  - The main disadvantage to construction management method is that it leaves the Owner with significant financial risk. Other challenges sometimes associated with this construction tendering method include sometimes Owner’s are presented with too many cost effective options and have difficulty making timely decisions and sometimes general contractors try to act as construction managers when in fact they do not have either the adequate skill set or foster strong relationships between trades.
  - For this construction tendering method to be highly successful everyone needs to be on the same team, and working together. Also, to maximize the benefits associated with this type of tendering process, all team members must be brought onboard early in the process so everyone has the ability to provide added value.
  - Dependent on internal capabilities, often times Owners prefer this construction

- tendering method.
- Panelist were in general consensus that if Owners are not comfortable with the financial risks associated with this type of construction tendering method they should not consider it, as the effectiveness of this process can fall apart quickly if the Owner isn't comfortable.
- Design-Build, the construction tendering process which relies on a single point of responsibility to minimize risk for the Owner and reduce the delivery schedule by overlapping the design and construction phase of a project was discussed next. Brad McAninch was invited to first outline the advantages and challenges associated with this process from the mechanical contractor's perspective with rebuttals and questions from the floor following. The discussion summary of the Design-Bid method is outlined below.
- The main advantage of the Design-Bid method is the sole source of responsibility. This method provides Owners with budget certainty and over time has proven to decrease the frequency of litigation since everyone involved is part of a single team. For this method to be successful in meeting and/or exceeding Owner requirements no barriers can exist between the design and construction team.
  - One major challenge to this type of construction tendering process is breakdown between consultant and construction team cooperation. If the construction team does not have a good working rapport with the consultant team often times this can create issues.
  - From an Owner's perspective clear definition of functional requirements prior to project commencement is sometimes difficult, but if function requirements are not clearly defined often times Owner's or end user clients are dissatisfied with construction outcomes.
  - Owners like being involved in the selection of the entire project team.
  - Panelists are in agreement that selection of a contractor and consultant team with a proven record of success in working together, as opposed to selecting team members individually is critical for maximizing the benefits associated with this construction tendering method.
- Next, the Public-Private Partnership was discussed. A Public-Private Partnership is a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. These schemes are often referred to as PPP, P<sup>3</sup> or P3s. P3s involve a contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in said project. David Bull opened up the discussion reviewing the advantages and challenges presented by this type of construction tendering process from the architect's point of view with rebuttals and questions from the floor following. A summary of the P3 discussions are outlined below.
- At a high level a P3 project is similar to the Design-Bid-Build with the addition of a performance based approach. In addition to capital costs of project construction the life cycle costs, maintenance and operational costs are considered. Typical projects that lend themselves to successful implementation of the P3 method are large complex projects with clear functional requirements

- definitions such as hospital, transportation infrastructure, etc.
- A disadvantage of the P3 method is that due to the complexity and costs associated with this type of projects competition is often limited.
  - Panelist agreed, that each of the construction tendering methods discussed are slightly more complicated than the previous method, however P3 is significantly more difficult. In addition, the pressures associated with delivery of a P3 project far exceed those of the other tendering methods so selection of the correct project team is critical for success.
- Finally, Frank Jefferies was invited to open the floor discussion regarding which construction tendering process is preferred from an Owner's standpoint. Rebuttals from other panelists and questions from the floor followed. A summary of these discussions is outlined below.
- Basically Owner's need to consider several factors when evaluating which construction tender method is the preferred approach on an individual project basis. Some of these factors include: level of function project requirements definition, timing, financial or budgetary constraints, level of risk comfort, internal knowledge and capabilities. Since each construction tender method has merit for various situations, there is no one single preferred method of procurement for Owners. Evaluation on a project specific basis is the best way to ensure Owners are satisfied with outcomes.
- To summarize the evening panelist all agreed that regardless of the construction tendering method selected, assembling the right team is critical for successful project completion. In addition, to ensure satisfaction with project outcomes clear identification of requirements and responsibilities ensure risks are allocated to the correct proponents. Basically, if you aren't comfortable with the associated risks for the proposed construction tender method for your project it isn't the correct option.
- President Rod Potter thanked the panel of speakers.
- Meeting adjourned 21:30.