



JULY GENERAL MEETING

The Structures of T-REX

Sure it's a hazard to self and others, but as engineers, it is difficult to not crank our necks to look at the structures under construction as we drive through the Transportation Expansion Project, or T-REX, Project in southeast Denver. The scale of the project is overwhelming, and completion of an undertaking of this size nearly two years ahead of initial schedule is truly amazing. Presently, construction on T-REX should be complete at the end of 2006.

The list of improvements to be accomplished within T-REX is long: extensive addition of double-track light rail; construction of 13 Park-n-Ride stations; addition of through lanes from Logan Street to the C470 interchange on I-25; addition of lanes along stretch of I-225 between Parker Road to Aurora; construction of new light rail facility; reconstruction of eight interchanges; replacement and/or widening of numerous bridges; and improvement of ramps, acceleration lanes, shoulders, and highway drainage. Designs of thousands of structures are involved in completion of this highway work. We have all noticed the laterally-loaded piers forming retaining walls, and their architectural concrete cladding, on either side of I-25. An attractive array of light rail stations, bridges, and parking facilities have been arising along the corridor.

We are fortunate to have **Jeff Stapleton**, Senior Project Manager for Carter & Burgess, joining us to discuss the project with us at our upcoming General Meeting. For the last 6 years, Jeff's focus has been working on the Transportation Expansion Project (T-REX) in Denver, Colorado. Mr. Stapleton was responsible for the initial preliminary design and EIS development thru writing the design criteria for both the structural and geotechnical portion of the "Request for Proposals" for the Design/Build teams. Mr. Stapleton, as the Structural Design Manager for the T-REX project, is responsible for overseeing both the design and construction of all structural elements (bridges, tunnels, walls, etc.). Please join us to learn more about this significant project taking place within our community.

Schedule

Mark Your Calendar (2003)

General Membership Meetings

(Breakfast 7:30 a.m.)

- January 15
- March 18
- May 20
- July 15
- September 16

Business Practice Committee Meetings

(Breakfast 7:30 a.m.)

- February 12
- April 8
- June 10
- August 12
- October 14

SEAC Board of Directors Meetings

(7:30 a.m.)

- January 8
- February 5
- April 1
- June 3
- August 5
- October 7

Annual Dinner Meeting

- November 4
- 6 - 9 p.m.

Don't Miss Out

Date: Thurs. July 15 2004, @ 7:30 am

Speaker(s): Jeff Stapleton, Carter & Burgess

Location: Renaissance Denver Hotel
3801 Quebec Street
(south of the I-70 and Quebec intersection)

Please e-mail your reservations to Caryn Bauer at: cbauer@martinmartin.com.

Reservations MUST be made By 12:00 on Monday, July 12, 2004.

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*Information for inclusion in the newsletter
must be received one month prior to the next
general meeting.*

Caryn L. Bauer
SEAC Executive Assistant

Natalie's News.....

It astounds me to realize that we are halfway through the year and that every time I type one of these articles there continues to be an excess of news to report. Who says that little changes in structural engineering?

First, there are some code adoption updates that **Jerry Maly**, as Chairman of the Denver Building Department Liaison Committee, recommended be relayed to SEAC's membership. The City of Denver adopted the 2003 I-Codes on June 1st. The effective date of the City's new building code is October 1st, four months later. In general this means that use of either code will be accepted. Arvada and Aurora have also adopted 2003 I-Codes—effective the first of July and October, respectively.

Meetings of the Colorado Board of Registration appointed Task Force on Forensic Engineering continue, the next to be held on July 9th. I was able to attend the morning session of the last meeting (on June 17th). This was a meeting of the subcommittee addressing the topics of "standard of care", "practice outside of area of expertise", "requirements for expert witness", and the big nebulous of "ethics". The professional conduct of all interested parties was impressive, and much thought-provoking discussion took place. Possible outcomes of the Task Force were considered such as adoption of a customized version of ASCE's Guidelines on Forensic Engineering, strengthening of existing Board provisions on advocacy for clients, or change nothing other than encouragement of complaints to the Board against fellow engineers.

If anyone would like to be copied minutes and communications concerning the Task Force on Forensic Engineering, please email me. I will see that your contact information is added to the distribution list.

Lastly, the SEAC roster has been updated and will be emailed to all SEAC members for verification prior to posting it on the website. (members will receive this email no later than Friday, July 9th). It has been noted that this update was a major overhaul; an unprecedented number of members have shifted their employment in the past year. I suppose it is another sign of ongoing changes within our field. Please remember to contact Caryn Bauer at cbauer@martinmartin.com if you have a change of address or email information.



SEAC/AIA Architectural Committee Activities

The Structural Engineers Association of Colorado (SEAC) Board joined with AIA Denver's Board to support this joint committee whose aim is to raise the level of understanding, and develop closer ties between Architects and Structural Engineers. This will hopefully foster better communication between the professions resulting in more profitable business relationships; more creative, collaborative designs; and more fun, less confrontational, working relationships.

Last summer the committee surveyed Colorado Architects and Structural Engineers to collect opinions about the state of working relationships between the two professions and asked two questions: **“What are the items in your current Architect/Structural Engineer relationship that you most appreciate?”** **“What are the items in your current Architect/Structural Engineer relationships that cause you difficulty and should be improved?”**

The committee used the responses to form the basis for five discussion topics and convened a panel of five prominent Architects at SEAC's September 11, 2003 meeting. There was a lively discussion between the panel and SEAC's members. Our panelists were Jim Bradburn of Fentress Bradburn, Harvey Hine of Harvey M. Hine Architects, Paul Hutton of Hutton Ford, Mary Morissette of Bennett, Wagner, Grody and Ben Wilking of Lantz-Boggio.

The five topics discussed were:

Consultant Selection and Fee Negotiation: “What process do you go through for selecting a structural engineer; what perceived value do you place on a particular consultant relative to their fees; what do you expect for that fee, and what are you willing to pay for?”

Conceptual and Schematic Design: “Structural Engineers appreciate creativity and the Architect's vision and have a lot to offer early in the design process. How early do you involve your structural engineer?”

DD and CD Documents Phase: “What can be done to improve coordination and completeness issues during detailed design?”

CA Phase/Construction Support: “How can we as a team better help the Contractor, and therefore the Owner, during CA?”

Other Miscellaneous Issues: “Structural Engineers perceive too inexperienced Architects as Project Architects. Do you see the appropriate level of experience from your Structural Engineer on your projects? How do you go about training your Architects in Project Management skills?”

The general consensus was that there needs to be much better communication between both professions at all phases of a project. During consultant selection there should be more communication of the scope of the project so structural fees can be based on the required scope of services and schedule, not on a percentage of the construction budget. If all parties communicate their expectations for the project earlier there could be less confrontations later. The Architects said they typically select the Structural Engineer with the most relevant experience and do not base selection purely on fees. The Architects typically bring the Structural Engineer in at the end of SD phase, but now realize the value they may get from involving the Structural Engineer earlier. The design should be complete and coordinated for major elements at the end of DD phase and CD is just for finalizing details. As change order requests to the Owner are difficult some Architects said that they are starting to build in an in-house design contingency into their fees to cover design team for re-design due to errors and omissions. Senior personnel from both parties should be involved throughout all phases of a project.

Look for news of our upcoming discussion with a panel of Owners' representatives at SEAC's Fall conference on October 28th from 3:00 pm to 4:30 pm. Details will be issued through AIA Colorado.

We need more Architects! For information about attending our committee meetings please contact committee chair **Julian Lineham, P.E.** of Studio NYL Structural Engineers at jlineham@studionyl.com.

Announcements

SEAC Members,

SEAC's Board of Directors has unanimously approved accepting advertisements for job openings to be printed within its newsletter. It was agreed that providing such information would be beneficial to our membership: employers and employees. Price to list an advertisement is \$100. Please contact Caryn Bauer at cbauer@martinmartin.com in place an ad.

Western Engineering & Research Corporation (WERC) is a multi-disciplinary firm providing forensic engineering investigation for building failures, structural collapses, construction defect litigation and construction injury accident investigation, as well as mechanical failures, automotive, plumbing and mechanical systems and components, electrical failures, fires and explosions, carbon monoxide incidents, and vehicle accident reconstruction. WERC engineers provide expert witness services nationwide.

Western is seeking an experienced licensed professional engineer to join its structural team. Candidates should have a broad range of experience; Institutional, Residential, Parking Garages, as well as Commercial. We are seeking an engineer experienced with analysis of concrete and steel structures, and knowledge of codes and common standards.

Successful candidates will have strong writing ability and good oral communication skills as they will be interfacing with clients. The work involves providing engineering services for building owners, attorneys and insurers. The work will include providing deposition and trial testimony. We are seeking an individual who thrives on problem solving and diverse structural related projects.

Competitive pay package, growth opportunities, potential leadership role in structural division, very strong benefits package, you are invited to inquire in confidence to Jim Royston, PE, president. Send your resume and references via email to jim@werc.com or via fax to 303-757-4222. For more information about Western Engineering & Research Corporation (WERC), please visit our website at www.werc.com.

Peak Engineering is seeking a Structural Engineer with experience in commercial type projects with either an E.I.T. or P.E. with a minimum of two years experience. If interested, contact Peak Engineering, Inc. at 13949 W Colfax Ave., Suite 106, Golden, CO 80401, call 303-274-0707, Fax 303-274-0808, Email to cadd@dberry@peakengr.com."

Loris and Associates is looking for a highly motivated individual to join our team as our Chief Structural Engineer with primary responsibility for our buildings and special structure service lines. The candidate must be able to take full charge of building projects from business development to plan production and construction administration. The ideal candidate must also embody our mission of holistic, aesthetic and creative design. This includes structure-as-art as well as well conceived designs that are derived from a wide knowledge of structural systems and materials. Colorado P.E. required, 15-20 years experience designing commercial, educational, residential and institutional structures. Five years minimum experience in the metro-Denver AE market as a Senior Structural Engineer and Project Manager preferred. To apply submit your resume and salary requirements to career@lorisandassociates.com. Visit our website at www.lorisandassociates.com.