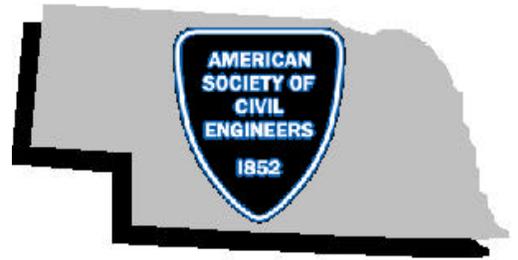


# THE NEBRASKA CIVIL ENGINEER



NEWSLETTER OF THE NEBRASKA SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

Volume XLVIII

October 2000

Number 2

**2000-2001  
Nebraska Section  
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**October Meeting  
Information**

**DATE:**  
Thursday, October 19, 2000

**HOST:**  
Construction Group  
Nebraska Section ASCE

**TOPIC:**  
"Henry Doorly Zoo's Desert/  
Nocturnal Dome" (see Pg. 3)

**SPEAKER:**  
**Dee Ciatti, Project Manager  
Kiewit Construction Company**

**TIMES:**  
3:30-5:00.....Site Tour  
5:30-6:30.....Social Hour  
6:30-7:30.....Dinner  
7:30-9:00...Meeting and Program

**LOCATIONS:**  
Site Tour: Park at Henry Doorly Zoo main lot and meet at the contractors' entrance just north of the Imax Theater. Look for Kiewit sign at the entrance.

Meeting: Cascio's Steak House  
1620 10th Street  
Omaha, NE

**MENU:**  
Lasagna  
7 oz. Dinner Steak  
Chicken Breast

**PRICE:**  
All Choices \$15.00  
(including tax and gratuity)

**DINNER RESERVATIONS**

RSVP by noon on Monday 10/16/00

**In Omaha and Eastern Nebraska:**  
contact Bob Kalinski at (402) 894-2678  
or [rdgge@rdgge.com](mailto:rdgge@rdgge.com)

**In Lincoln and Central/Western Nebraska:**  
contact Brad Levich at (402) 466-3911  
or [balevich@terracon.com](mailto:balevich@terracon.com)

**Dee Ciatti**

Dee Ciatti is the Project Manager on the Henry Doorly Zoo Desert Dome Project and has worked for Kiewit Construction Company for three years. She began her career with Kiewit after receiving a Construction Management Degree from the University of Nebraska-Lincoln in May 1997. Upon graduation she started as the Office Engineer for the First Data Resources Aksarben Campus Project in Omaha, Nebraska. Other activities include volunteering work for Junior Achievement.



## President's Comments

### Design-Build Legislation in Nebraska... Your Input is Requested



Daryoush Razavian, President  
Nebraska Section, ASCE

Cheers fellow ASCE members! We were treated by an outstanding, thought provoking presentation by Mr. Jack Gillum, P.E. at the September meeting hosted by Dr. Gary Krause and the Structural Group. Mr. Gillum's presentation was on the subjects of ethics, responsibilities, and professionalism in engineering practices. His remarks reminded us, as practicing or aspiring engineers, of our enormous responsibilities for protection of public health, safety, and welfare. After practicing structural engineering for more than 40 years, and being involved in an unfortunate, catastrophic incident, Mr. Gillum is now on a crusade educating engineering students and practitioners. He is determined to raise awareness for potential catastrophic and legal consequences of oversights and poor communication among those involved in the engineering design and construction phases of infrastructure projects.

Mr. Gillum's presentation was also a testimony to the need for involvement of engineering professionals in the public policy arena. This is particularly true because professional engineers are responsible for, and should be concerned with, protection of public health, safety, and welfare. Therefore, when legislative bills are being drafted, impacting both the public and the practice of engineering, who better than engineers (civil, of course) to help in drafting the language of the bill?

In the upcoming session of the Unicameral, a legislative bill will be introduced providing statutory authority for additional construction delivery systems for public schools in Nebraska. With the primary intention of drafting design-build legislation, this will be a prelude to future comprehensive legislation in Nebraska. The design-build legislation for public schools was introduced as LB 1252 in the last session of the Unicameral. However, it is no longer under consideration, and in its place, LR 333 is being discussed for introduction as a bill in the next session. LR 333 may be retrieved and reviewed from the Unicameral's web site, [www.unicam.state.ne.us](http://www.unicam.state.ne.us). For this process, the Ne-

braska Section has chosen a forum, the Professional Engineers Coalition (PEC), that will involve a partnership with the American Consulting Engineers Council of Nebraska, the Nebraska Society of Professional Engineers and others. ASCE, at the national level, has a stated policy on design-build procurement which is included in this issue of *The Nebraska Civil Engineer*. The Nebraska Section is also discussing this issue with ASCE's Government Relations Department. However, it is critical for the Nebraska Section Board and its representative to PEC (Mark Stark) to have input from our membership throughout Nebraska regarding the impending design-build legislation. This will enable us to be more informed on members' concerns and desires, and have broad perspectives at PEC. Ultimately, our goal is to insure protection of public health, safety, and welfare. Please provide your input to Mark Stark at (402) 474-6311 or his e-mail [mstark@oaconsulting.com](mailto:mstark@oaconsulting.com), or e-mail me at [drazavian@oaconsulting.com](mailto:drazavian@oaconsulting.com). I am looking forward to hearing from you.

Best regards,

Ed. Note...LB 1252 and LR 333 have been posted for review on the Section's website, at [www.radiks.net/~neasca](http://www.radiks.net/~neasca). ASCE's official policy statement on design-build can be found on Page 4.

### 2000-2001 Meeting Schedule

<i>Date</i>	<i>Group</i>	<i>Location</i>	<i>Organizer</i>
Oct 19	Construction	Omaha	Dave Sinsheimer
Nov 16	Management	Lincoln	Mark Stark
Jan 18	Water Resources/ UNL Student Chapter	Lincoln	Mark Wagner
Feb 15	Geotechnical	Omaha	Loras Klostermann
Mar 15	Environmental	Lincoln	John Hartwell
Apr 19	Transportation/ UNO Student Chapter	Omaha	Massoum Moussavi
May	(Annual Meeting)	TBA	Bob Kalinski

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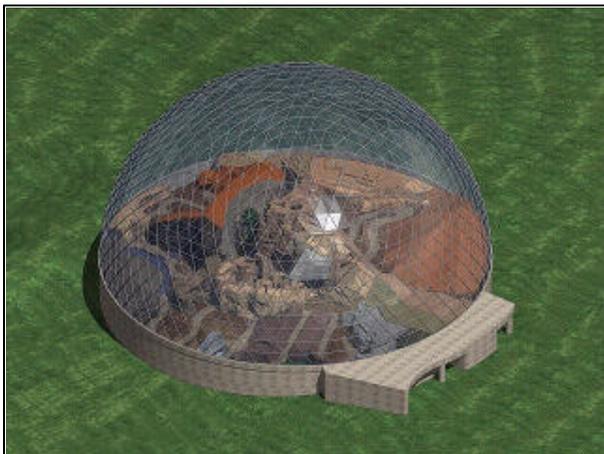
## Henry Doorly Zoo's Desert/Nocturnal Dome

The erection of the world's largest glazed geodesic dome spanning 230 feet and reaching a height of 137 feet began in late July. Inside the 3 million cubic foot enclosure will be the world's largest desert exhibit featuring three major desert regions; the Namib Desert in Southwest Africa, the Central Australian Desert in Australia, and the Sonora Desert in the Southwestern United States.

The dome will be constructed with an aluminum beam and truss system, which will be spanned by formed, acrylic panels. Temcor, the dome subcontractor out of Carson, California will erect the dome, leaving out the top two compression rings to allow Kiewit to drop in the structural steel framing for the Central Mountain and other exhibits through the 44-foot opening. The dome will be erected with a jacking system using a center mast pole and several guy wires.

The erection process will start at the center of the dome and will progress outwards until the dome can be hoisted onto the ring beam and permanently set in place.

Once dome construction is complete, steel erection for Central Mountain and Ayars Rock will begin. Central Mountain will reach 50 feet above the structural slab and will create a landmark view for both those inside the dome and for those peering through the acrylic roof. The main focus after dome construction will be to complete the Desert portion of the project for a Spring 2002 opening, while maintaining schedule on the lower level for the nocturnal opening in the Spring of 2003.



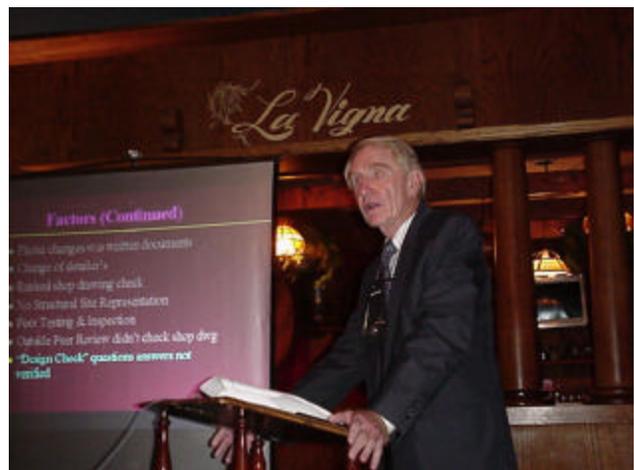
## Last Month's Meeting



Dr. Gary Krause, Structural Group Technical Chair, presents an appreciation gift to Mr. Jack Gillum, the featured speaker at the September meeting. Mr. Gillum gave an informative talk on ethics and structural engineering.

The September 2000 meeting at Caniglia's Venice Inn in Omaha attracted 31 attendees.

- |                   |                       |
|-------------------|-----------------------|
| Steve Kathol      | Bob Kalisnski         |
| Daryoush Razavian | Ryan Paradis          |
| Joe Sherrard      | Mark Stark            |
| Gary Krause       | Aaron Buettner        |
| Susie Jorgensen   | Sandi Keehn           |
| Steve Jorgensen   | Kristi Nohavec        |
| Nancy McCormick   | David Klostermeyer    |
| Mike Naccarato    | Thomas Marnik         |
| Randy Samson      | Ed Prost              |
| John Hill         | Loras Klostermann     |
| Nathan Dickerson  | Rick Kaufmann         |
| Ray Moore         | Aaron Ernst           |
| Maher Tadros      | Bill Wall             |
| Gamil Tadros      | Joe Waxse             |
| Scott Gilliland   | Jack Gillum (speaker) |
| Brian Havens      |                       |



Mr. Gillum, during his presentation at the September meeting at Caniglia's Venice Inn in Omaha.



**Nebraska Section Joins PEC**

On January 26, 2000, representatives from several engineering organizations met to form an alliance of these organizations to be known as the Professional Engineers Coalition or PEC. The Professional Engineers Coalition's purpose as stated in Article 2 of the Constitution,

"shall be to coordinate and promote the legislative interests of the constituent organizations represented in the Coalition by providing a unified effort devoted to the advancement of professional, technical, educational, and ethical interests and standards of professional organizations which are engaged in the various branches of engineering."

Three organizations, the American Consulting Engineers Council of Nebraska (ACEC), the Nebraska Society of Professional Engineers (NeSPE), and the Nebraska Section of the American Society of Civil Engineers (ASCE), each submitted membership fees of \$2,000 to form the PEC at the January 26 meeting. By submitting a membership fee of \$2,000, each organization is entitled to a constituent membership and has two voting representatives on all activities of the PEC. A single voting representative can also be obtained by an organization after submitting membership dues of \$1,000. Associate membership is available for organizations that wish to participate in discussions and to be kept aware of PEC activities. Annual dues for Associate membership is \$100.

Officers were elected to serve as the Executive Committee for the Coalition. Officers for the 2000 Executive Committee include:

- President.....Randy Kaster, representing NeSPE
- Vice-President.....Greg Wood, representing ACEC
- Secretary.....Mark Stark, representing ASCE
- Treasurer.....Bill Arneson, representing ASCE

The Executive Committee sent Requests for Proposals to professional lobbyists to represent the PEC and monitor legislative issues. The Committee interviewed four lobbyists and selected the firm of Kissel/E&S Associates to represent the PEC. The firm's principal, Gordon Kissel, has been active in the Nebraska Legislature since 1980. PEC formally executed a contract with Kissel/E&S Associates in February of 2000 and Gordon has been actively pursuing our interests since that time.

In early August of this year, PEC sponsored a reception for former Governor Ben Nelson and a second reception for Attorney General Don Stenburg. Both individuals are running for the Senate this fall and we felt that this would be a great opportunity to meet and converse with the candidates concerning issues affecting engineers today.

PEC is currently very involved in Design/Build for Schools legislation that is in the legislative review process at this time. We have attended meetings with the bill's authors and are investigating the laws impacts to the Civil Engineering profession. More information can be found in this and future issues of *The Nebraska Civil Engineer*.

**Mark Stark, PEC Representative**

**ASCE's Policy Statement on Design-Build Procurement**

- Approved by the Committee on Professional Practice on January 17, 1999
- Approved by the Planning and Implementation Committee Policy team on March 5, 1999.
- Adopted by the Board of Direction on April 12, 1999.

**Policy** - The American Society of Civil Engineers (ASCE) strongly supports the use of the two-phase competitive source-selection process required by the Federal Acquisition Reform Act of 1996 (Pub.L. 104-106) for design-build contracts awarded by government agencies. The design-build team must be selected using the modified qualifications-based selection (QBS) criteria specified by the Act. The owner must provide sufficient architectural and engineering (A/E) services to prepare the design-build request for proposal (RFP) to identify the disciplines needed in the design-build team, and to evaluate, manage, and assess the owner's requirements throughout the project. The contract between the design-build team and the owner must establish the means for direct communication between the owner and the designer as well as other team members. On complex projects, the owner should provide predetermined reimbursement for the firms selected to complete design-build proposals.

**Issue** - The design-build system is one of several project delivery systems available to government agencies and private businesses.

Owners are seeking life-cycle cost effectiveness and high quality products and services. Design-build is a method whereby and owner can focus design and construction responsibility through a single contract. However, this contracting method presents certain challenges that must be addressed if quality is to be maintained. These issues are (1) procuring a highly qualified design-build team; (2) providing the contractual mechanism enabling the designer to fulfill its professional and ethical obligations to the owner as well as the public; and (3) providing the contractual mechanism which expresses the owner's requirements in the proposal and their fulfillment in the delivered project.

**Rationale** - The qualifications of the design-build team must be the primary consideration of selection. Team selection should be accomplished through a qualifications-based process that precedes evaluation of all other considerations.

In order for the delivered project to meet owner requirements, the team's designer, as designer of record, must be allowed to fulfill its professional and ethical obligations to the owner as well as the public. The communication link between the designer and the owner must be firmly established at project inception.

Because of the high cost of preparing design-build proposals for complex projects, the owner should provide reasonable reimbursement to the firms selected to submit proposals.

## Officer's Spotlight

This month, Mark Stark, Director/Management Technical Chair/PEC Representative is featured.



Mark is a Senior Engineer/Project Manager at Olsson Associates where he recently completed his sixth year of employment. Mark's duties include the marketing, scheduling, preliminary design, design, and design review of structural

projects including bridges, steel, concrete, and masonry buildings and water/wastewater structures. Mark also is the project manager for several roadway projects for the Nebraska Department of Roads, Kansas Department of Transportation and municipal clients. One of the more enjoyable projects he has worked on is the Enhancement Program for the Nebraska Department of Roads. The Enhancement Program is responsible for the construction of over 60 hiker/biker trail projects across the State including the Keystone and Papio trails in the Omaha area. The Enhancement Program also funds historic bridge rehabilitation such as the bridge over the Niobrara River at Smith Falls State Park and the "Wagonwheel" bridge located in the Walnut Creek Reservoir south of Papillion.

Prior to working at OA, Mark was a Squad Leader in the Bridge Division at the Nebraska Department of Roads. He began working at the NDOR in the fall of 1981 as a cartographer and returned to school in January of 1985 with no clue as to what he wanted to do. Mark graduated with a BSCE from UNL in May of 1990 and quit working at the NDOR to pursue a MSCE as a full-time research assistant. Graduation from UNL with that degree in hand in May of 1992 saw Mark return to the NDOR where he stayed until June of 1994. A short stint at Ehrhart Griffin & Associates lasted four months before Mark succumbed to the pressures of the daily drive to Omaha and went to work at OA in Lincoln.

Mark and his wife Lisa have two boys, Aaron (15) and Chad (13), and reside in Lincoln. Mark is the past-president of the Great Plains Trails Network (GPTN) and still serves on the Board of Directors for the organization.

## A Note from the Editor

The deadline for the November edition of *The Nebraska Civil Engineer* is Friday, October 27, 2000. Send ideas for items that could be included in this newsletter, articles, or information to:

ASCE Newsletter Editor  
c/o Rick Kaufmann  
Terracon  
2211 South 156th Circle  
Omaha, NE 68130-2506  
Office No.: (402)-330-2202  
Fax No.: (402)-330-7606  
email address: [rakaufmann@terracon.com](mailto:rakaufmann@terracon.com)

### **CHANGE OF ADDRESS?**

Please notify ASCE national of any address changes by calling 1-800-548-ASCE (2723) or contact them through their web site at [www.asce.org](http://www.asce.org). Address changes made at the national ASCE office are updated monthly at your local Nebraska section.

### **We Need Your E-Mail Address**

Please send your updated email address to Brad Chambers at [neasce@radiks.net](mailto:neasce@radiks.net). The Section's website can be found at

[www.radiks.net/~neasce](http://www.radiks.net/~neasce)

Direct any items of interest or comments to the Section Webmaster, Brad Chambers, at 444-6866 or [neasce@radiks.net](mailto:neasce@radiks.net). These can include job position postings, RFP's, corporate news releases, editorials, articles, or photos of ASCE-related events.

## Building Big

The *Building Big* series will be televised in Nebraska on NETV2 (formerly EduCable), Nebraska Public Television's cable TV station, on Sunday afternoons throughout October at 12:30 pm Central Time. The episode will be repeated the following Friday at 4:30 pm. *Building Big* is the first national television series sponsored by ASCE in its history and is the first program in ASCE's 150th anniversary campaign.

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# YOU'RE INVITED...AGAIN!

THE YOUNGER MEMBER COMMITTEE OF THE NEBRASKA SECTION,  
ASCE IS HOSTING A SITE VISIT TO THE

## TOWER AT FIRST NATIONAL CENTER

If you did not attend last spring's trip, you won't want to miss this one. We will tour the inside of the building as well as the perimeter of the site. Construction has progressed considerably over the last few months, so there will be much to see!

**WHEN: 4:30pm TUESDAY, OCTOBER 24<sup>TH</sup>**  
**WHERE: 17<sup>TH</sup> & DOUGLAS, DOWNTOWN OMAHA**  
**WHO: EVERYONE IS WELCOME**

Park in garage west of First National Bank Building, on-street, or at the Doubletree Hotel. Meet at the west entrance of the Brandeis Building, 17<sup>th</sup> and Douglas (south of the Tower)

Contact Ryan Paradis, Younger Member Committee Chair, for more details at 399-1482.

**Note: Bring your hard hats & boots if you have them!**



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Henry Doorly Zoo's Desert/Nocturnal Dome  
First National Tower Site Visit  
President's Comments  
Officer's Spotlight  
PEC  
ASCE's Policy Statement on Design-Build

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