The Engineering Informer March 3, 2020

EASTERN CHAPTER

ENGINEERING SOCIETY

SOUTH DAKOTA

NSPE-SD

MEMBERS OF THE

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

SDES EASTERN CHAPTER NEWSLETTER

PO BOX 1512 SIOUX FALLS, SD 57101 | WWW.SDES.ORG

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WebEx: this month's presentation will be broadcast on WebEx so please plan on tuning in on the web if you can't be here in person! See the instructions on how to use WebEx on page 16 of this newsletter.

IMPORTANT NEWS NEXT MEETING: Tuesday, March 10th at 11:30am at Pizza Ranch on 3809 E. 10th Street

WELCOME NEW MEMBERS:

Tami Jansma Michael Konrad Angelinah Rasoeu Shane Waterman

PRESIDENT'S COLUMN BY KRISTA MAY, PE

I'm excited for this warmer weather we've been having! I hope you all are getting outside to enjoy it while it's here – we all know we'll get a late-season blizzard to bring us back to reality (3)

Thank you, Shannon Ausen, PE, and Travis Dressen, PE, for presenting to us at February's lunch meeting. It was interesting to hear about all the upcoming construction projects in the Sioux Falls area.

Our next chapter meeting will be held on Tuesday, March 10th at the **E. 10th Street Pizza Ranch**. Tanya Miller, PE, from Banner Associates will be presenting on the Volga Wastewater Treatment Plant. The project recently won the ASCE Outstanding Engineering Achievement Award for the Eastern Branch. Consider coming early to get a seat and network with colleagues. Welcome to our new members: Tami Jansma, Michael Konrad, Angelinah Rasoeu, and Shane Waterman!

Thank you to everyone who came out to volunteer in the month of February! We cannot do the activities and outreach without our amazing members, so thank you for putting in the time. Please see recaps of our events throughout the news-letter.

Thanks to everyone who came out for the awards banquet. We had almost 90 people in attendance! Dueling Duo was a hit! For those who missed it, Bill Moran serenaded us with Amazing Grace, and Lance Mayer got up on stage and sang for us too (to impress his wife)!

Registration is now open for the Annual PDH Conference here in Sioux Falls April 1-2. We have a great lineup of speakers and special guests joining us during the conference including Representative Dusty Johnson, Mayor Paul TenHaken, and SDSU College of Engineering namesake Jerry Lohr. We are also changing the location of our social to Remedy Brewing. Hopefully the weather is nice and they'll have yard games set up out back. It is also trivia night at Remedy on April 1st, so maybe our trivia team from the fall conference can make a run for the prize!

Hope to see you March 10th!

TREASURER'S REPORT BY JOSH PETERSON, PE

Previous General Fund Balance 02/04/2020:			\$	20,525.23	
Deposits:					
Newsletter Ads	\$	75.00			
Interest Deposit	\$	0.72			
Total:			\$	75.72	
Expenses:					
Webex Subscription	\$	(52.19)			
Banquet Entertainment	\$	(3,195.00)			
Chapter Board Meeting Refreshments	\$	(34.60)			
Awards Plaques	10	(236.43)			
Total:	<u> </u>	(2001.10)	\$	(3,518.22)	
Total General Fund Balance:		-	\$	17,082.73	
Total General Fana Balance.			Ψ	17,002.70	
Previous Scholarship Fund Balance 02/04/2020:			\$	5,397.06	
			Ψ	5,597.00	
Deposits:					
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Total:			\$	-	
_					
Expenses:					
Total:		_	\$.	
Total Scholarship Fund Balance:			\$	5,397.06	
Total Account Balance 02/25/2020:		-	\$	22,479.79	



CALENDAR OF EVENTS

Upcoming Events:

Tuesday, March 10th: Eastern Chapter Meeting at the **East 10th Street Pizza Ranch** — Tanya Miller, PE, from Banner Associates will be presenting on the Volga Wastewater Treatment Plant.

March 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

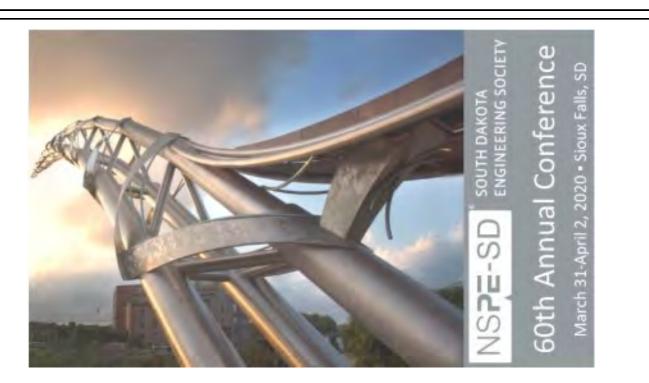
REMINDER!

New meeting location for the remainder of the year!

Pizza Ranch at <u>3809 E. 10th Street</u>

TO ADD A CALENDAR ITEM PLEASE CONTACT ABBY NELSON @ ABBY.NELSON@HDRINC.COM

SOUTH DAKOTA ENGINEERING SOCIETY 60TH ANNUAL CONFERENCE



The South Dakota Engineering Society Eastern Chapter invites you to join them at the SDES 60th Annual Conference to be held at the Holiday Inn City Centre in downtown Sioux Falls, South Dakota, on March 31st - April 2nd, 2020.

Gather with your friends and colleagues to kick off the conference on Tuesday, March 31st, with an evening social and hospitality room sponsored by the Dakota Concrete Pipe Association.

Mayor Paul TenHaken and Keynote Speaker Jerry Lohr open the conference's diverse educational sessions bright and early at 8 a.m. Wednesday, April 1st, with a social at Remedy Brewing wrapping up the first day. Then, we'll round out an exceptional morning of presentations on Thursday, with a closing plenary discussion with U.S. Representative Dusty Johnson.

Online registration is now open, so remember to register before March 13th to take advantage of the early bird discount. If you need to register multiple members or have other special registration needs, please reach out to Nancy in the SDES office for assistance.

Click <u>Here</u> for a Current Conference Schedule

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POSSIBLE VOLUNTEER OPPORTUNITY KRISTA MAY, PE



The Multi-Cultural Center of Sioux Falls has several after school programs and day camps for underserved students in the community. Students are bused from Jane Addams, Hawthorne, Cleveland, and Rosa Parks Elementary schools to the Multi-Cultural Center Monday-Thursday after school.

One of the afterschool programs is called Natives Count whose primary focus is to increase students' math skills and also increase their reading skills. The time commitment for helping with this program is 3:30-4:45 Monday – Thursday. They have a certified teacher to lead the lesson and volunteers would help tutor students with their math assignment.

SFMCC also has STEM-focused day camps during the summer. One camp is geared toward 5th graders and the other is geared toward middle school students. Time commitment could vary to a specific day or activity for the day camps.

We haven't scheduled any activities yet, but wanted to gauge member engagement before committing to a program. If any of this sounds of interest to you, please reach out to Krista May.



RECAP OF THE FREE FIRST FRIDAYS E-WEEK OUTREACH EVENT BY ERIN STEEVER, PE

We had an exciting kickoff to E-Week Celebrations on February 7th. The Kirby Science Center saw record Free Admissions for Free First Friday with 1,042 people. Jenna Isaacson, Museum and Public Programs Manager, said "It has to be one of the best February Free First Friday's we've ever had. These SDES activities were so much fun and we appreciate your commitment and involvement at the science center. We're already looking forward to next year!" This year's theme was Disaster Engineering, which has to perk some interests, especially with the extreme weather we've experienced across the nation and in your back yards over the past several years.

Our activities included five STEM challenges. First, we had Shannon Schultz at the Earthquake Marshmallow Toothpick Towers station with a Jell-O testing bed. Second, Ray Pierson had fun with the Building for Hurricanes challenge which included a constructed water tower structure holding a tennis ball. The water towers were put up to wind speeds of a fan, with many kids scrambling to modifying their design to withstand closer range wind speeds. Krista May was aided by Jed Reim-



nitz at the House of Cards Tallest Tower Challenge. Some of you may remember this from the ACEC Project Management Bootcamp Training in January, we had so much fun that we decided to roll it over to the FFF event. An event like this wouldn't be complete without a bridge build, am I right? For the fourth activity, ASCE allowed us to bring in their Bridge Build Kit that can is constructed with PVC pipe, shipping boxes and cord. This Cable Stay Bridge was a feature draw because of its sheer size. Jed Reimnitz and I helped kids build, tear down and rebuild this cool



structure. We even had a few adventurous toddlers attempting to test it out by stepping on the suspended road, which we had to catch quickly before the towers fell over. A huge thank you to Deidre Beck for her efforts in constructing this project, it's available for use if anyone is interested in bringing it in for a school visit or to a scout meeting. Lastly, the fifth activity was intended more for the middle school and high school kids, as well as the parents. Kent Johnson showed anyone interested in flooding the Interactive Flood Map Model (FIS), adjusted river flows to similar levels as 2019 flooding in Sioux Falls, and explained to those wanting to use this tool for building in low lying areas that river flooding is only one source of flooding and that this model has limited capabilities outside of that scope. It was a huge hit!

Thank you to all the volunteers and those that came out to test out the E-Week activities. I completely agree with Jenna on the record-breaking weekend. It was a non-stop fun filled evening introducing patrons to how we engineer to withstand disasters.

RECAP OF THE FREE FIRST FRIDAYS E-WEEK OUTREACH EVENT BY ERIN STEEVER, PE



RECAP OF BANQUET SERVING EVENT BY KRISTA MAY, PE

Thank you to those who came out to serve at the Banquet in Sioux Falls on February 19th. We served almost 240 people for breakfast – 20% more guests than usual. It is always humbling to serve those in need in our community. A majority of their guests are working poor, so being able to provide a warm breakfast before they head out to work was invaluable. If you are still interested in donating funds to help cover the cost of the meal, please contact Krista May.





MATHCOUNTS COMPETITION BY KRISTA MAY, PE



On behalf of the South Dakota Engineering Society, I want to thank all those that volunteered and contributed financially to this year's program. Your contribution helped ensure another successful program on the local level. This year's competition was held on February 20, 2020 at Southeast Technical Institute in Sioux Falls.

The first-place team was Yankton Middle School and the second-place team was Edison Middle School from Sioux Falls. The top 2 teams and top 4 individuals (3 from Edison MS and 1 from Sacred Heart MS) from the chapter competition advance to the state competition in Pierre on March 14th. There they will compete against the top students from 2 other chapters in the state. The top four individuals from the State Competition will represent South Dakota at the 2020 Raytheon MATHCOUNTS National Competition in Orlando, FL, May 9th - 12th. The National competition will be shown on ESPN 3 for those who are interested in seeing what MATHCOUNTS is all about!

Thanks to the following businesses for their financial contribution to this year's competition:

Bar	nner Associates	Helms & Associates	
Bar	tlett & West	HR Green	
BX	Civil & Construction	Infrastructure Design Group	
Cor	re & Main	JSA Consulting Engineers	
DG	R Engineering	KMS Engineering	
Ge	otek Engineering & Testing	Sayre Associates	
HD	R Engineering		
Thank you to the following volunteers for helping with this year's competition:			
Kar	in Lang	Ray Pierson	
Kur	t Peppel	Kari Drake	
Aar	on Storm	Abby Nelson	
Jak	e Braunagel	Branson Tolliver	
Sia	na Murphy	Beth Kassing & 3 students	
Thank you again for supporting the MATHCOUNTS program in South Dakota.			
Your help is greatly appreciated!			

MATHCOUNTS COMPETITION BY KRISTA MAY, PE



1st Place Team from Yankton Middle School







State Advancer from Sacred Heart Middle School



EASTERN CHAPTER AWARD WINNERS WERE RECOGNIZED AT THE SDES/ASCE AWARDS BANQUET ON FEBRUARY 22, 2020 BY WES PHILIPS, PE

The Young Engineer of the Year award was presented to **Joseph Stonesifer, PE, CFM**. Joe is the City Engineer for the City of Harrisburg, SD. He graduated from South Dakota State University with a Bachelor of Science degree in 2010 and a Master of Science degree in 2012. He has served on the Harrisburg Planning and Zoning Board and City Council. He is an active member and volunteer in SDES in addition to volunteering in several other roles in the community.





The Engineer of the Year award was presented to **Aaron Hartwell**, **PE**. Aaron is a Structural Engineer for Albertson Engineering and has worked on multistory hotels, office buildings, hospitals, sculptures, retaining walls, casinos and entertainment centers throughout the Upper Midwest. He worked with Dr. Dale Lamphere to bring the 'Dignity' and 'Arc of Dreams' sculptures to life. He volunteers at his church, with Habitat for Humanity and assists SDSM&T and SDSU faculty with engineering students' senior capstone projects.

EASTERN CHAPTER AWARD WINNERS WERE RECOGNIZED AT THE SDES/ASCE AWARDS BANQUET ON FEBRUARY 22, 2020 BY WES PHILIPS, PE

The Outstanding Engineering Achievement awards were presented to the HDR for the Yankton Collector Well and Water Treatment Plant Expansion and Albertson Engineering for the Arc of Dreams project.

The Yankton Collector Well and Water Treatment Plant Improvements Project provides the community with a new horizontal collector well, which will serve as a long-term, high volume, reliable source of water. The new well is not susceptible to quality and volume fluctuations of the Missouri River and is protected from the negative impacts of Zebra Mussels. The collector well was designed to provide 18 million gallons per day (MGD) of raw water supply capacity, which can be economically expanded to 24 MGD. The water plant expansion incorporates pro-



cesses that are flexible in treating raw water quality that may vary over time, treats to a consistent high quality standard, reduces disinfection byproducts, minimizes lead and copper issues, and improves protection against bacterial contamination.



The improvements were designed with architectural feature and amenities that complement the adjacent Riverside Park.

The **Arc of Dreams** sculpture in downtown Sioux Falls is a great example of the application of standard engineering principles to uncommon design applications. SculptureWalk Sioux Falls collaborat-



ed with sculptor Dr. Dale Lamphere, South Dakota's Artist Laureate, to create a monumental sculpture representing the leap of faith we take in life to



transform our dreams into reality. The cantilevered structure represented a unique and original design challenge. Due to the complex nature of the cantilevered structure, the design then underwent several iterations of aesthetics, framing types, and methods of fabrication. From the start, the design team recognized that the long, cantilevered nature of the structure would make it susceptible to wind-induced vibrations that are unique to the nature of the sculpture. After modeling, wind testing, and re-working of designs, the design team selected an open-pipe framework

wrapped with helix-shaped plates. The Arc of Dreams has permanently altered the skyline of Sioux Falls, towering 70 feet above the Big Sioux River.

The Eastern Chapter will nominate all award winners to the State SDES competition. State award winners will be presented at the SDES Annual Conference in Sioux Falls March 31-April 2, 2020. Good luck to our Eastern Chapter winners!

SCHOLARSHIP WINNERS BY LANCE MAYER, PE

As part of the 2019-2020 scholarship program, the SDES-Eastern Chapter awarded three \$2000 Engineering Scholarships out of 44 applicants to the following high school seniors:

Riley Van Den Top, from Sioux Falls, SD is ranked 1st in his class at Sioux Falls Christian and participates in several extracurricular activities including cross country, track and field, tennis, choir, oral interpretation, debate, and band. Riley's most satisfying achievement is being nominated for the US presidential Scholars program which makes him one of 23 high school seniors in SD with that honor. Riley has always been interested in the aspects of design and loves nothing more than being able to take things apart to get a better understanding of how they work. Through the several job shadows with different engineering firms and manufacturing plants, he's learned about the different



opportunities available and exciting engineering careers and is confident that engineering is the right choice for him. Riley plans on attending South Dakota School of Mines and Technology to study Mechanical Engineering.

Jared Dale, from Watertown, SD, attends Watertown High School where he participates in several activities, including tennis, football, softball, and youth group. Jared's



most satisfying achievement was his involvement in an internship with Moffatt Products. Inc. last summer. He learned many new skills and attained more experience in the engineering field than he could have imagined. During his employment he documented 3D models of the company's parts list using his knowledge in computer aided drafting software. From a young age, Jared looked at everyday objects and visualized the complex inner workings from the gear ratios within a clock to the mechanics in a pen. Painting and drawing have always been hobbies of Jared's and he believes they have contributed to his strong visualization skills and three-dimensional imagination. Jared plans on attending South Dakota State University to study Mechanical Engineering.

SCHOLARSHIP WINNERS BY LANCE MAYER, PE

Rose Eitemiller, from Armour, SD, has excelled academically as a senior at Wagner Community School and is 1st in her class. She has been involved in FFA, Volleyball, cross country, quiz bowl, student council, track and field, vearbook, the school newspaper, chorus, band and theater. Rose plans to work in the agricultural field to improve machinery and design feedlots to make the lives of farmers and ranchers easier. She aims to make an impact in the agricultural community by doing more than just participating in branding and harvest. Rose wants to work side by side with the farmers to invent new methods to save time by improving the processes. Rose will be pursuing an Agricultural Engineering degree at the South Dakota School State University.



Also, in 2019, the Eastern Chapter sponsored a \$400 Engineering Scholarship which was made available through a permanent endowed fund held within the South Dakota Community Foundation. **Bayden Schneider** was the recipient selected by the Scholarship Committee and he presently attends South Dakota State University planning to major in Civil Engineering.

Congratulations to all of this year's SDES - Eastern Chapter Scholarship Recipients!

THANK YOU NOTES

Dear South Dakota Engineering Society:

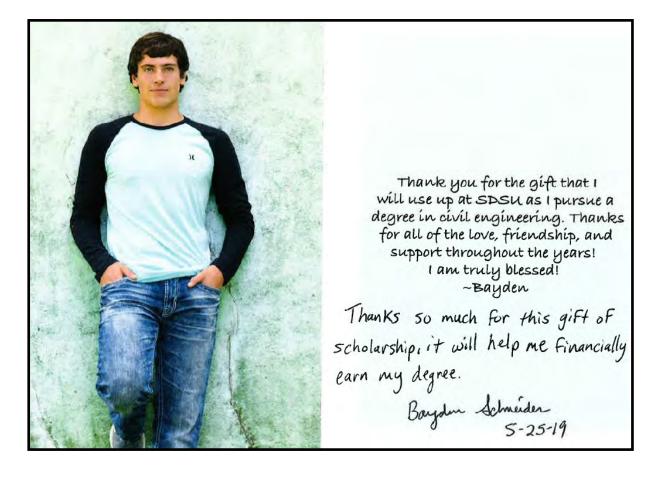
I would like to formally thank the Eastern Chapter of South Dakota Engineering Society for the \$2,000 scholarship. I am very honored to be the recipient of this award and plan to use it to pursue a degree in Mechanical Engineering from the South Dakota School of Mines and Technology.

I am looking forward to meeting the members of the South Dakota Engineering Society at the annual banquet on Saturday evening, and learning more about the organization.

Sincerely,

Riley Van Den Tap

Riley Van Den Top



2019-2020 OFFICERS AND CHAIRPERSONS

Officers

President	Krista May, PE	
President Elect	Ben Scholtz, PE	
Vice President	Gabe Laber, PE	
Secretary/Treasurer	Josh Peterson, PE	
Chapter Director(2nd term)	Riley Rinehart, El	
Chapter Director(1st term)	Kari Johnson PE	
State Director	Devin Clay, PE	
Past President	Lance Weatherly, PE	
Committees		
Nominating Committee	Lee Kaffar, BA	
Mathcounts	Krista May, PE	
Scholarship	Lance Mayer, PE	
Events Coordinators		
E-Week	Erin Steever, PE	
Winter Social	Gabe Laber, PE	
Golf Outing	Gabe Laber, PE	
Awards Banquet	Jedidiah Reimnitz, PE	
Awards	Wes Philips, PE	
Audio/Visual IT	Chad Stensland, PE	
Newsletter	Abby Nelson, PE	
Membership List	Myron Adam, PE	

Eastern Chapter of SDES Goals

- To promote the licensed practice of engineering and to provide learning opportunities that enable licensed engineers to maintain practice competency;
- To maintain high ethical standards for the practice of engineering and lead the profession in adhering to these principles:
- To protect the public health, safety, and welfare; while being good stewards of the environment;
- To incorporate engineering principles and perspectives in government decisions that protect the public; and
- To consider community service a professional obligation.

SDES Mission Statement

SDES is the state society of engineers from all disciplines that promotes the ethical and competent practice of engineering, advocates licensure, enhances the image of its members, and advocates legislation and public policy for the betterment of human welfare and the profession.

Webex Login Instructions

1. Navigate your internet browser to: <u>https://sdes.webex.com</u>

2. Select "Classic View" from the left column.

3. Select "Attend a Meeting"

4. Find the meeting in the "Search Meetings" Section.

5. Click the "Register" link by the Monthly Meeting.

6. Fill in your first name, last name, email address and hit the "Register Now" button at the bottom.

7. A registration email will be sent with all the information to log into the meeting.

For any and all newsletter articles, additions, edits, corrections, and important dates contact:

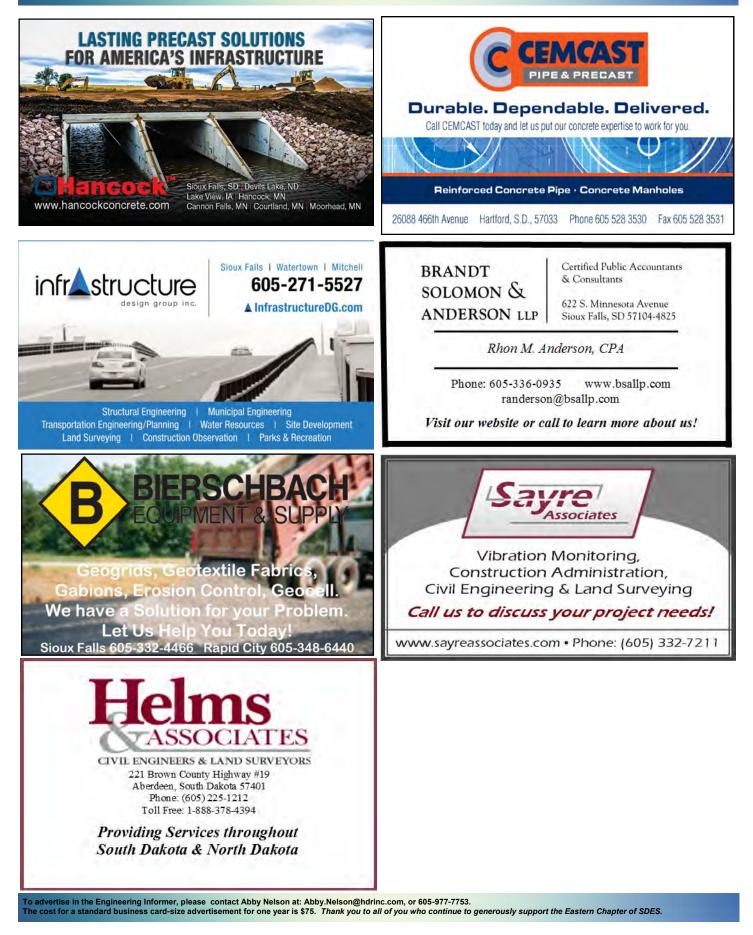
Abby Nelson, PE HDR 6300 S. Old Village Place, Suite 100 Sioux Falls, SD 57108-2102 605-977-7753 Abby.Nelson@hdrinc.com

For all *State Society* membership information and other business, contact:

Nancy Hoines SDES Executive Director PO Box 1076 Pierre, SD 57501 605-951-1004 sdengineeringsociety@gmail.com

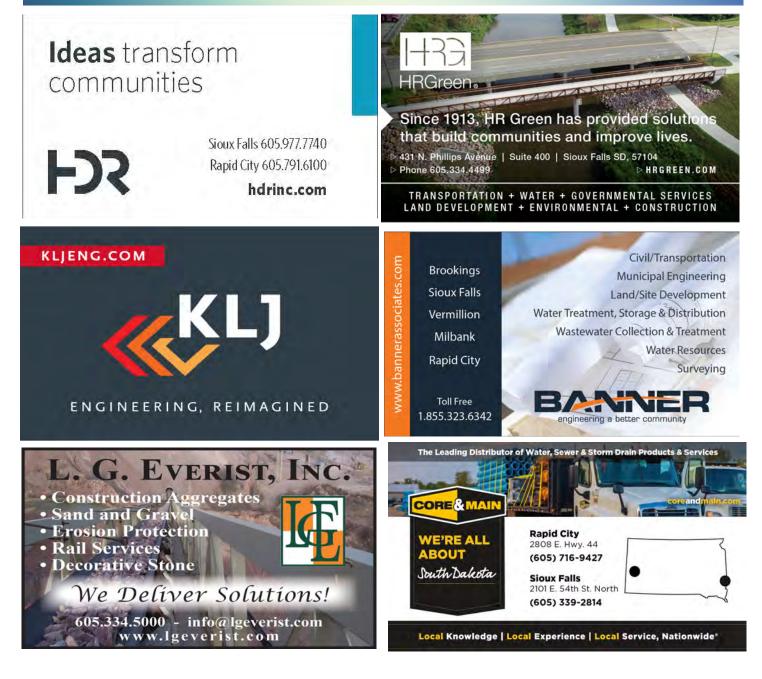
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To advertise in the Engineering Informer, please contact Abby Nelson at: Abby.Nelson@hdrinc.com, or 605-977-7753. The cost for a standard business card-size advertisement for one year is \$75. Thank you to all of you who continue to generously support the Eastern Chapter of SDES.