Q2, JUNE 2020

The American Society of Civil Engineers

Civil Engineering Alaska

The Quarterly Newsletter of the American Society of Civil Engineers Alaska Section

Quarterly Highlights

Resilience in the Face of Adversity

Resilience is defined in the Oxford Dictionary as the ability of people or things to recover quickly after something unpleasant.

In very recent history we have been through very challenging times that have stretched the fabric of our daily lives. Several moments and lengths of time over the last months and years will permanently define our recollections of the turn of a new decade.

After the dust settles following catastrophic events, many lessons are learned throughout the process. The response, the continued efforts, and the future planning to not only recover, but to build stronger communities defines how successful we become.

On November 30th, 2018, 8:29 AM, the people of Southcentral Alaska remember vividly where they were and what they were doing right as the ground began to shake violently. Creaking, crashing, groaning, lights flickering in the buildings as the realization that this was the most violent earthquake that most had ever experienced. What happened over the following minutes, hours, and days was testament to how Southcentral Alaska not only had survived without any deaths, but was able to restore essential infrastructure quickly, and also plan for the next catastrophic event.

Over the last several months people across the world have been tested by a pandemic of proportions not seen in modern history. The social distancing, hunker down, and school and business closures forced us all to have to adapt to a new way of living. Face masks, 6' feet apart, hand sanitizer, and virtual meetings have become a "new normal" in our daily vocabulary. While this is going on in real-time, we are learning ways to adapt to the mandates and recommendations to stay safe and emerge stronger.

Eventually this time will pass, and will go down in history, but what will be most valuable will be the knowledge gained, lessons learned, and the stronger fabric of our communities to be able to recover quickly from future unpleasant events.

Stay Well,

David Gamez, P.E., M.ASCE
President—ASCE Alaska Section ('19-'20)

Nov 2018 Earthquake Response—See Page 2

Photo: DOT&PF

Infrastructure Spotlight

DOT&PF Earthquake Response

The November 2018 Earthquake

A magnitude 7.1 earthquake hit Southcentral Alaska on November 30, 2018, damaging roadway facilities as well as other regional infrastructure. More than 80 aftershocks were recorded throughout the day with at least three with magnitudes greater than 5.0. The Alaska Department of Transportation & Public Facilities (DOT&PF) responded quickly, converting their main conference room into a command center to push out frequent updates to the public on damaged infrastructure and to coordinate the mobilization of crews for the inspections of roadways, bridges, and other critical infrastructure. More than 100 damaged sites were initially identified by DOT&PF crews. Asphalt plants were restarted despite winter conditions to conduct emergency repairs on heavily damaged roadways to restore crucial traffic flow. Essential roads were re-opened within five days of the earthquake thanks to temporary repairs and a rapid response from the contractor community, the public, local governments, other agencies, and State forces.

Photo: DOT&PF, 11/30/2018, Minnesota Drive Off-Ramp

Photo: DOT&PF, 12/4/2018, Minnesota Drive Off-Ramp

Over 265 damaged sites have been identified, with over 150 requiring repairs

The Response Team

In spring 2019, DOT&PF engaged a team of consultants to begin identifying, facilitating and monitoring repairs to the damaged sites throughout Alaska. In total, over 265 damaged sites have been identified, with over 150 requiring permanent repairs. Damages ranged from cracks and sinkholes to deep embankment stability issues. One of the most important tasks of the response team is to meet FEMA and FHWA guidelines in order for DOT&PF to receive emergency federal reimbursement. For example, the team must inspect the damage, show it was caused by an earthquake, assemble alternatives, estimate the repair costs from design through construction, and then track costs. Incorrectly tracking costs can lead to a loss of federal funding and complications with the approval process. The response team also manages and tracks budgets and estimates future costs for each damage location.

Leveraging New Technology

The program has implemented a wide array of innovative technology to coordinate scheduling, site inspection and tracking, document control, dashboard analytics, cost management, and risk and issue management.

Communication and collaboration was a large challenge that the team had to swiftly overcome. With 12 different firms/agencies involved, the team sought a solution that would provide transparency and document access to all team members throughout the life of the program. The project team quickly adopted Microsoft Teams as a solution. The Teams site hosts nearly 90 users and provides a sound platform for frequent communications and document collaboration, which results in massive time savings through streamlined communication methods and file sharing. Microsoft Planner has also been integrated into the Teams site for much of the day-to-day task management, which helps coordinate everyone's engagement, monitor progress of job tasks, and verify transparency with team members.

An additional challenge that the program faced was the ability to provide frequent and comprehensive reports of the project schedule and financial data to the management team. Microsoft Power BI, a data analytics and visualization software, was implemented to provide the team live reporting data. Project data from multiple data sources are aggregated into a central dashboard with data visualizations, allowing team members to consume detailed content from various sources in an efficient and understandable manner. There are many different budgeting instruments used to track project cost data, including Financial Obligation Status Reporting (FOSR) and Integrated R3 Information System (IRIS). The IRIS budget and expenditures track information from DOT&PF's financial systems. FOSR tracks anticipated funding needs for DOT&PF's entire Earthquake

Photo: DOT&PF

REBUILDING

Construction Year
2018—Ongoing

Owner
Alaska Department of Transportation & Public Facilities

Program Manager
HDR

(EQ) Response program. Through Power BI dashboards, data from all these tracking systems are brought into one dashboard and overlaid to monitor progress and identify potential issues. This helps the Program Management Team to anticipate how much additional funding is needed and when, determine where the program sits in the schedule and compares gaps against what has been funded and budgeted. Aggregating many different sources into one central approach gives the team the ability to take individual data points and convert them into knowledge.

The team also incorporates a massive EQ Tracker repository, which ties all the funding together (whether emergency or permanent repairs) and connects the budget and expenditures to the scope of work. The EQ Tracker constitutes the whole book on the Anchorage Earthquake Response, while Power BI tells the complete story of the many program facets and provides hyperlinks to respective contract folder locations with contract records.

A custom-built application called Quake Inspector was developed and implemented as a means to track the large quantities of individual site data. Initially, DOT&PF was using Suvery123 to track site inspection data. However, the team required a more robust application to provide more comprehensive site inspection reports. As an alternative to traditional reporting, the application allows site inspectors to download the information to their phones, complete site inspection reports in real-time in the field, and upload photos directly within the application. This reduces the time required to complete inspection forms, download photos, and tie them to the correct location. This allows for greater reporting consistency and for the project team to see changing conditions of sites over the various seasons. These photos and reports can also be accessed online by the project team on the web portal and are frequently brought up in meetings when discussing specific site damage. This has allowed the team to discuss and examine photos of sites with rapidly worsening damage and led to the determination that additional emergency repairs were required before the winter season. Because of this, several sites with rapidly changing damage were fast-tracked to construction in the fall of 2019 before the winter season.

Photo: DOT&PF, 11/30/2018, Vine Road

Photo: HDR Alaska, Eagle River Road

Forging Ahead

Inspections are currently underway to examine site conditions after spring breakup and determine how the ground may have further shifted after it thawed. Some sites have been removed or descoped because the emergency repairs are in good shape. Some sites may need additional temporary repairs after the winter to improve the site conditions until a permanent repair can be constructed.

DOT&PF has prioritized design solutions for permanent repairs that are currently underway. There are 7 FEMA and 14 FHWA roadway projects in various stages to repair damage and 3 FHWA and 9 FEMA airport projects are in various stages in the development process at the Ted Steven's Anchorage International Airport. Construction began in summer 2019 with more to follow in 2020 and 2021. Some site repairs that require right-of-way or permitting may extend into the 2022 construction season. It is DOT&PF's goal to construct and restore Alaska's infrastructure to its pre-earthquake state in a timely manner.

As part of the response program, DOT&PF is evaluating its existing systems and expanding on new ways to further their preparedness in the event that another large earthquake or a natural disaster occurs. DOT&PF is evaluating ideas and solutions for how it can greater increase communications with the public, identify damaged facilities, update available resources, fast-track repairs, and coordinate inspections. This initiative is a testament that DOT&PF operates by its mission to "keep Alaska moving through service and infrastructure".

EARTHQUAKE RESPONSE TEAMS

Zone 1 Design Team
Outside Anchorage
HDR; DOWL LLC; Shannon & Wilson Inc.; Stephl Engineering LLC; RRR, LLC; RSA Engineering Inc.

Zone 2 Design Team
Anchorage Municipality
Stantec Consulting Services Inc.; Golder Associates, Inc.; Shannon & Wilson, Inc.; RRR, LLC; Frawner Corporation; AWR Engineering, LLC; Kittelson & Associates

Introducing The Committee on Preparing the Future Civil Engineer and the Engineer Tomorrow Initiative

by Tor Anderzen, P.E., F. ASCE

There is an acknowledgement among many that the knowledge base civil engineers must now acquire to keep up with the world's complexity and increasing regulatory and standards growth cannot be accomplished in a four-year baccalaureate degree. While mentored experience and on the job training is a significant contributor to enhancing knowledge, postgraduate education is typically required in order to meet several of the recommended outcomes in the Civil Engineering Body of Knowledge, third edition (CEBOK3). This advanced level of education may be obtained through a master's degree program or through alternative learning options. In either case we, as a profession, must recognize that the future of the profession will require more education.

The ASCE Board of Direction (BOD) has approved the following definition of this issue:

The American Society of Civil Engineers (ASCE), as the acknowledged leader of the civil engineering profession, has a responsibility to establish and advance standards to fulfill its mission to protect the public health, safety, and welfare. This responsibility includes the establishment of a body of knowledge (BOK) to describe the minimum knowledge, skills, and attitudes necessary for the future professional practice of civil engineering.

Advance standards to fulfill its mission to protect the public health, safety, and welfare.

ASCE has determined there is a gap between the CEBOK and the current educational and experiential requirements for professional licensure in civil engineering. Additional education and relevant experience is required for the future civil engineer. Otherwise, civil engineering is at risk of losing relevance and its place as a learned profession.

To address this problem statement, the BOD designated a new committee, the "Committee on Preparing the Future Civil Engineer" (CPFCE). Encompassing the former Raise the Bar committee and its associated initiative, the charge statement of this new committee is "The Committee … shall advance the Society's educational qualifications and professional standards for the practice of civil engineering." This Committee's function is fully aligned with ASCE Goal No. 4 which states, "ASCE advances the educational and professional standards for civil engineers." The BOD has refreshed efforts to reinforce the importance of all civil engineers striving to meet the outcomes of the CEBOK3 and to identify new pathways for future civil engineers to be recognized for the attainment of those outcomes. Among the specific tasks assigned to the CPFCE were updating Policy Statement 465 and developing a new brand and communications plan to inform the membership of this new direction. It is an exciting time of new energy being invested into this important effort, recently branded as "Engineer Tomorrow."

The Engineer Tomorrow initiative has an emphasis on early outreach to all student and younger members and, as well, to inform all membership levels. CPFCE members are available to speak with your group and to share the goals and benefits of the Engineer Tomorrow initiative.

Informed by the services of a marketing consultant, the CPFCE communications team finalized a formal communications plan in late 2019 to build awareness around the evolving initiative.

Within this plan, The CPFCE has identified the following objectives as essential to fulfilling its purpose:

- Increase awareness of the need for post-graduate education and mentored experience for CEs to fulfill the necessary body of knowledge
- Increase the percentage of CEs enrolling in post-graduate educational programs
- Underscore the positive impact of higher educational standards on the profession as a whole
- Empower individuals to take responsibility for the future of the CE profession
- Highlight the opportunities and successes of ASCE members with advanced education
- Prompt members with advanced degrees to mentor and encourage others to gain additional skills, knowledge, and education

A task committee of CPFCE has also completed a robust evaluation of if and how professional certification could be used to acknowledge attainment of the CEBOK3. In 2019, the task committee

JOB OPPORTUNITIES

HDL Engineering Consultants

Position Title: Aviation Engineer
Office: Palmer or Anchorage
Contact: Anna Johnson, 564-2120
https://hdlalaska.applicantpro.com/jobs/

DOT&PF

Position Title: Engineer/Architect I (Aviation Design Squad Leader)
Office: Anchorage
Application closes 6/30/20
https://www.governmentjobs.com/careers/alaska/jobs/2796634/engineer-architect-i-project-engineer-pcn-25-3441

DOT&PF

Position Title: Engineer/Architect I (Highway Design Squad Leader)
Office: Anchorage
Application closes 7/8/20
https://www.governmentjobs.com/careers/alaska/jobs/2797968/engineer-architect-i-project-engineer-pcn-25-0886

Lounsbury & Associates

Position Title: Project Engineer I and II
Office: Anchorage, Wasilla, or Fairbanks
Email Resume to: info@lounsburyinc.com
http://www.lounsburyinc.com/careers/

presented an interim report to the BOD which included research on certification processes and programs offered in other fields and how aspects of these systems may be applied to credentialing within the civil engineering profession. The committee also reviewed the available certifications relevant to civil engineering practice, including those offered by ASCE via Civil Engineering Certification, Inc. (CEC) and by other organizations. Data gathered confirmed that no single existing certification is universally recognized as the qualifier of the appropriate knowledge, skills, and attitudes for the practice of civil engineering, including its specialty areas, at the professional level, and meeting the outcomes of the CEBOK3. The task committee has concluded that this may present an opportunity for ASCE to develop such a system, informed by the success of the medical profession's model. More recently, the task committee worked with a market research consultant to gather data from various stakeholders within the engineering industry related to the desirability, feasibility, and viability of a certification program. The results of this research are currently being evaluated and will be presented to the BOD before any decision is made on a creating a certification program.
For more information on the Engineer Tomorrow initiative and to schedule a presentation to your group, please contact ASCE's Manager of Professional Advancement, Jennifer Hofmann at JHofmann@asce.org.

Student Member Spotlight

Future Civil Engineer from the University of Alaska—Fairbanks

Name: Caitlynn Hanna

Age: 20

Grade: Junior at UAF

Hometown: Anchorage, Alaska

Year you became a member of ASCE: Freshman year Fall 2018

Describe why you joined ASCE: I am also a part of the Alaska Native Science and Engineering Program (ANSEP), one of their requirements to be apart of the program is to be involved with an organization that is representative of our major. An upperclassman in ANSEP and who I briefly went to high school with was a member of ASCE and the Concrete Canoe Co-Captain, encouraged me to join.

Describe a little bit about yourself and why you chose Civil Engineering as a major: My maternal grandfather was a Civil Engineer, as a young child he always encouraged learning. He said that, "there is always something new to learn every day, it is impossible not to." I participated in ANSEP as a high school student in their acceleration program, I took a college level math class at the University of Alaska Anchorage, we also worked on other projects pertaining to engineering. With ANSEP showing me that I can become an engineer, I was drawn to Civil Engineering coming into college.

Describe your involvement in the community: I have helped the Migrant Education, another program I was a part of in high school, they are dedicated to help students graduate high school. The program is for students who have moved across school district boundaries on their own, with, or to join a family member who participates in seasonal, temporary moves for: fishing activities, berry picking, agricultural industry, and/or logging industry. I have helped with an event at the local Barnes and Nobles, where we gave out gift cards and helped the children pick out books. With ASCE we also help with the Boys and Girls Club, helping throw a Halloween Party.

My favorite community/ASCE project was: Engineering Open House, for the following reason:

Engineering Open House takes place every year, the University of Alaska Fairbanks hosts the event in our engineering building. Professors and clubs occupy labs, hallways and classrooms with presentations and activities to teach young children the principles of math, science, and engineering. Concrete Canoe has a table every year where we have the children build 'canoes' out of tin foil and hold a contest to see which can hold the most fishing weights, along with building the tin foil boats we also show them our concrete canoe. I always enjoy working with younger kids. It is rewarding to see them learn and enjoy the process and to see the amazement when we hand them two concrete cylinders, one with 'normal' concrete and one that is our specially made lightweight concrete.

I have set the following goals for myself for the next 1 year: I am excited to see how the next year will play out. I am taking on more responsibility in the ASCE school organization, I will be the ASCE President and Concrete Canoe Captain. I want to increase the number of students in our club and increase participation. **5 years:** I will graduate college in two years, in five years I will be graduated and in the work force.

My parents (or other individual) have inspired me to: The woman in my life have taught me to be a strong independent indigenous woman. My family has taught me to be a proud indigenous person and to work hard. I have been involved in subsistence activities with my family all my life, it has instilled a respect of land, animals, and people, it is the Iñupiat Ilitqusiat (Iñupiat

UPCOMING EVENTS

ASCE ANCHORAGE BRANCH GOLF TOURNAMENT

WHEN: Tuesday, July 14, 2020 (Split-tees start at 7:00am – More to come)

WHERE: Moose Run Golf Course – Creek Course FEE*: $125 Entry Fee (per player) - Includes: Greens Fee and ½ Golf Cart

WHO: ASCE members, adult guests, and all members of professional engineering societies in Anchorage who would like to support ASCE's outreach programs.

WHY: To raise money for ASCE scholarships, UAA Student Chapter support, YMF support, and other Anchorage Branch outreach activities.

CONTACT DOUG SIMON AT DSIMON@HDLALASKA.COM IF INTERESTED

Values). Lorena Hegdal (Sis) is a retired Civil Engineer, she is from Nome and lives in Fairbanks. She has taught me a lot about being a successful woman engineer, one being that I need to give back to the programs that have helped me, like ANSEP and Migrant Education.

My favorite civil engineering course is, or has been: Statics and Surveying have been my favorite engineering courses. I like Statics because the basics are fairly easy to understand and it can be applied to more complex problems. I like seeing and manipulating the members in my mind, visualizing them. Surveying was fun to me, because I love being outside and taking the measurements.

My favorite extra-curricular activity is, or has been: Concrete Canoe has been my most fulfilling extra-curricular activity. We are a small team; everyone is involved in the creation of the canoe. As a freshman it was very valuable to be in a lab, mixing concrete, testing concrete, and writing our design paper. As a team of seven we placed third overall at the regional competition my first year.

The most challenging thing I have ever experienced is: My grandmother passed away during my freshman year of college, it was very difficult being away from my family and to focus on my studies. I had spent every summer with her and for awhile she had lived with us, my mother and I were her caregivers.

My greatest accomplishment to date has been: Receiving the Alaska Federation of Natives (AFN) Presidents Award, Lu Young Youth Leadership Award in 2019. It is a state wide recognition. The award is in honor of Lu Young and it is awarded to young native woman for their leadership skills and contributions in their community.

My ideal 1st Job in Civil Engineering will be: Ultimately, I want to be working for and improving Alaska's rural communities. I want to inspire and encourage all the youth to continue learning in any form possible, our cultural practices and hopefully within higher education. These coming years I will explore the possibilities of a civil engineering path and where I want to focus.

Life Member Spotlight

Name: Paul Taylor, P.E., P.Eng., F.ASCE

Hometown: Skagway, Alaska

Background

Where did you grow up? What brought you to Alaska?

I am about as Alaskan as one can get. I was born in Skagway, Alaska and earned all of my education in Alaska finishing with a Master of Civil Engineering degree at the University of Alaska Fairbanks. My father was stationed in Skagway during WWII. He and about a dozen other GIs returned to Skagway after the war and made their lives here.

What made you want to become an engineer? If you had to choose a different career, what would it be?

During the late 60s (my high school years) the Yukon economy was undergoing a significant mining expansion triggering the White Pass & Yukon to upgrade and modernize the railroad between Skagway and Whitehorse. The WPYR work included retaining wall strengthening, new bridges and a new tunnel, new track grading, new locomotive, new freight cars and a huge expansion of the port of Skagway. I spent time in the field with several consulting engineers during this effort (Brawner, Kirwen, T.A.M.S., Brown, Yasuda and Weston) and knew then, as I listened to them and read their reports and experienced the creation of their designs, that I wanted to be a civil engineer.

If I had to choose a different career it might be Business Administration.

What college(s) did you attend? Can you list your degrees, any honors and/or awards, and involvement in engineering organizations?

I attended the University of Alaska Fairbanks earing a Bachelor Degree with a Major in Civil Engineering followed by Master of Civil Engineering degree.

I lived in Juneau for several years working for AKDOT and attended ASCE meetings while there.

I have been a life time member of ASCE and the American Railway Engineering and Maintenance-of-Way Association.

Work/Professional Experience

What is your favorite part about being a Civil Engineer?

I enjoy a project where you are responsible for the complete delivery of a project. That being the business case, planning, design, permitting and construction and sometimes operation of a project. I include public projects where the public good, and the social license is effectively the best business case.

What skills do you find most valuable to focus on in your career?

I find the most valuable skill to be the very best "engineering economy" of a project where one uses almost all of the civil engineering fundaments to take you home to the best business case. I include public projects in this skill importance.

What drew you to your specific career path? If you could start your career differently, what would you do differently?

I have already mentioned the exposure to engineers working in Skagway improving the WPYR during my high school years made the largest impression on me to become a civil engineer.

There was no hesitation about the civil engineer calling. I have never doubted my choices when I look back at my career path

JOB OPPORTUNITIES

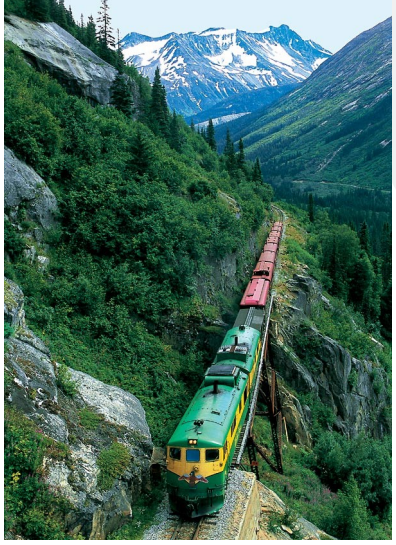


Photo courtesy of wypr.com

and my life's experience as an engineer.

What is the most challenging project, task, or role for which you were responsible? What lesson or skill did you earn from that experience?

There is no question the 1988 restarting of the White Pass and Yukon Route Railroad was the most challenging and the most rewarding task of my career. I can't say I was totally responsible but it sure seemed like it at the time. The railroad as you know was shut down completely in the fall of 1982 and did not turn a wheel for five years. At this time, I was Vice President Alaska Operations of White Pass's petroleum service business in Southeast Alaska. The railroad was being offered for scrap. All of it: Locomotives, cars, rail and ties. But beginning late in the year of 1987 we were able to put together a plan to bring the railroad back beginning with service over the most historic portion of track between Skagway and White Pass Station – the summit. In spring 1988 we first went to the cruise ship companies and tourism operators in Alaska to market the plan. The operators were behind us 100%. We negotiated new labor agreements, reopened the railroad shops, regraded washouts, repaired bridges, refurbished passenger cars and brought several locomotives back into running condition. We succeeded, re-opening the railroad in early May.

The rest is history. Today the White Pass Railroad is the world's most popular cruise ship shore excursion.

What was the project you felt had the greatest impact on your professional career?

In strictly engineering terms the project that had the greatest impact on my professional career was my position as AKDOT Asst. Project Engineer for construction of the Klondike Highway from Skagway to the Canadian Border for the years 1975 to 1978. I even worked with some of the very same consultants on the highway construction that I had worked with earlier on the railroad side of the White Pass canyon.

Looking back, what do you think was your greatest contribution?

I have to say the reopening of the WPYR was my greatest contribution. Without that accomplishment I don't think WPYR's dedication as an ASCE International Historic Civil Engineering Landmark on September 10, 1994 would ever have happened.

The designation was led by the Juneau ASCE branch in coordination with their Canadian counterparts.

Plaques are in located at the Skagway and Carcross railroad depots.

Did you have any mentors? Who or what did you learn from as you grew in your career?

I cannot say I ever had a mentor.

I did draw my learning and engineering wisdom from work associates and family members and I had a very good corps of professors at the University of Alaska Fairbanks.

Both of my sons are engineers. And I have two other close family members of their age who are engineers that I counseled. I have a grandson Wyatt Vrana who is a Junior at UAF studying to be a mining engineer – a fourth generation of family attending UAF as an engineer.

My wife Denise and I believe our daughter is the first female attorney raised and schooled in Skagway.

I have maintained a life long association with members of my civil engineering class, most of whom practice in Alaska.

ASCE

How/Why did you get involved with ASCE? Why did you choose to stay involved?

Getting involved with ASCE was as natural a career step as breathing. I have also been a life long member of the American Railway Engineering and Maintenance-of-Way Association.

How has ASCE impacted your work and/or what is your favorite benefit of your involvement?

In a word ASCE's impact to me, residing in a small community, is the flow of information. This information includes the ASCE magazine, insurance, liability, legal and continuing education offerings.

What has been your favorite ASCE event or experience since you got involved?

Collaborating with the Juneau branch of ASCE to dedicate WPYR as an International Historic Civil Engineering Landmark is by a very large margin the favorite of my ASCE experiences.

What advice would you give to young professionals in the organization?

Get involved with their community. Get on a board, attend meetings regularly and maybe run for an office

Personal Life

Favorite hobbies, sports, and interests outside of engineering?

Summer fishing with my grandkids in B.C. and the Yukon is very enjoyable for me. I have a leadership role and am very active in my church.

Other volunteer organizations or experiences that you'd like to share?

I have been a volunteer fighter, heavily involved in scouting (I have about 3 frostbite challenge patches) and have served on many community boards and commissions. I continue to remain involved in the port of Skagway.

SUSTAINING SUPPORTERS

Opportunity to become a sustaining support of the ASCE Alaska Section is open to become a sustaining supporter of Civil Engineer Alaska. Your support will help advance the following activities:

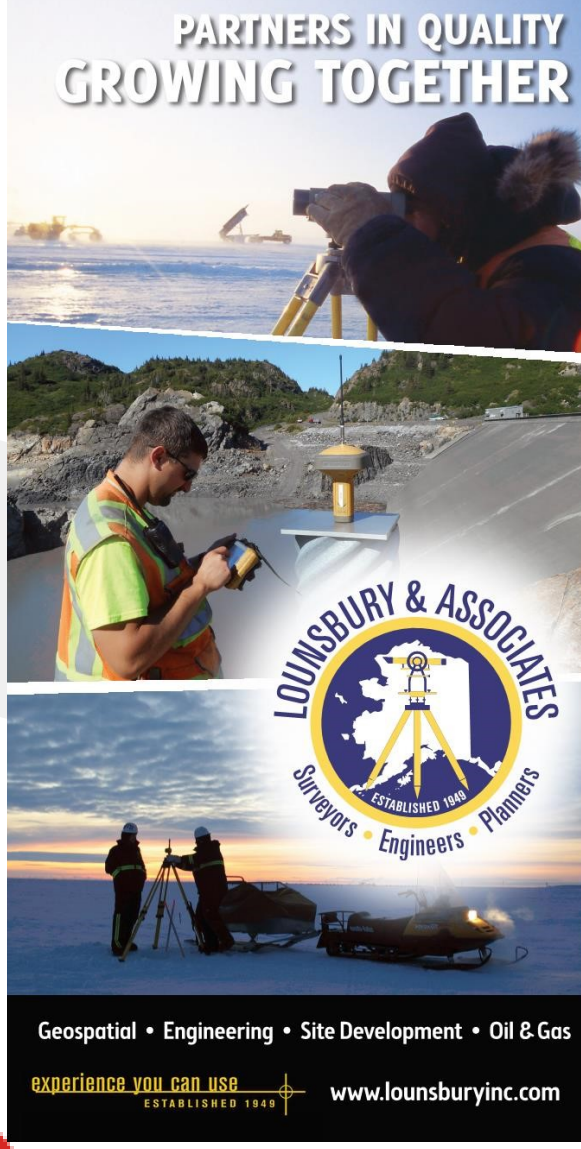
- **Dale Nelson Memorial Civil Engineering Scholarship**
- **Alaska Infrastructure Report Card**
- **Recognizing Civil Engineering Projects of Historical Significance**
- **Dream Big—Engineering Our World K-12 Outreach Efforts**
- **Annual Legislative Fly-In**

Your company logo and job opportunities with your company will be featured in this newsletter, which will be shared with our statewide membership, industry leadership, and our partner organizations via digital and social media.

Interested in supporting State-Wide ASCE efforts?

Email AlaskaASCE@gmail.com for more Information

SUSTAINING SUPPORTERS



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