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2009 – 2010 Officers

Sean Caraway, P.E.
SPU Materials Laboratory

Michel Bouchided, P.E.
CH2M Hill

Carlo Evangelisti, P.E.
AMEC Earth & Environmental

Sarah Morgan, P.E.
Golder Associates, Inc.

Bo McFadden, P.E., L.E.G.
GeoEngineers, Inc.

Ghada Ellithy, Ph.D., P.E.
Shannon & Wilson

John Bickford, P.E.
DBM Contractors, Inc.

MinJae Park, E.I.T.
AMEC Earth & Environmental

President
President Elect
Secretary
Treasurer
Membership Chair
Education Chair
Public Relations Chair
Webmaster
2009 – 2010 Events Schedule

The ASCE Seattle Section Geotechnical Group Education Committee planned a very active 2009 – 2010 season with a diverse group of geotechnical topics presented. Below is a summary of our activities for the 2009 – 2010 season:

Dinner Meetings

September 24, 2009
Recent Developments in Excavation Modeling and Monitoring
Dr. Youssef Hashash, University of Illinois at Urbana-Champaign (UIUC)

November 5, 2009
Lateral Resistance of Deep Foundations in Liquified Sand from Blast Liquifaction Tests
Dr. Kyle M. Rollins, Brigham Young University (BYU)

December 17, 2009
Banjo Bill Rock Catchment Basins
John Bickford, P.E., DBM Contractors

January 28, 2010
Beacon Hill Station and Tunnels – State of the Art Construction in Difficult Ground
Red Robinson, Shannon & Wilson and Dick Sage, Sound Transit

February 25, 2010
Aspects of Earthquake Resistant Design of Foundations
Dr. Michael Pender, University of Auckland New Zealand

March 25, 2010
Snoqualmie Pass I-90 Road Widening Project,
Randy Giles, P.E., WSDOT; Chuck Vita Ph.D., P.E., G.E., URS; Norm Norrish, P. ENG., P.E

Short Courses

November 12 and 13, 2009
Seismic Site Response Analysis
Speakers: Dr. Steve Kramer and Dr. Pedro Arduino

April 30, 2010
Geosynthetic Reinforced Reinforced Soil
Speakers: Dr. Bob Holtz and Dr. Jonathan Fannin

Spring Seminar

May 1, 2010
Geosynthetic Applications – New Developments & Case Histories
Speakers: Dr. Bob Holtz, Dr. Jon Fannin, Tony Allen, Dr. Stan Boyle, Rick Valentine, Roch Player, Barry Christopher
President’s Message

The ASCE Seattle Section Geotechnical Group is proud to present the 2010 edition of our annual publication, the Groundhog. The Groundhog presents updates from members of the local geotechnical community, information on the activities of the ASCE Seattle Section Geotechnical Group for the 2009 – 2010 year and information for our annual Spring Seminar and this year’s associated Spring Short Course.

The first order of business is to extend a hearty thanks to the dedicated people within our officer corps. Their continued hard work is what allows us to organize and host so many informative and fun events throughout the year. Our officers this year include: Michel Bouchiedid (CH2M Hill), President Elect; Ghada Ellithy (Shannon & Wilson), Education Chair; John Bickford (DBM), Public Relations Chair; Carlo Evangelisti (AMEC Earth & Environmental), Secretary; Sarah Morgan (Golder Associates), Treasurer; and Bo McFadden (GeoEngineers), Membership Chair. Many of you within the geotechnical community know and work with these folks, so please thank them for their efforts when you have an opportunity. Each year we have many other people who step up to help us with organizing and planning our short courses, dinner meetings, and our spring seminar, but I would like to give recognition to four members who have been consistently involved with these activities over the last several years. Mike Lach (CDM), Kami Deputy (Kleinfelder), Ian Lavielle (Kleinfelder), and Tyler Stevens (Shannon & Wilson) have assisted us in a variety of roles and I know all of the officers have greatly appreciated their help. Everything that we do is volunteer based, so any time that any member of the group gives to help with our activities, including civil engineering student field trips and public meetings (landslide sessions and others), is truly welcomed and appreciated. Just about all of what we do would simply not be possible without the extra help that we get from other members of the geotechnical group.

Our events for this year include the fall short course from last November on Seismic Site Response. This two-day course was presented by Drs. Steve Kramer and Pedro Arduino of the University of Washington. Steve and Pedro are familiar faces for many of us. We often see them at other group events. We had an attendance of 40 people at the Seismic Site Response short course. I know that the fall short course attendees found the content informative and the instructors interesting and witty. In December a field trip, organized by John Bickford (our Public Relations Chair), was conducted for the SR-519 project near Safeco Field. For the third consecutive year, we are organizing our one-day Spring Short Course in conjunction with the Spring Seminar. The Spring Short Course will be held on Friday, April 30, 2010 and the topic will be Geosynthetic Reinforced Soil. The short course will be given by Drs. Bob Holtz and Jon Fannin. The Spring Seminar will be on Saturday, May 1, 2010 and the topic will be Geosynthetic Applications, New Developments and Case Histories. In addition to planning and holding our short courses, the field trip and our Spring Seminar, we have organized six dinner meetings, including our upcoming final dinner meeting of the year on March 25, 2010. This will be the second joint meeting with AEG. Our January dinner was a joint meeting between our group, AEG and ASCE Seattle Section.

Our most significant issue for debate this year has been our ongoing conversation regarding whether to become a Geo-Institute Chapter. After attending a Geo-Institute conference last summer in Denver, Colorado, I believed that we needed to bring this topic to the forefront so that we could make an informed final decision. The majority of our membership has not been particularly vocal about the issue, however a few of our members have provided valid reasons to favor and oppose making this transition. Bo McFadden, our Membership Chair, has done an excellent job in assembling information and presenting it to the officers for discussion and evaluation. The consensus, at the current time, is to first develop a set of our own by-laws, which
will provide autonomy and an ability to transition back to our current status if we move forward with becoming a Geo-Institute Chapter and find that this is not in the group’s best interests.

The ASCE Seattle Section Geotechnical Group continues to be financially solid, despite the economic downturn. The economic situation over the last year appears to have contributed to slightly lower attendance at our short courses and last year’s Spring Seminar, however the group remains in a strong financial position.

I encourage any of you within the group who has an interest in being more involved with our events to talk to any of our officers about how to contribute. We certainly recognize that many of us have very busy schedules, but if you have been meaning to be more active please do not hesitate to ask where you can help.

Thank you all for your continued support of the geotechnical group. I hope to see as many of you as possible at the final dinner meeting and at our Spring Short Course and Seminar.

Sean Caraway, P.E.
President
Membership Committee Update

Membership has been growing consistently over the past few years and has held steady over the last year, with our current membership at 610. This membership represents significant growth in local firms as well as new company moves into the Puget Sound area during past two to three years. A primary focus of the Membership Committee is to keep up with membership changes, email address changes and solicit active involvement of businesses practicing in the Puget Sound area market. Anyone wanting to be included on the Geotechnical Group’s email distribution list, needing to update their email address, or provide names of potential new members should contact the chair of the membership committee, Bo McFadden PE, LEG at bmcfadden@geoengineers.com.

In addition, the Membership Committee has a subcommittee which recognizes meritorious service by members whose past efforts on behalf of the Geotechnical Group deserve recognition. These awards are made annually at the Spring Seminar. Nominations for the Distinguished Service Award should be addressed to Bo McFadden at bmcfadden@geoengineers.com by March 1, 2008.

This past January, during our joint meeting with the Seattle Section and AEG, it was my pleasure on behalf of the Seattle Geotechnical Group to present Distinguished Service Awards to two of our colleagues, Al Macnab and Bill Laprade. A brief summary of their accomplishments is provided below.

**Alan Macnab, P.Eng. | Business Development Officer w/ Condon-Johnson**

Over the course of his 30-plus-year career Alan, Macnab has worked for several firms but joined Condon-Johnson & Associates (CJA) in 1994 as their District Manager of the Seattle office In 2001 he became the business development officer for all four CJA regional offices—a position he still holds while spending a bit more time on the golf courses these days. Alan’s professional focus has been on deep foundation systems—specifically drilled shaft and earth retention systems—for projects in the Pacific Northwest, California, Alaska, Hawaii, the Mountain States, the northeastern United States, and eastern and western Canada.

Alan is a Past President of the Geo-Institute and remains involved with the organization on their Board of Direction. He is also a Past President of the Association of Drilled Shaft Contractors (ADSC), has served on various committees for that organization and the Deep Foundation Institute (DFI) and currently co-chairs the Washington State DOT/ADSC Task Force.

Alan has lectured frequently on issues related to his practice for industry and academic groups, and has written a number of papers on earth retention and drilled shaft issues for publications such as the American Society of Civil Engineers (ASCE) Journal of Geotechnical and Geo-Environmental Engineering. He is also the author of Earth Retention Systems Handbook, published by McGraw-Hill (2002).

**William T. Laprade, LEG | Sr. Vice President – Shannon & Wilson**

With more than 36 years of experience, Bill Laprade is an expert in Seattle/Western Washington geology and the interpretation of subsurface information. He is a Senior Vice President at Shannon & Wilson and has been with the company for all 36 years of his career. He is licensed as a geologist and engineering geologist in Washington and Oregon, and is the incoming chair for 2010 on the Washington State Geologists’ Licensing Board. He
is a Fellow of the Geological Society of America, Past President of the Northwest Geological Society, former Seattle University Adjunct Professor, and a former officer of the Association of Engineering Geologists. Bill has been active for many years as the chief fundraiser for Water for People in the Northwest section of the American Water Works Association.

Through his work on large public works projects in glacial soils in the Seattle area and in Boston, Bill has been recognized as one of the leading experts in glacial history, distribution of glacial deposits, and the behavior of glacial soils during construction in the United States, particularly in the Puget Sound region. Bill co-authored with Dick Galster, “The Geology of Seattle, Washington,” which has been a staple for the understanding of the engineering geology and engineering properties of Puget Lowland soils since its publication by AEG in 1991. Bill’s expertise in the identification and geologic interpretation of landslides is reflected in his leadership as the prime author of the Seattle Landslide Study for Seattle Public Utilities, which received the 2001 CECW (now ACEC Washington), Engineering Excellence Honor Award and National Recognition Award by the American Consulting Engineers Council. The study is an invaluable tool for many of our design professionals in Seattle, and the City’s landslide capital program is based in large part on the results of the study.

As an expert, Bill is often called on to make public presentations at City of Seattle-sponsored landslide meetings, and before other civic and professional groups in the Puget Sound. His efforts have contributed greatly to elevating the stature of geologists, from information-gathering, to that of integral members of the geotechnical design team. For these and many other notable accomplishments too numerous to describe tonight, I am proud to honor Bill Laprade on behalf of the Seattle Geotechnical Section with our Distinguished Service Award.

Bo McFadden, P.E., L.E.G.
Membership Chair
Geosynthetic Reinforced Soil
1-Day Short Course, April 30, 2010

Prof. Bob Holz, University of Washington
Prof. Jon Fanuiel, University of British Columbia

The Geotechnical Group is pleased to announce their 1-day short course on “Geosynthetic Reinforced Soil” presented by Prof. Bob Holz and Prof. Jon Fanuiel on Friday, April 29th, 2010 at the Red Lion Hotel, at 11211 Main Street, Bellevue, Washington 98004.

The Short Course will cover the following topics:

- Material properties (BH/JF)
- tensile strength
- manufacturer test data
- soil-geosynthetic interface strength
- durability issues
- Case Study I (BH)
  - Ranier Ave. Wall, Seattle
- Design methodologies (JF/BH)
  - Overview of external and internal stability analysis in design (FHWA, AASHTO, NCMA, BS 806)
- Case Study II (JF)
  - MCF Sliped Wall, Oslo
- Design guidelines (BH/JF)
  - allowable tensile strength
  - required tensile strength
  - vertical spacing of reinforcement
  - length of reinforcement
  - seismic loading issues
- Discussion and course summary

27th Annual Spring Seminar
Geosynthetic Applications
New Developments & Case Histories

Registration and Site Information
1. Seminar registration includes morning and afternoon refreshments, a box lunch, and a bound seminar program containing a CD with the seminar proceedings.

2. Registering as soon as possible is advised. Registration will be on a first-come, first-served basis. Day-of seminar registration will be accepted only if space is available.

3. Registration forms must be postmarked or received electronically by April 23, 2010, to ensure you have a seat. Refunds will not be provided. If you are unable to attend, you may send another person in your place.

4. The seminar will be held in the Husky Union Building (HUB) Auditorium on the University of Washington (UW) campus in Seattle, Washington. Parking and maps are available on campus - check in at the gate upon arrival. A map of the campus can also be found online at www.washington.edu/home/maps/

5. Due to a building event taking place on May 1st, The Mount Lake Bridge (University Bridge) will be closed between 10:00 AM and 4:00 PM. Please plan your arrival and departure accordingly.

6. For additional information, please contact:
   Michel Bouchard at (425) 333-3386, or
   e-mail: michel.bouchard@ch2m.com
   Web site: http://www.seattlegeotech.org

Saturday May 1, 2010
8:00 AM – 5:00 PM

Sponsored by:
ASCE Seattle Section
Geotechnical Group

www.seattlegeotech.org

The University of Washington provides equal opportunity in education without regard to race, color, creed, national origin, sex, sexual orientation, gender identity, age, marital status, veteran status, disability or status as a qualified person with a disability or status as a service member or veteran or member of their covered family members, or their receipt of other protected benefits under federal law. To request disability accommodations, contact the Office of the ADA Coordinator at least two days in advance of the event: (206) 543-4575 (voice), (206) 543-4574 (TDD), TTY (211), 1-877-833-8884 (voice) or 7-1-1-WASH (TTY).
Registration and Payment

1. You may register online via our website: www.seattlegeotech.org. We accept electronic payment (Paypal credit card).

2. If paying by check make payable to “ASCE Seattle Geotechnical Group” and mail your check and this form to:

   ASCE Seattle Geotechnical Group
   2010 Short Course/Spring Seminar
   c/o Ghada Elhity
   Shannon & Wilson, Inc.
   400 N 34th Street, Suite 100
   Seattle, WA 98103-8690

Name

Firm/Agency

Mailing Address

City/State/Zip

E-Mail Address:

Daytime Phone (Please indicate area code)

3. Spring Seminar & Short Course Fee
   Check applicable box (boxes)

   a. Short Course (Bellevue)
      □ $25 regular non-student registration
      □ $75 student registration

   b. Seminar (UW HUB)
      □ $45 regular non-student registration
      □ $45 student registration

   □ $45 Extra Seminar program and CD

For Office Use Only

Date Rec’d: ___________________________ Amount: ___________________________
Check No. Date: ___________________________ Payee: ___________________________

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Spring Seminar Description

The focus of the seminar this year will be on “Geosynthetic Applications” and will be presented by prominent speakers from academia and practice. The presentations will include history of geosynthetic reinforced soil, new developments in soil reinforcement, filtration, geosynthetics in pavement design, and several case studies from the northwest.

In addition to the presentations, the seminar will include award presentations, panel discussion, exhibitors display, and hosted lunch and breaks.

Seminar attendees will be eligible to receive 0.8 Continuing Education Units (CEU) or 8 Professional Development Hours (PDH). For more information visit www.seattlegeotech.org.

Seminar Schedule and Speakers

Saturday, May 1st, 2010 Spring Seminar

7:30 – 8:00 Registration

8:00 – 8:10 Opening and Introduction

8:10 – 9:10 Geosynthetic Reinforced Soil – From Experimental to Familiar (4th Terzaghi Lecture), Bob Holst, Ph.D., P.E.

8:10 – 10:10 Geotextile Filters in Civil Engineering Applications, Jon Fannin, Ph.D., P. Eng.

10:10 – 10:40 Morning Break

10:40 – 11:25 Design and Performance of Two Block Faced Geosynthetic Walls Up to 36 ft High, Tony Allen, P.E.

11:25 – 12:10 Poor Performance of an Embankment Constructed on Soft Ground, Stan Boyle, Ph.D., P.E.

12:10 – 1:00 Lunch Break

13:00 – 13:15 Award Presentation

13:15 – 14:00 Assessment of the Performance of Mechanically Stabilized Earth Retaining Walls, Rick Valentine, P.E.

14:00 – 14:45 Reinforced Soil Slope Structures on the I-405 Renton Stage 2 Design-Build Project, Rach Pelleu, P.E.

14:45 – 15:15 Afternoon Break

15:15 – 16:15 Geosynthetics in Mechanistic Empirical Design of Paved and Unpaved Roads, Barry Christopher, Ph.D., P.E.

16:15 – 16:45 Past Predictions of Geosynthetic Developments, Dr. Holst & Dr. Christopher

16:45 – 17:45 Reception and Social Hour

Morning refreshments, lunch, and coffee breaks will be provided.

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ASCE Seattle Section Geotechnical Group – 2009-2010 Officers

Sue Carwile, PE
President

Michel Brouillet, PE
President-Elect

Carlo Fasano, PE
Secretary

Sarah Morgan, PE
Treasurer

Becky Meeder, PE, LCG
Membership Chair

Chad Killingsworth, P.E.
Education Chair

John Bickford, PE
Public Relations Chair

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Charitable Donations

The ASCE Seattle Geotechnical Group is fortunate to be able and to donate to various charities associated with our profession each year. Over the last year, we made two significant donations. The first was to the local chapter of Engineers Without Borders. Last August, our group presented them with a check for $5,000. We plan on having a representative from EWB attend one of the remaining dinner meetings and briefly describe the impact our donation had on project(s).

Our second donation was presented last December to Dr. Kramer and Dr. Arduino of the University of Washington. This $2,000 donation was applied to their research projects associated with Civil Engineering Graduate Program. As many of you know, both Dr. Kramer and Dr. Arduino are very active participants in our geotechnical community and we are privileged to help fund their valuable research.

We are always interested in hearing about other non-profit organizations associated with geotechnical engineering profession. If you are aware of an organization, please let one of our officers know about it.
Local Firm Summaries

ASCE Seattle Section Geotechnical Group would like to thank the following companies for volunteering to submit articles for the 2010 Groundhog publication. The Groundhog is published to inform group members and others of the group’s achievements, recent activities, goals, changes in the group, and other significant issues in the geotechnical community. Each local organization represented by the group’s membership is invited to submit a brief article summarizing their organizations services and trends over the past year, plans for the coming year, changes in the organization and promotions.

The company articles are arranged within the Groundhog publication in alphabetical order.

Geotechnical Group

The AMEC Geotechnical Group had a very successful 2009 with a variety of new and ongoing projects including waterfront developments, community colleges and K-12 schools, and transportation and infrastructure projects. We look forward to another busy year in 2010.

In 2008, Geomatrix merged with AMEC and became AMEC Geomatrix adding significant experience in geotechnical, environmental, and water related disciplines. AMEC Geomatrix continued to operate under this name through 2009. In 2010, AMEC Geomatrix will become fully integrated into AMEC Earth & Environmental and fully adopt the AMEC name.

Beginning in 2010, Principal Jim Dransfield took over as head of the Geotechnical group. Jim has been managing several local municipal and commercial projects, with occasional projects outside the northwest, including Guam, Hawaii, Japan, and Puerto Rico.

Henry Brenniman, Pat Reed, Konrad Moeller, Lisa Erickson, and Bill Lockard continued traveling to Canada to support our Calgary office with several oil sand projects in northern Alberta. Much of this work is expected to continue throughout 2010.

Todd Wentworth has been working on a variety of projects including new schools, roadway improvements and some commercial developments. Some highlights have included: a preliminary study for Snohomish County to stabilize the landslides along a river meander in order to improve salmon habitat; landslide stabilization projects for the City of Seattle; and designing stormwater infiltration systems for several projects. He has been enjoying commuting by bike to the office along the Sammamish River Trail a couple of times a week.

Steve Siebert and Carlo Evangelisti continued to work on a variety of project for local municipalities, school districts, and private developers. Steve managed the geotechnical design for a casino and hotel resort in the US Virgin Islands, provided third party review for developments in critical areas in the Puget Sound area, and continues to manage multiple ongoing commercial and retail projects at Issaquah Highlands. Carlo continued managing the geotechnical design for several municipal projects that included aquatic centers, sewer and stormwater lines, and roadway improvement projects.

Minjae Park has been busy working with all of our engineers on a wide variety of projects, gaining valuable experience both in and out of the office. Minjae has been involved in deep foundation projects such as Seacrest Floating Dock and Pile Replacement and Anchor Cove Marina Breakwater Design. He served as the Webmaster for ASCE Seattle Section Geotechnical Group and developed the new website.
2009 proved to be one of the busiest years eight-year-old Aspect Consulting’s geotechnical staff has experienced since the firm’s 2001 inception. With a reputation as a leader in providing detailed stratigraphic analyses, engineering geologist Dave McCormack applied his understanding of the region’s geologic complexity on two major regional infrastructure projects. Continuing the geologic and hydrogeologic analysis he completed for Sound Transit’s University Link Light Rail alignment, Dave led the exploration, geologic / hydrogeologic analysis, and reporting for North Link early work with the NTP team, supported by Tyson Carlson, Matthew von der Ahe, and Amy Tice. Dave also led Aspect’s team in completing field and geotechnical data reporting programs for the SCL Gorge Second Tunnel Design (on Jacobs Associates team). The two-mile rock tunnel project kept our field staff—geologist Annaliese Eipert and hydrogeologists David Rugh and Seann McClure—busy most of the summer and into September with helicopter-supported and underground core drilling and rock testing.

In 2009, Aspect also provided geotechnical engineering support for some technically challenging or otherwise interesting projects including an earthquake drain system for Cleanscapes CNG facility in south Seattle, the Theater Commons development at the Seattle Center; preliminary design of SPU’s Thornton Creek Confluence project, SPU’s Madison Valley drainage project with MWH, and Quendall Terminal’s site redevelopment in conjunction with KPFF.

With a newly minted MS in geotechnical engineering from OSU and several years’ experience with Portland area firms, geotechnical engineer Andy Holmson joined the firm in June, and was immediately kept busy with geotechnical engineer John Peterson providing geotechnical support for Kitsap County and Otak on the Southworth Bridge.

Senior staff assumed additional responsibility in corporate leadership as associate Dave McCormack and senior associate John Peterson joined the firm’s ownership group. Both Dave and John have been with the firm since its inception and have been leaders of Aspect’s growing geotechnical practice.

Even in the midst of one of the firm’s busiest years, Aspect staff made time for recreational sport. The annual winter ski day, this year at Mt. Baker, saw establishment of its autumnal counterpart with a golf day in September. Three Aspect bicycling teams competed against each other and area A/E firms in the course of the 2009 Group Health Commute Challenge. Combining work with recreation, our geotechnical staff provided shoring, ground improvement, and dewatering recommendations during the big geoduck dig at this year’s summer picnic near Kingston. A co-rec team has been battering its way through the D-division in indoor soccer all winter.
AESI would like to wish everyone a happy New Year! 2009 was a challenging yet rewarding year. Though our usual mix of residential development has dropped off we continue to provide support for numerous schools and commercial projects throughout the Puget Sound. Add to this, a variety of infrastructure work we continued to keep busy throughout the year.

At the Kirkland office, we start out the year with change. Bruce Blyton has now assumed the role as President of AESI. Bruce has been with AESI for over 20 years as principal engineer and will continue to take care of his many loyal clients. However new challenges will await as he digs in to continue the efforts that former president Ron Parker has established. Ron will continue in a less demanding role maintaining his current business relationships and establishing new ones. Thanks Ron.

Due to the overwhelming support of the school levies we anticipate a busy summer throughout the Puget Sound. Many schools will be undergoing change and new ones will take shape this summer and in the coming year. Under the direction of Curtis Koger we continue to advocate Low Impact Development strategies in the site development arena. We currently have representatives on technical committees and on the seminar circuit helping to shape the future in the world of infiltration and site development.

Our Everett office continues its excellent service on the north end with Chuck Lindsay at the helm. Ed Garcia is serving as the secretary for the Professional Consultants of Snohomish County (PCSC), who has been helping Snohomish County EDDS streamline their changes to the deviation process.

Our Tacoma office continues to maintain a steady workload under the guidance of Maire Thornton, with a good mix of private and public projects. We continue to work on the military bases and have expanded our horizons to an ever growing presence on the peninsula.

Notable AESI projects in 2009 include more redevelopment in the SODO neighborhood, the redevelopment of Issaquah and Skyline High schools, continued design on the redevelopment of Park Place in Kirkland, and new buildings in the downtown corridor.

Looking forward to 2010, we see new challenges with the shifting economy and sidelining and restarting of projects. Hopefully, we can all carry on through the next year as we start to see the light at the end of the tunnel in this slow down in the economy. AESI wishes all of the engineering, geology, and environmental community lots of success in 2010!
Camp Dresser & McKee, Inc. (CDM), a consulting, engineering, construction, and operations firm delivering service to public and private clients worldwide, is represented in the Northwest by offices in Bellevue, Seattle, Portland, and Helena and Libby, Montana.

John Newby, P.E., leading our Geotechnical Services Division in the Western United States out of the Bellevue office, provided his expertise for alternative analysis and concept engineering for several LA Metro tunnels and for the seismic retrofit of the Harry Tracy Water Treatment Plant in San Francisco. Joe Souther, P.E., leading the geotechnical group in Bellevue, worked on the geotechnical design for a new gold mine in Montana, the construction of a fishtrap structure in the Baker River, and several environmental remediation projects including containment measures by slurry walls. Ulf Gwildis, L.E.G., in his role of CDM’s construction services manager for the Brightwater Conveyance System project, can look back on another busy year. The upcoming break-through of the West Contract Tunnel at the 200 ft deep Ballinger Way Portal shaft will complete the second of four main tunnel drives while the Central Contract tunnels continue to pose a technical challenge. Mike Lach, P.E., in addition to his tasks at Brightwater, worked on seismic analyses and on the geotechnical design for the closure of former mine sites in South Dakota and Idaho. Karen Irby-Smith, while managing our soils laboratory and upgrading it for handling and testing of asbestos-contaminated soil samples, was also busy with projects for the Highline School District. Farid Sariosseiri, PhD, in addition to being kept busy with Brightwater, worked on the Portland Airport de-icing system enhancement project monitoring and analyzing ground deformation during large-scale pre-loading. Morris Wainwright provided civil design services for several water and wastewater conveyance projects and for the Machado Lake Ecosystem Rehabilitation Project.

Despite the worldwide economic slowdown delaying several major projects, CDM’s Geotechnical Services Division had a successful year. In addition to the resources provided by our geotechnical professionals in fourteen states, we can turn to the internationally acknowledged expertise of our affiliated colleagues in Germany in specialty fields ranging from special underground construction technologies like ground freezing to innovative interdisciplinary approaches like coupling geothermal energy concepts with infrastructure development and expansion.

We continue seeking to add geotechnical professionals to our team working on numerous technically exciting and challenging projects throughout the Western U.S. and beyond.
CH2M Hill would like to welcome Samuel Brancheau to the Geotechnical Group. Sam obtained his BS in Environmental Geology from Western Washington University and worked for 2 years at Merit Engineering before joining CH2M HILL. We also congratulate Joel Theodore for taking over as the new Geotechnical Team Lead for the Seattle office. King Sampaco, who was the Group Leader for the past 3 years, transferred to our Panama office in the middle of 2009. Don Anderson served as the interim Geotechnical Group Leader until a new person was identified for the role. We would also like to congratulate Kimberly Mugg for having a baby boy in December 2009. Kim is currently on maternity leave and will be joining our Sound Transit U-Link team in March of 2010.

Design-Build opportunities continue to dominate much of our workload. In early 2009, CH2M HILL, through a joint venture with Gary Merlino, was selected for WSDOT’s I-405 Corridor Design-Build Project as part of the Renton Stage 2 widenings. The project includes adding a new lane in each direction on I-405 from SR 167 to SR 169, reconstructing the Benson Road Bridge over I-405, and building a new half-diamond interchange at SR 515 (Talbot Road) that helps reduce congestion at nearby interchanges with SR 167 and SR 169. Roch Player serves as the geotechnical task lead on the project and is supported by Todd Valentine, Kimberly Mugg, and Joel Theodore.

Our CH2M HILL geotechnical group is also supporting design and construction of the Tacoma/Pierce County HOV Project. Karen Dawson is the geotechnical functional manager for the Program. This project consists of providing preliminary through final geotechnical design to add HOV lanes and improve access to I-5 between the King County Line and SR-16. CH2M HILL geotechs, which include Don Anderson, Ha Pham, and Sean Shin, are providing design support for replacement of the I-5 Puyallup River Bridge, seven additional bridge widenings or replacements, and numerous cut and fill walls. Technical challenges have included site specific seismic response studies using DMOD and the results of cyclic direct simple shear testing and design of stone column and soil-cement column ground improvement, surcharging and settlement monitoring, two-stage structural earth walls, and trenchless pipe installations with low cover and poor ground, as well as the more common soil nail walls, soldier pile tie-back walls, vendor-supplied structural earth walls, drilled shaft foundations, and spread footings.

Karen Dawson is also the geotechnical task lead on M Street Grade Separation Project in Auburn. The geotechnical work includes staged construction of a shaft-supported railroad undercrossing, soldier pile tie-back walls, soil nail walls below existing bridge footings, and trenchless utility crossings. All elements of this small but challenging project are typical of many of our jobs for local agencies.

Don Anderson is the geotechnical manager for the Sound Transit (ST) Eastlink Light Rail project in which CH2M HILL is teamed with several subcontractors to provide environmental documents and conceptual and preliminary engineering designs for high capacity transit system located in the 17-mile east corridor of the ST East King County taxing district (downtown Seattle, Mercer Island, Bellevue, Overlake, and Redmond). Michel Bouchédid is the geotechnical field program manager and is supported by Mark Thompson, Sam Brancheau, and Sandra McGinnis. Joel Theodore is the design manager and is supported by Mark and Ben Hoffman of our Portland office.
Jen Schaffer continues to provide support to CH2MHILL’s Nuclear Business Group on Progress Energy’s Combined Operating License Applications to the NRC for new nuclear units in North Carolina and Florida, in addition to providing support to various SEA office projects (Tacoma, Eastlink).

Our senior staff, Dr. Don Anderson and Ken Green, also serve as senior consultants and mentors to our local staff. Don was active in ASCE 7-10 seismic code update, work with the TRB GeoSeismic Foundation Committee, and planning for the 2010 9th US National and 10th Canadian Conference on Earthquake Engineering. Don also was a presenter for the TRB-sponsored webinar LRFD for Seismic Design of Slopes and Retaining Walls.

Condon-Johnson & Associates, Inc. (CJA), is a diversified heavy civil engineering construction company whose core competencies included Drilled Shafts, Anchored Earth Retention, and all forms of ground modification (grouting, stone columns, soil mixing, jet grouting, etc). Headquartered in Oakland, CA, CJA has four offices (Seattle, Oakland, Los Angeles, and San Diego). CJA undertakes work as both a subcontractor and as a general contractor.

Given the tough state of the economy, the Seattle Office of CJA took a conservative road in 2009. CJA completed four (4) projects. They were:

- Drilled Shafts @ 244th Avenue - Ceccanti Construction - City of Sammamish
- Compaction Grouting @ Simonds Road – Condon-Johnson - King County
- Compaction Grouting/Stone Columns @ Columbia WWTP - Stellar J - City of Portland
- Compaction Grouting @ Eastside CSO – Kiewit/Bilfinger Berger – City of Portland

One major project that is currently under construction is Contract U-215, the I-5 Undercrossing at Olive Way for Sound Transit being undertaken as a general contractor.

CJA has two added contracts for 2010 in addition to U-215. CJA has a major subcontract for Traylor/Frontier Kemper JV to install the slurry walls at the University Station (Contract U-220). The Sound transit project is being undertaken by CJA as a joint venture with Nicholson Construction. Minor works have already begun but the majority of the work will not start until July 2010. In addition, CJA will be providing Chemical Grouting on the Willamette CSO for Michaels Tunneling on their contract for City of Portland.

CJA has added two fulltime employees to its Seattle roster. Russ Campbell has taken the role of General Superintendent while Jeff Neal has come aboard as a Project Manager.

Recently Alan Macnab was recognized by The International Association of Foundation Drilling (ADSC) with its President’s Award for work on the 2010 version of the FHWA Drilled Shaft Design and Construction Manual. In addition Alan was honored by the Geotechnical Group of ASCE – Seattle Section with its Service Award.
CJA remains committed to service to its clients and the engineering community. For help with costing, budgeting or conceptual design, please contact Eric Dybevik (206)-575-8248, edybevik@condon-johnson.com, Dominic Parmantier dparmantier@condon-johnson.com, or Leo Stapleton, lstapleton@condon-johnson.com.

Cornerstone
Geotechnical, Inc.

We are proud to announce that in November 2009, Cornerstone Geotechnical merged with Robinson Noble, Inc, a long-established professional geosciences consulting firm based in Tacoma, Washington. This opportunity has allowed us to greatly expand the scope of our technical capabilities and to do so with other experienced professionals. In addition to our geotechnical engineering and construction testing services, we now provide a wide range of environmental and hydrogeologic services out of both our Woodinville and Tacoma offices.

Chuck Couvrette, PE, co-founder of Cornerstone Geotechnical with over 30 years of experience in the Puget Sound area, is a Principal Engineer with the firm. Rick Powell, PE, former President and co-founder of Cornerstone Geotechnical, is also a Principal Engineer. With over 20 years of professional engineering and construction experience, Rick serves as the Geotechnical Division Manager for Robinson Noble.

We are excited about the professional and technical prospects this transition presents, and we are looking forward to continued growth in 2010.

Donald B. Murphy Contractors (dba DBM Contractors, Inc.) is an industry leader in heavy civil and specialty geotechnical construction projects. With over 60 years of experience, DBM has earned a reputation for performing difficult and diverse design/build projects on highway systems, as well as commercial and industrial projects throughout the western United States, including Alaska and Hawaii.

Despite the challenging economy in 2009, DBM was successful in sustaining a wide variety of projects. For private developments, DBM was involved with the Two Newport Office Building and the Vulcan Amazon Block 34 project. Regarding medical facilities, DBM was involved with the 5350 Tallman Building (Swedish Medical Center) and is currently involved with the expansion of the UW’s Medical Center.

Public Works projects, however, dominated our year. Some of the projects we were involved with included the SR501 Ridgefield Interchange, Hylebos Bridge Rehabilitation, and the I-5/SR16 Nalley Valley Interchange. At the Pike Place Market, DBM was selected as the General Contractor for the Phase 1b Renovation. Our scope of work included temporary earth retention, excavation, miscellaneous utility improvements and interior demolition and seismic retrofits.
DBM is happy to announce the addition of Ryan Thody to our staff. Ryan is our newest Design Engineer and comes to us from a local structural engineering consulting firm. Ryan has over three years of design experience and will be responsible for the design and coordination of all of our design/build endeavors.

2009 was also the first full year for our newest geotechnical services; Ground Improvements and Dewatering. Under Ground Improvements, DBM was responsible for the design and construction of stone column ground improvement at the Department of Information Services’ new facility in Olympia, WA. This project included over 2,100 each stone columns. DBM was also responsible for numerous dewatering projects that varied from deep well systems to Underground Injection Control (UIC) Wells.

DBM continues to be active in the advancement of the geotechnical construction industry through our participation in the ADSC, DFI and ASCE. We want to thank all of our project partners for a successful 2009 and wish you all a safe and prosperous 2010.

GeoEngineers is ringing in 2010 with exciting projects, staff promotions and continued company growth. In 2009, Engineering News Record ranked GeoEngineers in the top 200 design firms nationally. In addition, Puget Sound Business Journal ranked the firm fifth largest in the region for environmental services—its highest rank ever in the category.

The American Council of Engineering Companies (ACEC) Washington Chapter recognized GeoEngineers and teaming partner Ground Support, LLC, with its Best in State Award for Original or Innovative Application of New or Existing Techniques for the 1918 Eighth Avenue high-rise development in Seattle. The project won for its innovative two-stage shoring design that enabled the project to proceed when traditional tieback anchors were not available. GeoEngineers also received two Bronze Awards for its Knapp-Wham Diversion Improvement and Hazel’s Creek Regional Stormwater Facility Feasibility Evaluation projects. In addition, the firm received a Grand Award for Engineering Excellence in the Water Resources category from the ACEC Missouri chapter for a geotechnical project in Branson, MO.

In addition to these projects, the firm worked on a number of large projects in the Puget Sound area and across the country this year, including the former Scott Paper Mill cleanup for the Port of Anacortes, I-405 widening project in Bellevue and the King County Housing Authority Greenbridge Hope VI Redevelopment in Seattle. Other major domestic projects included the Enterprise Acadian Haynes Extension pipeline and I-49 North projects in Louisiana and the Fayetteville Express Pipeline from Arkansas to Mississippi. In addition to our U.S. projects, GeoEngineers worked on a number of projects around the world, including Vietnam, Panama, Costa Rica, China, and Argentina.

GeoEngineers is proud to announce the following promotions for Puget Sound geotechnical engineers in 2009: Dan Campbell, COO (Seattle); Braydan DuRee, Staff Engineer 3 (Everett); Mackenzie Hanks, Staff Engineer 2 (Tacoma); Morgan McArthur, Staff Engineer 3 (Tacoma); Aaron McCain, Senior Engineer 2 (Bellingham); Calvin McCaughan, Engineer 2 (Tacoma); Lyle Stone, Engineer 1 (Tacoma); and Dennis J. Thompson, Senior Engineer 2 (Tacoma).
Finally, we are proud of Bo McFadden, PE, LEG, (Seattle) for his contributions as ASCE Seattle Section Geotechnical Group Membership Chair in 2009-2010.

In May of 2010, Golder will celebrate our 50th Anniversary. We are commemorating our 50th with a series of employee, client, and community events.

People
The Engineering Group at Golder Associates welcomed John Edgerly, Staff Engineer. We also expanded our coastal geomorphology and engineering team in Redmond with the addition of Jessica Cote, Greg Curtiss, Traci Sanderson, and Ken Connell. Congratulations to Andrew Walker, P.E. on your appointment to Principal. Thank you for your continued commitment and dedication to Golder.

Congratulations to Jessica Cote and Sarah Morgan for receiving their Professional Engineers registration, Ali Dennison for receiving her Licensed Geologist registration, and Alex McKenzie-Johnson for receiving his Licensed Engineering Geologist registration.

Projects Highlights
2009 continued to be a promising year for the Golder geotechnical group with a variety of interesting projects including:
- Performing geotechnical explorations and providing construction monitoring services for oil and gas facilities (buildings, roads, bridges, etc.).
- Geotechnical on-call services for the Western Federal Lands Division of FHWA.
- Geologic and geotechnical services to the Washington State General Administration for the State Capitol Campus in Olympia, including evaluating the risks of landslides on the west campus and installing instrumentation.
- Geotechnical services to the cities of Mount Vernon and Burlington to assess the current condition of levees and options to raise and construct new levees.

Awards
Golder and its employees were honored with several awards this year including:
- ACEC Silver Award for Social, Economic and Sustainable Design Considerations category for the Uranium Mine Site Superfund Cleanup of the White King/Lucky Lass Mines. Golder combined several innovative approaches to address different aspects of design and remediation of the site.
• CE News Top 40 Best Civil Engineering Firms To Work
• ENR Top 500 Design Firms

Community
Golder employees continued their commitment to giving back to the community through financial donations and volunteer activities. Highlights from the past year include:
• Employees participated in a tree-planting event at Redmond Trail to celebrate Earth Day
• Our Seattle office participated in City of Seattle’s “Green Seattle” volunteer effort, including removing blackberry bushes in Seward Park.
• Our team of 30 Golder employees, family, and friends participated in the American Cancer Society Relay for Life at Redmond High School. Our team walked nearly 200 miles during the 20-hour overnight event.
• Four Golder teams participated in the 100-mile Mountains to Sound Relay benefitting Mountains to Sound Greenway

The second half of 2009 was challenging for the design and construction industry. Hart Crowser’s diverse client base has allowed us to weather the economic downturn. Although private sector development has slowed considerably, federal, state (WSDOT), county, and municipal markets have been steady for us.

We continue to be involved in a number of challenging, high-profile projects throughout the Puget Sound area. Select project profiles are included on our website (www.hartcrowser.com). Some projects from 2009 include:

• 505 First Avenue (Cement Deep Soil Mixing Excavation and Office Building)
• King Street Station Improvements and Seismic Upgrade
• Various South Lake Union Development Projects
• Children’s Hospital – Bellevue Campus
• WSDOT – State Route 519
• Puget Sound Naval Shipyard – Aircraft Carrier Pier
• Fort Lewis – Various
• Bangor Submarine Base – Various
• US Forest Service – Holden Mine Site Cleanup; Chelan County, Washington
• US Department of the Interior; Office of Surface Mining (OSM) – Roslyn Mine Reclamation project in eastern Washington

In addition to being heavily involved in technical and project management roles, our senior principal geotechnical engineers continue to play key roles in the corporate leadership of the company. Mike Bailey is our CEO and principal in charge of the Holden Mine project. Jeff Wagner is our Seattle Office Manager and principal-in-charge of the projects for OSM and others, and Garry Horvitz is on the Board of Directors and principal-in-charge of many of the premier projects identified above.

Principal Barry Chen has played a key role as the principal-in-charge of our work for the multi-block development in the South Lake Union area. Barry was also the principal-in-charge of our
work for the SR-519 project and leads our pursuit of WSDOT opportunities. Senior Associate Doug Lindquist is a key project manager for many of the high profile federal projects identified above and heads our seismic engineering group. Associate John Bingham also plays a key project management role and anchors the geotechnical workload in our Edmonds office.

2010 promises to be an exciting and challenging year. We have started work on another project at the US Submarine Base Bangor and look forward to work as a selected WSDOT on-call geotechnical firm. We also look forward to our role as a key member of a design-build team for the Alaska Way Viaduct SR-99 Bored Tunnel.

Hayward Baker Inc. (HBI) continues to provide a full range of specialty geotechnical construction services based out of its Seattle and Vancouver, BC offices. Management/Engineering staff has grown to include Adam Gerondale, Justin Sharman, Jon Bussiere, Mike Blanding, Frank Kalata, Mark Koelling, and Andy Anderson. In addition to HBI traditional ground improvement works treating soft soils or mitigating liquefaction, installing aggregate piers or drilling and grouting services, HBI now equally focuses on drilled shafts. Drawing on the resources and capabilities of its sister company Anderson Drilling, these two Keller companies, operating as one, will continue to see to your underground construction needs.

Co-Owners Jay Graham and Clay Griffith spent the better part of 2009 improving equipment and services. Highlights include the purchase of a Diedrich D-50 All-Terrain Remote Access Rig, and a Casing Advancer System for advancing borings in loose gravels. A Health & Safety Manager was also hired to review and oversee Holocene’s Safety Programs and Training. Two of our Drillers received their Oregon Resource Protection Well Licenses allowing for Holocene’s expansion into the Oregon marketplace and to pursue Wind Farm Projects on both sides of the Columbia River. This brings a total of 7 Licensed Drillers at Holocene.

Jay Graham’s design and fabrication of a specialized Construction Dewatering Well Point Jetting Drill used in the installation of dewatering well points keeps Holocene busy for several Geotechnical Engineers and Contractors in the Construction Dewatering market. Jay Graham and Holocene continue to bring new and innovative solutions to the geotechnical dewatering arena. If you would like additional information on our innovative dewatering well point jetting method, please call Jay Graham to discuss your project needs in detail.
Holocene continues to work on major area geotechnical projects, both on-shore and off-shore, for Tacoma Public Utilities Potlatch 500Kv Line Relocation and at Bangor Submarine Base for NAVFAC Northwest. We were also awarded a major Geotechnical Instrumentation Project for Sound Transit which begins early this year.

Jay Graham continues to serve as President and as a Technical Advisory Group (TAG) member for DOE and Clay Griffith, Vice President has assumed a more focused role overseeing Holocene’s Geotechnical and Environmental Operations.

Finally, we’d be remiss if we didn’t mention the efforts of Donna Thrall, Project Coordinator, who brings a sense of balance to Holocene Corporate Offices and drilling operations. Her efforts in communicating with our clients and scheduling our drillers are superb. She continues to assist Clay Griffith with administrative oversight in the areas of DOE Reporting, Site Access Issues, Safety Reporting, Marketing, and Personnel Management.

Finally, we offer our thanks to our clients for their confidence and trust in our abilities. As we look forward, we wish you a successful 2010. We want to remain an integral part of the drilling value you offer to each of your clients.

Holocene Drilling, Inc. was established in 1996. We offer core drilling services in Geotechnical, Environmental and Construction Dewatering. Holocene’s staff of 14 operates 8 rigs throughout Washington and Oregon. For additional information, please visit www.holocenedrillinginc.com.

Lachel & Associates, Inc. (Lachel) is an underground engineering and geotechnical design firm specializing in geo-structural design for large infrastructure projects including tunnels, bridges, retaining structures, and related facilities.

Our company’s name has changed to Lachel & Associates (formally LACHEL FELICE & Associates). Along with our new name and look, David Chapman, P.E., was named President and Chief Executive Officer. Prior to being named President and CEO, Mr. Chapman served as the vice president of Lachel and continues to serve as Director of Tunneling Services.

We’re also delighted to have Matt Koziol, Staff Engineer and Fadzilah Saidin, P.E., Ph.D., Senior Staff Engineer join our Kirkland, WA office. As a Staff Engineer and CSL Tester, Matt works closely with senior engineering management in performing non-destructive testing. Since 2009, he has performed over 80 integrity tests and evaluations using the Cross-hole Sonic Logging (CSL) technique and equipment. Fadzilah completed her MSc in geotechnical engineering at University of Michigan and her Ph.D. at University of Washington. She has over 10 years’ experience in Geotechnical Engineering and recently obtained a Washington P.E. license. Her design experience includes geotechnical design analysis, numerical modeling and hydraulics and she has field experience with driven piles, auger cast piles, drilled shafts shoring and project management.

Tim Kovacs, P.E., has been working on projects in Washington, Oregon, California, Alaska, Nevada, Utah, and Idaho, as well as designing excavation support systems and repair plans for
drilled shafts, using his finite element modeling expertise for several local projects including the DIS Wheeler site in Olympia and the SR519 Intermodal Access project next the Safeco field. He put the working temperature range of our CSL equipment to the test, taking it from 100° in the Las Vegas summer to -8° (without the wind chill) on the winter solstice in Tok, Alaska.

Mark Rohrbach, Project Engineer recently earned a P.Eng. license allowing Lachel to work in Canada and has worked on several projects highlighting Lachel & Associates and Schnabel Engineering’s berth of services. Sample projects include: deep underground structures and cavities constructed in salt, the Wanapum Dam stability improvements (dam and reinforced concrete design), Gateway Station Shell (deep excavation support), stone column ground improvement design, and ongoing consultation related to the Lake Dorothy Hydroelectric project located just outside Juneau, AK.

Kenneth Faught, Area Manager, continues to successfully grow Lachel’s CSL and Pile Driving Analysis (PDA) services. He also offers mitigation design services to provide a complete solution package to better serve our clients’ needs. Recent projects include the Port Mann Bridge in Vancouver, B.C., 4th Avenue Ramp and Spokane Street Viaduct, Seattle, WA.

The geotechnical group was very busy last year, working on very exciting projects.

Ed Heavey, P.E., is keeping busy in our Tacoma office with projects for the Cities of Olympia and Tacoma and Pierce County. Significant projects completed over the past year included the design of a shoring wall system at the former Sauro’s Cleanerama, the widening of Tumwater Boulevard over Interstate 5, and the a new regional water treatment plant in Longview.

Reda Mikhail, P.E., is continuing to manage our work for the WSDOT SR520 Pontoon project and challenging energy projects.

Dave Pischer, P.E., has been working on a variety of waterfront redevelopment projects for local ports and cities, in addition to other diverse site development and environmental remediation projects in Washington and Oregon. Dave has also been working on design of a 9-acre constructed stormwater wetland for the City of Arlington.

Dennis Stettler, P.E., has been involved with a wide variety of projects including road, bridge, retaining wall, and waterfront projects for WSDOT, landslide projects for the City of Seattle, and water resource projects for the City of Bellevue. Dennis recently took on a new role as Director of Engineering for Landau Associates.

Colin Turnbull, L.E.G., manages a variety of projects including the NAS Whidbey Island waterline replacement project, emergency stabilization work for the Yarrow Creek Tributary and Seola Beach, the Wainwright VA new hospital addition in Walla Walla, the downtown Seattle First United Methodist Church, and various residential/commercial site development projects.

Steve Wright, P.E., has been busy with many infrastructure improvement projects for a number of local municipalities, airports, and public utility districts. Steve is also currently managing our
work for WSDOT's SR 522 Cathcart Road Bridge and Walls project. Steve also continues to work on projects on the east side of the Cascade Mountains, including several boat launches on the Columbia and Methow Rivers.

 Looking ahead, we continue to work on challenging projects and seek to add outstanding staff. We encourage you to contact us in our Edmonds, Tacoma, Spokane, or Portland offices and visit our website at www.landauinc.com.

Malcolm Drilling Co., Inc. (MDCI), is a heavy civil engineering contractor specializing in deep foundations, earth retention systems, and subsurface drilling for more than 45 years. We are a recognized leader in the deep foundation and drilling industry. In January 2010, Malcolm Drilling Co., Inc., was just awarded the highly-coveted and very prestigious ADSC Quality in Drilled Shaft Construction Award for 2009.

Based in San Francisco, California, with offices throughout the western United States and Panama, MDCI's fleet of equipment has grown from a single truck-mounted drill rig, to the most extensive fleet of most state-of-the-art drilling equipment in the United States, valued at over 80 million dollars. Our fleet includes low overhead and limited access equipment capable of passing through interior doorways, to equipment capable of excavating shafts up to 18 feet in diameter and up to 300 feet deep.

We also have extensive experience and expertise in ground improvement and construction dewatering. Our Ground Improvement Division specializes in permeation and compaction grouting, jet-grouting, soil mixing, stone columns, displacement piles, vibro replacement and vibro compaction. Our Dewatering Division specializes in construction dewatering systems utilizing deep wells, vacuum wellpoints, and eductor wells. As well as, horizontal drains, piezometers and monitor/observation wells.

Some of our notable recent projects include stone columns for the Lincoln Avenue Grade Separation in Tacoma, Washington; Tanana River Bridge in Tok, Alaska which included three meter diameter drilled shafts to depths of 180 feet deep; US-2/US 395 Wandermere Connector Bridges in Spokane, Washington featuring three meter diameter shafts to 175 feet deep; 635 Elliott Avenue in Seattle, Washington, featuring a large Cutter Soil Mix (CSM) cutoff wall for groundwater control and excavation support; OR 217 at US 26 Interchange which included 50,000 sf permanent soil nail retaining wall, secant piles and 1.2 meter diameter drilled shafts in Beaverton, Oregon.

Malcolm Drilling continues to advance geotechnical construction through our active participation in ADSC, DFI, Geo-Institute and ASCE. Please contact for assistance with your next project. Contact Malcolm Drilling Co, Inc. at (253) 395-3300. Al Rasband, NW District Manager arasband@malcolmdrilling.com.
City of Seattle

Seattle Public Utilities Materials Laboratory
Geotechnical Group

The SPU Materials Laboratory Geotechnical Group has had a productive year in 2009. The group has added one new member to the staff this year. Claire Gibson, P.E. came on board as the Geotechnical Engineering Supervisor. Jeff Fowler, P.E. was promoted to Materials Laboratory Manager. Our staff also includes Juan Carlos Ramirez, P.E., Senior Geotechnical Engineer, Sean Caraway, P.E., Senior Geotechnical Engineer, Cody Nelson, Assistant Engineering Geologist, Aaron Clark, Assistant Engineering Geologist and Taryn Sass, L.G., Associate Engineering Geologist.

Our group has worked on various phases of numerous interesting projects including the Madison Valley Drainage Long Term Solution, Chester Morse pump station, South Park pump station, Windermere CSO, West Seattle Reservoir, South Lake Union Park, Phase II and the Maple Leaf Reservoir burying. Our work on these projects has included preliminary geotechnical engineering, monitoring of instrumentation, project management planning and construction monitoring. The upcoming year appears to hold more exciting projects.

Shannon & Wilson had a successful 2009 filled with challenging projects; new hires, and steady growth.

Our geotechnical and environmental staff continued work on the region’s most urgent projects: WSDOT’s Alaskan Way Viaduct and SR 520 Bridge Replacement and HOV program. We provided ongoing geotechnical support in Vancouver, BC on the new Port Mann Bridge/Highway 1 project (now under construction), and construction oversight for the Coast Meridian Overpass Design-Build, due to open in March 2010. Other key projects include WSDOT’s SR 532 Design-Build Corridor Improvements from Camano Island to I-5, new task orders under the re-awarded Seattle/Walla Walla Corps of Engineers Geotechnical AE Services contract, and the Fort Lewis Expansion. Shannon & Wilson was also awarded a Sound Transit Environmental Due Diligence On-Call contract.

Shannon & Wilson’s staff are one of the main reasons for our success. This past year we welcomed the following new talent: Geotechnical Engineers: Taylor Booker, Jason Buenker, Barbara Gallagher, Bahara Ghazvinian, Ismail Emre Kucukkirca, Milan Radic, Ali Shahbazian, Wookuen Shin, Hilja Welsh, Minna (Ming) Yan, Calvin Yeh. Environmental Engineers: Michael Reynolds, Laura Skaro, and Dave Cline. GIS Analyst/Biologist: Alia Johnson. Biologist: Sarah Corbin.

Rob Clark, PE was promoted to Associate. He is experienced with the design, installation, and monitoring of geotechnical instrumentation and was heavily involved in projects at Howard Hanson Dam and the Beacon Hill tunnel. Rob joined Shannon & Wilson in 1985 and has been with the firm his entire career.

Over 150 people attended the annual Stanley D. Wilson Lecture, co-sponsored by the University of Washington’s Civil and Environmental Engineering Department. Dr. Gholamreza Mesri presented his lecture “Residual Shear Strength Mobilized in First-Time Slope Failures.”

Working in the public and the private sector, Shannon & Wilson provides geotechnical, environmental, and natural resources services for the design and construction of transportation, waterfront, and military facilities; buildings and structures; industrial plants, infrastructure components, and energy generators. Shannon & Wilson’s Northwest presence includes our Seattle headquarters plus offices in Richland and Portland.

The Oregon and Washington offices of the former Zipper Zeman Associates celebrated our fourth anniversary as part of Terracon this year. We are proud to report that our local revenues have doubled in four years since we joined Terracon and all of our senior staff remain in key roles with the Terracon team.

In order to expand our ability to provide construction monitoring services, Terracon added a WABO Special Inspection department and Redmond laboratory during 2009. Tyler McCormick manages the Redmond office and has become involved with special inspection services as a follow up to many of our geotechnical engineering projects.

We continue to emphasize hands-on, senior-level involvement in all of our projects, whether they are large wind farms or small pavement evaluations. 2009 also saw several of our local staff members staying busy on projects outside of the Puget Sound region. We expect this trend to continue in 2010. One of our geologists spent most of 2009 installing instrumentation on a large port project in Alaska, and we have regularly provided staff support to our Portland, Salt Lake City, and Boise offices to ensure responsive service for our clients.

2009 highlights for some of our ASCE members included:

- **Jim Thompson** was our lead engineer on a large design-build highway project proposal, and on port work in California;
- **Tim Roberts** is now manager of our Tacoma and Bellevue offices and has stayed involved in federal sector work including geotechnical projects at Fort Lewis;
- **Dave Baska** was appointed to the position of Senior Consultant in recognition of his role within Terracon as our national seismic technical leader;
- **Kris Hauck** in our Portland office has added staff in both geotechnical and environmental departments and increased revenue by about 50%;
- **Eric Lim** joined our Portland office as geotechnical department manager;
• **Rob Ross** assisted our Salt Lake City office with engineering for infrastructure projects;
• **Al Zeman** continues to work part time from his base in Cave Creek, Arizona.

Our engineers and environmental department managed to stay more chargeable in 2009 than the year before, but we have started off 2010 with a cautious outlook and a focus on maintaining profitability. We are hopeful that this economy turns around soon, and have great sympathy for clients, friends, ASCE members and colleagues who are experiencing difficult times during this recession.

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**University of Washington Geotechnical Group**

The UW Geotechnical program has had a busy and productive year, highlighted by Bob Holtz’s selection as the 2010 Terzaghi Lecturer by the Geo-Institute of ASCE. This lecture, which is arguably the highest honor in geotechnical engineering, was titled “Geosynthetic Reinforced Soil: From the Experimental to the Familiar” and delivered on February 23, 2010 at the GeoFlorida conference in West Palm Beach. Even after retirement, Bob has continued to teach selected classes at the UW and elsewhere (e.g., Colombia) and continues to be active in consulting, ASCE Geo-Institute, and ISSMGE affairs.

Pedro Arduino continues his research in computational geomechanics with emphasis in constitutive modeling of soils, finite elements, meshless techniques, soil structure interaction, and hazard analysis. Pedro also continues his tenure on the editorial board of the ASCE *Journal of Geotechnical and Environmental Engineering* (JGGE). Pedro recently received a National Science Foundation grant to further develop his material point method (MPM) research program; the MPM offers the potential to model large-strain problems such as flow slides. He received the 2009 University of Washington Outstanding Teaching Award in Civil Engineering, and is on the organizing committee of the Earth Retention 2010 conference to be held in Bellevue in June 2010.

Steve Kramer and former Ph.D. student Roy Mayfield were awarded the 2009 Norman Medal by ASCE for their paper “Return Period of Liquefaction,” which was published in the July, 2008 issue of JGGE. The Norman Medal is the highest award for a technical paper, given for the most outstanding paper in all of the ASCE journals. Steve delivered a number of invited and keynote lectures in such places as Japan, Costa Rica, Turkey, San Francisco, and Los Angeles in the past year. With support from WSDOT, Steve and former Ph.D. student Yi-Min Huang produced a novel computer program for performance-based liquefaction hazard analysis for WSDOT; this program is available at [http://faculty.washington.edu/kramer/WSliq/WSliq.htm](http://faculty.washington.edu/kramer/WSliq/WSliq.htm).

In September 2010, the group will welcome Joseph Wartman as the H. R. Berg Associate Professor of Civil and Environmental Engineering. Joe is currently an Associate Professor at Drexel University in Philadelphia. He conducts research and teaches in the areas of geotechnical earthquake engineering, landslides, and sustainable geotechnics. The author of over 60 professional articles, he is an incoming Editor of the JGGE and chairs the Geo-Institute Committee on Embankments, Dams, and Slopes. Joe is the recipient of the 2007 Geotechnical Engineer of the Year from the Philadelphia section of ASCE, the 2006 John J. Galen Memorial Award for Technical Advancements from Villanova University, and a Faculty Early Career Development Award from the National Science Foundation.
Advertisements

ACF West Inc. was established in 1986 as a full line stocking distributor of geosynthetic products. We continue to represent manufacturers committed to providing quality materials for the varied demands of the Northwest.

We welcome your inquiries regarding the selection of time-proven materials for your project site.

**Geotextiles**
- Woven
- Non woven
- Polypropylene
- Polyester
- Heavyweight Non Woven
- High Strength

**Geogrids**
- Polyester
- Uniaxial
- Biaxial
- Retaining Walls & Slopes
- Base Course Reinforcement

**Cellular Confinement**
- Base Stabilization
- Earth Retention
- Channel Protection
- Vertical Walls

**Hydro Mulch**
- Stabilized Mulch Matrix
- Bonded Fiber Matrix
- Flexible Growth Medium
- Agronomic Solutions

**Erosion Control Blankets**
- 100% Biodegradable
- Turf Reinforcement Mats

**Stormwater Treatment Solutions**
- Prefabricated Drainage Composites
- Pavers
- Environmental Barricades
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