Nebraska User Group
Annual Conference
March 28-29, 2018

Nebraska Innovation Campus, Lincoln, Nebraska

Event Sponsor

Bentley User Group

Advocating Engineering Technology Since 2004
Event Sponsor

Bentley User Group
Welcome

Dear Conference attendee:
Welcome to the 15th annual Nebraska User Group Conference sponsored by Bentley User Group. And welcome to the Nebraska Innovation Campus! Thanks to all of you for your participation with us this spring.

The Conference is a time to gather, share ideas and build on our knowledge about technology. We can make the most of this event by speaking with and listening to presenters and exhibitors. They provide the hardware, complimenting software technology and services we use daily. Please take time during the conference to visit the exhibitor booths.

Day One - Conference

The keynote will be provided by Derricke Gray, Industry Strategy Group Manager, Bentley Systems, Inc. titled “What is Constructioneering”

In our keynote, we'll look at a new concept called Constructioneering. So what is Constructioneering? It's automating the digital construction process through a connected data environment to improve construction execution and reduce project costs. What does all that mean? Come to the keynote and you'll find out!

As always, be sure to stick around for the wrap-up and drawing after Wednesday’s last presentations. Will this be your lucky year?

Day Two – Workshop

This year we have provided eight workshops. All eight of our workshops are bursting at their seams; either completely full or near full capacity. Workshops will cover Beginner to Intermediate MicroStation SS4; many, many Corridor Modeling sessions; Georeference coordinate systems and Point Cloud tools; Context; and Precast Bridge Modeling and Analysis. Thanks to Seiler Instruments we have a workshop, “Trimble Business Center Working with SX10 Scan Data”.

Presenters, Sponsors, and Exhibitors

We would like to send out our sincere thank you to Derricke Gray for the keynote; all the presenters, sponsors, and exhibitors for their participation in the NeUG 2018 Spring Conference & Workshop. Thanks to InEight (Gold) and Seiler Geospatial (Silver) for their sponsorships at this year’s event. We all benefit from their contributions, hard work and dedication.

Thanks to the Event Sponsor, Bentley Systems, Incorporated! Your continued support and participation in the Nebraska User Group allows our continued success!

Nebraska User Group, a Chapter of Bentley Community

My sincere thanks go out to Troy Norviel, Vice Chairperson (HDR), Shane Swope, Executive Secretary (The Schemmer Associates), Brian Jueneman, Treasurer (Olsson Associates), Jon Starr, Executive Assistant (NDOR), Mark Templeman, Executive Assistant (JEO Consulting Group Inc.) and Larry Lagsding, Executive Assistant (Felsburg Holt & Ullevig).

I want to recognize and thank Shane Swope for his dedication to the Nebraska User Group. An original founding member, Shane has decided to retire from his post as a committee member. Shane’s pursuit of excellence is what has helped the group to be a success today. Shane is also the reason why we have had so many AccuDraw sessions. ☺ Thank you Shane!

A special shout-out to Garrett Hummel, Wilson & Company and Brian Jelinek, Olsson Associates for their help in planning for this year’s conference.

The Planning Committee works hard to meet the needs of the community in planning the conference and the group’s efforts are truly appreciated.

I would also like to recognize our Planning Committee employers for their support and participation in the Nebraska User Group. This event takes a lot of time and effort in planning. Thank You!

Stay informed by visiting our website http://dot.nebraska.gov/business-center/conferences/neug/ for upcoming event dates and news. Your participation and feedback will make the next Conference even better!

Best Regards,

Mike Otte
City of Lincoln
Nebraska User Group
http://dot.nebraska.gov/business-center/conferences/neug/
NeUG Officers, Keynote, and Presenters

NEUG OFFICERS

Michael Otte, City of Lincoln
Troy Norviel, HDR
Shane Swope, The Schemmer Associates
Brian Jueneman, Olsson Associates

Jon Starr, Nebraska Department of Transportation
Mark Templeman, JEO Consulting Group Inc.
Larry Lagsding, Felsburg Holt & Ullevig

WELCOME ADDRESS/NDOT UPDATE

Steve Ingracia, Nebraska Department of Transportation
Steve Ingracia is the Deputy Director of Technology and Strategic Planning at the Nebraska Department of Transportation. He has 25 years of experience in the application of technology to infrastructure, and his vision is to move the Nebraska DOT to the forefront of public agencies that are advancing the state of transportation technology and business intelligence. Steve was awarded a Bachelor of Science degree in electrical engineering from the Missouri University of Science and Technology in 1993, and he is a registered professional engineer in multiple states. He lives with his family in Lincoln, Nebraska.

NEUG KEYNOTE

Derricke Gray, Bentley Systems, Inc.
Derricke Gray is a life-long resident of Tallahassee, Florida and has been involved in Civil Engineering and CADD for 32 years. After graduating in 1986 from Florida State University with a BS in Mathematics, he used Bentley products at the Florida DOT as well as in the consulting industry for several years before joining Bentley in 1997. He now serves as an Industry Strategy Group Manager.

NEUG PRESENTERS

Jeanne Aarhus, Aarhus Associates, LLC
Jeanne is known for keeping her training sessions fast-moving and fun. She is an internationally-known speaker and expert in several CAD products. She has more than 30+ years of experience in production drafting, user support, standards configuration and coordination, programming, and training. Jeanne is an independent consultant offering these services around the world and is certified in several Autodesk and Bentley products. She is a popular speaker at many Autodesk and Bentley conference events and was recently awarded “Top Speaker” at Autodesk University.

Charles McFarland, JEO Consulting Group
Charles McFarland is a civil designer with JEO Consulting Group. With over 12 years of experience in a variety of project types. He has helped in design of municipal streets, trails, civil site design, sewer and water designs. He also has experience in survey, plating, and grading pad design.

Derek Smith, Wilson & Company, Inc.
Derek Smith is Wilson & Company’s Geospatial Operations Manager and has 14 years of experience developing photogrammetric and LiDAR workflows and managing Geospatial projects. He oversees Wilson’s full service mapping group providing solutions using photogrammetry and LiDAR from a variety of platforms like fixed and rotary wing aircraft (manned and unmanned), as well as mobile, static, and other terrestrial acquisition methods.

Whitney Lynn, Wilson & Company, Inc.
Whitney Lynn is a Geospatial Project Manager at Wilson & Company, Inc., Engineers & Architects. He currently leads point cloud and reality capture product development fusing geospatial data from airborne to ground-based to hand-held platforms. Whit has completed a variety of geospatial projects, including road/bridge as-built design, dam deformation studies, transmission line and substation surveys, and sidewalk/stormwater improvements.

Tim Sylvester, Integrated Roadways
Tim Sylvester is multi-award winning entrepreneur and electrical & computer engineer. With more than a decade of experience in construction trades, and having participated in two R&D projects for the National Science Foundation, Tim’s work with Integrated Roadways has been featured in numerous regional and national publications and other media, including CNN and the Wall Street Journal.

Tom Stogdill, Content Engineer, Bentley Systems, Inc.
Tom is a Content Engineer in the Design Modeling CONNECT Services group with 20+ years of Bentley product experience. He is a Bentley instructor who has presented on a wide variety of MicroStation related courses and topics. Tom has also been involved in developing and authoring MicroStation course curricula and training materials, has provided technical support, technical sales support, WorkSpace development, and software customization and configuration as well as a variety of production and implementation services.

Jodi Kocher, Felsburg, Holt & Ullevig
Jodi Kocher is a Water Resources Engineer with Felsburg Holt & Ullevig. Her work includes hydrologic and hydraulic analysis and design for floodplains, storm sewer systems, culverts and bridges, and stormwater quality treatment. Jodi is leading the drainage design for the City of Lincoln’s 14th Street, Warlick Boulevard, and Old Cheney intersection project. Prior to joining FHU, Jodi worked at the Nebraska Department of Transportation for 11 years, in both Roadway Design and the Roadway Design Hydraulics/Environmental Liaison Section.

Scott Speicher, Felsburg, Holt & Ullevig
Scott Speicher is a Water Resources Engineer with Felsburg, Holt & Ullevig. His work includes hydrologic and hydraulic analysis and design, storm sewer modeling using SUDA, and geospatial data analysis for water resources planning. Scott is assisting in the drainage design and model for the City of Lincoln’s 14th Street, Warlick Boulevard, and Old Cheney Intersection project. Scott recently graduated from the University of Nebraska-Lincoln with a B.S. and M.S. from the college of engineering.

Mike Otte, City of Lincoln
Mike Otte splits his time with standards, documentation, supporting staff, among way too many unimportant things to be listed. 15 years at the City of Lincoln, Mike continues supporting Bentley products for the City along with an ever growing list of other products. When you cannot find Mike in the office, chances are he is at a softball field or with his grandchildren or both.

Lisa Whiston, Bentley Systems, Inc.
Lisa Whiston started working with InRoads in 1990 in development at Intergraph. She has done customer support, product certification, professional services, and is now a Senior Application Engineer in the Transportation & Local Infrastructure group. She has a degree in Geology and a Masters in Surveying Engineering, experience in programing, custom XSL development, and wide array of product knowledge and integration.

Mike Boyle, InEight
Mike Boyle is a technical product manager at InEight, a leading provider of construction software. He leverages his real-world construction and engineering experience to guide and develop new software, such as InEight® Model Suite, that expands traditional BIM workflows. Boyle joined InEight in 2016. He previously served as a VDC designer for Kiewit. He graduated from the University of Nebraska with a degree in Construction Engineering and obtained his Professional Engineering License in Civil Engineering in 2013.

Curtis Nosal, Nebraska Department of Transportation
Curtis Nosal is a Senior Software Engineer at NDOT Design Build Unit.
Bob Rolle, Bentley Systems, Inc.
Bob is a registered PE in the state of Kansas. Bob worked for several years for the Kansas Department of Transportation as a project engineer. In 1992 Bob began working for a consultant firm as a Project Design Engineer and later was assigned the Design Support Systems Engineer position focusing on providing Civil and Architectural resources, support, and training for the corporation. He has worked for Bentley Systems for the last 6 years as a Senior Civil Application Engineer for the Design Modeling Advancement - Transportation Team based out of Kansas City.

Mike Golka, Olsson Associates
Mike is currently an associate engineer and lead designer for Olsson Associates. He has 8 years of experience in roadway design, and 3 years of experience in surveying and field services with Olsson Associates. Mike started off working in MicroStation but has since transitioned into an AutoCAD user for the past 5 years and has designed various projects that included 3D modeling of urban and rural streets, intersections, round-a-bouts, and pedestrian facilities. Despite most of his time spent in AutoCAD, he still uses MicroStation on various projects and to aid with some elements of design.

Steve Willoughby, Bentley Systems, Inc.
Steve Willoughby started his career as a Civil Engineer working for Illinois Department of Transportation. In 1985 he joined GEPAPK Corp, prior to Bentley System’s acquisition of the company. He has worked in the Bridge Information Modeling Group since its inception in 2008 providing consulting, training, and support services. He has 30 years of experience in using, implementing, training, and supporting civil engineering design software. During his time with Bentley he has worked with DOT’s and countless engineering firms.

Tim Barber, InEight, Inc.
Tim Barber serves as a product engineer for InEight, a leading provider of construction software. He is responsible for designing and developing innovative new aspects of InEight® Model Suite, which provides a unique view of models connected with project information.

Jeff McKerrow, Olsson Associates
Jeff D. McKerrow, P.E., PTCE, is a senior transportation engineer and project manager with Olsson Associates. With more than 20 years of experience in both public and private practice than spans multiple states, Jeff brings a unique perspective on transportation funding and strategies with a variety of public agencies including municipal, county and state DOT’s, along with public-private partnerships.

Troy Norviel, HDR Engineering, Inc.
Troy has over 38 years of experience working in transportation industry. He has been a Senior Roadway Designer with HDR for 20 years. He has over 32 years of CAD experience.

John Davis, City of Lincoln
John began his career as a member of a survey crew and a construction inspector for 5 seasons with NDOT in Wayne, NE. He then joined the City of Lincoln as a surveyor, where he was introduced to MicroStation and InRoads. After 3 years in the field performing construction staking and preliminary survey, John moved into the design section of Engineering Services, where he has spent the last 17 years designing roads and utilities with MicroStation, Geopak, and OpenRoads.

Scott Howe, Seiler Instrument
Scott Howe is a Geospatial Technical Support Specialist and Trimble Certified Trainer for Seiler Instrument working out of there Kansas City Office. Scott has worked for Seiler Instrument for 2.5 years in this role. Prior to Seiler, Scott spent 20 years as a Surveyor in the Marines.

Ryan Hanson, HDR Engineering, Inc.
Ryan is a Transportation Engineer with a diverse range of transportation project experience including roadway design, drainage design & modeling, pavement design and evaluation, and airfield planning and design. He has been involved in all phases of the transportation infrastructure life cycle, from planning & conceptual design through final design & pavement preservation. His strong technical background is complemented by his drive to stay on the cutting edge of CAD production and BIM technology to visualize projects and deliver a high quality product that meets the project budget & schedule.

Sheila Davis, Nebraska Department of Transportation
Sheila has over 19 years of experience as a roadway designer, and over 5 years of experience working as part of the support team. Her current role is working within the Engineering Support section that handles the configuration, setup and support of MicroStation, Power Geopak, OpenRoads Designer and various engineering applications for NDOT.

Kyle Keller, Nebraska Department of Transportation
Kyle is originally from Scottsbluff, NE and lived there until moving to Lincoln to attend UNL, where he later graduated with a BS in Civil Engineering. He started his career in the private sector before joining NDOT in the Scoping Unit of Planning and Project Development. He later transferred to Roadway Design Division and completed several projects before accepting the role to manage the project and overall process for the first Design-Build project at NDOT.

Thomas Sawyer, Nebraska Department of Transportation
Tom has over 25 years of experience working with Engineering Software at NDOT, a Bentley reseller, and local engineering firms. His current role is supervising the Engineering Software Support section that handles the configuration, setup and support of MicroStation, Geopak and various engineering applications for NDOT.

Ryan Swingley, ESP Associates, P.A.
Ryan Swingley graduated from Vincennes University with A.S. in Surveying Technology and 1999 and gained licensure to practice as a Registered Land Surveyor in the State of Indiana in 2005. Ryan has worked as a consultant, performing large-scale boundary, topographic and route surveys and has been involved with LIDAR control, collection, extraction and QA/QC since 2010. Ryan now is the Technical Manager and Systems Engineer for the Trimble MX8 Mobile LIDAR and Image capture hardware and software with ESP Associates.

Sonya Pieterse, Bentley Systems, Inc.
Sonya is a Senior Application Engineer at Bentley Systems, providing technical pre-sales presentations and support to the sales team, on the Civil applications. Sonya has been in the Civil industry for over 30 years in South Africa and has recently relocated to Huntsville, Alabama, to join the Bentley Civil team there. Sonya specializes in InRoads and Bentley Rail Track, having 17 years of pre-sales and technical support on these applications throughout Africa.

Shane Swope, The Schemmer Associates
Shane Swope, P.E., is a Transportation Manager for The Schemmer Associates and has more than 24 years of experience in the transportation and civil engineering profession as a project manager, designer, and transportation engineer. His work encompasses nearly every phase of project development from preliminary surveys, to corridor studies, through preliminary and final design plans and contract preparation. He has extensive knowledge of roadway and expressway standards for both 3R and new and reconstructed projects.

Kevin Snook, The Schemmer Associates
Kevin Snook has more than 22 years of professional experience in transportation engineering and surveying. His experience includes many state, county, municipal and federal projects. In addition to his project experience, Kevin has spent a large portion of his career designing and managing transportation projects, while continuing to provide support to the CADD automation and Survey activities for projects. Kevin is also an FAA certified remote pilot.

Adam Sleeper, The Schemmer Associates
Adam Sleeper, P.E., is a Transportation Engineer for the Schemmer Associates and has more than 14 years of combined experience in the areas of design, transportation engineering, construction administration, fracture critical bridge inspection and surveying. He is a graduate of Colorado State University and started his career with NDOT’s District 2 headquarters involved in expressway, interstate, and bridge construction.
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Presenting & Committee Member Companies
# Wednesday, March 28 – Conference

## Registration and Breakfast
- **Time:** 7:00 - 8:00
- **Duration:** 60 min.

## Conference Overview
- Jon Starr, NEUG Planning Committee/NDOT
- **Time:** 8:06 - 8:10
- **Duration:** 50 min.

## Conference Welcome
- Steve Inggracia
- **Time:** 8:10 - 8:20

## Keynote: Derrick Gray “What is Constructioneering”
- **Time:** 8:20 - 8:30
- **Duration:** 50 min.

## Track 1 - MicroStation
- **Time:** 9:00 - 9:45
- **Duration:** 45 min.
  - **Session 1:** 1 Introducing The MicroStation CONNECT Edition
    - **Track:** 1
    - **Presenter:** Tom Stogill - Bentley
  - **Session 2:** 2 Conceptualize and Communicate Your Road Design with OpenRoads ConceptStation
    - **Track:** 1
    - **Presenter:** Bob Raffa - Bentley

## Track 2 - OpenRoads
- **Time:** 9:45 - 10:30
- **Duration:** 45 min.
  - **Session 8:** 8 Surviving the Transition to Connect for Users
    - **Track:** 2
    - **Presenter:** Joanne Aashto - Aashto Associates
  - **Session 9:** 9 OpenRoads Best Practice - Civil Cells
    - **Track:** 2
    - **Presenter:** Bob Raffa - Bentley

## Track 3 - Civil Design
- **Time:** 10:30 - 11:15
- **Duration:** 45 min.
  - **Session 11:** 11 Modeling Techniques Retaining Walls, Benching, and Complex End Conditions
    - **Track:** 3
    - **Presenter:** Lisa Whiston - Bentley
  - **Session 12:** 12 Leveraging UAV Technologies and the Reconstruction of the Oroville Dam Spillway
    - **Track:** 3
    - **Presenter:** Mike Ott - City of Lincoln

## Track 4 - Misc.
- **Time:** 11:15 - 12:00
- **Duration:** 45 min.
  - **Session 13:** 13 Standards Update
    - **Track:** 4
    - **Presenter:** Tom Sawyer & Cheryl Davis - NDOT
  - **Session 14:** 14 SUDA for Storm Sewer Analysis and Design
    - **Track:** 4
    - **Presenter:** Jodi Kocher & Scott Speicher - FHWA

## Track 5 - Engineering & Misc.
- **Time:** 12:00 - 12:45
- **Duration:** 45 min.
  - **Session 15:** 15 Autodesk InfraWorks for Visualizing Transportation Projects
    - **Track:** 5
    - **Presenter:** Anne Peterson - HDR
  - **Session 16:** 16 MicroStation to AutoCAD
    - **Track:** 5
    - **Presenter:** Mike Geilke - Olson Associates

## Lunch
- **Time:** 12:45 - 1:00
- **Duration:** 60 min.

## Track 6 - Bmc.
- **Time:** 1:00 - 1:45
- **Duration:** 45 min.
  - **Session 17:** 17 BrIM Analytics: Product Update - LEAP Bridge Concrete, LEAP Bridge Steel and RM Bridge
    - **Track:** 6
    - **Presenter:** Steve Wiltoughby - Bentley
  - **Session 18:** 18 Connecting to the Field
    - **Track:** 6
    - **Presenter:** Tim Barker - InEight

## Track 7 - AutoCAD
- **Time:** 1:45 - 2:30
- **Duration:** 45 min.
  - **Session 19:** 19 City of Lincoln: Design & Computation Manager
    - **Track:** 7
    - **Presenter:** John Davis - City of Lincoln
  - **Session 20:** 20 Under the Surface with Subsurface Utilities
    - **Track:** 7
    - **Presenter:** Lisa Whiston - Bentley

## Vendor Break
- **Time:** 2:30 - 3:15
- **Duration:** 45 min.

## Track 8 - OpenBridge Modeling
- **Time:** 3:15 - 4:00
- **Duration:** 45 min.
  - **Session 21:** 21 Civil 3D Corridor Modeling Basics
    - **Track:** 8
    - **Presenter:** Ryan Hanson - HDR
  - **Session 22:** 22 OpenRoads Best Practice - Terrain Modeling
    - **Track:** 8
    - **Presenter:** Lisa Whiston - Bentley

## Conference Wrapup
- **Time:** 4:00 - 4:45
- **Duration:** 45 min.
Wednesday, March 28 – Conference

7:00 – 8:00 A.M.  Registration & Breakfast
8:00 – 8:10 A.M.  Opening Remarks – Jon Starr, NeUG Planning Committee/Nebraska Department of Transportation
8:10 – 8:20 A.M.  Welcome Address – Steve Ingracia, Deputy Director, Nebraska Department of Transportation
8:20 – 8:50 A.M.  Keynote - Derrick Gray, Constructioneering
In our keynote, we’ll look at a new concept called Constructioneering. So what is Constructioneering? It’s automating the digital construction process through a connected data environment to improve construction execution and reduce project costs. What does all that mean? Come to the keynote and you’ll find out!
Presenter: Derrick Gray, Solutions Executive, Bentley Systems, Inc.

1 9:00 – 9:45 A.M.  Introducing The MicroStation CONNECT Edition
The MicroStation CONNECT Edition features many updates to the user interface. These updates include the introduction of a ribbon-style graphical user interface, a relocation of the ‘WorkSpace’ settings such as Preferences and Configuration, and more. This course contains a set of exercises that are used to become familiar with the ribbon style interface found in the MicroStation CONNECT Edition.
Presenter: Ray Swingley - ESP Associates, P.A.

2 9:00 – 9:45 A.M.  Conceptualize and Communicate Your Road Design with OpenRoads ConceptStation
OpenRoads ConceptStation helps you jump-start your projects by rapidly creating conceptual models that allow you to evaluate design alternatives and estimated costs faster, resulting in improved project decisions. Use OpenRoads ConceptStation’s powerful modeling capabilities to model roads, rail, intersections, bridges, tunnels and more.
Presenter: Bob Rolle - Bentley Systems, Inc.

3 9:00 – 9:45 A.M.  Modeling Techniques - Ramps and Gores
Tips and tricks for creating and editing Ramps and Gores. Many of these tips and tricks apply to both OpenRoads Designer, CONNECT Edition and V8i versions of InRoads, GEOPAK, MXROAD, and PowerCivil.
Presenter: Sonya Pieterse - Bentley Systems, Inc.

4 9:00 – 9:45 A.M.  Mobile LiDAR Pitfalls - How to QA/QC Data
In the last few years terrestrial and mobile LiDAR systems have come to the forefront for accurate and defined data collection. While the prices of these systems still remain high, the value they bring to surveyors and their clients is also high. This course will discuss some of the technology behind mobile LiDAR and QA/QC techniques using TopoDOT software.
Presenter: Ryan Swingley - ESP Associates, P.A.

5 9:45 – 10:30 A.M.  Lincoln Transportation Implementation Strategies
The City of Lincoln retained the Olsson Associates team to lead an effort to identify strategies to improve the transportation system, including adopting best management practices and identifying future funding sources to address the transportation systems preservation, optimization, and growth. Strategies were developed working with a citizens’ transportation coalition.
Presenter: Jeff McKerrow – Olsson Associates

6 9:45 – 10:30 A.M.  Leica mobile scanning and HD scanning
Presenter: Brian Ebe - Leica Geosystems

7 10:00 – 10:45 A.M.  Autodesk InfraWorks for Visualizing Transportation Projects
Using the InfraWorks 360 program, developed by Autodesk, creating a 3D visualization is no longer a time and budget consuming process. In many cases the information needed to generate a model is already readily available. This presentation will describe the basics of using InfraWorks, and demonstrate how a project can be brought to life in less than a half hour.
Presenter: Ryan Hanson - HDR Engineering Inc.

8 10:00 – 10:45 A.M.  Surviving the Transition to Connect for Users
This session will help the existing V8i user make the transition to the CONNECT Edition. Learn how to use your existing V8i skills and preferences to help get up to speed quickly using CONNECT. Learn to embrace the new ribbon interface and improve your interaction with MicroStation. Discover how you can raise your current MicroStation skills to the next level using the latest version of MicroStation. Don’t miss out on this fun and enlightening session!
Presenter: Jeanne Aarhus - Aarhus Associates, LLC

9 10:00 – 10:45 A.M.  OpenRoads Best Practice - Civil Cells
Join Bentley experts as they share tips and tricks for creating and using OpenRoads civil cells. Many of these tips and tricks apply to both OpenRoads Designer, CONNECT Edition and V8i versions of InRoads, GEOPAK, MXROAD, and PowerCivil.
Presenter: Bob Rolle - Bentley Systems, Inc.

10 10:00 – 10:45 A.M.  Modeling Techniques - Retaining Walls, Benching, and Complex End Conditions
Join Bentley experts to learn recommended techniques to model retaining walls, benching, and other complex end conditions.
Presenter: Lisa Whitson - Bentley Systems, Inc.

11 10:00 – 10:45 A.M.  Leveraging UAV Technologies and the Reconstruction of the Oroville Dam Spillway
We will show how we used Unmanned Aerial Vehicles and photogrammetry to capture surface models, earthwork quantities, and more.
Presenter: Jim Brinkman & Andy Temus - Kiewit

12 10:00 – 10:45 A.M.  Standards update
Upgrading users on current workspace changes for MicroStation & GEOPAK, Clip-Zip-Ship Update, etc.
Presenter: Mike Otte - City of Lincoln

13 10:00 – 10:45 A.M.  SUDA for Storm Sewer Analysis and Design
This presentation will provide a general overview of the processes and challenges of using SUDA for drainage analysis and design on a current project.
Presenter: Jodi Kocher & Scott Speicher - Felsburg, Holt & Ullevig

14 10:00 – 10:45 A.M.  AutoCAD to Sketchup
Presenter: Anne Peterson - HDR Engineering Inc.

15 11:00 – 11:45 A.M.  Viewing Your Design in MicroStation
3D models offer a comprehensive, content-rich solution for delivering design information. But data being displayed, making it seem a daunting task to work with them. An understanding of a few simple 3D viewing techniques can make your experience working with 3D models a success.
Presenter: Tom Stogdill - Bentley Systems, Inc.

16 11:00 – 11:45 A.M.  OpenRoads Best Practice - Corridor Modeling
Tips and tricks for creating and editing OpenRoads corridor models. Many of these tips and tricks apply to both OpenRoads Designer, CONNECT Edition and V8i versions of InRoads, GEOPAK, MXROAD, and PowerCivil.
Presenter: Lisa Whitson - Bentley Systems, Inc.

17 11:00 – 11:45 A.M.  Modeling Techniques - Roundabouts
Join Bentley experts as they share techniques to model roundabouts in OpenRoads Designer.
Presenter: Bob Rolle - Bentley Systems, Inc.

18 11:00 – 11:45 A.M.  Trimble SX10 Scanning Total Station
During this presentation we will discuss the capabilities and uses of the SX10 as well as the workflow in the field. During this presentation we will also demonstrate how to collect scan data in the field.
Presenter: Scott Howe - Seiler Instruments
Wednesday, March 28 – Conference (Continued)

11:00 – 11:45 A.M.
**NDOT Preparing for ORD**
This presentation will outline the steps that the Engineering Software Support Team has taken to prepare to implement OpenRoads Designer at NDOT. The team will outline the work that has already been done as well as the steps that still need to happen.
**Presenter:** Tom Sawyer & Sheila Davis - NDOT

11:00 – 11:45 A.M.
**Smart Pavement & Autonomous Cars: The Future of Roads**
Public agencies are asked to invest in smart cities, smart highways, municipal fiber networks, public safety Wi-Fi, connected, electric, & autonomous vehicle programs, but lack funding for basic maintenance. What if these new technologies could be used to pay for road improvements instead of adding yet one more thing to the list of things the public can’t afford to do?
**Presenter:** Tim Sylvester – Integrated Roadways

11:00 – 11:45 A.M.
**MicroStation to AutoCAD**
This session will talk about various similarities between MicroStation and AutoCAD and how to have both programs work together. If you are a MicroStation user that is just beginning to learn or operate in Civil 3D, this is a great discussion to get your foot in the door.
**Presenter:** Mike Golka - Olsson Associates

12:00 – 1:00 P.M.
**Lunch**

1:00 – 1:45 P.M.
**MicroStation 3D 101: Intro to Working in 3D**
This session is designed to get the intermediate MicroStation user beyond the everyday commands. Learn to work with 3D capabilities and to create and work in a 3D design file. Learn to create, view, and edit 3D solids and surfaces. If you have always wanted to venture into 3D but have not had the opportunity to explore these advanced tools, this is your chance!
**Presenter:** Jeanne Aarhus - Aarhus Associates, LLC

2:00 – 2:45 P.M.
**Civil 3D Corridor Modeling Basics**
This presentation demonstrates the basics of corridor modeling in AutoCAD Civil 3D. We will work on a sample project developing an alignment, profile, assembly (template), corridor, and finished grade surface, and show how dynamic and user friendly Civil 3D is to work with. This presentation will cover basic features including alignments, profiles, and templates.
**Presenter:** Ryan Hanson – HDR Engineering Inc.

2:00 – 2:45 P.M.
**OpenRoads Best Practice - Drawing Production**
Join Bentley experts for tips and tricks using the new OpenRoads Designer cross section and plan sheet layout and annotation tools.
**Presenter:** Sonya Pieterse - Bentley Systems, Inc.

2:00 – 2:45 P.M.
**BrIM Analytics Product Update - LEAP Bridge Concrete, LEAP Bridge Steel and RM Bridge**
This session will provide a review of the updates and enhancements in the last year of the CONNECT Editions of LEAP Bridge Concrete, LEAP Bridge Steel and RM Bridge. Also a look ahead to the development roadmap for 2018.
**Presenter:** Steve Willoughby – Bentley Systems, Inc.

2:00 – 2:45 P.M.
**OpenRoads Best Practice - Terrain Modeling**
Tips and tricks for working with terrain models including the best way to create a single terrain from multiple corridors and linear templates, how to create and use graphical filters to create a single composite terrain, how to export the terrain to other formats, and more.
**Presenter:** Lisa Whitson - Bentley Systems, Inc.

2:00 – 2:45 P.M.
**OpenBridge Modeler: What is New?**
O&M continues to evolve at a significant pace and this past year was no exception. This lecture will review new and enhanced capabilities, including modeling stiffeners and cross frames, wingwalls, camber and deflection from LBC, and much more!
**Presenter:** Steve Willoughby – Bentley Systems, Inc.

2:00 – 2:45 P.M.
**NDOT’s First Design-Build Project**
Topics discussed will be a brief overview of how NDOT obtained statutory authority to use accelerated delivery procurement, the differences between design-build and design-build, and the first project selected. The topics will transition into the scope and status of the project and procurement of the design-build contractor.
**Presenter:** Kyle Keller & Curtis Nosal - NDOT

2:00 – 2:45 P.M.
**Point Clouds, Imagery, and Beyond. Integrating and Enriching Design Level Mapping**
Using our 3D presentation system we will demonstrate the basics of modern mapping, and how we utilize the best tool in the tool box and leverage the strengths of each approach to produce a seamless design mapping dataset. Collaboration with the design team is critical when planning the missions and integrating the survey and mapping data. We will interactively review the data fusion approach.
**Presenter:** Derek Smith & Whit Lynn - Wilson & Company

2:00 – 2:45 P.M.
**Drawing with MicroStation for Civil Designers**
In the MicroStation CONNECT Edition, there are a host of placement tools that allow you to create new drawing elements efficiently and accurately using tools such as Place SmartLine, Place Circle, Create Region, and others. AccuDraw is an intuitive drawing aid that helps you to define exact distances and angles while creating new elements or manipulating existing ones.
**Presenter:** Tom Stogdill - Bentley Systems, Inc.

2:00 – 2:45 P.M.
**Intro to AccuDraw: Resistance is Futile!**
Are you still resisting the functionality provided by AccuDraw? You tried using it many years ago and determined that it had nothing to offer you? Attend this session to learn the “new” AccuDraw and realize the increased productivity provided by this useful tool. V8i makes it easier to use than ever before, and provides new improved methods for using many of your old tools. Don’t believe me? I challenge all users to beat this tool for drafting efficiency!
**Presenter:** Jeanne Aarhus - Aarhus Associates, LLC

2:00 – 2:45 P.M.
**OpenRoads Best Practice - Making the Model More Visual**
Learn how to increase the visual impact of your models with minimal effort. Create models using realistic materials, pavement markings, guardrails, barriers, fences, traffic control and more. The techniques described in this session all use functionality built into the OpenRoads Designer workspace.
**Presenter:** Sonya Pieterse - Bentley Systems, Inc.

2:00 – 2:45 P.M.
**OpenBridge Modeler: What is it and how can I use it today?**
Develop intelligent, 3D, parametric bridge models within the context of an overall highway project with Bentley’s OpenBridge Modeler. Easily manage changes with built-in, user-defined relationships among bridge components and reference DGN models throughout the lifecycle of the bridge. This session will cover bridge modeling with OpenBridge Modeler.
**Presenter:** Steve Willoughby – Bentley Systems, Inc.
3:00 – 3:45 P.M.
Connections that Improve Productivity with 2D drawings and 3D Models
Memories work best when we can associate an idea or event to a location. If we begin to store and recall documents based on their location in a 3D model, we can become more efficient. By utilizing an element in a 3D model as a central hub, we can organize documents and relate elements to cost estimates, maintenance plans, and live monitoring systems. Learn how this is being achieved today.
Presenter: Mike Boyle - InEight, Inc.

3:00 – 3:45 P.M.
County Road 4 Unbonded Overlay
The project investigated rehabilitation and reconstruction of the existing roadway that was failing due to Alkali-Silica Reactivity (ASR). The presentation will emphasize the engineering aspects of the decision making process and also discuss the use of MicroStation and Open Roads to develop machine control files in anticipation of stringless paving.
Presenter: Shane Swope - Schemmer

3:00 – 3:45 P.M.
AMG and NDOT Project Deliverables
In this session we will walk through creating project deliverables from Corridors to XML files using OpenRoads terrain graphical filters and tools to verify data.
Presenter: Adam Sleeper & Kevin Snook - Schemmer

3:00 – 3:45 P.M.
Translating AutoCAD to MicroStation and MicroStation to AutoCAD
In this presentation we will discuss the does and don'ts of translation. Why it doesn't always work? Setup!
Presenter: Troy Norviel – HDR Engineering Inc.

4:00 – 4:30 P.M.
NeUG Wrap up and Door Prizes
Presenter: Nebraska User Group, Committee Planners
Thursday, March 29 - Workshops

7:15 – 8:00 A.M.
Morning Registration & Buffet Breakfast

7:15 – 8:00 A.M.
Morning Registration

8:00 A.M. – 12:00 P.M.
**Beginner MicroStation SS4**
MicroStation is a vast piece of software containing many tools and features. A fundamental knowledge of how MicroStation works, coupled with an understanding of the various features, will help ensure your success. This workshop consists of a series of hands-on lessons intended to introduce a new user to MicroStation.
Presenter: Tom Stogdill - Bentley Systems, Inc.

8:00 A.M. – 10:00 A.M.
**Automated Corridor Modeling with Triggers and Switches**
In this course, we will show you how to create triggers and switches that can be used to automatically display and un-display parts of your template.
Presenter: Sonya Pieterse – Bentley Systems, Inc.

10:15 A.M. – 12:00 P.M.
**Creating and Manipulating the Corridor**
In this workshop, you will explore the many tools and techniques available to edit and manipulate a corridor.
Presenter: Sonya Pieterse – Bentley Systems, Inc.

8:00 A.M. – 12:00 P.M.
**QuickStart for OpenRoads Designer Geometry and Corridor Modeling**
In this course, you will be creating a horizontal and vertical alignment using the OpenRoads Designer Geometry tools.
Presenter: Bob Rolle – Bentley Systems, Inc.

8:00 A.M. – 12:00 P.M.
**Trimble Business Center Working with SX10 Scan Data**
During this workshop we will conduct a quick review of Trimble Business Center before focusing on how to work with point cloud data in the Scanning module.
Presenter: Scott Howe – Seiler Instruments

8:00 A.M. – 12:00 P.M.
**Precast Bridge Modeling and Analysis**
This workshop will focus on modeling a precast girder bridge with OpenBridge Modeler, transfer the bridge to LEAP Bridge Concrete for Analysis, then return any resulting changes back to OBM.
Presenter: Steve Willoughby – Bentley Systems, Inc.

8:00 A.M. – 12:00 P.M.
**Intermediate MicroStation SS4**
Once you have mastered the fundamentals, it is time to expand your knowledge of MicroStation and its capabilities. This can aid in better utilization of the software and lead to increased productivity. In this workshop will you further explore the capabilities of MicroStation, adding additional tools to your MicroStation “toolkit”.
Presenter: Tom Stogdill - Bentley Systems, Inc.

1:00 P.M. – 5:00 P.M.
**QuickStart for OpenRoads Designer Drawing Production**
Learn to create and annotate cross section sheets and plan & profile sheets. You will also learn to add individual annotations to label specific location coordinates, station-offset values, elevations, and more. This course will be taught using the OpenRoads Designer, CONNECT Edition software.
Presenter: Sonya Pieterse - Bentley Systems, Inc.

1:00 P.M. – 3:00 P.M.
**QuickStart Using OpenRoads ConceptStation**
This course is an introduction to the OpenRoads ConceptStation software. In this course you will learn how to import data for existing conditions, and how to create conceptual roadway designs that include road corridors and their interactions with intersections, bridges and ramps, including lighting, guardrail and street markings.
Presenter: Sonya Pieterse - Bentley Systems, Inc.

1:00 P.M. – 3:00 P.M.
**Understanding Georeference coordinate systems and point cloud tools**
Come explore Georeferenced Coordinate Systems and the LiDAR tools under the reality modeling tab in OpenRoads Designer. We will take a look into what a Georeferenced Coordinate System is and why setting the correct one is critical for your project’s success. We will also explore the tools available for processing Point Cloud data from which you will build a terrain model.
Presenter: Lisa Whitson – Bentley Systems, Inc.

3:15 P.M. – 5:00 P.M.
**Quick start Using ContextCapture**
This hands-on training introduces you to ContextCapture and how to create 3D models and meshes from standard imagery. You will learn how to submit images for processing, to add control points to geolocate a project and how to take measurements from the resulting 3D data set. This course will be taught using the ContextCapture software.
Presenter: Lisa Whitson – Bentley Systems, Inc.

12:00 – 1:00 P.M.
Lunch

12:30 – 1:00 P.M.
Afternoon Registration

1:00 P.M. – 5:00 P.M.
**Intermediate MicroStation SS4**
Once you have mastered the fundamentals, it is time to expand your knowledge of MicroStation and its capabilities. This can aid in better utilization of the software and lead to increased productivity. In this workshop will you further explore the capabilities of MicroStation, adding additional tools to your MicroStation “toolkit”.
Presenter: Tom Stogdill - Bentley Systems, Inc.
### Thursday, March 29 – Conference

#### Workshop Sessions

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