Event Sponsor

Bentley User Group
Welcome

Dear Conference attendee:
Welcome to the 14th 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.

Day One - Conference

The keynote will be provided by Mo Harmon, Solutions Executive, Bentley Systems, Inc. titled “CIM Across America”

Join Mo as he discusses some of the key activities and influences driving CIM adoption throughout the United States and Bentley’s vision to meet industry needs.

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 Intermediate to Advance MicroStation, Corridor Modeling, SUDA, OpenBridge Modeler, LEAP Bridge Steel, and Trimble Business Center.

Presenters, Sponsors, and Exhibitors

We would like to send out our sincere thank you to Mo Harmon for the keynote; all the presenters, sponsors, and exhibitors for their participation in the NeUG 2017 Spring Conference & Workshop. We all benefit from their contributions, hard work and dedication.

Thanks to the Event Sponsor, Bentley Systems, Incorporated, and our Silver sponsor InEight. Thanks to A&D for printing the handouts for this year!

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).

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://roads.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://roads.nebraska.gov/business-center/conferences/neug/
**NeUG Officers, Keynote, and Presenters**

**NEUG OFFICERS**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Otte</td>
<td>City of Lincoln</td>
</tr>
<tr>
<td>Troy Norviel</td>
<td>HDR</td>
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<tr>
<td>Shane Swope</td>
<td>The Schemmer Associates</td>
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<td>Brian Jueneman</td>
<td>Olsson Associates</td>
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</tbody>
</table>

**WELCOME ADDRESS/NDOR UPDATE**

**Khali Jaber, Nebraska Department of Roads**

Khali Jaber has been the Deputy Director - Engineering for the Nebraska Department of Roads since August 6, 2012. Prior to this, he was the Program Management Engineer since July of 2005. He also spent two years as the Public Transportation Engineer in the Rail and Transit Sections, seven years as a Project Engineer and Consultant Coordinator in Roadway Design, and five years as a field Project Manager in District 5, Bridgeport office. He received his Bachelor of Science in Civil Engineering from Kansas State University and is a Registered Professional Engineer in the State of Nebraska. He is also a Project Management Professional (PMP) since January of 2008.

**NEUG KEYNOTE**

**Mo Harmon, Bentley Systems, Inc.**

Mo Harmon earned an engineering degree from Louisiana State University and was hired by HNTB Corporation in 1988. After spending 26 years with HNTB, Mo joined Bentley Systems as a Solution Executive.

**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.

**William Knight, Wilson & Company, Inc.**

William has 17 years of diverse land surveying experience. Beginning in the U.S. Army as a Topographic Surveyor (555th EN CO), he went on to work as a CAD draftsman, instrument operator, survey field crew chief, and survey manager. Throughout his surveying career he has performed ALTA/ACSM, boundary, geodetic, topographic, aerial mapping, transportation, bathymetric, and bridge surveys. As survey manager at Wilson & Company, he oversees land surveying tasks in Nebraska, Missouri, Kansas, and Illinois.

**Whitney Lynn, Wilson & Company, Inc.**

Whitney has more than eight years’ experience in the geospatial industry. He has been part of numerous projects performing LiDAR, photogrammetric, GIS, and image processing tasks. He currently serves as LiDAR Data Processing Lead for Wilson & Company. Whit has completed a variety of LiDAR-based projects, including road/bridge as-built design, dam deformation studies, transmission line and substation surveys, and sidewalk/stormwater improvements.

**Mark Scholfield, Wilson & Company, Inc.**

Mark Scholfield is Wilson & Company’s Alternative Delivery Program Manager and has overall responsibility for Wilson & Company’s involvement in design-build and CM/GC projects. Mark is also a leader in the Colorado Department of Transportation Innovative Contracting Program, serving as ACEC’s representative to the program and co-authoring CDOT’s Project Delivery Selection Matrix and Design-Build Manual and CM/GC Manual. Mark received his undergraduate degree in civil engineering from the University of Wisconsin and his masters degree in civil engineering from the University of Colorado.

**Jon Starr, Nebraska Department of Roads**

Jon Starr is a former Engineer, District Manager, and Consultant Coordinator in Roadway Design.

**Mark Templeman, JEO Consulting Group Inc.**

Mark Templeman has over 20 years of experience working with MicroStation, Mr. Templeman splits his time with standards, documentation, supporting staff, among too many unimportant things to be listed. Soon to celebrate 13 years at the City of Lincoln, Mike is now developing the third Bentley workspace for Engineering Services. When you cannot find Mike in the office, chances are he is at a softball field or with his grandchildren or both.

**Larry Lagsding, Felsburg Holt & Ullevig**

Larry Lagsding is a Consulting Engineer with over 30 years of experience in the geotechnical and environmental field. He has worked on numerous projects related to the design and construction of buildings, bridges, and roads.

**Nicholas Thomas, Wilson & Company, Inc.**

Nicholas Thomas has focused the last 10 years of his career on design-build projects. He has served as MOT Engineer, Roadway Design Lead, Project Manager, and Design Manager for transportation design-build projects in Utah, Colorado, and Missouri. He is also a Project Management Professional (PMP) since 2001.

**Garrett Hummel, Wilson & Company, Inc.**

Garrett Hummel serves as a project manager and lead design engineer for Wilson & Company’s Midwest transportation team. He has been responsible for the design of interstate expressway reconstruction, resurfacing, and roundabout projects. In addition, he is well versed in Bentley Open Roads 3D modeling and has used this technology to successfully model numerous reconstruction and resurfacing projects. Garrett also serves as a member of the NDOR/NDMUG (Nebraska Design-Build and MGC) Program Group.

**Mike Otte, City of Lincoln**

With over 20 years of experience working with MicroStation, Mr. Otte splits his time with standards, documentation, supporting staff, among too many unimportant things to be listed. Soon to celebrate 13 years at the City of Lincoln, Mike is now developing the third Bentley workspace for Engineering Services. When you cannot find Mike in the office, chances are he is at a softball field or with his grandchildren or both.

**Lisa Whitson, Bentley Systems**

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

**Christiana Holmes, Bentley Systems**

Christiana Holmes is a Computer Engineering Graduate from Florida State University. She has 13 years of CADD experience both in design and development. Christiana is an Applications Engineer with Bentley Systems and has several years of experience with Bentley products.

**Leland Rupp, Thiele Geotech**

Leland Rupp is a Consulting Geotechnical Engineer with over 20 years of experience in the geotechnical and environmental field. He has worked on numerous projects related to the design and construction of buildings, bridges, and roads.

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Mark Templeman, JEO Consulting Group Inc.

Mark has over 25 years of experience working in the civil engineering field at various consulting engineering firms throughout the Midwest. Mark’s current role at JEO is Senior Transportation Designer / CAD Manager with an emphasis on Federal and State funded projects. His design experience using Openroad technology includes projects such as: state highways, interstates, 3R, major municipal streets, local urban streets, and site design. As CAD Manager, he’s experience range from creating customized configurations and workspaces, maintaining standards, and implementation and training of design software. Mark also is a member of the NDOR Modeling User Group and 3R Subcommittee.

Steve Willoughby, Bentley Systems

Steve started his career working for Illinois DOT. He began working for GEOPAK Corp. in 1995. He has worked in the Bridge Information Modeling Group since its inception providing consulting, training, and support services. He has nearly 30 years of experience in using, implementing, training, and supporting civil engineering design software. He has worked with over two dozen DOT’s and countless engineering firms in his time with Bentley Systems.

Tim Barber, InEight, Inc.

Tim has been working in the VDC market for more than 6 years. 5 of those years were with the Kiewit VDC team as a designer. Tim has helped to implement various 3D modeling standards and procedures within Kiewit. With his ’Outside of the Box’ thinking and problem solving he was noticed by InEight as a valuable resource. In the fall of 2016 joined the Visual Solutions team at InEight as a Product Engineer. Tim has applied his critical thinking to help solve use cases that cross multiple industries utilizing InEight’s InfinyD solution. Tim holds a Certificate of Management for Building Information Modeling from the AGC of America.

Matthew Gregor, Olsson Associates

With over 10 years of experience in the field, Matthew works as a GIS specialist for Olsson Associates (OA). He has extensive experience creating Geographic Information Systems (GIS) products for a variety of customers with the majority of his experience creating and maintaining data for engineering uses such as Water Resources, Environmental, Traffic, and Automated Technology. One of Matthew’s key skills is converting legacy data into usable GIS data. In addition to providing local and regional GIS support for OA, Matthew also creates automation tools for iterating repetitive processes.

Morgan Fogarty, Kiewit

Morgan has been working in the construction industry for more than 8 years, 2 of those with the Kiewit VDC team as a Field Coordinator. Morgan has spent extensive time in the field and is currently working with project teams to maximize the use of modeling content for construction work planning. Morgan holds a Certificate of Management for Building Information Modeling from the AGC of America.

Julio Talero, City of Lincoln

28-year career with the Lincoln Fire Department as Captain and frequently providing PC support. The last 7 years I have achieved extensive knowledge in the field of GIS, creating and maintaining Geodatabase as well as development of several Web applications. I have been with Public Works and Utilities since 2013. I served as a main GIS editor for City Land-base as well as providing QA/QC services in order to assure the accuracy and completeness of new Sub-Division/plot projects. Over the past few months, I have transitioned into the role of GIS leadership for Public Works and Utilities.

Holly Urbain, Seiler Instrument

Holly is a Trimble certified survey trainer. She is based in Madison Wisconsin. She started her career with the Wisconsin Department of Transportation in the field on a survey crew, advanced to crew chief and moved to standards and training at the central office. Her 15 years with Seiler Instrument have been in the Geospatial Surveying group in sales and support and training.

Daniel Chapek, IMAGINiT

A leading expert in Leica HDS, 3D laser scanning and aerial photogrammetry technology, Daniel applies his knowledge of both the data collection and his understanding of how point clouds are used in the design to help clients create a more effective workflow and solution. As director of the reality capture solutions team, Dan is responsible for thought leadership, uncovering new ways in which to serve clients and keeping abreast of the rapidly changing technology environment. A sought-after speaker, Dan has presented at HXGN Live and Autodesk University.

Bill Baird, Nebraska Department of Roads

Bill has over 30 years of experience with NDOR including working in a Survey Crew at a District Construction Office and 9 years in the Photogrammetry Department. The last 19 years, Bill has been working within the Engineering Support section that handles the configuration, setup, and training of MicroStation, Geopak, ProjectWise and various other engineering applications for NDOR. Bill is also involved with the State GIS Implementation Team, which includes multiple State Agencies, for the past 5 years.

Toby Fierstein, Nebraska Department of Roads

Toby is a registered Professional Civil Engineer in Nebraska with 15 years of experience in highway design at the Nebraska Department of Roads (NDOR). His current role in the Engineering Support Division is as a Design Unit Head, supervising a group of Engineers and Designers. In addition to his duties as a Unit Head, he leads the 3D modeling effort throughout Roadway Design and NDOR is also responsible for supervising a group of Engineers, Designers and Utilities Coordinators. In addition to his duties as a Unit Head and the Utilities Engineer, he is a Group Advisor for the NDOR Modeling Users Group (MUG).

Thomas Sawyer, Nebraska Department of Roads

Tom has over 25 years of experience working with Engineering Software at NDOR, a Bentley reseller, and engineering firms. His current role is supervising a small group within the Engineering Support section that handles the configuration, setup, and support of MicroStation, Geopak and various engineering applications for NDOR.

Nathan Sorben, Nebraska Department of Roads

Nathan Sorben is currently an Assistant Roadway Design Engineer for NDOR with 17 years of experience in Civil Engineering. Nathan is a graduate of the South Dakota School of Mines with a B.S. in Civil Engineering. After graduation, he spent 10 years as a consultant. While at NDOR, Nathan has spent his time within the Roadway Design Division as a designer, Unit Head, and currently as a Section Head. His role includes leading the Design Support Section including Design Standards, Plan Development, and ROW Permit reviews. Nathan is a Professional Engineer in Nebraska and Missouri.

Dan Barth, Felsburg Holt & Ullevig

Dan Barth is a graduate of the University of Nebraska at Omaha with a Bachelor’s of Science in Civil Engineering. He has 4 years of experience in Roadway Design at FHU and has been involved in various design projects including local urban streets, state highways, and interstate projects. He has experience in modeling intersections, roundabouts, interchanges, and rest areas with Open Roads.

NeUG Presenters (Continued)
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LINCOLN PUBLIC WORKS AND UTILITIES

OLSSON ASSOCIATES

HDR

Kiewit

SCHEMMER

ARCHITECTS | ENGINEERS | PLANNERS

FELSBURG HOLT & ULLEVIG
engineering paths to transportation solutions

NDOR
Nebraska Department of Roads

WOODS & AITKEN LLP

WILSON & COMPANY

Bentley User Group

SEILER Geospatial Division

Thiele Geotech Inc
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 - 8:00</td>
<td>Registration and Breakfast</td>
<td></td>
</tr>
<tr>
<td>8:00 - 8:10</td>
<td>Conference Overview: Jon Starr NEUG Planning Committee/NDOR</td>
<td></td>
</tr>
<tr>
<td>8:10 - 8:20</td>
<td>Conference Welcome/NDOR Update: Khalil Jaber- Deputy Director Engineering NDOR</td>
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</tr>
<tr>
<td>8:20 - 8:50</td>
<td>Keynote: “CIM Across America” Mo Harmon, Solutions Exec. Bentley Systems</td>
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</tr>
<tr>
<td>9:00 - 9:45</td>
<td>Track 1 - MicroStation</td>
<td></td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>1. Surviving the transition to CONNECT for Users</td>
<td>Jeanne Aarhus</td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>2. Design-Build Delivery and Innovation</td>
<td>Mark Scholfield &amp; Nicholas Thomas, Wilson &amp; Company</td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>3. OpenRoads for Site Design</td>
<td>Quinten Jordan- JEO Consulting Group</td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>4. OpenBridge Modeler Overview</td>
<td>Steve Willughby, Bentley</td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>5. Understanding Design Intent &amp; How it Impacts OpenRoads</td>
<td>Christiana Holmes- Bentley</td>
</tr>
<tr>
<td>9:00 - 9:45</td>
<td>6. The Reality of Reality Capture</td>
<td>Daniel Chapek- Imaginit</td>
</tr>
<tr>
<td>9:45 - 10:00</td>
<td>Vendor Break</td>
<td></td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>Track 2 - Engineering</td>
<td></td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>7. Beyond Basics in MicroStation 2D</td>
<td>Jeanne Aarhus</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>8. Liability Side of Technology for Engineers</td>
<td>Bruce Smith- Woods Atkken</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>9. 3R Guidance for Modeling- Panel Discussion</td>
<td>Toby Fleerstein and Jamie Mikkelsen- NDOR</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>10. Linking Mobile Plans to a Model For Use in the Office and Field</td>
<td>Tim Barber- InEight Inc.</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>11. Making Custom Linestyles Part of the Modeling Workflow</td>
<td>Lisa Whitson- Bentley</td>
</tr>
<tr>
<td>10:00 - 10:45</td>
<td>12. Civil 3D Pipe Networking</td>
<td>Troy Bennett- HDR</td>
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<tr>
<td>10:45 - 11:00</td>
<td>Vendor Break</td>
<td></td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>Track 3 - Civil Design</td>
<td></td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>13. OpenRoads Designer</td>
<td>Dave Hoerner- Bentley</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>14. Content Management for Consultants on NDOR Projects</td>
<td>Nathan Sorben and Bill Baird NDOR</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>15. Roundabout Modeling using the Open Roads tools</td>
<td>Dan Barth- FHU</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>16. Trimble SX10 Workflow</td>
<td>Kevin Hall, Scott Howe- Seiler Instrument</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>17. OpenBridge Modeler to LEAP and Back</td>
<td>Steve Willughby- Bentley</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>18. Creating Traditional Topography from Advanced Data Sources</td>
<td>Daniel Chapek- Imaginit</td>
</tr>
<tr>
<td>11:45 - 1:00</td>
<td>Lunch</td>
<td></td>
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<tr>
<td>1:00 - 1:45</td>
<td>Vendor Break</td>
<td></td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>Track 4 - Survey/Construction</td>
<td></td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>19. Large Projects- Working with Reference Files</td>
<td>Lisa Whitson- Bentley</td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>20. CIM- Sioux City</td>
<td>Chris Malmberg- HDR</td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>21. NDOR’s Use of OpenRoads Navigator for Model Review</td>
<td>Thomas Sawyer and Jamie Mikkelsen- NDOR</td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>22. Importing and Editing ASCII Survey Data</td>
<td>Dave Hoerner- Bentley</td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>23. Introduction to SUE and StormCAD for OpenRoads</td>
<td>Lisa Whitson- Bentley</td>
</tr>
<tr>
<td>1:45 - 2:00</td>
<td>24. City of Lincoln CAD and GIS Update</td>
<td>Julio Tailer and Mike Otte- City of Lincoln</td>
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<tr>
<td>2:00 - 2:45</td>
<td>Vendor Break</td>
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<tr>
<td>2:45 - 3:00</td>
<td>Track 5 - Civil Design</td>
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<tr>
<td>2:45 - 3:00</td>
<td>25. LumenRT Overview</td>
<td>Christiana Holmes- Bentley</td>
</tr>
<tr>
<td>2:45 - 3:00</td>
<td>27. Creating Civil Cells</td>
<td>Thomas Sawyer- NDOR</td>
</tr>
<tr>
<td>2:45 - 3:00</td>
<td>28. Ditch Modeling</td>
<td>Dave Hoerner- Bentley</td>
</tr>
<tr>
<td>2:45 - 3:00</td>
<td>29. An Introduction to OpenRoads ConceptStation</td>
<td>Lisa Whitson- Bentley</td>
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<tr>
<td>2:45 - 3:00</td>
<td>30. GIS Technologies</td>
<td>Matthew Gregor- Olson Associates</td>
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<tr>
<td>3:00 - 3:45</td>
<td>Vendor Break</td>
<td></td>
</tr>
<tr>
<td>3:45 - 4:00</td>
<td>Conference Wrapup</td>
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</tbody>
</table>
Nebraska Innovation Campus
## Wednesday, March 8 – Conference

### 7:00 – 8:00 A.M.
**Registration & Breakfast**

### 8:10 – 8:20 A.M.
**Opening Remarks** – Jon Starr, NeUG Planning Committee/Nebraska Department of Roads

**Welcome Address** – Khalil Jaber, Deputy Director, Nebraska Department of Roads

### 9:00 – 9:45 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. Don't miss out on this fun and enlightening session!

Presenter: Jeannine Aarhus – Aarhus Associates, LLC

### 9:00 – 9:45 A.M.
**Liability Side of Technology for Engineers**

The things to watch for, how using technology vs. paper can cause situations and share some case examples.

Presenter: Bruce Smith – Woods Atkins

### 9:00 – 9:45 A.M.
**Beyond Basics in MicroStation 2D**

This session is designed to get the beginning MicroStation user beyond the introductory level and efficient using more advanced concepts and commands. Learn to work with reference files, level symbology, saved views, and custom linestyles. If you have been using MicroStation the same way for years, and don’t have time for command adventures at work, attend this class to progress to the next level.

Presenter: Jeannine Aarhus – Aarhus Associates, LLC

### 9:00 – 9:45 A.M.
**OpenRoads for Site Design**

OpenRoads isn’t just for the lateral design projects like roads and railroads. Parking lots, building sites, ponds and many other non-lateral civil projects can be designed using the tools within OpenRoads. Learn how to leverage the Horizontal, Vertical and 3D Geometry tools inside of OpenRoads to design your next non-lateral civil projects.

Presenter: Quinten Jordan – JEO Consulting Group

### 9:00 – 9:45 A.M.
**OpenBridge Modeler Overview**

In this session, you will learn how to model different types of bridges using OpenBridge Modeler including precast girders, steel beams, and segmental boxes within a traditional interchange configuration. Learn how you can prepare optimal designs in a 3D environment to evaluate constructability issues in the earliest stages.

Presenter: Steve Willoughby – Bentley Systems, Inc.

### 9:00 – 9:45 A.M.
**Understanding Design Intent & How it Impacts OpenRoads**

Design intent describes the geometry rules OpenRoads creates defining how geometry elements relate to other geometry elements and to graphic elements. During this session we will discuss when rules are created, best practices for creating geometry (and rules) for different situations, and how and when it is appropriate to drop rules.

Presenter: Christiana Holmes – Bentley

### 9:00 – 9:45 A.M.
**Photogrammetry, and 3D Laser Scanning Data Sources**

These technologies, including high definition scanning (HDS) and UAV photogrammetry, have been all over the industry lately. But which technology or collection process will ensure that you get the most accurate measurements of existing conditions, digitally? And beyond that, what do you do with the data after it's been collected? This course covers multiple technologies and how detailed point clouds can be used to create many different deliverables. Beyond hardware and software, IMAGINiT's Reality Capture expert will provide answers to many of the questions new users of reality capture data only know to ask after they've struggled.

Presenter: Daniel Chapek – Imaginix

### 10:00 – 10:45 A.M.
**Making Custom Linestyles Part of the Modeling Workflow**

Custom lines styles are not just for 2D drafting. Moving beyond dash-dot patterns custom lines styles can be a quick and powerful tool in your 3D modeling workflow. During this session you will learn how to create your own custom 3D line styles and use them in an OpenRoads model.

Presenter: Lisa Whitson - Bentley

### 10:00 – 10:45 A.M.
**Civil 3D Pipe Networking**

Creating, editing, and viewing pipe networks.

Presenter: Troy Bennett – HDR Engineering

### 10:00 – 10:45 A.M.
**Trimble SX10 Workflow**

We will discuss the new Trimble SX10 robotic total station / 3D laser scanner. We will step through the features of the instrument, data collection and data manipulation in TBC.

Presenter: Holly Urbain – Seiler Instruments

### 11:00 – 11:45 A.M.
**3R Guidance for Modeling – Panel Discussion**

Panel discussion with the members from NDOR's Modeling Users Group 3R Subcommittee. This discussion will focus on the how this committee is developing modeling design procedures for NDOR's 3R projects.

Presenter: Toby Fierstein and Jamie Mikkelson – NDOR

### 11:00 – 11:45 A.M.
**Linking mobile plans to a model for use in the office and field**

This presentation will highlight a valuable use case in the industry. The Owner has requested that design and fabrication documents are linked to the model for operational use. Why not make that connection early on to assist field users in finding the most up to date documents? Upon upload of 3D models, InfraGC retains engineering/design information from the 3D model along with adding construction/building operation information. Imagine allowing a team to normalize this data to support processes further down the line. This data allows the team to filter the model down and link documents to these elements. Imagine noticing an issue in the field. Open the model on your tablet or phone. Select the element and you’re able to open designs, inspections, or specs associated to that element with a touch of your finger.

Presenter: Tim Barber – InEight, Inc.

### 11:00 – 11:45 A.M.
**Roundabout Modeling using the Open Roads tools**

This presentation will provide a way to create the complex geometry associated with roundabouts using various tools in Open Roads including the Horizontal, Vertical, and Terrain tools, as well as Linking mobile plans to a model for use in the office and field.

Presenter: Dan Barth – FHU

### 11:00 – 11:45 A.M.
**Linking mobile plans to a model for use in the office and field**

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Presenter: Tim Barber – InEight, Inc.

### 11:00 – 11:45 A.M.
**Content Management for Consultants on NDOR Projects**

NDOR will provide an overview and status update on efforts to better integrate how NDOR and consultants manage content and deliverables on consulting engagements. This will include using ProjectWise and OnBase, and having access to content live in NDOR's content management systems.

Presenter: Nathan Sorben and Bill Baird – NDOR

### 11:00 – 11:45 A.M.
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Presenter: Toby Fierstein and Jamie Mikkelson – NDOR

### 11:00 – 11:45 A.M.
**OpenBridge Modeler to LEAP and Back**

The newest version of OpenBridge Modeler supports sending geometric changes to the girders from LEAP Bridge Steel back to OBM. This session will focus on the interaction between the two products as well as new girder optimization tools in LEAP Bridge Steel and the substructure drawing generation tools in OpenBridge Modeler...

Presenter: Steve Willoughby - Bentley

### 11:00 – 11:45 A.M.
**Creating Traditional Topography from Advanced LiDAR, Photogrammetry, and 3D Laser Scanning Data Sources**

Presenter: Daniel Chapek – Imaginix
Wednesday, March 8 – Conference (Continued)

12:00 – 1:00 P.M.
Lunch

1:00 – 1:45 P.M.
Beyond Basics in MicroStation 3D
This session is designed to get the intermediate MicroStation user beyond the everyday 2D commands. Learn to create, view and edit “smart” 3D solids, and develop a basic understanding of the parametric design tools. 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

1:00 – 1:45 P.M.
Virtual Design and Construction
This presentation will highlight how VDC can empower project teams with the ability to organize, enhance, and consume design data through the use of best practices and technology. Use cases to be discussed include Quantity Extraction, 3D Coordination, Construction Work Planning, Lidar, and Data Modeling.
Presenter: Morgan Fogarty, Jim Brinkman & Brock Pierson – Kiewit

1:00 – 1:45 P.M.
NDOR's Use of OpenRoads Navigator for Model Review
OpenRoads Navigator is a Bentley application that NDOR is implementing to allow supervisors to review design files and 3D models without having an in-depth knowledge of how to use OpenRoads modeling software. OpenRoads Navigator will give you the opportunity to review the files in a simpler format and allow you to redline the design.
Presenter: Thomas Sawyer and Jamie Mikkleston – NDOR

1:00 – 1:45 P.M.
Importing and Editing ASCII Survey Data
This course teaches how to import, review, and edit data contained in RAW Survey data files using OpenRoads Survey. Such data includes Setups, Instrument Heights, Horizontal & Vertical Angles, Rod Heights, and Slope Distances.
Presenter: Dave Hoerner – Bentley Systems, Inc.

1:00 – 1:45 P.M.
Introduction to SUE and StormCAD for OpenRoads
Discover the capabilities of the Subsurface Utility Engineering and StormCAD for OpenRoads products. You will learn what you can do with each application as well as the differences and the overlaps between the two tool sets. Finally we will discuss licensing so you understand which products you need and the advantages of OpenAccess in regards to the utilities tools in OpenRoads.
Presenter: Lisa Whitson – Bentley

1:00 – 1:45 P.M.
City of Lincoln - CADD and GIS Update
CADD/GIS Update for the City of Lincoln. We will also take a look at the future.
Presenter: Julio Taliero and Mike Otto – City of Lincoln

2:00 – 2:45 P.M.
Large Projects - Working with Reference Files
Take a look on how file federation allows you to handle large projects. Examine how file structure and referencing can benefit you during a projects life cycle. Also look into other factors that will streamline performance of models which will aid you on starting new projects in way that they will scale to meet your needs as the project grows in complexity.
Presenter: Lisa Whitson – Bentley Systems, Inc.

2:00 – 2:45 P.M.
CJM - Sioux City
Roadway design is currently in the middle of an evolution from CAD generated plans and quantities towards CJM design with paperless plans and a 3D model as the deliverable. The I-29 interstate project through downtown Sioux City is a complex interdisciplinary project that has benefitted from the implementation of some of these new processes. This session will illustrate how CJM has been utilizing on a real world project, what benefits if provided, and how a similar project might be done in the future.
Presenter: Chris Malmborg – HDR

2:00 – 2:45 P.M.
OpenRoads - Lessons Learned
Lessons learned, Open Roads best practices, reducing cross section manual edits, when and when not to use linear templates, and methods of reviewing / verifying design output are all items that will be discussed in this hands on session.
Presenter: Adam Sleeper and Kevin Snook – Schemmer

2:00 – 2:45 P.M.
LiDAR Case Studies in Transportation Design
What is LiDAR and how does it apply in transportation design? Where is it suitable to use...and where is it not? Can this technology make a project more successful and how? By reviewing case studies utilizing LiDAR technology and how it helped overcome design challenges, the presenters will discuss the benefits and contributions of LiDAR as part of transportation projects.
Presenter: Whitney Lynn and William Knight – Wilson & Company

2:00 – 2:45 P.M.
Ditch Modeling
Learn multiple techniques to model ditches. Examples include using independent ditch profiles, independent horizontal geometry and profiles, concrete paving, and more.
Presenter: Dave Hoerner – Bentley

2:00 – 2:45 P.M.
Open
Presenter: TBD – Open

3:00 – 3:45 P.M.
LumenRT Overview
Quickly create images, videos and real-time presentations of architecture, landscape, urban and infrastructure designs. With LumenRT, you will Tell a Better Story. Win business through more engaging user experiences while still working in Your Design System. Nothing to learn! Quickly bring your scenes to life using tools you know. Enjoy high quality graphics with real-time natural lighting.
Presenter: Christina Holmes – Bentley Systems, Inc.

3:00 – 3:45 P.M.
Geotech - Vibration Monitoring Device
Presenter: Leland Rupp – Thiele Geotech, Inc.

3:00 – 3:45 P.M.
Creating Civil Cells
This presentation will demonstrate the steps that were taken to build one of NDOR's civil cells. The intention of this presentation is to introduce users to the concepts needed to create civil cells. This is intended for those that have not yet tried to create a civil cell.
Presenter: Thomas Sawyer – NDOR

3:00 – 3:45 P.M.
Trimble Access Tips and Tricks
We will discuss various tools and tips to make data collection and stakeout more efficient within the Trimble Access software.
Presenter: Holly Urbain – Seiler Instruments

3:00 – 3:45 P.M.
An Introduction to OpenRoads ConceptStation
Learn about Bentley’s new OpenRoads ConceptStation solution for rapidly creating, analyzing, and optimizing multiple conceptual corridor design alternatives to gain the maximum insights with the minimum of effort in a real-time high-end game-like visualization environment. The results of the conceptual models integrate with OpenRoads for detailed and final design.
Presenter: Lisa Whitson – Bentley

3:00 – 4:30 P.M.
NeUG Wrap up and Door Prizes
Presenter: Nebraska User Group, Committee Planners
Thursday, March 9 - Workshops

1. **Methodology for Sub Surface Utility Layout**
   - Time: 8:00 A.M. – 12:00 P.M.
   - Description: In this hands-on course you will learn the various methods for Drainage and Utility layout. The workshop will cover how to place inlets with physical and hydraulic accuracy, speed and confidence, how to import drainage from Graphical features, pull data from GIS and bring forward legacy drainage data. You will learn how to place inlets with physical and hydraulic accuracy, speed and confidence, how to import drainage from Graphical features, pull data from GIS and bring forward legacy drainage data.
   - Presenter: Lisa Whitson - Bentley Systems, Inc.

2. **Mastering the Corridor**
   - Time: 8:00 A.M. – 12:00 P.M.
   - Description: This course teaches the core skills necessary to work with corridors. The course begins with what 2D and 3D elements get created and how the 2D and 3D models interact with one another. You will learn how to override template geometry with Point Controls and End Condition Exceptions, how to target something other than the existing terrain, and how to assign Superelevation to a corridor.
   - Presenter: Christiana Holmes – Bentley Systems, Inc.

3. **Trimble Business Center**
   - Time: 8:00 A.M. – 12:00 P.M.
   - Description: This workshop will have four main topic areas spread over the 4 hour time period. We will learn how to setup and customize TBC. We will also cover integrating GNSS data with Dini Level Data. The points spreadsheet will be used for data analysis of 3D areas, volumes and reporting. Lastly, we will work with corridor models from design in XML, RXL and Imodel formats and leverage Trimble Access to edit the models during construction.
   - Presenter: Holly Urbain – Seiler Instruments

4. **Using OpenBridge Modeler**
   - Time: 1:00 P.M. – 5:00 P.M.
   - Description: This hands-on workshop will introduce you to the world of OpenBridge Modeler. You will learn how to create a model for a prestressed girder, steel girder and a segmental bridge with the modeler. Following the creation of the model, you will transition this model to the design and analytics solutions (LEAP Bridge Concrete, LEAP Bridge Steel and RM Bridge) individually. We will review some of the design, analytics and reporting features in each solution with the major focus on the model.
   - Presenter: Steve Willoughby – Bentley Systems, Inc.

5. **Intermediate to Advanced MicroStation User Training**
   - Time: 1:00 P.M. – 5:00 P.M.
   - Description: This session is designed to get the beginning MicroStation user beyond the introductory level and efficient using more advanced concepts and commands. Learn to work with reference files, level symbology, saved views, and custom linestyles. If you have been using MicroStation the same way for years, and don't have time for command adventures at work, attend this class to progress to the next level.
   - Presenter: Jeanne Aarhus - Aarhus Associates, LLC

6. **Defining End Conditions and Modeling a Superelevated Highway**
   - Time: 1:00 P.M. – 5:00 P.M.
   - Description: This hands-on training teaches how to create and make major modifications to template side slopes (end conditions). This training focuses on the side slopes connecting the template hinge to the tie down point. You will learn how to create end conditions with multiple cut and fill slope solutions, cut slopes with a ditch adjacent to the hinge, walls, and forced right-of-way solutions.
   - Presenter: Lisa Whitson - Bentley Systems, Inc.

7. **Accelerating Roadway Conceptual Design and Alternatives**
   - Time: 1:00 P.M. – 5:00 P.M.
   - Description: In this hands-on course you will use OpenRoads ConceptStation to create a new project, import data from multiple sources, create and edit roads and bridges, place city furniture, and visualize the project. OpenRoads ConceptStation is all about speed and ease of use.
   - Presenter: Dave Hoerner - Bentley Systems, Inc.

8. **LEAP Bridge Steel**
   - Time: 1:00 P.M. – 5:00 P.M.
   - Description: Learn how to model a steel I-girder bridge with field splices. Course covers the function for loading, analysis and rating. Generate reports and design code check the structure.
   - Presenter: Steve Willoughby – Bentley Systems, Inc.
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<tr>
<th>Time</th>
<th>Session</th>
<th>Duration</th>
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<tr>
<td>7:15 - 8:00</td>
<td>Registration &amp; Breakfast</td>
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<td>8:00 - 10:00</td>
<td>1. Methodology for Sub Surface Utility Layout</td>
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<td>10:00 - 10:15</td>
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<td>10:15 - 12:00</td>
<td>2. Mastering the Corridor</td>
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<td>12:00 - 1:00</td>
<td>Lunch</td>
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<td>12:30 - 1:00</td>
<td>Afternoon Registration</td>
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<td>1:00 - 3:00</td>
<td>3. Defining End Conditions and Modeling a Superrelevated Highway</td>
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<td>Lisa Whitson- Bentley</td>
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<td>3:00 - 3:15</td>
<td>Break</td>
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<td>3:15 - 5:00</td>
<td>4. Accelerating Roadway Conceptual Designs and Alternatives</td>
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Wednesday, March 9 – Conference
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www.roads.ne.gov/NEUG

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