

## 2023 IDDEA Conference Announcement

**Scheman Center, Iowa State University, Ames, Iowa**

**Workshops October 18th & October 20th  
Conference Day October 19th**

Another year and some hard work later, the IDDEA board is back and excited to unveil the 2023 IDDEA Fall Conference agenda!

This year's conference will be held on October 18th through October 20th and offers a wide range of session topics for users that are new to the field or veterans of the trade. The sessions provided are related to MicroStation and Civil Products, Survey, Bridge, Reality Modeling and Drainage and Utility, utilizing many Bentley Products. Our presentations come directly from Bentley professionals as well as consultants that use the software on a day-to-day basis.

Beginning on Wednesday, we will be providing a full day of hands-on workshops pertaining to creating and editing corridor templates and corridors, site and intersection modeling, creating curb ramp civil cells and bridge plan production.

Thursday morning, we will be kicking off our conference day with a keynote presentation from Dan Vogen, Vice President of Transportation for User Success at Bentley Systems. Dan has been working with many transportation agencies in the past 30-years and we are looking forward to hearing what he has in store for us.

As in years past, we will conclude Thursday's conference sessions with a brief meeting and closing remarks in the auditorium, followed by a social event. Be sure to stick around for the social event as we will be raffling off prizes for those in attendance. We will also have a cash bar available for refreshments as well as hors d'oeuvres provided for your enjoyment while networking with peers, presenters, and sponsors.

Friday will be our final day, rounding out the conference with an additional day of hands-on workshops. The workshops on Friday relate to creating and editing terrains, drainage plans and reports, item types, survey processing, modeling parametric concrete, and ProConcrete.

To register for the conference, please visit us at <https://iddeagroup.wildapricot.org/> to use our online registration page. Workshop attendance is based on a first come, first serve basis so if you plan to attend a workshop the sooner you get registered the better. In addition to conference registration on our website, you can also find directions and accommodation links, current conference newsletter including course descriptions, and information about the IDDEA Group and about becoming a sponsor.

As always, the driving force behind this conference year after year is you, our members. Our hope is to offer an opportunity to learn, excel, adapt, and grow with the ever-changing technology we are connected by. With that notion, please let any of our board members know what you think about this year's conference and about any sessions or specific presenters you would like to see at future conferences. Your input is valued and always appreciated.

Thanks again for being a part of this group and we look forward to seeing you at the 2023 IDDEA Conference at the Scheman Center, Iowa State Campus in Ames, October 18th-20th.

Hope to see you there!!

A handwritten signature in blue ink that reads 'Arielle Muench'.

Arielle Muench  
Chair, The IDDEA Group

## Registration Information

To register for the IDDEA Conference visit: [WWW.IDDEAGROUP.WILDAPRICOT.ORG](http://WWW.IDDEAGROUP.WILDAPRICOT.ORG)

**Note: We hope you will become a member before registering for the conference, but it is not required.**

A variety of payment options are available during the registration process. A confirmation email will be sent when payment is received.

Payment must be **received no later than Friday, October 13, 2023**. The deadline to cancel and receive a refund is **Friday, September 15, 2023**.

Make checks payable to: The IDDEA Group

Send to: Iowa DOT  
Bridges & Structures Bureau  
c/o Annette Jeffers  
800 Lincoln Way  
Ames, Iowa 50010

A copy of the registration form will serve as an invoice for most purposes.

½ day workshop - \$105

Full day Workshop - \$210

Conference day - \$120

Students – (Conference Day only) - \$60

[Register On-Line Here](#)

## Conference Location & Hotel Accommodations

**IOWA STATE UNIVERSITY**

Google - [Directions to the Scheman Building](#)

Iowa State University – [Online Campus Map](#)

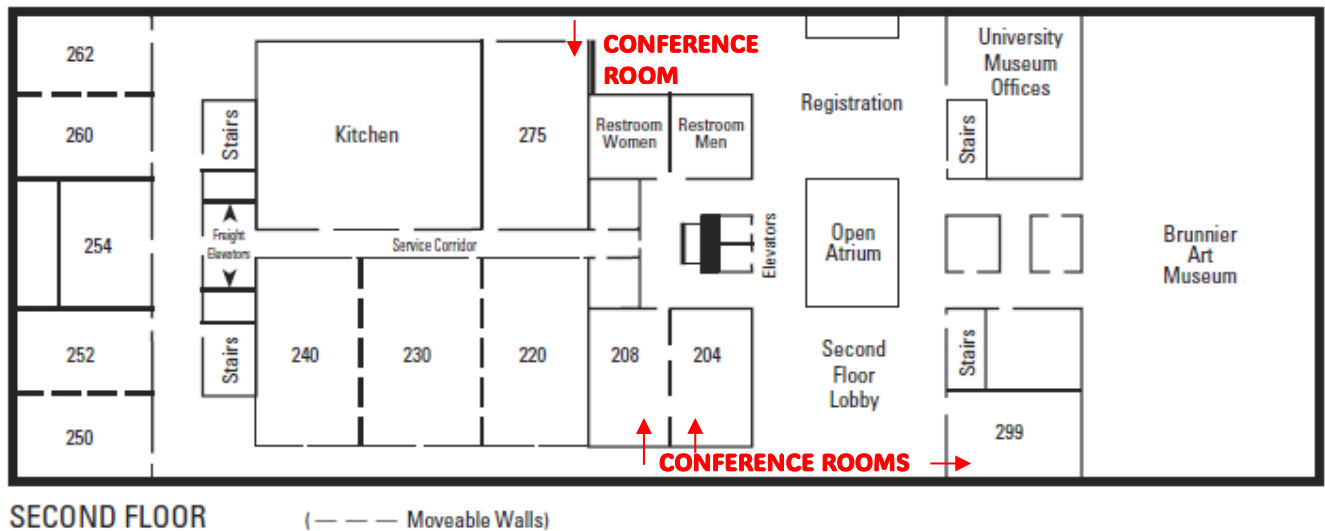
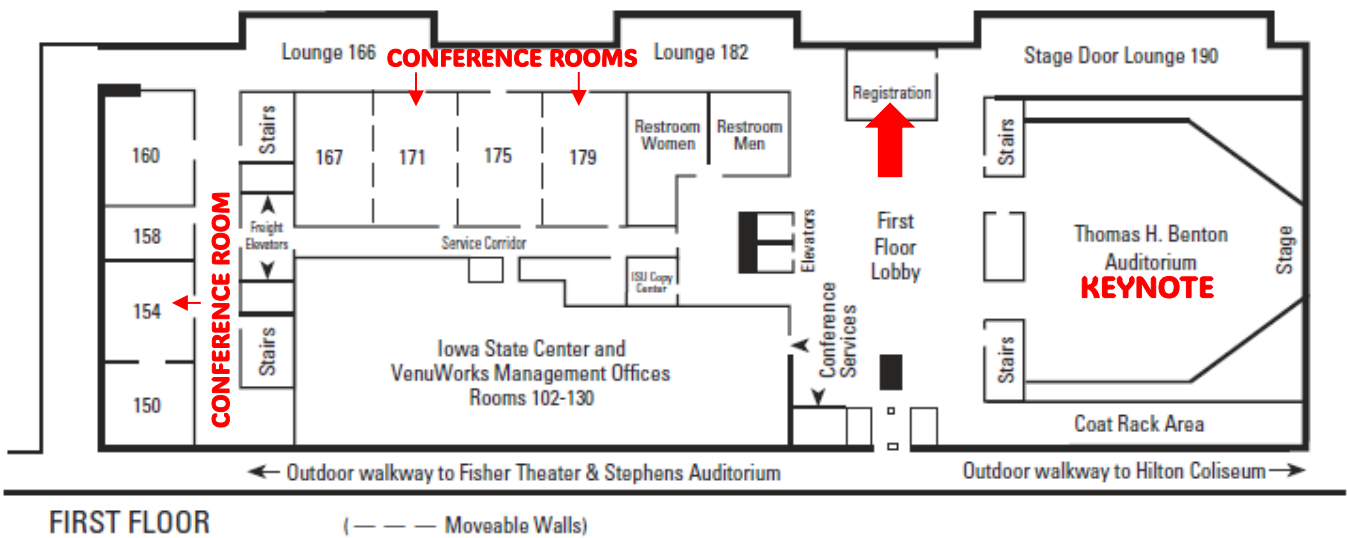
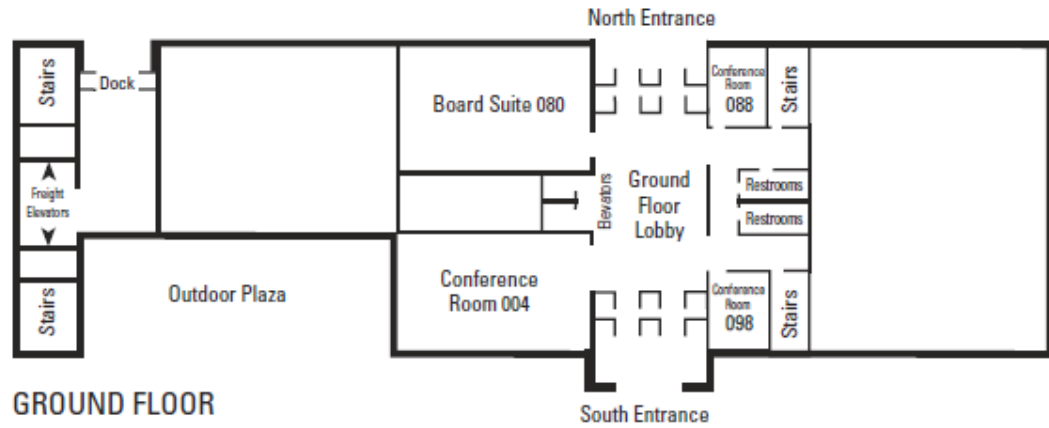
Hotel Accommodations – [Discover Ames](#)

Dining – [Discover Ames](#)



# Scheman Building

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## Keynote

### **Daniel T. Vogen, Bentley Systems, Inc.**

Dan Vogen is Vice President of Transportation for User Success at Bentley Systems. He has worked with transportation agencies for about 30 years, focusing on areas from design through asset inventory, operation, maintenance, analytics, and oversize/overweight permitting automation. Dan works with global development and implementation teams in the North America, Europe, and Asia, supporting transportation solutions worldwide. He earned a Master's of Science degree in Computer Science from the Illinois Institute of Technology.

## Workshop Presenters

### **Steve Willoughby, Bentley Systems, Inc.**

[Steve.Willoughby@bentley.com](mailto:Steve.Willoughby@bentley.com)

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.

### **Don Lee, Bentley Systems, Inc.**

[Don.Lee@bentley.com](mailto:Don.Lee@bentley.com)

Don Lee is a Senior Consultant located in Austin, Texas. At Bentley Systems, Don is an engineering application's professional with strong technical and applied expertise. An experienced internal and external consultant with deep knowledge in the areas of AEC software management, information standards design and development. Don has over 30 years of experience using Bentley's products and services before joining Bentley Systems in the Civil Infrastructure - Solution Engineering Advancement Unit.

### **Scott Urbas, Bentley Systems, Inc.**

[Scott.Urbas@bentley.com](mailto:Scott.Urbas@bentley.com)

Scott has over 25 years of experience in the civil engineering industry. He is a licensed professional civil engineer in the state of Ohio. He has worked on small and large roadway projects across the United States as a highway designer and InRoads & GEOPAK training/support specialist. His areas of expertise include 3-D Highway Design, 3-D Modeling, Geometric Design, Cross Section Design, Right of Way Design, Training and Support. He has extensive knowledge of Bentley civil products: OpenRoads Designer, InRoads and GEOPAK. Scott joined Bentley Systems in 2017 and currently serves as the manager of civil training content development. In this role, he is responsible for developing civil engineering training material for Bentley civil products: OpenRoads Designer, OpenRail Designer and OpenSite Designer.

### **Kevin Lusterio, Bentley Systems, Inc.**

[Kevin.Lusterio@bentley.com](mailto:Kevin.Lusterio@bentley.com)

Kevin Mark Lusterio is a seasoned professional engineer with nearly 10 years of experience in transportation design and civil design software, specializing in intricate highway/roadway and municipal projects. Proficient and accredited in OpenRoads Designer CE and Microstation CE, Kevin leads the configuration, deployment, training, and support of Bentley's civil solutions—specifically OpenRoads Designer—across North America. Joining Bentley Systems in 2019, he's a key consultant on the Civil Engineering User Success team, holding a B.S. in Civil Engineering from the University of Wisconsin-Milwaukee and a Professional Engineer license in Illinois.

**Chris McNulty, EnvisionCAD**

[Chris.Mcnulty@envisioncad.com](mailto:Chris.Mcnulty@envisioncad.com)

Chris specializes in MicroStation support and training. After receiving his AAS degree in Civil Engineering from Hawkeye Community College in Waterloo, IA, he worked as a lead designer for a civil engineering firm for nine years. He was involved with creating and maintaining cad standards and providing internal support. Chris was also involved with taking roadway and site design projects from survey to final plan production. His most significant accomplishments include creating advanced roadway templates to help increase modeling production and designed multiple roadways, trails, and roundabouts. Chris is always looking for ways to help others utilize the software to become more productive and efficient.

**Jamie Wahl, Stanley Consultants**

[WahlJamie@stanleygroup.com](mailto:WahlJamie@stanleygroup.com)

With 23 years' experience, Jamie Wahl serves as a Multidisciplinary Principal Designer at Stanley Consultants where he leads modeling tasks of different scopes and sizes for both roadway and structures in the Transportation Market. Mr. Wahl is proficient using MicroStation CONNECT, OpenRoads Designer, OpenBridge Designer, ProStructures, and OpenRoads ConceptStation. Mr. Wahl also serves as an Adjunct Instructor at DMACC teaching Introduction to MicroStation, Road Design using OpenRoads Designer, and Structural Detailing and Modeling using OpenBridge Designer and MicroStation 3D modeling.

**Steve Litzau, EnvisionCAD**

[Steven.Litzau@envisioncad.com](mailto:Steven.Litzau@envisioncad.com)

Since completing his degree in Civil Engineering at Colorado State University, Steve has accumulated fifteen years of experience in the AEC industry. His experience spans all phases of project development from conceptual design through to final construction documents delivered on both Autodesk and Bentley civil platforms. While specializing in geometric design and modeling of linear projects, Steve also provided three-dimensional modeling for simple and complex site design projects. Following ten years of civil engineering design, Steve followed his passion for process and workflow into design technology systems, support and management. While at a national AEC firm, Steve supported over 150 engineering and design applications, serving as a subject matter expert for numerous applications, including Bentley's GEOPAK and Autodesk's Civil 3D. As the Manager of Design Technology, Steve oversaw teams tasked with all aspects of design technology application support from installation and licensing to software customization and training. Now with EnvisionCAD Steve leverages this experience to provide a full spectrum of support to organizations and agencies including configuration, project support, education, and strategic planning.

**Jeff Vaske, Midwest CAD Solutions.**

[Jeffv@mcskad.com](mailto:Jeffv@mcskad.com)

Jeff has been a CAD consultant for the past sixteen years working with a diverse client base from civil engineering to power/gas utility companies. He is a Bentley Qualified Trainer and has provided CAD support, developed custom documentation, and conducted MicroStation, GEOPAK, Descartes, and OpenRoads training for all skill levels. Jeff currently provides CAD management for a large utility company with over 150 users spanning multiple states. Before being a consultant Jeff was a civil technician with MnDOT and two consultant firms designing various State, County, and City projects. Several years of road construction experience as a finisher / foreman rounds out his background enabling him to relate design to field application.

**Jordan Hatfield, Bentley Systems, Inc.**

[Jordan.Hatfield@bentley.com](mailto:Jordan.Hatfield@bentley.com)

Conference Presenters

**Mark Stafne, Bolton & Menk, Inc.**

[Mark.Stafne@bolton-menk.com](mailto:Mark.Stafne@bolton-menk.com)

**Jamie Wahl, Stanley Consultants**

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**Steve Rick, Bentley Systems, Inc.**

[Steve.Rick@bentley.com](mailto:Steve.Rick@bentley.com)

<b>7:30-8:00</b>	<b>Workshop Registration and Continental Breakfast Sponsored By Kirkham Michael</b>		
<b>Room No.</b>	<b>150-154</b>	<b>167-171</b>	<b>175-179</b>
<b>8:00 - 12:00</b>			
	<b>Creating a Curb Ramp Civil Cell</b> <i>Scott Urbas</i>	<b>Intersection Modeling</b> <i>Steve Litzau</i>	<b>Defining Template Components &amp; Constraints / Defining Template End Conditions</b> <i>Kevin Lusterio &amp; Jordan Hatfield</i>
<b>12:00 - 1:00</b>	<b>Lunch Sponsored by Snyder &amp; Associates</b>		
<b>1:00 - 5:00</b>			
	<b>Bridge Plan Production</b> <i>Steve Willoughby</i>	<b>Site Modeling In ORD</b> <i>Steve Litzau</i>	<b>Creating &amp; Manipulating the Corridor / Templates, Triggers &amp; Switches</b> <i>Don Lee &amp; Scott Urbas</i>

**Defining Template Components, Constraints & End Conditions**

*Presenter – Kevin Lusterio & Jordan Hatfield, Bentley Systems, Inc.*

The first half of this course teaches how to create templates and components for those situations that require more than simply modifying existing templates. This training focuses on the hinge-to-hinge backbone portion of the template. You will learn how to create pavement slabs, pavement stripes, curbs, pavement widening, matching existing pavement, and barriers.

This hands-on training teaches how to create and make template end conditions. The second half of 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.

**Intersection Modeling**

*Presenter – Steve Litzau, EnvisionCAD*

With the move towards model based deliverables, completing a holistic design model is becoming crucial. This workshop will explore a dynamic, robust intersection modeling workflow using a tool familiar to most ORD roadway modelers, the corridor.



### **Creating a Curb Ramp Civil Cell**

*Presenter – Scott Urbas, Bentley Systems, Inc.*

This course is for both new users and users. You will learn the basics of placing civil cells. This includes gaining an understanding of what civil cell references are and how to use them in a practical workflow. You will learn to use the civil cells delivered with the product, as well as how to use civil cells taken from external sources and incorporate them into your models. you are going to learn how to create a curb ramp civil cell. You will learn how to create reference geometry elements for the horizontal and vertical parts of the civil cell. You will learn how to create profiles, slopes and curb transitions as well as how to create the 3D model details. Geometry rules and relationships will be created to make the civil cell easily adaptable to any corridor or geometry you place it alone.

### **Creating & Manipulating the Corridor / Templates, Triggers & Switches**

*Presenter – Don Lee & Scott Urbas, Bentley Systems, Inc.*

In this course, we will take a look at how to add multiple template drops along the corridor as you encounter intersections, driveways and turn lanes and how to edit and copy template drops in lieu of creating a new template. We will show how to make the corridor follow edge of pavement geometry using point controls and corridor references. You will learn how the secondary alignment tool aids in changing the direction of template processing as it applies to point controls and corridor reference elements. You will also learn how to use parametric constraints to override default template values for pavement depths, curb heights, shoulder slopes and ditch widths and how to use the clipping reference tool to clip out a portion of your corridor. Learn how to create templates that use null points with component display rules that act as triggers (or switches) to display and undisplay parts of your template when linear geometry is added as corridor reference elements to a corridor. An example of this is turning off curb and grading components in intersections areas when in intersection matchline element is added as a corridor reference. We will also discuss how to create end conditions that can be used to check for the existence of a right of way feature. We will look at how corridors interact with other corridors by learning how to use target aliasing to seek corridors. And finally, we will show how to create end condition exceptions in areas that require a different type of end condition solution.

### **Site Modeling in OpenRoads Designer**

*Presenter – Steve Litzau, EnvisionCAD*

OpenRoads Designer, often thought of as a “linear design” software, includes ample tools for the design and modeling of site elements efficiently and dynamically. This workshop strives to provide general site modeling concepts, design methodologies and exposure to applicable tools while using those tools in common site design applications such as parking lots, intersections and ponds.

### **Bridge Plan Production**


*Presenter – Steve Willoughby, Bentley Systems, Inc.*

Drawing, sheet models, section callouts, annotation scales, dynamic views, display styles are some of the features that we will review during this workshop so we can produce plans directly from the 3D model.





Iowa Digital Design & Engineering Applications

7:15-8:00	Conference Registration & Continental Breakfast Sponsored by Stanley Consultants							
8:00-9:00	Opening Remarks and Keynote: Presenter, Dan Vogen Opening the Door to Data Standards in Transportation (Auditorium)  ** For Room Layout and Course Descriptions, Scan the Code **							
9:00 - 9:10	BREAK (Vendor Area)							
Room No.	175-179	167-171	150-154	204	208	275	299	
	1	2	3	4	5	6	7	
9:10-10:00	Creating Terrain Models from LiDAR in ORD  <i>Mark Stafne</i>	Creating Staged Cross Sections  <i>Scott Urbas</i>	Plan Production Workflow in ORD  <i>Steve Litzau</i>	SYNCHRO Construction Solutions  <i>Kerry Newbanks</i>	Geometry Rules & Relationships  <i>Jordan Hatfield</i>	Templates Deconstructed  <i>Kevin Lusterio</i>	Right-of-Way Geometry Using ORD  <i>Chris McNulty</i>	
10:00-10:10	BREAK Sponsored By SRF Consulting Group, Inc. (Vendor Area)							
	8	9	10	11	12	13	14	
10:10-11:00	Understanding Terrain Models  <i>Don Lee</i>	Modeling Walls & Sideslopes  <i>Scott Urbas</i>	Site Modeling for Linear Designers  <i>Steve Litzau</i>	Creating a Construction Model in SYNCHRO  <i>Kerry Newbanks</i>	Cross Section Annotation  <i>Jordan Hatfield</i>	Detailing of Bridge Elements Using ProStructures  <i>Steve Willoughby</i>	Controlling the Display of Designs  <i>Steve Rick</i>	
11:00-11:10	BREAK Sponsored By Kirkham Michael (Vendor Area)							
	15	16	17	18	19	20	21	
11:10-12:00	Working Together: ORD, ProjectWise & iTwins  <i>Scott Urbas &amp; Done Lee</i>	Iowa DOT Design Tabulations  <i>Kyle Bennett</i>	Sheet Creation & Indexing with Named Boundaries (Hour One)  <i>Steve Rick</i>	Interrogating an iModel in SYNCHRO  <i>Kerry Newbanks</i>	Grading - It's Not Just Dirt  <i>Jordan Hatfield</i>	OpenBridge Designer Release Updates  <i>Steve Willoughby</i>	Item Types-Application Methods  <i>Jeff Vaske</i>	
12:00-1:00	Lunch							
	22	23	24	25	26	27	28	
1:00-1:50	Above & Beyond Corridor Modeling  <i>Scott Urbas</i>	Iowa DOT Earthwork  <i>Brandon Filides &amp; Kelly Bell</i>	Sheet Creation & Indexing with Named Boundaries (Hour Two)  <i>Steve Rick</i>	Navigating Drainage & Utilities  <i>Kevin Lusterio</i>	Civil Labeler Tips & Tricks  <i>Jordan Hatfield</i>	Understanding Survey Feature Definitions  <i>Don Lee</i>	Creating a Reality Mesh (3SM)  <i>Jack Riesenberg</i>	
1:50-2:00	BREAK Sponsored by Midwest CAD Solutions (Vendor Area)							
	29	30	31	32	33	34	35	
2:00-2:50	Changing the Paradigm-Model Driven Deliverables  <i>Don Lee</i>	Advanced Techniques with Quantities & Earthwork  <i>Jordan Hatfield</i>	Creating Tables & Reports  <i>Steve Rick</i>	Annotating Drainage Profiles  <i>Kevin Lusterio</i>	Intro to Collecting & Processing Drone Imagery  <i>Kevin Snook</i>	Interacting with Survey Data as a Designer  <i>Chris McNulty</i>	Digital Delivery with iTwins  <i>Jack Riesenberg</i>	
3:00-5:00	Closing Remarks & Membership Business (Auditorium) Door Prizes and Social (Vendor Area) - Sponsored By Foth							
*** Vendors will be exhibiting in the Lobby from 7:30 am to 5:00 pm ***								
Session Emphasis	MicroStation / Civil Products	Survey	Bridge	Reality Modeling	Drainage and Utility			

8:00 – 9:00

**Keynote – Presented By Dan Vogen in the Auditorium**

*Presenter – Dan Vogen, Bentley Systems, Inc.*

This keynote will look at the advancements in Bentley’s solutions for digital delivery. It will look at the importance of iTwin technology and open format, along with how these tools and data stores support other standards like IFC. It will consider the art of the possible today, tomorrow, and in the coming years.

9:10 – 10:00

**1 – Creating Terrain Models from LiDAR in OpenRoads Designer**

*Presenter – Mark Stafne, Bolton & Menk, Inc.*

In this session, attendees will see how to use the tools in OpenRoads Designer to create terrain models from LiDAR and the terrain tools for creating terrain models for use in OpenRoads Designer.

**2 - Creating Staged Cross Sections**

*Presenter – Scott Urbas, Bentley Systems, Inc.*

During this session, we will discuss constructing special roadway corridors and terrain models to facilitate the creation of staged cross sections.

**3 – Plan Production Workflow in OpenRoads Designer**

*Presenter – Steve Litzau, EnvisionCAD*

Plan production in OpenRoads Designer is a significant change from how designers have historically created plan sheets with Bentley software. This presentation shares a number of workflows to extend the “out of the box” functionality in OpenRoads Designer. We will discuss non-standard named boundaries, persistent profile annotation and some general tips and tricks.

**4 – SYNCHRO Construction Solutions**

*Presenter – Kerry Newbanks, Bentley Systems, Inc.*

This session is an overview of the SYNCHRO portfolio, uses and capabilities.

**5 – Geometry Rules & Relationships**

*Presenter – Jordan Hatfield, Bentley Systems, Inc.*

Learn more about Geometry parent/child relationships, and how to build geometry in such a way that it maximizes efficiency when dealing with design changes.

**6 – Templates Deconstructed**

*Presenter – Kevin Lusterio, Bentley Systems, Inc.*

Deep dive into the template editor and a breakdown of the template structure and how it gets processed to help the user design better/more usable templates.

**7 – Right of Way Geometry Using ORD**

*Presenter – Chris McNulty, EnvisionCAD*

This Session will go over different methods to create right-of-way geometry using OpenRoads Designer.

10:10 – 11:00

**8 – Understanding Terrain Models**

*Presenter – Don Lee, Bentley Systems, Inc.*

Learn the tools and techniques behind these dynamic terrain models as well as the do's and don'ts with managing multiple terrain models.

**9 – Modeling Walls & Sideslopes**

*Presenter – Scott Urbas, Bentley Systems, Inc.*

Layout and model retaining walls.

Demonstrate practical examples showing how to use intelligent end conditions to include retaining walls along your project. Learn about the powerful capabilities that allow you to model walls and side slopes while adhering to engineering requirements. You will also see how to extract useful data, such as profiles and quantities from the modeled wall and workflows to help you take advantage of modeling on your project.

**10 – Site Modeling for Linear Designers**

*Presenter – Steve Litzau, EnvisionCAD*

OpenRoads Designer, often thought of as a "linear design" software, includes ample tools for the design and efficient and dynamic modeling of "site" elements (intersections, ponds, infields, abutments, etc.) Not only are these tools available, but many of them are the same tools that experienced linear designers are already using. This presentation strives to provide an overview of the applicable tools and workflows for "no-nlinear" design modeling to refine and enhance our models.

**11 – Creating a Construction Model in SYNCHRO**

*Presenter – Kerry Newbanks, Bentley Systems, Inc.*

Not all models are ready for construction. Construction teams have needs for the model that are usually not addressed, Modeler allows organizations the ability to turn a design model into a construction model for QTO, improved sequencing and adding detailed WBS to the components. This allows for accurate model-based bids, more efficient scheduling, and detailed analysis of the work needed to complete the project.

**12 – Cross Section Annotation**

*Presenter – Jordan Hatfield, Bentley Systems, Inc.*

Learn more about cross section annotation automation and setup.

**13 – Detailing of Bridge Elements Using ProStructures**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

As part of your plans production deliverables, Rebar detailing is one of the more time-consuming tasks in your project. Learn how to detail standard and custom structural elements using ProStructures and generate an automatic bar list and bar bending diagrams.

**14 – Controlling the Display of Designs**

*Presenter – Steve Rick, Bentley Systems, Inc.*

In this session, you learn how to control the display of levels in both the active and those of attached references. Set View Attributes by creating a Display Style that will be matched up to a Display Rule. You will then create a Clip Volume, which will limit the region that is displayed within a view to the area of that around the project site, and then finally preserving all these view settings through the creation of a Saved View.

11:10 – 12:00

**15 – Working Together: ORD, ProjectWise & iTwins**

*Presenter – Scott Urbas & Don Lee, Bentley Systems, Inc.*

In this session, we are going to take a look at a sample highway project that several Bentley colleagues have been developing. We are going to discuss how ProjectWise, OpenRoads Designer, OpenBridge Designer and iTwin technology can be integrated together.

**16 – Iowa DOT Design Tabulations**

*Presenter – Kyle Bennett, Iowa DOT*

This session will cover Iowa DOT's new web-based Design Tabulations Program that replaces the Excel Calculations files. We will explain how to access the system as well as give an overview of how it works.

**17 – Sheet Creation & Indexing with Named Boundaries (Hour One)**

*Presenter – Steve Rick, Bentley Systems, Inc.*

As you move into the Sheeting Composition stage, a pain that you may encounter is that laying out drawings onto sheets is a time consuming and error-prone process that is done differently by everyone on a team and can cause inconsistencies and delays in getting projects delivered. The solution is the Accelerated Sheet Creation and Layout. Here you can create multiple sheets in a single operation. The Automated layout can be based on scale, location & along path. Once generated, the Sheet layouts can be modified for fine adjustments.

**18 – Interrogating an iModel in SYNCHRO**

*Presenter–Kerry Newbanks, Bentley Systems, Inc.*

Tools such as Data Visualization, Civil Tools, and Clash Detection allow users to search, locate, and interrogate the model data in order to visualize and understand the project with more information available than traditional plans.

**19 – Grading- It's Not Just Dirt**

*Presenter – Jordan Hatfield, Bentley Systems, Inc.*

This presentation introduces some non-corridor approaches to solving advanced grading problems

**20 – OpenBridge Designer Release Update**

*Presenter – Steve Willoughby, Bentley Systems, Inc.*

The presenter will be showcasing the latest additions to OpenBridge.

**21 – Item Types- Application Methods**

*Presenter – Jeff Vaske, Midwest CAD*

During this presentation we will look at different methods how to apply Item types using MicroStation and OpenRoads Designer. We'll discuss the different methods and how each may fit your business practices. Included will be ways to view, find, display, and edit Items attached within a design file

1:00 – 1:50

**22 – Above & Beyond Corridor Modeling***Presenter – Scott Urbas, Bentley Systems, Inc.*

A “deep dive” presentation into corridor modeling methods that you may have never thought possible.

**23 – Iowa DOT Earthwork***Presenter – Brandon Filides, IA DOT and**Presenter – Kelly Bell, IA DOT*

Learn the basics of Iowa DOT OpenRoads Designer earthwork from understanding the feature definition properties, running end area volumes with custom reports, and utilizing the earthwork spreadsheet.

**24 – Sheet Creation & Indexing with Named Boundaries (Hour Two)***Presenter – Steve Rick, Bentley Systems, Inc.*

As you move into the Sheeting Composition stage, a pain that you may encounter is that laying out drawings onto sheets is a time consuming and error-prone process that is done differently by everyone on a team and can cause inconsistencies and delays in getting projects delivered. The solution is the Accelerated Sheet Creation and Layout. Here you can create multiple sheets in a single operation. The Automated layout can be based on scale, location & along path. Once generated, the Sheet layouts can be modified for fine adjustments.

**25 – Navigating Drainage & Utilities***Presenter – Kevin Lusterio, Bentley Systems, Inc.*

In this session you will learn how to use core product tools to display, review and analyze drainage and utility objects in a design file. You will also learn how to display annotations, create FlexTables, run queries and reports, and create profiles on drainage and utility objects.

**26 – Civil Labeler Tips & Tricks***Presenter – Jordan Hatfield, Bentley Systems, Inc.*

In this session, we will discuss various ways to annotate elements and how the annotations are set up. You will learn about Annotation Groups, Annotation Definitions, Civil Labeler.

**27 – Understanding Survey Feature Definitions***Presenter – Don Lee, Bentley Systems, Inc.*

This Session will review how raw field codes are mapped into a DGN file when processed with the Survey product. It will show the relationship between field codes and Feature Definitions that have been configured to display various survey features and how to control those settings.

**28 – Creating a Reality Mesh (3SM)***Presenter – Jack Riesenberg, Foth*

This presentation will cover the steps to create a reality mesh from 3D surfaces generated from LiDAR or survey and layering imagery from sources like Bing Maps to create a single file that can be used in design and other 3D digital delivery applications.



2:00 – 2:50

**29 – Changing the Paradigm – Model Driven Deliverables***Presenter – Don Lee, Bentley Systems, Inc.*

A discussion on model driven deliverables as a replacement for plans.

**30 – Advanced Techniques with Quantities & Earthwork***Presenter – Jordan Hatfield, Bentley Systems, Inc.*

This presentation will cover the many nuances with computing quantities and calculating earthwork such as unsuitable materials, multiple substrata, and complex volumes.

**31 – Creating Tables & Reports***Presenter – Steve Rick, Bentley Systems, Inc.*

Learn how to quantify item types, edit items, use existing picklists, create various reports, spreadsheets and tables in the design. Learn to edit existing tables and to add useful functions like table breaks, plus much more.

**32 – Annotating Drainage Profiles***Presenter – Kevin Lusterio, Bentley Systems, Inc.*

If you ever wondered how to create drainage pipe profiles and annotate drainage structures? Then this session is for you. This presentation will discuss: creating pipe profiles using the Drainage and Utilities tools, creating Named Boundaries that will be used to place those pipe profiles on sheets and how to add individual annotations to label specific location coordinates, station, elevations, and more.

**33 – Introduction to Collecting & Processing Drone Imagery***Presenter – Kevin Snook, Benesch*

This session is designed to provide participants with a basic understanding of how to process and analyze aerial imagery captured by drones. In this hands-on session, participants will learn essential techniques to transform raw drone images into valuable data, enabling them to gain insights for various applications in a short span of time. The class will be structured as follows:

- Brief introduction to drone imagery and its applications, Demonstration of preprocessing steps.
- Image stitching and mosaic creation, and 3D model generation, followed by a Q&A session and conclusion.

The class will serve as a steppingstone for those interested in further exploring drone technology and its applications in data analysis and decision-making.

**34 – Interacting with Survey Data as a Designer***Presenter – Chris McNulty, EnvisionCAD*

This session will go over different methods to interact with survey data as a designer. You will learn about different survey file types as well as how to design off existing features and how to design to existing features

**35 – Digital Delivery with iTwins***Presenter – Jack Riesenberg, Foth*

As the industry continues to take steps towards 3D design, modeling and digital deliverables, this presentation will show the process and lessons learned from moving a 3D model into the iTwin digital delivery platform, along with useful ways to review large amounts of data.

<b>7:30-8:00</b>	<b>Workshop Registration and Continental Breakfast Sponsored By HR Green</b>		
<b>Room No.</b>	<b>150-154</b>	<b>167-171</b>	<b>175-179</b>
<b>8:00 - 12:00</b>	<b>Build Item Types With Lookup Table &amp; Pick List</b>  <i>Jeff Vaske</i>	<b>Modeling Parametric Concrete, Rebar, and an OpenBridge Model Using ProConcrete - Part One</b>  <i>Jamie Wahl</i>	<b>Creating a Terrain from Point Cloud / Using &amp; Editing the Terrain Model</b>  <i>Jordan Hatfield</i>
<b>12:00 - 1:00</b>	<b>Lunch</b>		
<b>1:00 - 5:00</b>	<b>Survey Processing in OpenRoads Designer</b>  <i>Chris McNulty</i>	<b>Modeling Parametric Concrete, Rebar, and an OpenBridge Model Using ProConcrete – Part Two</b>  <i>Jamie Wahl</i>	<b>Drainage Plans, Profiles, Cross Sections &amp; Creating Drainage Reports</b>  <i>Kevin Lusterio</i>

### **Modeling Parametric Concrete, Rebar, and an OpenBridge Model Using ProConcrete**

*Presenter – Jamie Wahl, Stanley Consultants*

This workshop will utilize the use of ProConcrete to model concrete and reinforcing steel – both within ProStructures elements and referenced OpenBridge Model – for bridge & roadway structures. Additionally, the process of creating drawings from the model, as well as bar bending and material schedules, will be covered. This is part 1 of 2, though both workshops can be taken separately.

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### **Item Types**

*Presenter – Jeff Vaske, Midwest CAD Solutions*

This workshop will cover fundamentals how to build Item Types for use with MicroStation or OpenRoads Designer. What 's the difference between the two? That's what we'll discuss and build. Understanding how they are created will help you leverage Item Types during your design process.



**Survey Processing in ORD**

*Presenter – Chris McNulty, EnvisionCAD*

The workshop uses real world raw survey data that we will import, correct line and feature code errors, cleanup the terrain model and discuss different survey deliverable options while also exploring some of the back-end settings of survey features and survey settings.

**Creating a Terrain from Point Cloud & Using / Editing the Terrain Model**

*Presenter – Jordan Hatfield, Bentley Systems, Inc.*

The first half of this course will cover how to create a terrain model from point cloud data. You will learn how to

- Attach Point Cloud Data
- View Point Cloud Data
- Create Terrain Model from Point Cloud
- Attach Raster Images
- Place SmartLines
- Create Point Cloud Breaklines Using Snap Element Tool
- Add Point Cloud Breaklines to Terrain Model
- Create a Complex Terrain Model

In the second half of this course you will review terrain model feature display and learn how to

- Create thematic height displays
- Creating a terrain from graphical elements using filters
- Modify terrain features and apply terrain rules
- Report on and resolve crossing break lines and conflicting points
- Create a complex terrain model
- Control edge triangles by edge method, triangle edits and boundary features

**Drainage Plans, Profiles, Cross Sections & Creating Drainage Reports**

*Presenter – Kevin Lusterio, Bentley Systems, Inc.*

Learn how to create and annotate plan and profile sheets, add individual annotations to label specific location coordinates, station-offset values, and elevations. You will also learn how to create reports using FlexTables. You will learn how to customize the FlexTables to show the desired data fields and formatting for the reports. FlexTables show data for one type of element - a catch basin or a manhole for example. You will learn how to combine the content of multiple FlexTables into a single Excel spreadsheet.

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