Florida Local Users' Group

2021 FLUG Training Forum

October 12th – October 15th, 2021

Cocoa Beach, FL

FINAL AGENDA

2021 FLUG Training Forum Sessions Include:

FDOT Connect OpenRoads
Bentley OpenRoads
Bentley OpenBridge
Construction Management
MicroStation
AutoCAD
TopoDOT/TopoShare

PointClouds
Reality Modeling
LiDAR
Drainage
Bentley ProjectWise
Bentley OpenSite
Survey

FDOT Civil 3D
Autodesk Civil 3D
FDOT Traffic Plans
Geotech/Utility
Bentley OpenRail
Bluebeam Review
Bentley iTwin

FDOT
Digital Signatures
Bentley OpenBuilding
Civil 3D/Civil Site
ConceptStation/ContextCapture
Drone Surveying
Rendering/Visualization
Trimble Quadri

Professional Development, PSM Continuing Education Hours and Bentley Accreditation Course:

General Sessions and Workshops denoted with " * " indicates PDH credits available.
General Sessions and Workshops denoted with " ** " indicate PSM CE credits available.
Workshop denoted with " *** " indicate a Bentley Accreditation Course. Bentley will provide details during workshop.
PDH and CE credits are offered one (1) credit per one (1) hour of class. Attendees must sign the PDH or CE credit sheet(s) upon completion of the session or workshop to receive credit. Professional Credit Certificates for both Florida PE's and PSM's will be available from Your Account on the FLUG website upon processing AFTER FLUG.

2021 FLUG TRAINING FORUM
Daily Overview

Monday Oct. 11	4:30pm - 6:30pm Seagrapes	Early On-Site Registration / Support Partner Setup
TUESDAY Oct. 12	7:00am - 8:30am Sea Oats / Seagrapes	Registration and Breakfast
	8:00am - 8:15am Sea Oats	Welcome with Opening Announcements
	8:30am - 5:15pm	General Sessions and Hands-On Workshops
WEDNESDAY Oct. 13	7:00am - 8:30am Sea Oats / Seagrapes	Registration and Breakfast
	8:00am - 8:15am Sea Oats	Welcome with Opening Announcements
	8:15am - 9:15am Sea Oats	**Key Note: iTWIN Design Review and Synchronizer** *Presented by Mo Harmon - Direcotr, Industry Strategy, Civil Engineering - Bentley*
	9:45am - 5: 15pm	General Sessions and Hands-On Workshops
THURSDAY Oct. 14	7:00am - 8:30am Sea Oats / Seagrapes	Registration and Breakfast
	8:00am - 8:15am Sea Oats	Welcome with Opening Announcements
	8:30am - 5:15pm	General Sessions and Hands-On Workshops
	6:30pm - 9:30pm *Ball Room*	*Evening Social: Refreshments Served!* *Presented by FLUG and Our Partners*
FRIDAY Oct. 15	7:00am - 8:30am Sea Oats / Seagrapes	Registration and Breakfast
	8:00am - 8:15am Sea Oats	Welcome with Opening Announcements
	8:30am - 3:45pm	General Sessions and Hands-On Workshops

2021 FLUG Training Forum

General Sessions and Hands-On Workshops

Tuesday - Oct 12

		GENERAL SESSION FDOT Dunes (60)	GENERAL SESSION OpenRoads - Geometry, Reality Modeling, Terrain Sea Oates (120)	GENERAL SESSION Bentley OpenBridge - OpenRail Sawgrass (60)	GENERAL SESSION Civil 3D - FDOT Civil 3D Starfish (30)	GENERAL SESSION Point Cloud / Reality Modeling Sand Dollar (30)	GENERAL SESSION Bentley SYNCHRO-iTwin Construction Management Sundial (20)	WORKSHOP MicroStation / Bentley OpenBridge Sandcastle I	WORKSHOP Civil 3D / TopoDOT Sandcastle II	WORKSHOP Bentley OpenRoads Designer : Geometry Seahorse	WORKSHOP FDOT Connect ORD Horizon
8:30-9:30		**BIM and CADD Standards** **FDOT** *Vern Danforth*	*** OpenRoads Designer: The Ultimate Roadway Design Software** **Bentley** *Jimmie Prow*	**Overview of OpenBridge Designer** **Bentley** *A. Mabrich/ S. Willoughby*	**What's New with Civil 3D and FDOT StateKit** **FDOT** *Randy Roberts*	**Understanding Georeferenced Coordinate Systems and Point Cloud Tools** **Bentley** *Mike Barkasi*	**Bentley SYNCHRO 4D from Office to Field** **Bentley/ Jacobs** *D. Sheldon/ J. Oestreich*	**T-1-SC I** **Rendering and Visualization in MicroStation CE Update 16** **Bentley** *Steve Rick*	*** T-1-SC II** **Civil 3D Corridor Modeling: Magnificent and the New Way…Beyond OpenRoads!** **Applied Software** *Kenneth Driscol*	*** T-1-SH** **OpenRoads Designer : QuickStart to Geometry** **Bentley** *Christiana Holmes*	*** T-1-H** **FDOT Connect ORD: Basic 2D Design for Corridor Modeling** **FDOT/ACEC-FL** *T. Holt/G. Gaiotti*
15 Min		**BREAK**									
9:45-10:45		**FDOT BIM Files for Earthwork** **FDOT** *John-Mark Palacios*	*** Harnessing the Power of Civil Geometry** **Bentley** *Jimmie Prow*	*** Modeling Steel Boxes in OpenBridge** **Bentley** *A. Mabrich/ S. Willoughby*	*** FDOT C3D 3D Driveway Modeling** **FDOT** *Mike Racca*	*** Utilizing Descartes for Ground Extraction of Reality Meshes and Point Clouds** **Bentley** *Mike Barkasi*	**Bentley SYNCHRO integration with OpenRoads Designer and ProjectWise** **Bentley** *Dan Sheldon*				
15 Min		**BREAK**									
11:00-12:00		**Traffic Design Tools for ORD** **FDOT** *Randy Roberts*	*** Complex Geometry Constructions** **Bentley** *Jordan Hatfield*	**Update on New Features in OpenBridge** **Bentley** *A. Mabrich/ S. Willoughby*	*** FDOT C3D 3D Island Modeling** **FDOT** *Mike Racca*	**Mission Planning for Reality Capture to Ortho Photos** **Bentley** *Mike Barkasi*	**Quadri Technology – Connected Construction Workflow** **Trimble** *Adrien Patane*			*** T-2-SH** **OpenRoads Designer : Creating and Editing Centerline Geometry** **Bentley** *Christiana Holmes*	
1 1/2 Hr		**LUNCH**									
1:30-2:30		**Updates NexGen, Models as Contact Documents, Signing and Sealing Digital CADD Files** **FDOT** *Vern Danforth*	*** Dynamic Profiling - Interactivity between Horizontal and Vertical Geometry** **RS&H** *Andrew Poszich*	**What's new in OpenRail Designer 2021 R1** **Bentley** *Sonya Pieterse*	**AutoCAD and Civil 3D Tips & Tricks** **NFPS** *Seth Cohen*	*** Merging Air and Ground Photos in a Reality Model** **Bentley** *Mike Barkasi*	**SYNCHRO Field & SYNCHRO Control: Media Indexing and PDF Plan Sets** **Bentley** *Dan Sheldon*	*** T-2-SC I** **OpenBridge Modeler Modeling Fundamentals for PC Bridges** **Bentley** *A. Mabrich/ S. Willoughby*	*** T-2-SC II** **Tips & Tricks for Corridor Feature Extraction using Point-Clouds for TopoDOT Users** **TopoDOT** *Michael Cook*		
15 Min		***BREAK***									
2:45-3:45		**Design Model Review Tools** **FDOT** *Vern Danforth*	*** QuickStart Using Reality Modeling Tools in OpenRoads Designer** **Bentley** *Christiana Holmes*	*** Adding Value to Rail Projects with by extending ORD with OpenRail Designer** **Bentley** *Sonya Pieterse*	*** Site Design Tips & Tricks - Teaching Corridors & Site Features to Get Along** **NFPS** *Seth Cohen*	*** Engineering Visualization** **RS&H** *Andrew Poszich*	**Enabling 3D Design Review and Collaboration with iTwin Design Review** **Bentley** *D. Sheldon / Rob Riley*			*** T-3-SH** **OpenRoads Designer: Beyond Centerline Geometry** **Bentley** *Jordan Hatfield*	
30 Min		**"Snack with the *SUPPORT PARTNERS* !"**									
4:15-5:15		**CADD Automated Quantity Workflow and Summary Reports** **FDOT** *Kandi Daffin*	**QuickStart for Terrain Display** **Bentley** *Christiana Holmes*	*** Building Intelligent Digital BIM Models with OpenRail Designer** **Bentley** *Sonya Pieterse*	*** Civil 3D – Grading Optimization Tool** **Applied Software** *Kenneth Driscol*	**Civil Engineering and Reality Modeling** **Bentley** *Mike Barkasi*	**Use iTwin Design Review to Share and Collaborate on Design Models** **Bentley** *D. Sheldon / Rob Riley*				

"Technology Hub Open - Come and visit our Support Partners!!"

2021 FLUG Training Forum

General Sessions and Hands-On Workshops

Wednesday - Oct 13

		GENERAL SESSION MicroStation CONNECT Dunes (60)	GENERAL SESSION OpenRoads - General Sea Oates (120)	GENERAL SESSION Bentley OpenSite-OpenBridge Sawgrass (60)	GENERAL SESSION OpenRoads -Drainage Starfish (30)	GENERAL SESSION Bentley OpenBuilding for Transportation Sand Dollar (30)	GENERAL SESSION General Sundial (20)	WORKSHOP Bentley OpenBridge/Reality Modeling Sandcastle I	WORKSHOP Bentley ORD Utilities/FDOT Civil 3D Sandcastle II	WORKSHOP Bentley OpenRoads Designer : Terrain/Drainage Seahorse	WORKSHOP FDOT Connect ORD Horizon
9:45-10:45		Tips and Tricks for MicroStation CE **Bentley** *Steve Rick*	* Integrating Geotechnical Data in OpenRoads Designer **Bentley** *Jimmie Prow*	An Introduction to OpenSite Designer **Bentley** *Sonya Pieterse*	* Navigating Drainage and Utilities **Bentley** *Jordan Hatfield*	OpenBuildings Designer – Information Modeling in 3D of a Transit Station **Bentley** *Mark Enos*	Microsoft Office Importer - Link Excel and Word into Revit, MicroStation and AutoCAD! **Axiom** *Eiren Smith*	* W-1-SC I OpenBridge Modeler Modeling Fundamentals for Steel Bridge **Bentley** *A. Mabrich/ S. Willoughby*	* W-1-SC II Detecting and Managing Utility Conflicts **Bentley** *Christiana Holmes*	* W-1-SH Using and Editing Terrain Models **Bentley** *Dan Sheldon*	* W-1-H FDOT Connect ORD: Existing Modeling **FDOT/ACEC-FL** *J.M. Palacios/D. Wait*
15 Min		**BREAK**									
11:00-12:00		Property Driven Annotation **Bentley** *Steve Rick*	Bringing Data into OpenRoads Designer **Bentley** *Jimmie Prow*	* Benefiting from OpenSite in Roadway Projects **Bentley** *Sonya Pieterse*	* Draining a Road Surface Effectively **Bentley** *Jordan Hatfield*	OpenBuildings Designer for Road Infrastructure - Design of Support Buildings & Structures **Bentley** *Mark Enos*	** Using Point-Clouds Beyond As Built Surveys **TopoDOT** *Michael Cook*				
1 1/2 Hr		**LUNCH**									
1:30-2:30		Introduction to Parametric Modeling **Bentley** *Dave Mayer*	* Fundamentals of Templates and Corridor Modeling **Bentley** *Jimmie Prow*	* Using Functional Components for Custom Bridge Elements **Bentley** *A. Mabrich/ S. Willoughby*	* Channel Modeling **Bentley** *Christiana Holmes*	BIM Enlivened – OpenBuildings Designer & LumenRT **Bentley** *Mark Enos*	Bluebeam Revu for Transportation **Digital Drafting System** *Ariel Rejtman*	* W-2-SC I Creating Reality Models and Integrating them into Civil Designs **Bentley** *Mike Barkasi*	* W-2-SC II FDOT Civil3D - Island Corridor Modeling **FDOT** *Mike Racca*	* W-2-SH Introduction to Drainage Layout and Hydraulics **Bentley** *Jordan Hatfield*	
15 Min		***BREAK***									
2:45-3:45		Ahead of the Curve **Bentley** *Dave Mayer*	* Extended Attribution with Item Types using OpenRoads Designer **Bentley** *Jimmie Prow*	* Exploring Generative Components for Bridge Projects **Bentley** *A. Mabrich/ S. Willoughby*	* Levee Modeling **Bentley** *Christiana Holmes*	OpenBuildings Designer for Early Conceptual Modeling and Analysis Workflows **Bentley** *Mark Enos*	Crossing the Digital Construction Chasm **Bentley** *D. Sheldon / Rob Riley*				
30 Min		**"Snack with the *SUPPORT PARTNERS* !"**									
4:15-5:15		Consider Another View **Bentley** *Dave Mayer*	Innovative Template Solutions **RS&H** *Andrew Poszich*	* Plans Production with OBM **Bentley** *A. Mabrich/ S. Willoughby*	Creating Drainage Reports **Bentley** *Christiana Holmes*	OpenBuildings Designer with Water/Plant and Civil Infrastructure Projects **Bentley** *Mark Enos*	Digitally Signing and Sealing Documents **IdenTrust** *Richard Jensen*				

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2021 FLUG Training Forum

General Sessions and Hands-On Workshops

Thursday - Oct 14

		GENERAL SESSION FDOT Dunes (60)	GENERAL SESSION OpenRoads - Modeling Sea Oates (120)	GENERAL SESSION OpenRoads - Survey Sawgrass (60)	GENERAL SESSION Civil 3D Starfish (30)	GENERAL SESSION Bentley ProjectWise Sand Dollar (30)	GENERAL SESSION General Sundial (20)	WORKSHOP Bentley OpenBridge Sandcastle I	WORKSHOP Civil 3D / iTwin-Digital Twin Sandcastle II	WORKSHOP Bentley OpenRoads Designer : Corridors Seahorse	WORKSHOP FDOT Connect ORD Horizon
8:30-9:30		General CADD Office Updates **FDOT** *Matt Sexton*	* Corridor Side Slope Design and Modeling **Bentley** *Jordan Hatfield*	** FDOT Connect ORD: ROW Workflows **FDOT** *John Hazlip*	What's New with Civil 3D and FDOT StateKit (Repeat) **FDOT** *Randy Roberts*	ProjectWise Update and *More* Hidden Gems **Bentley** *Adrian Crowfoot*	* Utilizing Bentley ConceptStation & ContextCapture to create a Digital Model **Mead and Hunt, Inc.** *J. Duffie/A. Moorman*	* TH-1-SC I Plans Production with OpenBridge Modeler **Bentley** *A. Mabrich/ S. Willoughby*	* TH-1-SC II Civil 3D Site Design with Storm Water Management - The Complete Project! **Applied Software** *Kenneth Driscol*	* TH-1-SH QuickStart for Corridor Modeling **Bentley** *Jimmie Prow*	* TH-1-H FDOT Connect ORD: Advanced 3D Modeling **FDOT/ACEC-FL** *J.M. Palacios/E. Gray*
15 Min		**BREAK**									
9:45-10:45		BIM and CADD Standards (Repeat) **FDOT** *Vern Danforth*	* Grading Design and Modeling at Bridge Abutments **Bentley** *Jordan Hatfield*	** An Introduction to OpenRoads Designer Survey **Bentley** *Alvie Griffith*	Civil 3D and Visualization Tips **Consor** *Oscar Castaneda*	ProjectWise PowerShell Basics **Bentley** *Adrian Crowfoot*	iTwin with Reality Modelling **Bentley** *Rob Riley*				
15 Min		**BREAK**									
11:00-12:00	*"Technology Hub Open - Come and visit our Sponsor and Support Partners!!"*	Traffic Design Tools for ORD (Repeat) **FDOT** *Randy Roberts*	* Getting the Model Right **Bentley** *Christiana Holmes*	** Understanding Survey Feature Definitions **Bentley** *Alvie Griffith*	** Drone Surveying with the AEC Collection **Consor** *Oscar Castaneda*	ProjectWise Managed Workspace and Best Practices **Bentley** *Buddy Branham*	IModel.JS Platform Overview **Bentley** *Rob Riley*	* TH-2-SC I Analytical Design with OpenBridge Designer for PC Bridges **Bentley** *A. Mabrich/ S. Willoughby*		* TH-2-SH Overlay, Stripping and Widening **Bentley** *Jimmie Prow*	
1 1/2 Hr		**LUNCH**									
1:30-2:30		CADD Automated Quantity Workflow and Summary Reports (Repeat) **FDOT** *Kandi Daffin*	* Creating Utilities from Graphics **Bentley** *Christiana Holmes*	** Editing Survey Features Using Point Lists **Bentley** *Alvie Griffith*	* Civil Site Design – Road Design with the Complete Solution **Applied Software** *Kenneth Driscol*	Strategies for Implementing the FDOT Workspace in ProjectWise **Bentley** *Buddy Branham*	* Improving Your 3D Design Methods by Leveraging Mobile and UAS LiDAR **Colliers Engineering** *Paul DiGiacobbe*		* TH-2-SC II *** iTwin Digital Twin Lifecyle Going from Design , Construction to Operations **Bentley** *D. Sheldon / Rob Riley*		
15 Min		***BREAK***									
2:45-3:45		New FDOT Geotech Tools **FDOT** *Todd Holt*	* RRR Design & Modeling with OpenRoads **3D Highway Engineering** *Richard Perez*	** Preparing Right of Way Plans in ORD **Mead & Hunt** *Adam Moorman*	Maintaining personal variable setting, custom keyboard commands, and more for Civil 3D and AutoCAD vertical Products **IMAGINiT** *Archie Dodge*	Digital Twins and Project Coordination **Bentley** *A. Crowfoot/B .Branham*	* Leveraging TopoShare for Effective Support of 3D Design/Construction Processes **TopoDOT** *Michael Cook*	* TH-3-SC I Analytical Design with OpenBridge Designer for Steel Bridges **Bentley** *A. Mabrich/ S. Willoughby*		* TH-3-SH Using and Defining Superelevation **Bentley** *Jimmie Prow*	
30 Min		**"Snack with the *SUPPORT PARTNERS* !"**									
4:15-5:15		Updates NexGen, Models as Contact Documents, Signing and Sealing Digital CADD Files (Repeat) **FDOT** *Vern Danforth*		** Using Survey Data to Create Existing Terrain **Bentley** *Alvie Griffith*	Sheet Set Manager Layout Views and Referencing for Civil 3D and AutoCAD vertical Products **IMAGINiT** *Archie Dodge*	Ad Hoc Design Reviews **Bentley** *A. Crowfoot/B .Branham*	RefManager - Take Control of Your CONNECT and V8i Reference Files! **Axiom** *Eiren Smith*				

2021 FLUG Training Forum

General Sessions and Hands-On Workshops

Friday - Oct 15

		GENERAL SESSION MicroStation CONNECT Dunes (60)	GENERAL SESSION OpenRoads - General Sea Oates (120)	GENERAL SESSION Bentley OpenBridge - OpenSite Sawgrass (30)	GENERAL SESSION Civil3D Starfish (30)	GENERAL SESSION OpenRoads -In the Real World Sand Dollar (30)	GENERAL SESSION General Sundial (20)	WORKSHOP FDOT Connect ORD Sandcastle I	WORKSHOP Bentley OpenRoads Designer : Corridors/Modeling Sandcastle II	WORKSHOP FDOT Connect ORD Seahorse	WORKSHOP FDOT Connect ORD Horizon
8:30-9:30	*"Technology Hub Open - Come and visit our Sponsor and Support Partners!!"*	So, they gave you a Point Cloud. Now What? **Bentley** *Dave Mayer*	* QuickStart Using Reality Modeling Tools in OpenRoads Designer (Repeat) **Bentley** *Jordan Hatfield*	Adding Extra Intelligence to Your Bridge Using Item Types **Bentley** *A. Mabrich/ S. Willoughby*	* FDOT C3D 3D Driveway Modeling (Repeat) **FDOT** *Mike Racca*	Rapid Concept Development - Rapid Layout **RS&H** *Andrew Poszich*	Bluebeam Revu for Transportation (Repeat) **Digital Drafting Sytem** *Ariel Rejtman*	** F-1-SC I FDOT Connect ORD: ROW CADD Workflows **FDOT** *John Hazlip*	* F-1-SC II Intersection Design - Horizontal and Vertical Geometry **Bentley** *Christiana Holmes*	* F-1-SH FDOT Connect ORD: Drainage Design/Modeling and Plan Details **FDOT/ACEC-FL** *J. Worley/A. Shepard*	* F-1-H FDOT Connect ORD: Roadway Plans Development **FDOT/ACEC-FL** *C. Thorpe/D. Broom*
15 Min		**BREAK**									
9:45-10:45		Geospatial MicroStation **Bentley** *Dave Mayer*	With OpenRoads Designer, an Ordinary Design Becomes Your Interoperable Data! **Bentley** *Jordan Hatfield*	Practical Uses of OpenBridge Modeler **American Consulting Professionals, LLC** *Steve Tissier*	* FDOT C3D 3D Island Modeling (Repeat) **FDOT** *Mike Racca*	Rapid Concept Development - Smart Templates **RS&H** *Andrew Poszich*	** New Efficient Solutions for Distribution Powerline Extraction and Utility Pole Survey **TopoDOT** *Michael Cook*				
15 Min		**BREAK**									
11:00-12:00		You can do that with MicroStation VBA? **Bentley** *Dave Mayer*	* Computing Earthwork Volumes **Bentley** *Jimmie Prow*	Producing FDOT Compliant Plans with OpenBridge Modeler **American Consulting Professionals, LLC** *Steve Tissier*	Planes, Trains and Automobile with Vehicle Tracking – How to use Autodesk Vehicle Tracking **Applied Software** *Kenneth Driscol*	Rapid Concept Development - Visualization **RS&H** *Andrew Poszich*	Quadri Technology – Connected Construction Workflow (Repeat) **Trimble** *Adrien Patane*				
1 1/2 Hr		***LUNCH***									
1:30-2:30		Named Boundaries **Bentley** *Steve Rick*	** Using Geometry Builder to Define (Right of Way) Geometry **Bentley** *Jimmie Prow*	* Drainage and Utilities for Site Modeling **Bentley** *Sonya Pieterse*	Pipe Networks with Civil Site Design **Applied Software** *Kenneth Driscol*	Bessemer Avenue At-Grade Railroad Crossing Improvements Feasibility Study **Mead & Hunt** *A Moorman/J Duffie*	Digitally Signing and Sealing Documents (Repeat) **IdenTrust** *Richard Jensen*		* F-2-SC II Intersection Design - 3D Model Detailing **Bentley** *Christiana Holmes*		
15 Min		**BREAK**									
2:45-3:45		Sheet Creation and Indexing **Bentley** *Steve Rick*	* Harnessing the Power of OpenRoads Rules and Relationships - What Happens When Things Change? **Bentley** *Jimmie Prow*	* Hang Up That 2D Site Design Process For An Exciting Automated 3D Modeling Workflow **Bentley** *Sonya Pieterse*	Civil 3D Project Explorer **Applied Software** *Kenneth Driscol*	Cross Practice Coordination in a 3D World **RS&H** *Andrew Poszich*	iTwin Issues Resolution and Customs Forms **Bentley / Atkins** *Rob Riley / E. Gray*				

2021 FLUG Training Forum

Descriptions - General Sessions and Hands-On Workshops

Tuesday - Oct 12

Room	Type	PDH Credits	Title	Description	Company	Speaker	Level
Dunes	General Session		BIM and CADD Standards	This presentation will review all major changes in the last 2 year to the CADD Standards for BIM and 3D Delivery.	FDOT	Vern Danforth	Novice - Expert
Dunes	General Session		FDOT BIM Files for Earthwork	A new FDOT contract Document for Earthwork.	FDOT	John-Mark Palacios	Novice - Expert
Dunes	General Session		Traffic Design Tools for ORD	This presentation will review all major changes in the last year to the CADD Traffic Tools.	FDOT	Randy Roberts	Novice - Expert
Dunes	General Session		Updates NexGen, Models as Contact Documents, Signing and Sealing Digital CADD Files	NexGen Plans Update, Earthwork and AMG CADD files for contract documents.	FDOT	Vern Danforth	Novice - Expert
Dunes	General Session		Design Model Review Tools	Review FDOT D2 pilot project with Itwin Design Review. Discussion on other tools like BIM360, and Trimble Connect/Quadri, etc.	FDOT	Vern Danforth	Novice - Expert
Dunes	General Session		CADD Automated Quantity Workflow and Summary Reports	This presentation will review all major changes in the last year to the Automated Quantity Workflow and Summary Reports.	FDOT	Kandi Daffin	Novice - Expert
Sea Oates	General Session	1	* OpenRoads Designer: The Ultimate Roadway Design Software	Learn how one application provides an integrated solution to design, model, and document road projects complete with survey, utilities, and drainage in a 2D/3D/BIM environment. Construction documents and models are generated directly from the design model ensuring accurate, up-to-date deliverables. From the simplest to the most complex projects in the world, OpenRoads Designer provides the tools you need.	Bentley	Jimmie Prow	Novice - Expert
Sea Oates	General Session	1	* Harnessing the Power of Civil Geometry	Civil Geometry is a wonderfully simple collection of tools that when combined empower you to easily define intelligent, updatable, and responsive alignments and other geometry. Civil Geometry is also the core of Civil Cells. During this session we will solve common geometry situations and explore how the Feature Definition Toggle Bar settings, Snaps, and Civil AccuDraw affect the geometry.	Bentley	Jimmie Prow	Intermediate - Expert
Sea Oates	General Session	1	* Complex Geometry Constructions	Learn how to create complex geometry constructions such as loop ramps, multi-centered curves, complex curve-spiral combinations, and reverse spiral transitions.	Bentley	Jordan Hatfield	Intermediate - Expert
Sea Oates	General Session	1	* Dynamic Profiling - Interactivity between Horizontal and Vertical Geometry	A session focused on the interactivity between horizontal and vertical geometry. Dynamically tie profiles together to make a living-breathing design file as well as do sketch-level 3D modeling during a project's concept phase.	RS&H	Andrew Poszich	Intermediate - Expert
Sea Oates	General Session	1	* QuickStart Using Reality Modeling Tools in OpenRoads Designer	This course is a brief introduction to commonly used Reality Modeling tools in OpenRoads Designer.	Bentley	Christiana Holmes	Novice - Intermediate
Sea Oates	General Session		QuickStart for Terrain Display	Learn how to display terrain model features including the boundary, triangles, and contours using feature definitions, and how to modify the default display parameters. You will also learn how to label terrain contours, spot elevations and slopes.	Bentley	Christiana Holmes	Novice - Intermediate
Sawgrass	General Session		Overview of OpenBridge Designer	Develop intelligent, 3D, parametric bridge models for your highway projects 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. Learn how OpenBridge Modeler's integrated workflow minimizes errors and improves efficiency.	Bentley	A. Mabrich/ S. Willoughby	Novice - Expert

Sawgrass	General Session	1	* Modeling Steel Boxes in OpenBridge	Review the latest major development in OpenBridge as we now have the ability to model steel tubs or boxes in OpenBridge Modeler	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert
Sawgrass	General Session		Update on New Features in OpenBridge	Review all the new enhancements done in version 10.10 of OpenBridge Modeler.	Bentley	A. Mabrich/ S. Willoughby	Novice - Expert
Sawgrass	General Session		What's new in OpenRail Designer 2021 R1	Join us for this session where we will review all the new features and enhancements in OpenRail Designer 2021 R1.	Bentley	Sonya Pieterse	Novice - Expert
Sawgrass	General Session	1	* Adding Value to Rail Projects with by extending ORD with OpenRail Designer	Join us to explore how OpenRail Designer extends OpenRoads Designer with rail specific tools including turnout and crossing geometry, regression, cant, 3D rail design, and sleeper modeling. We will also look at workflows to model mainline tracks, yards, and tunnels and hear about the latest software enhancements and plans for the future.	Bentley	Sonya Pieterse	Novice - Expert
Sawgrass	General Session	1	* Building Intelligent Digital BIM Models with OpenRail Designer	Join representatives from the OpenRail team to learn how rule-based parametric design adds value to Rail modeling. See how additional detail modeling extends level of detail in the Rail Digital Twin in support of BIM requirements for sleepers, rails, joining and associated model attribution.	Bentley	Sonya Pieterse	Novice - Expert
Starfish	General Session		What's New with Civil 3D and FDOT StateKit	This presentation will review what's new in the latest Civil 3D State kit	FDOT	Randy Roberts	Intermediate - Expert
Starfish	General Session	1	* FDOT C3D 3D Driveway Modeling	This presentation will review the steps for 3D Driveway Modeling	FDOT	Mike Racca	Intermediate - Expert
Starfish	General Session	1	* FDOT C3D 3D Island Modeling	This presentation will review the steps of modeling a Island	FDOT	Mike Racca	Novice - Expert
Starfish	General Session		AutoCAD and Civil 3D Tips & Tricks	In this presentation we will cover the gamut of AutoCAD and Civil 3D tips & tricks specific to roadway design. We will examine AutoCAD tips that will help you all day while working on your roadway or site projects. We will then delve into Civil 3D specific tips and workflows that help you in designing, as well as getting your plans done. Oh, and we may go over some non-CAD tips & tricks that just help you throughout your day.	NFPS	Seth Cohen	Novice - Expert
Starfish	General Session	1	* Site Design Tips & Tricks - Teaching Corridors & Site Features to Get Along	Have you ever been confused as to how you can model a site that contains roads and site elements? One of the goals of modeling is to have all elements in your design interact with each other as you do your design. In addition to all your modeling elements interacting, the main goal for a site is to balance the earthworks. In this webinar we will cover some basic modeling techniques that help automate the ability to have all these elements "talk to each other", as well as examine how dynamic balancing of the site can be easily accomplished.	NFPS	Seth Cohen	Intermediate - Expert
Starfish	General Session	1	* Civil 3D – Grading Optimization Tool	Grading Optimization is an interactive tool that facilitates grading various land areas such as sites, road interchanges, and around structures. It consists of optimization algorithms that work toward surface smoothness while accommodating user imposed constraints. Grade with a purpose,. Enhance operational efficiencies – More efficiently generate multiple grading design options and site grading workflows for consideration without manual intervention. Validate the most feasible design option – Identify grading design challenges earlier in your process, minimizing errors and rework. Ultimately delivering a balanced earthwork grading plan that meets your customer's intent!	Applied Software	Kenneth Driscol	Intermediate - Expert
Sand Dollar	General Session		Understanding Georeferenced Coordinate Systems and Point Cloud Tools	MISSING	Bentley	Mike Barkasi	Novice - Expert
Sand Dollar	General Session	1	* Utilizing Descartes for Ground Extraction of Reality Meshes and Point Clouds	"Ground detection" is a Bentley Descartes tool that uses a point cloud file to create a terrain model representing the bare earth and then uses this terrain model to classify point cloud points as "ground".	Bentley	Mike Barkasi	Novice - Expert

Sand Dollar	General Session		Mission Planning for Reality Capture to Ortho Photos	In this Tech Talk we will identify how to best plan for various types of capture. The user will get an understanding of the software needs and how the capture techniques will be best suited to meet these needs.	Bentley	Mike Barkasi	Novice - Expert
Sand Dollar	General Session	1	* Merging Air and Ground Photos in a Reality Model	In this session we will review the steps necessary for a good air and Ground Fusion of imagery. The user will get an understanding for the process and details on how best to make these photo captures work best.	Bentley	Mike Barkasi	Intermediate - Expert
Sand Dollar	General Session	1	* Engineering Visualization	With technology evolving and communication always being an integral part of any design, engineers are starting to venture out into the world of visualization. What used to only be a tool for public involvement is now being utilized for client meetings, quality control, and field revisions. We will walk through the basics of how you can begin leveraging 3D engineered models to better your design and bring your project to life!	RS&H	Andrew Poszich	Novice - Expert
Sand Dollar	General Session		Civil Engineering and Reality Modeling	In this session we will look at common uses for Reality models in civil engineering workflow. The user will gain an understanding on how to specify the requirements for what is needed for typical uses, such as Ortho Photos or 3D Reality Models. Additionally, potential accuracy and how accuracy can be best checked and verified will be discussed.	Bentley/ Jacobs	Mike Barkasi	Intermediate - Expert
Sundial	General Session		Bentley SYNCHRO 4D from Office to Field	This session will introduce the entire SYNCHRO portfolio. From the desktop applications to add construction data, schedule and cost to the 3D model to bringing that construction data to the Field via web-based project management and mobile application.	Bentley/ Jacobs	D. Sheldon/ J. Oestreich	Novice - Expert
Sundial	General Session		Bentley SYNCHRO integration with OpenRoads Designer and ProjectWise	Show the integration working with ORD file in the iModel and accessing ProjectWise content with workflow in SYNCHRO Control and Field.	Bentley	Dan Sheldon	Novice - Expert
Sundial	General Session		Quadri Technology – Connected Construction Workflow	This session will cover the fundamentals of a Connected Construction workflow built around Trimble's latest Quadri technology, that streamlines the Design to Construct, and Operate and Maintain workflows for your infrastructure. The Quadri technology leverages Trimble's construction experience tying together tools such as Trimble Business Center, SiteVision, WorksManager and WorksOS that help facilitate a model based design workflow, with the end result being a powerful and intelligent Digital As-Built, that can be used for highly effective visualizations, and more importantly maintaining your infrastructure investment.	Trimble	Adrien Patane	Intermediate - Expert
Sundial	General Session		SYNCHRO Field & SYNCHRO Control: Media Indexing and PDF Plan Sets	This session will cover the administrative requirements to define Plan Sets, Plan Set revision, and Photo Indexing. We will also look at the valuable workflows you gain once these tools are configured for your project.	Bentley	Dan Sheldon	Novice - Expert
Sundial	General Session		Enabling 3D Design Review and Collaboration with iTwin Design Review	For years engineers have been designing in 3D but, with a lack of viable review tools, reviewers have been forced to review and certify on 2D sheets. Time allocation for design reviews continues to be compressed, leaving less and less time for design review preparation and duplication of design artifacts. Learn how iTwin Design Review enables a simplified, 2D/3D hybrid workflow for design review and collaboration. See how project teams can leverage a Digital Twin to easily share design context and provide review feedback on design deliverables through review, collaboration and quality tools.	Bentley	D. Sheldon / Rob Riley	Novice - Expert
Sundial	General Session		Use iTwin Design Review to Share and Collaborate on Design Models	iTwin Design Review is an exciting new tool that allows designers to easily share and collaborate directly from their design models. Purpose built for how you work, our unique, hybrid 2D/3D design review environment enables you to conduct faster review sessions on design work-inprogress, while minimizing intermediate steps, artifacts, and ad hoc workarounds. Come learn how to coordinate faster reviews and eliminate intermediate steps with iTwin Design Review.	Bentley	D. Sheldon / Rob Riley	Novice - Expert
Sandcastle I	Workshop		T-1-SC I Rendering and Visualization in MicroStation CE Update 16	As many of you may have heard the Luxology rendering engine is no longer used in MicroStation. Since the acquisition of E-on Software and Update 16 of MicroStation we are now using the Vue Rendering engine. What does this mean for Visualization? What has changed and what has stayed the same? What is Vue and do I need to buy a license?	Bentley	Steve Rick	Intermediate - Expert

Sandcastle II	Workshop	3	* T-1-SC II Civil 3D Corridor Modeling: Magnificent and the New Way…Beyond OpenRoads!	Civil Site Design increases your productivity with intuitive design tools and then generates your Civil 3D design surfaces, profiles, assemblies, corridors and pipe profiles with a simple mouse click. Empowering civil engineers and designers to work smarter and faster.	Applied Software	Kenneth Driscol	Intermediate - Expert
Seahorse	Workshop	2	* T-1-SH OpenRoads Designer : QuickStart to Geometry	In this course, you will be creating a horizontal and vertical alignment using the OpenRoads Designer Geometry tools. You will learn how to create, edit, review and annotate geometric elements. This course will also cover working with existing ground terrain and aerial imagery as well as defining 2D/3D Views.	Bentley	Christiana Holmes	Intermediate - Expert
Horizon	Workshop	6	* T-1-H FDOT Connect ORD: Basic 2D Design for Corridor Modeling	This course to that will go over the fundamentals of 2D design Alignments, 2D-Planimetrics & Profiles. Participants will be introduced to Bentley OpenRoads Designer CONNECT Edition - OpenRoads Technology tools for design and modeling; specifically for Florida Department of Transportation (FDOT) projects using the FDOTCONNECT Workspace. Several new technologies will be introduced including: • Civil Elements, Civil Features and Civil Geometry • Design Intent and Design Standards • Civil AccuDraw and Civil Cells • Explorer: OpenRoads Standards • Ribbon Tabs and Cursor Text Menu	FDOT/ACEC-FL	T. Holt/G. Gaiotti	Novice - Intermediate
Seahorse	Workshop	2	* T-2-SH OpenRoads Designer : Creating and Editing Centerline Geometry	In this course, you will learn how to create and edit horizontal and vertical geometry using various tools and techniques. You will be defining the horizontal and vertical geometry for River Rd. You will also learn how to make changes to the River Rd. geometry and how to make changes to the existing geometry for Mountain Highway and Pike Rd.	Bentley	Christiana Holmes	Intermediate - Expert
Sandcastle II	Workshop	3	* T-2-SC II Tips & Tricks for Corridor Feature Extraction using Point-Clouds for TopoDOT Users	Learn the latest techniques to improve your corridor feature extraction process. This session is a summary of the recent changes and updates to the Main Extraction tools in TopoDOT® such as the Drape Element to Data, Road Extraction, Extraction by Intensity, Template Extraction and Break-Line Extraction tools. This session is a great opportunity to increase your productivity with a few tips and tricks we have in store for TopoDOT Users.	TopoDOT	Michael Cook	Intermediate - Expert
Sandcastle I	Workshop	3	* T-2-SC I OpenBridge Modeler Modeling Fundamentals for PC Bridges	Develop a multi-span prestressed girder bridge using LEAP Bridge Concrete. We will explore the use of different super and substructure templates and how to modify them, create geometry reports, convert the 3D physical model into an analytical model, and analyze it using the LRFD code. Additionally, we will create drawings and share best practices for project deliverables	Bentley	A. Mabrich/ S. Willoughby	Novice - Intermediate
Seahorse	Workshop	2	* T-3-SH OpenRoads Designer: Beyond Centerline Geometry	Pavement Edges are particularly important: they are required in Plan Sheets and the streamline modeling corridors (a single template can follow edges wherever they meander). In this class you create smart, editable, obedient edges, turn lanes, tapers, and driveways. You will see how OpenRoads Remembers the relationships with which you built the geometry and honors it when the design changes. OpenRoads Remembers your Design Intent.	Bentley	Jordan Hatfield	Intermediate - Expert

2021 FLUG Training Forum

Descriptions - General Sessions and Hands-On Workshops

Wednesday - Oct 13

Room	Type	PDH Credits	Title	Description	Company	Speaker	Level
Dunes	General Session		Tips and Tricks for MicroStation CE	Small Helpful, sometimes overlooked Tips for making you more productive in MicroStation CE	Bentley	Steve Rick	Novice - Expert
Dunes	General Session		Property Driven Annotation	The MicroStation CONNECT Edition provides new capabilities for annotating designs through the use of Item Types. An Item Type is a user defined set of properties used to describe an object or element. The item type data may be exposed using text fields with tools such as Place Text, Place Note, and Labels. In this session text fields will be created for use in a label cell	Bentley	Steve Rick	Intermediate - Expert
Dunes	General Session		Introduction to Parametric Modeling	Useful in both 2D and 3D production, parametric modeling tools give you a degree of flexibility which is not possible with conventional tools. In this session we will explore how to build and use parametric models that are easily editable yet preserve the geometric and dimensional relations that drive your design.	Bentley	Dave Mayer	Novice - Expert
Dunes	General Session		Ahead of the Curve	In this session we'll survey MicroStation's extensive curve functionality. From creation to modification we'll take a look at the mechanics and dynamics the curve tools provide in both 2D and 3D environments	Bentley	Dave Mayer	Intermediate - Expert
Dunes	General Session		Consider Another View	Have you taken a thorough tour of MicroStation's View Attributes lately? In this session, not only will we review the basics, but we will explore advanced features such as Display Styles, Display Rules, Saved Views, Clip Volumes, Display Sets and more.	Bentley	Dave Mayer	Novice - Expert
Sea Oates	General Session	1	* Integrating Geotechnical Data in OpenRoads Designer	In this session, you will learn how to quickly and efficiently integrate subsurface data within civil design using OpenGround, gINT or HoleBASE applications. * Loading multiple sub surface layers and topography, * Geological interpretation tools, * Creation of surfaces and volumes, *Integration into profiles and cross sections, * Adding borehole strip logs in the document production tools.	Bentley	Jimmie Prow	Intermediate - Expert
Sea Oates	General Session		Bringing Data into OpenRoads Designer	Join us for a discussion of what type of project data can be imported or referenced into OpenRoads Designer and how it can be used. Discussion will including bringing in project data from Bentley's GEOPAK, InRoads, and MX formats and other sources such as text files, XML, IFC, Civil 3D, and 12d.	Bentley	Jimmie Prow	Intermediate - Expert
Sea Oates	General Session	1	* Fundamentals of Templates and Corridor Modeling	Join us to learn the basics of creating corridor templates in OpenRoads Designer. In this session we will explain and demonstrate how to use OpenRoads Designer to build pavement sections and side slopes. We will discuss component creation, constraints, targets, and end conditions. Don't miss this opportunity to get started effectively using templates in OpenRoads Designer.	Bentley	Jimmie Prow	Novice - Expert
Sea Oates	General Session	1	* Extended Attribution with Item Types using OpenRoads Designer	Learn to use item types to add custom attribution to OpenRoads objects. Custom attributes can be used for reporting and to extend data for other downstream uses such as construction, bid quantities, and asset management. We will explore how to setup item types, pick lists, lookup tables, and calculated expressions. We will also discuss when and why the OpenRoads Asset Manager tool should be used to supplement the core item types capabilities.	Bentley	Jimmie Prow	Intermediate - Expert
Sea Oates	General Session		Innovative Template Solutions	Time is spent going over some of the more out-of-the-box templates that we have come up with over the years. Some examples would be a template that sets minimum grade for cross slope correction, split templates, dynamic box culverts, creating an component with 2 parents, basic template math, and many more.	RS&H	Andrew Poszich	Novice - Expert
Sawgrass	General Session		An Introduction to OpenSite Designer	Learn about Bentley Systems newest site planning and design software, OpenSite Designer. Discover the power of automated and optimized tools to see how it will shorten your design times and deliver better projects.	Bentley	Sonya Pieterse	Novice - Expert
Sawgrass	General Session	1	* Benefiting from OpenSite in Roadway Projects	Road projects are not just the corridor. Learn how using the new Site Layout toolset will help create sites along with your roadway.	Bentley	Sonya Pieterse	Novice - Expert
Sawgrass	General Session	1	* Using Functional Components for Custom Bridge Elements	Learn how to create custom pier and abutments for your bridge using the concept of parametric cells and functional components regarding the structure.	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert

Sawgrass	General Session	1	* Exploring Generative Components for Bridge Projects	When your abutment or pier gets overly complex with lots of variables to account for and behave in different manners depending on the superelevation of the deck, skew angle of the support, skew angles of the wingwalls…there is Bentley's Generative Components to the rescue. Let's learn how you can highly customize these kind of structures for your projects.	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert
Sawgrass	General Session	1	* Plans Production with OBM	Let's review the plans production process for the creation of bridge deliverables and the tools available in the software to accomplish that. Topics include: Review of Model Types, Dynamic View Workflow, Review of Detailing Symbol Styles, Review of Display Styles, Specialized OBM Drawing Production Tools	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert
Starfish	General Session	1	* Navigating Drainage and Utilities	In this course 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.	Bentley	Jordan Hatfield	Novice - Expert
Starfish	General Session	1	* Draining a Road Surface Effectively	In this presentation we will look at how to optimize the position of inlets to effectively drain the road surface, including checking that spread width constraints have been adhered to along the gutter, and not just at the inlet.	Bentley	Jordan Hatfield	Intermediate - Expert
Starfish	General Session	1	* Channel Modeling	In this course you will learn how to model a drainage channel that is adjacent to an existing roadway. You will learn how to create the horizontal and vertical geometry for the drainage channel. You will also learn how to create the channel template, the channel corridor model and how to generate cut and fill volumes.	Bentley	Christiana Holmes	Intermediate - Expert
Starfish	General Session	1	* Levee Modeling	In this course you will learn how to model a levee that is adjacent to an existing roadway. You will learn how to create the horizontal and vertical geometry for the levee. You will also learn how to create the levee template, the levee corridor model and how to generate cut and fill volumes.	Bentley	Christiana Holmes	Intermediate - Expert
Starfish	General Session		Creating Drainage Reports	In this course, you will 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.	Bentley	Christiana Holmes	Intermediate - Expert
Sand Dollar	General Session		OpenBuildings Designer – Information Modeling in 3D of a Transit Station	An introduction and overview of OpenBuildings Designer and its robust 3D modeling Workflows to quickly model a Transit Station while reviewing discipline specific Drawings and Schedules as the modeling progresses. Exploring the 3D Modeling Environment by creating Building Grids, using Floor Planes, and Working with Site Models 1) Working with Site Files – Geo-Referencing Civil Models 2) Modeling Structural ProSteel (New) Elements Columns, Beams, Joists, Concrete Piers, and Footers. 3) Modeling and Modifying Architectural Elements such Walls, Doors, Windows and Curtain Wall. 4) Placing Interior objects such as Building and Transit related Spaces, Furniture, Fixtures, and Equipment (FF&E) 5) Advanced modeling capabilities to create the Transit Station Platform Canopy with Tapered Columns and Beams, Steel Plates, Purlins and custom glass shapes. 6) Creating an iTwin	Bentley	Mark Enos	Novice - Expert
Sand Dollar	General Session		OpenBuildings Designer for Road Infrastructure - Design of Support Buildings & Structures	OpenBuildings Designer is a scalable, multidiscipline building design application that enables BIM workflows to provide information-rich models for the design, analysis, simulation, and documentation of buildings with the embedded power of MicroStation. 1) Explore BIM projects for transportation such as vehicular maintenance buildings, highway service plazas, comfort stations, transit stations, and roadside and bridge support structures. 2) Quick design alternative exploration and adaptive re-use of BIM models for other projects. 3) Review results from BIM Pilots for DOT Buildings 4) Review of the Next Generation of Structural Elements – New ProSteel Element Types 5)Publishing models outside of OpenBuildings Designer for review by Project Managers, such as 3D PDF, imodels, and iTwin Review. 6)Extend BIM models from Design and Construction to Operations and Maintenance for building Spaces, Devices, Furniture, Fixtures, and Equipment across multiple building models.	Bentley	Mark Enos	Novice - Expert

Sand Dollar	General Session		BIM Enlivened – OpenBuildings Designer & LumenRT	Enrich your OpenBuildings Designer models to make them look more realistic with LumenRT's Digital Nature. Immerse buildings within a real-time visualization environment populated with moving people, wind-swept plants with seasonal foliage, rolling clouds, rippling water, and animated vehicles. 1) With LumenRT Pro you can easily share interactive, immersive 3D presentations with any stakeholder. (Executable 3D Live Cubes) 2) What is LumenRT Designer? 3) Output to 360 Static VR with Google Carboard, or Immersive VR with devices such as Oculus Rift and Samsung Vive. 4) Best Practices and Tips & Tricks 5) What is New in LumenRT ? 6) The new Drive Mode Included with LumenRT is a python script that enables users to "drive" through the LumenRT scene using a gaming type driving or racing wheel. This powerful capability allows designers to explore the approach and experience to OpenBuildings Designer Models and Structures.	Bentley	Mark Enos	Novice - Expert
Sand Dollar	General Session		OpenBuildings Designer for Early Conceptual Modeling and Analysis Workflows	OpenBuildings Designer provides building information modeling (BIM) advancements with multiple discipline capabilities to design, analyze, document, and visualize buildings of any size, form, and complexity. It also has powerful tools for space planning as well as intelligent 3D massing models with easy to use push-pull intelligent solid modeling capabilities. 1) Bentley's ContextCapture solution, creates real-world digital context in the form of a 3D scalable reality mesh models from photographs. This Scalable Mesh Model (.3MX), along with Point Cloud models, can be referenced into OpenBuildings models to capture existing conditions. 2) Bentley's Generative Components, (included with OpenBuildings Designer), allows rapid computational design alternatives of building massing studies, and much more. 3) OpenBuildings Energy Simulator (included with OpenBuildings Designer), has a Conceptual modelling mode, that can be used for preliminary calculations and analysis, early on in the design stage, to analyze important decisions such as site location, building geometry and solar orientation. 4) Bentley's OpenSite Designer allows you to quickly model parametric parking, sidewalks, driveways, building pads, and general site conditions. 5) Bentley's LEGION Pedestrian software can simulate and analyze the foot traffic on infrastructure assets including rail and metro stations, stadiums, shopping malls, and airports. Accurately test designs and operational or commercial plans to enhance footfall, wayfinding, crowd management, and safety and security strategies on all phases of design.	Bentley	Mark Enos	Novice - Expert
Sand Dollar	General Session		OpenBuildings Designer with Water/Plant and Civil Infrastructure Projects	OpenBuildings Designer is a scalable, multidiscipline building design application that enables BIM workflows that is built on the "Open" Platform Technology that has the embedded power of MicroStation. We will explore Digital Workflows and Best Practices when working on Water/Plant projects with OpenPlant Modeler and Bentley Cable and Raceway Management, or Civil Projects with OpenRoads Designer and OpenRail Designer.	Bentley	Mark Enos	Intermediate - Expert
Sundial	General Session		Microsoft Office Importer - Link Excel and Word into Revit, MicroStation and AutoCAD!	Import perfectly formatted — and linked — Excel and Word data into Revit, MicroStation (CONNECT and V8i) and AutoCAD/Civil 3D with Axiom's Microsoft Office Importer. MicroStation version includes complete ProjectWise support — it automatically links imported data in your DGNs to Excel spreadsheets and Word documents stored inside ProjectWise. Revit version includes BIM 360 and SharePoint/OneDrive support. Learn how to shave man-weeks off your next project with Microsoft Office Importer for Revit, MicroStation, and AutoCAD.	Axiom	Eiren Smith	Novice - Expert
Sundial	General Session	1	** Using Point-Clouds Beyond As Built Surveys	Looking to get more of your data past "as built" surveys? Want to get more uses out of LiDAR? Learn about the latest data analysis and monitoring tools available for you in TopoDOT®. The presenters will demonstrate examples of the Speed Advisory tool to analyze speed based on the road curvature, the Wall Monitoring tool to inspect displacement over time on retaining walls, as well as the Road Contrition Analysis to detect and report pavement surface distress and more. Updates on other analysis tools will also be demonstrated. Don't miss the opportunity to discover new ways to expand your business with tools you already own.	TopoDOT	Michael Cook	Intermediate - Expert

Sundial	General Session		Bluebeam Revu for Transportation	In the transportation industry, many teams and clients work together to provide safe and efficient solutions for commuters. By utilizing Bluebeam Revu, civil engineers can collaborate on the same PDF at the same time with surveyors, contractors, and project managers in different locations. Many projects have tight budgets and evolving needs in growing communities, so using Revu's Markup List and Summary Reports to quantify each detail keeps costs below their threshold. Revu ensures that all changes and comments made to a project are documented and seen by all relevant parties via Studio Projects and Sessions. The "Alert" and "Reply" tools ensure that important changes are communicated to specific entities quickly and without the need for redundant emails. This webinar covers the following functions: 1. Studio Projects & Sessions for the transportation industry 2. The Markups List and Hyperlinked Summary Reports 3. Comparisons and Overlays 4. Visual Search	Digital Drafting System	Ariel Rejtman	Novice - Expert
Sundial	General Session		Crossing the Digital Construction Chasm	There has been a lot buzz in the AEC market around emerging technologies, BIM, and digital twins. As parts of the industry move to adopt technology to transform how they work, many construction firms are just starting their journey to digitize their workflows. In this session we will discuss technology trends, the technology plans/viewpoint of construction firms servicing different market segments (i.e. Civil Infrastructure and Building), and a path towards the "live" construction digital twin. This will include a review of how SYNCHRO Construction is evolving with the industry, enabling construction firms to scale from basic workflows automations to full 4D/5D model-based workflows from preconstruction through execution and handover. Learn how SYNCHRO is helping construction firms to cross the digital chasm and leverage the latest technology to win more projects, deliver projects more efferently with more predicable outcomes, and drive greater profits.	Bentley	D. Sheldon / Rob Riley	Novice - Expert
Sundial	General Session		Digitally Signing and Sealing Documents	Using x.509 compliant digital certificates to digitally sign and seal documents to meet the State of Florida's requirements for digitally submitting electronic documents.	IdenTrust	Richard Jensen	Novice - Expert
Sandcastle I	Workshop	2	* W-1-SC I OpenBridge Modeler Modeling Fundamentals for Steel Bridge	We will use LEAP Bridge Steel's computational 3D design and modeling capabilities to streamline the design of a curved I-girder bridge. You will learn how to generate geometry reports, convert the 3D physical model into an analytical model for analysis purposes, create drawings and share best practices for project deliverables.	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert
Sandcastle II	Workshop	2	* W-1-SC II Detecting and Managing Utility Conflicts	In this course, you will learn how to identify hard and soft conflicts of underground utilities.	Bentley	Christiana Holmes	Intermediate - Expert
Seahorse	Workshop	2	* W-1-SH Using and Editing Terrain Models	In this course you will review terrain model feature display and learn how to create thematic height displays. You will also learn how to create terrain models by importing graphic elements, identify and fix terrain model problems, and combine multiple terrain models together.	Bentley	Dan Sheldon	Intermediate - Expert
Horizon	Workshop	5	* W-1-H FDOT Connect ORD: Existing Modeling	This course will go over the fundamentals of creating a 3D Model for existing features to include; hard surfaces (i.e. asphalt, concrete, sidewalks, curbs, etc…), utilities, drainage structures and soil borings. Participants will be introduced to Bentley OpenRoads Designer CONNECT Edition - OpenRoads Technology tools for design and modeling; specifically for Florida Department of Transportation (FDOT) projects using the FDOTCONNECT Workspace.	FDOT/ACEC-FL	J.M. Palacios/D. Wait	Intermediate - Expert
Sandcastle I	Workshop	3	* W-2-SC I Creating Reality Models and Integrating them into Civil Designs	In this workshop you will learn how to build a reality model using ContextCapture from photogrammetry. Civil users will gain valuable insight into the accuracy level provided from these models. The user will learn to include ground control on a captured roadway project and access detailed reports attesting to accuracy. Learn what it takes to generate a survey accurate reality model for use in civil design projects. Next, you will work with disparate data aligning spatially referenced information to generate a working design for volume comparison between various models all within the Open Roads environment.	Bentley	Mike Barkasi	Intermediate - Expert
Sandcastle II	Workshop	3	* W-2-SC II FDOT Civil3D - Island Corridor Modeling	This workshop will take you step by step of Modeling a Island using the FDOT Civil 3D Sate kit.	FDOT	Mike Racca	Intermediate - Expert

Seahorse	Workshop	3	* W-2-SH Introduction to Drainage Layout and Hydraulics	This course was previously called Inlet and Pipe Layout - Analysis and Design. In this course we cover creating and designing a highway drainage system consisting of Inlets, Manholes, Outlets, Pipes, and Drainage Areas. Topics covered include placing drainage structures, placing drainage areas, placing drainage pipes and computing flows through the system. We will also cover creating profiles of the system	Bentley	Jordan Hatfield	Intermediate - Expert

2021 FLUG Training Forum

Descriptions - General Sessions and Hands-On Workshops

Thursday - Oct 14

Room	Type	PDH Credits	Title	Description	Company	Speaker	Level
Dunes	General Session		General CADD Office Updates	This presentation will review all major changes in the last 2 year to the CADD Standards, CADD Tools and CADD Platforms.	FDOT	Matt Sexton	Novice - Expert
Dunes	General Session		BIM and CADD Standards (Repeat)	This presentation will review all major changes in the last 2 year to the CADD Standards for BIM and 3D Delivery	FDOT	Vern Danforth	Novice - Expert
Dunes	General Session		Traffic Design Tools for ORD (Repeat)	This presentation will review all major changes in the last year to the CADD Traffic Tools.	FDOT	Randy Roberts	Novice - Expert
Dunes	General Session		CADD Automated Quantity Workflow and Summary Reports (Repeat)	This presentation will review all major changes in the last year to the Automated Quantity Workflow and Summary Reports.	FDOT	Kandi Daffin	Novice - Expert
Dunes	General Session		New FDOT Geotech Tools	This presentation will not be boring. This presentation will review FDOT's new tools for managing Geotechnical Inforamtion from start to finish	FDOT	Todd Holt	Novice - Expert
Dunes	General Session		Updates NexGen, Models as Contact Documents, Signing and Sealing Digital CADD Files (Repeat)	NexGen Plans Update, Earthwork and AMG CADD files for contract documents.	FDOT	Vern Danforth	Novice - Expert
Sea Oates	General Session	1	* Corridor Side Slope Design and Modeling	This session focuses on practical ways to take advantage of the side slope modeling tools in OpenRoads Designer. Watch as we discuss and demonstrate various end condition capabilities in context of real-world examples. You'll see examples of targeting 2D and 3D project features such as ROW and retaining walls, as well as matching slopes between corridors. In this session you will learn: (1)How to use various methods to target model elements and control end conditions, (2)How to tie end conditions to model elements (such as walls, abutments, and special ditches), and (3)To use target aliasing, end condition exceptions, and other end condition methods to create side slopes.	Bentley	Jordan Hatfield	Intermediate - Expert
Sea Oates	General Session	1	* Grading Design and Modeling at Bridge Abutments	In this session, we will demonstrate tools and techniques for modeling side slopes and grading around bridge abutments. You will learn how to define vertical elevations of 2D horizontal geometry, as well as use linear templates and end conditions to tie down slopes. Working between the multiple views of OpenRoads Designer, you will gain insight on viewing, analyzing, and modifying design elements, helping you incorporate bridge grading into your project design models.	Bentley	Jordan Hatfield	Intermediate - Expert
Sea Oates	General Session	1	* Getting the Model Right	Join us to learn the basics of creating corridor templates in OpenRoads Designer. In this session we will explain and demonstrate how to use OpenRoads Join us for techniques and tips to model all sizes of projects efficiently. We will discuss how file federation, backbone only corridors, level of detail and such can influence calculations, deliverables, drawing production, performance, and collaboration with the design team.	Bentley	Christiana Holmes	Intermediate - Expert
Sea Oates	General Session	1	* Creating Utilities from Graphics	In this course, you will learn to create Utilities from 2D and 3D Graphics. You will also learn to create Utilities using Utility Filters and Filter Groups.	Bentley	Christiana Holmes	Novice - Expert
Sea Oates	General Session	2	* RRR Design & Modeling with OpenRoads	3DH's RRR presentation will cover the basics on "how to build" milling & resurfacing template setups, cross slope correction templates, friction course and superpave overlay template setups and existing cross slope report template setups. Q & A on anything ORD related at the end of presentation.	3D Highway Engineering	Richard Perez	Intermediate - Expert
Sawgrass	General Session	1	** FDOT Connect ORD: ROW Workflows	This presentation will take users through the tools for the Right of Way workflow	FDOT	John Hazlip	Novice - Expert

Sawgrass	General Session	1	** An Introduction to OpenRoads Designer Survey	An introduction to the survey capabilities in OpenRoads Designer.	Bentley	Alvie Griffith	Novice - Expert
Sawgrass	General Session	1	** Understanding Survey Feature Definitions	This course 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.	Bentley	Alvie Griffith	Intermediate - Expert
Sawgrass	General Session	1	** Editing Survey Features Using Point Lists	This course focuses on how to easily correct erroneous survey linework by converting the Linking Code survey features to Point List Features and then editing the features. We will focus on converting Linking Code Features to Point List Features and then editing the Point List Features.	Bentley	Alvie Griffith	Intermediate - Expert
Sawgrass	General Session	1	** Preparing Right of Way Plans in ORD	This will be an overview of our lessons learned in developing Right of Way Plans using the new tools available in ORD. We will also discuss what we have developed as our in-house best practices.	Mead & Hunt	Adam Moorman	Novice - Expert
Sawgrass	General Session	1	** Using Survey Data to Create Existing Terrain	We will import raw survey data, correct errors, and refine the data in order to generate breaklines, spot shots, and planimetric linework. Ultimately, we will deliver a comprehensive, well-defined existing ground terrain as well as a survey map including linework, contours, and annotation.	Bentley	Alvie Griffith	Intermediate - Expert
Starfish	General Session		What's New with Civil 3D and FDOT StateKit (Repeat)	This presentation will review what's new in the latest Civil 3D State kit	FDOT	Randy Roberts	Novice - Expert
Starfish	General Session		Civil 3D and Visualization Tips	This class is intended to provide an overview of the options available within and from Civil 3D to create visual aids to help inform stakeholders on the design intent of our projects, taking advantage of the AEC collection and your current corridor models.	Consor	Oscar Castaneda	Novice - Expert
Starfish	General Session	1	** Drone Surveying with the AEC Collection	This presentation provides a general overview of the process to create from drone images a survey file for preliminary analysis of existing conditions and development of concept layouts for your projects. We will go over Drone best practices, point cloud creation workflow within Pix 4D, surface creation and features extraction for development of Survey files.	Consor	Oscar Castaneda	Novice - Expert
Starfish	General Session	1	* Civil Site Design – Road Design with the Complete Solution	Civil Site Design is an add-on to Civil 3D that adds automation and powerful visual design tools that allows, new and experienced designers, to significantly increase their design productivity. Corridor modeling with Flare and ease! Road design and layout with a purpose! Roads automatically connect vertically based on the alignment geometry. Auto Create Roads allows multiple alignments to be converted to roads at once, including intersection connections that are maintained as main roads are edited vertically.	Applied Software	Kenneth Driscol	Intermediate - Expert
Starfish	General Session		Maintaining personal variable setting, custom keyboard commands, and more for Civil 3D and AutoCAD vertical Products	Auto-loading LISP routines, maintaining preferred variables settings and support assets such as line types and hatch patterns with minimal effort! Reestablish your AutoCAD personal support assets after a profile reset, new install, or even when updating to a new product version within only a few minutes.	IMAGINiT	Archie Dodge	Intermediate - Expert
Starfish	General Session		Sheet Set Manager Layout Views and Referencing for Civil 3D and AutoCAD vertical Products	Dynamically link detail callouts and their respective sheet numbers using the Sheet Set Manager Layout Views to easily update detail callout information without ever opening the drawing! The resulting callouts automatically update sheet numbers associated with the detail when renaming and renumbering sheets within the Sheet Set Manager, allowing you to focus on the things that matter rather than manually updating each detail callout in your project.	IMAGINiT	Archie Dodge	Intermediate - Expert
Sand Dollar	General Session		ProjectWise Update and More Hidden Gems	This session will cover an overview of the new features in ProjectWise Design Integration, iCS, ProjectWise 365 Services (Deliverables Management, PDF Markup/ Issues Resolution…). We will additionally share some hints and tricks to help you get more out of your ProjectWise investment.	Bentley	Adrian Crowfoot	Novice - Expert

Sand Dollar	General Session		ProjectWise PowerShell Basics	This session will introduce Microsoft PowerShell, discuss its importance to Microsoft Administrators and provide resources to learn more about Microsoft PowerShell. Additionally, Bentley has created PowerShell Cmdlets for ProjectWise that allow administrators to leverage the power of the ProjectWise API via PowerShell. Bentley will discuss where to find the Cmdlets, how to get started, share how users are automating administrative tasks, describe the process for getting started and, if time allows, walk through some scripts.	Bentley	Adrian Crowfoot	Intermediate - Expert
Sand Dollar	General Session		ProjectWise Managed Workspace and Best Practices	This session will discuss the basics of ProjectWise Managed Workspaces for those who are new to ProjectWise. This session will also present Best Practices in the context of the current standard template used by Bentley User Success Service (referred to as the "Dynamic Managed Workspace"). The template has been implemented in more than 40 AEC Design firms and DOTs over the last two years and has become the standard for managed workspaces.	Bentley	Buddy Branham	Intermediate - Expert
Sand Dollar	General Session		Strategies for Implementing the FDOT Workspace in ProjectWise	This session will address the challenges and potential strategies for implementing the FDOT workspace in ProjectWise as a managed workspace. FDOT provides many helpful applications within their workspace, but these are oriented for a Windows environment. The session will review which parts work well in ProjectWise and which don't work quite as well. PW Drive will drive will also be reviewed a solution to mirror the PW environment so that the Windows based applications can function properly.	Bentley	Buddy Branham	Intermediate - Expert
Sand Dollar	General Session		Digital Twins and Project Coordination	This session will discuss how to execute project-level design reviews and multidiscipline coordination. The iTwin Design Review Digital Twin workflow helps to capture and visualize engineering change throughout the project with an accountable record of who changed what and when. Topics will include requirements, when to initiate project-wide design reviews and an illustration of an example project.	Bentley	A. Crowfoot/B .Branham	Novice - Expert
Sand Dollar	General Session		Ad Hoc Design Reviews	This session will discuss how to execute quick peer reviews of design work-in-progress deliverables; specifically PDFs and CADD files. The iTwin Design Review Ad Hoc workflow can be used to conduct quick design reviews from anywhere, with a standard web browser. Topics will include requirements, when to initiate ad hoc design reviews and illustrations of several examples.	Bentley	A. Crowfoot/B .Branham	Novice - Expert
Sundial	General Session	1	* Utilizing Bentley ConceptStation & ContextCapture to create a Digital Model	The trials and tribulations of developing a UAS program and successfully completing project deliverables.	Mead and Hunt, Inc.	J. Duffie/A. Moorman	Novice - Expert
Sundial	General Session		iTwin with Reality Modelling	In this session we will using Orbit GT to publish LiDAR, Images and Reality modelling to iTwin as well leveraging Nearmap and other data sources	Bentley	Rob Riley	Novice - Expert
Sundial	General Session		IModel.JS Platform Overview	Review of iTwin Imodel.js platform on how to use opensource APIs, tools to create iTwin view tools to connect to other operational applications	Bentley	Rob Riley	Novice - Expert
Sundial	General Session	1	* Improving Your 3D Design Methods by Leveraging Mobile and UAS LiDAR	As the industry pushes forward to harness the power of 3D design and modeling, the marrying of LiDAR data capture with the modeling process will continue to evolve. This session will focus on an interstate widening project where the survey and design functions were compressed in the project schedule and the conceptual design was revised midstream. The Horizon/Colliers team was able to respond to the challenges by leveraging the power of mobile and UAS LiDAR in order to provide high resolution surface modeling in near real time to support the 3D modeling effort, which propelled the project to an on-time completion. The methods used will be demonstrated during this session.	Colliers Engineering	Paul DiGiacobbe	Novice - Expert
Sundial	General Session	1	* Leveraging TopoShare for Effective Support of 3D Design/Construction Processes	As traditional infrastructure design methods migrate from 2D to 3D modeling, this presentation will review a process designed to integrate 3D design models with 3D existing condition models. There will be focus on the challenges in the practical application of the federated model concept with specific attention to the risk and liability associated with the process. In this presentation the presenter will then define the mission of the geospatial team and how it can be effectively integrated within the iTwin process to overcome these shortcomings. Finally we'll look at the new TopoShare™ Geospatial Data Catalogue and how it serves a critical role in the execution of a comprehensive process iTwin process. The presenter will discuss other data storage/sharing/viewer products on the market, present their advantages and shortcoming as well as their role in the overall process. The utility of TopoShare™'s unique ability to effectively communicate every instance of geospatial project data across downstream operations will be introduced. This communication makes possible the documentation and maintenance of quality standards of federated reference models in support of the iTwin centered design process.	TopoDOT	Michael Cook	Novice - Expert

Sundial	General Session		RefManager - Take Control of Your CONNECT and V8i Reference Files!	Remove the time and frustration of dealing with MicroStation reference attachments and their settings, using Axiom's RefManager. Effortlessly fix missing reference attachments. Run comprehensive reports on reference dependencies and reference settings to instantly find out the real condition of your reference files before they impact your submittals. Easy-to-use modification features give you precise control over reference attachment settings in all of your DGNs. Save considerable time on every MicroStation project, starting with your current project.	Axiom	Eiren Smith	Novice - Expert
Sandcastle I	Workshop	2	* TH-1-SC I Plans Production with OpenBridge Modeler	Most agencies are requiring 3D models as part of the submittals but 2D plans are still part of their contractual documents. As the traditional way of drafting plans are phasing away, extracting 2D plans from 3D models demands new knowledge and techniques that we will cover during this presentation.	Bentley	A. Mabrich/ S. Willoughby	Novice - Intermediate
Sandcastle II	Workshop	3	* TH-1-SC II Civil 3D Site Design with Storm Water Management - The Complete Project!	Civil 3D software to automate design and analysis of storm sewer networks with Hydraflow Extension tools. Site layout analysis….We'll use AutoCAD software and Civil 3D to prepare data such as watershed and catchment areas, and lay out a drainage network for further analysis of hydrology and hydraulic in Hydraflow Extension. We'll analyze hydrology, open channel flow, and culvert and pipe flow. We'll also design detention ponds. And we'll generate stage-storage curves, pond routing, and outflow hydrographs. We'll use site-grading tools and corridors to complete design modeling.	Applied Software	Kenneth Driscol	Intermediate - Expert
Seahorse	Workshop	2	* TH-1-SH QuickStart for Corridor Modeling	In this course, you will be creating a Corridor and 3D model for a 2 lane rural road. You will learn how to create a Corridor, assign template drops, create dynamic cross sections and review the Corridor and 3D model. You will also learn how to use parametric constraints and point controls to vary pavement depths and shoulder widths. This course will also cover how to create and assign superelevation to a Corridor. And lastly, you will learn how to compute quantities from the 3D model.	Bentley	Jimmie Prow	Intermediate - Expert
Horizon	Workshop	6	* TH-1-H FDOT Connect ORD: Advanced 3D Modeling	This course to include fundamentals of 3D Modeling. Participants will continue to learn the Bentley OpenRoads Designer Connect Edition tools for design and modeling within the FDOTCONNECT workspace. Several advanced concepts and technologies will be introduced including: • Rule Based Superelevation Design Parameters • Associating Template Points to Superelevation Lanes • Constructing 3D Elements • Building Intersection Terrains from 3D Elements • Appling a Surface Depth to Terrain Elements • Placing 3D Civil Cells • Configuring Advanced 2D and 3D Civil Cells • Corridor and Terrain Model Clipping • Applying Linear Templates to 3D Elements • Building DTM, XML Files for Construction Deliverables	FDOT/ACEC-FL	J.M. Palacios/E. Gray	Intermediate - Expert
Sandcastle I	Workshop	2	* TH-2-SC I Analytical Design with OpenBridge Designer for PC Bridges	After modeling the bridge in OpenBridge Modeler, the next step is to perform the analytical design. Let's use the interoperability with LEAP Bridge Concrete to analyze and design the bridge. Add the live loads, load combinations and come up with the proper strands arrangement and rebar reinforcement for your beams, piers and abutments.	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert
Seahorse	Workshop	2	* TH-2-SH Overlay, Stripping and Widening	During this course you will learn to create and use templates that incorporate overlay and stripping components. You will also learn to use the Overlay Vertical Adjustments tool to calculate new vertical alignments that result in minimizing or specific depths of overlay and stripping/milling.	Bentley	Jimmie Prow	Intermediate - Expert
Sandcastle II	Workshop	3	* TH-2-SC II *** iTwin Digital Twin Lifecyle Going from Design , Construction to Operations	The workshop will teach users how to create a iTwin using OpenRoads Data , complete a design review with custom Issue forms , Open the iTwin in SYNCHRO to connect to a schedule , create construction work area and add cost fields, and data . Next the users will be exposed to Imodel.js to go through the Imodel.js accreditation course which will end up with the users creating a iTwin viewer and connect civil data to a simulated IOT sensor.	Bentley	D. Sheldon / Rob Riley	Intermediate - Expert
Sandcastle I	Workshop	2	* TH-3-SC I Analytical Design with OpenBridge Designer for Steel Bridges	Built-up girders, cross frames, stiffeners, field splices, filler plates and shear studs are some of the elements that can be challenging in modeling a steel bridge. Moreover, all of that information needs to be transferred or duplicated when calculating the bridge in the analytical software. Let's discover during this presentation how OpenBridge Designer brings interoperability to the back and forth between the physical and analytical model to streamline the process of modeling and designing a bridge.	Bentley	A. Mabrich/ S. Willoughby	Intermediate - Expert

Seahorse	Workshop	2	* TH-3-SH Using and Defining Superelevation	In this course, you will learn how to create, edit and review superelevation information using the tools provided in OpenRoads Designer. You will learn about the Superelevation XML preference file that controls how superelevation is calculated. You will learn how to create superelevation sections, lanes and transitions and how to apply the superelevation transitions to your corridor. You will also learn how to review and edit superelevation data.	Bentley	Jimmie Prow	Intermediate - Expert

2021 FLUG Training Forum

Descriptions - General Sessions and Hands-On Workshops

Friday - Oct 15

Room	Type	PDH Credits	Title	Description	Company	Speaker	Level
Dunes	General Session		So, they gave you a Point Cloud. Now What?	MicroStation's Point Cloud tools allow you to import, control, visualize and manipulate point cloud data. While we will certainly consider those basic operations in this session, we'll also explore various mechanisms and processes for extracting useful geometry using both MicroStation and Descartes.	Bentley	Dave Mayer	Novice - Expert
Dunes	General Session		Geospatial MicroStation	Geo-Coordination lets you specify or view the position of your design content on the earth's surface. In this session you'll learn how to set up a GCS in MicroStation, reference geo-located data such as MicroStation models, raster data, point clouds and more.	Bentley	Dave Mayer	Novice - Expert
Dunes	General Session		You can do that with MicroStation VBA?	In this session we will look at how to leverage MicroStation's implementation of the Microsoft VBA Integrated Development Environment (IDE). If you've ever wondered what you can do with VBA in MicroStation, this session is for you.	Bentley	Dave Mayer	Intermediate - Expert
Dunes	General Session		Named Boundaries	A named boundary is any closed element that has a name associated with it. You can place named boundaries using drawing boundaries. Named boundaries may also be grouped for processing sets of drawings onto sheets. In this session, you will learn to: create a Named Boundary and place the content of the Named Boundary in a sheet model.	Bentley	Steve Rick	Novice - Expert
Dunes	General Session		Sheet Creation and Indexing	Sheet creation is a time-consuming process that often causes inconsistencies and delays in the delivery of projects. Manually tracking the number and order of sheets can be a tedious and error-prone process. A sheet index can help to alleviate this by automating and speeding the process of creating and delivering well-organized sheet sets.	Bentley	Steve Rick	Novice - Expert
Sea Oates	General Session	1	* QuickStart Using Reality Modeling Tools in OpenRoads Designer (Repeat)	This course is a brief introduction to commonly used Reality Modeling tools in OpenRoads Designer.	Bentley	Jordan Hatfield	Novice - Expert
Sea Oates	General Session		With OpenRoads Designer, an Ordinary Design Becomes Your Interoperable Data!	OpenRoads Designer models are filled with data, but it is the ability to enrich the model with custom attribution and share all of that data through digital twin technology that brings a new level of interoperability and collaboration to project delivery. Using Item Types, the terminology and information that is most important to you becomes part of that interoperable data. This ability to instill custom attributes, such as pay items and specification details into the model, coupled with the iTwin cloud-based collaborative environment, ensures that the value of the design isn't lost during the project delivery process and enhances downstream activities within the project lifecycle.	Bentley	Jordan Hatfield	Novice - Expert
Sea Oates	General Session	1	* Computing Earthwork Volumes	Earthworks are one of the largest costs to consider for any project. OpenRoads Designer's model-based design (BIM) approach provides significant flexibility and accuracy in quantity calculations. Come see how the modeling capabilities of OpenRoads Designer help you calculate cut, fill, unsuitable, subsurface, subgrade, and other custom quantities to meet your project requirements. You can report on these 3D volumes with conventional end area volume methods, or compute volumes more accurately with a full prismoid approach directly from the 3d model, or even "slice" up the model to report volumes segregated for staged construction, different areas of the project, or for each plan sheet.	Bentley	Jimmie Prow	Intermediate - Expert
Sea Oates	General Session	1	** Using Geometry Builder to Define (Right of Way) Geometry	Learn the power of the Geometry Builder to define and edit geometry. Specifically we will explore how to create existing and proposed right of way lines and existing property parcel from record data during this session.	Bentley	Jimmie Prow	Novice - Expert

Sea Oates	General Session	1	* Harnessing the Power of OpenRoads Rules and Relationships - What Happens When Things Change?	OpenRoads Designer rules and relationships enable automatic model updating when geometry and corridors change. This is a powerful feature of OpenRoads Designer that ensures the design model is always up-to-date. But what happens when you need to replace a substantial part of the geometry? What if you don't want a rule created. How do you force a template to start at a physical position even if the up station geometry or stationing changes? During this presentation we will explore the rules and relationships between civil elements to better understand what updates automatically. We will share tips and techniques that affect the rules that are created and how they are evaluated.	Bentley	Jimmie Prow	Novice - Expert
Sawgrass	General Session		Adding Extra Intelligence to Your Bridge Using Item Types	One of the main advantages of the BIM methodology is the ability to produce a model rich with information provided by the software applications. However, what about when we want more information, custom information? Join us in this presentation as we will explore the use of item types in a bridge project context.	Bentley	A. Mabrich/ S. Willoughby	Novice - Expert
Sawgrass	General Session		Practical Uses of OpenBridge Modeler	In this session we will explore how OBM was utilized in numerous real world projects and see what kind of results it delivered. Specific topics may range from clearances, finish grade elevations, plans production, analytical data transfer, constructability checks, clash detection, rebar detailing, and more.	American Consulting Professionals, LLC	Steve Tissier	Novice - Expert
Sawgrass	General Session		Producing FDOT Compliant Plans with OpenBridge Modeler	Do you have doubts about being able to produce a set of bridge plans in OpenBridge Modeler that are derived from the 3D model? Even more so, a set of plans that meet FDOT Structures Detailing Manual standards? There is plenty of documentation out there showing how to do plans production in OBM, but they use simple examples and don't produce the plans how we need them to look. In this session I'll walk you through the different workflows, tips, and tricks to producing many of our common bridge plan sheets to a level of detail where we can use them as our project deliverables.	American Consulting Professionals, LLC	Steve Tissier	Intermediate - Expert
Sawgrass	General Session	1	* Drainage and Utilities for Site Modeling	Included in OpenSite Designer is the ability to design and analyze storm drainage facilities. This session will cover how to create layout and analysis design to create final design. Also, learn how to use Subsurface Utilities to layout other utilities such as water, sewer and power. (Accelerate 2020)	Bentley	Sonya Pieterse	Novice - Expert
Sawgrass	General Session	1	* Hang Up That 2D Site Design Process For An Exciting Automated 3D Modeling Workflow	The site industry has been designing in 2D for generations with little advancement until now. In this session you will learn the benefits of moving to the OpenSite Designer 3D modeling workflow. Discover how to maximize your design skills and let the automation help you deliver better projects with less effort. See how to start with nothing but an address, then create layouts and grading in minutes. See how to turn that 3D design into 2D plans for submittals.	Bentley	Sonya Pieterse	Novice - Expert
Starfish	General Session	1	* FDOT C3D 3D Driveway Modeling (Repeat)	This presentation will review the steps for 3d Driveway Modeling	FDOT	Mike Racca	Intermediate - Expert
Starfish	General Session	1	* FDOT C3D 3D Island Modeling (Repeat)	This presentation will review the steps of modeling a Island	FDOT	Mike Racca	Intermediate - Expert
Starfish	General Session		Planes, Trains and Automobile with Vehicle Tracking – How to use Autodesk Vehicle Tracking	Autodesk Vehicle Tracking is a product that enables a wide variety of solutions in the transportation space. At the highest level it can be divided into three main segments vehicle swept path analysis parking layout and design roundabout design. Effectively perform swept path analysis, perform ground conflicts, animate transportation vehicles and drive in the real world.	Applied Software	Kenneth Driscol	Novice - Expert
Starfish	General Session		Pipe Networks with Civil Site Design	Civil Site Design with Pipe Networks from 2D polylines to 3D pipe networks in seconds…..Mega Projects pulling back the curtains to produce models of utility systems, such as storm sewers, sanitary sewers and more. Faster creation and design,,, Clicking a 1 button solutions!	Applied Software	Kenneth Driscol	Novice - Expert
Starfish	General Session		Civil 3D Project Explorer	Civil 3D is a data-rich program. The various civil 3D objects are both graphical and informational. Traditionally gaining access to that information within several 3D objects is rather arduous and convoluted differing on every type of project. Project Explorer simplifies accessing and reviewing such data through a single interface, you can edit Civil 3D objects. validate design assumptions and create reports and tables in one single place.	Applied Software	Kenneth Driscol	Novice - Expert

Sand Dollar	General Session		Rapid Concept Development - Rapid Layout	In this session, we will be going over the process of bringing in background information for an area as well as how to utilize civil tools for dynamic horizontal alignments and linked profiles. This allows us to quickly confirm the geometric feasibility of a project as well as identify potential trouble areas.	RS&H	Andrew Poszich	Novice - Expert
Sand Dollar	General Session		Rapid Concept Development - Smart Templates	Are your old templates not doing enough legwork to justify their use in the concept stage? We will go into how simple templates can be used to quickly get an understanding of limits of construction, types of end conditions, lane configurations, quantities, and more. (No template knowledge needed)	RS&H	Andrew Poszich	Novice - Expert
Sand Dollar	General Session		Rapid Concept Development - Visualization	Rounding out the series, we will be bringing it all together in LumenRT. We will cover some tips and tricks in MicroStation of how you can improve your model as well as the basics of LumenRT materials, trees, and traffic to get you ready for your next pursuit involvement.	RS&H	Andrew Poszich	Novice - Expert
Sand Dollar	General Session		Bessemer Avenue At-Grade Railroad Crossing Improvements Feasibility Study	The existing at grade crossing has the highest accident prediction rate for all at-grade crossings in Ohio. As part of this study, we flew the industrial corridor with our UAS capturing a series of photos that were then used to create a 3D terrain with Bentley's ContextCapture. The 3D terrain was then used to model design alternatives using Bentley's ConceptStation. The various design alternatives were then pushed into LumenRT to create renderings. This presentation will provide an overview of our use of technology and our lessons learned.	Mead & Hunt	A Moorman/J Duffie	Novice - Expert
Sand Dollar	General Session		Cross Practice Coordination in a 3D World	With 3D modeling taking center stage in workflows of the future, learn how others in industry are taking steps to ensure information is communicated in the most efficient manner. We will discuss some tactics we've used for 3D coordination between roadway, drainage, structures, utilities, ITS, and even signals and lighting.	RS&H	Andrew Poszich	Novice - Expert
Sundial	General Session		Bluebeam Revu for Transportation (Repeat)	In the transportation industry, many teams and clients work together to provide safe and efficient solutions for commuters. By utilizing Bluebeam Revu, civil engineers can collaborate on the same PDF at the same time with surveyors, contractors, and project managers in different locations. Many projects have tight budgets and evolving needs in growing communities, so using Revu's Markup List and Summary Reports to quantify each detail keeps costs below their threshold. Revu ensures that all changes and comments made to a project are documented and seen by all relevant parties via Studio Projects and Sessions. The "Alert" and "Reply" tools ensure that important changes are communicated to specific entities quickly and without the need for redundant emails. This webinar covers the following functions: 1. Studio Projects & Sessions for the transportation industry 2. The Markups List and Hyperlinked Summary Reports 3. Comparisons and Overlays 4. Visual Search	Digital Drafting Sytem	Ariel Rejtman	Novice - Expert
Sundial	General Session	1	** New Efficient Solutions for Distribution Powerline Extraction and Utility Pole Survey	Cataloguing Electric and Power Corridors for Transmission, Distribution and Substations with LiDAR scanning has become more efficient in the past few years. However, the Electrical Grid is one of the largest machines on earth and there's a lot of information that is often missed or not collected at all. In this presentation we aims to improve the quality of the collection of such information with a combination of Mobile LiDAR data and the right extraction tools and methods. This presentation will explore how to collect and label towers, poles, wires, attachment points, clearances and more. The presenter will emphasize how the implementation of Mobile LIDAR into this type of utility survey will add value to current collection processes and/or improve established workflows by extracting only what's needed, vectorizing poles, wires and attachment points, with a few simple steps; and producing a light-weight 'geolocated' deliverable to then export seamlessly to ArcGIS or to other database platforms. This well-defined process will improve the quality of the information extracted without sacrificing schedules.	TopoDOT	Michael Cook	Novice - Expert

Sundial	General Session		Quadri Technology – Connected Construction Workflow (Repeat)	This session will cover the fundamentals of a Connected Construction workflow built around Trimble's latest Quadri technology, that streamlines the Design to Construct, and Operate and Maintain workflows for your infrastructure. The Quadri technology leverages Trimble's construction experience tying together tools such as Trimble Business Center, SiteVision, WorksManager and WorksOS that help facilitate a model based design workflow, with the end result being a powerful and intelligent Digital As-Built, that can be used for highly effective visualizations, and more importantly maintaining your infrastructure investment.	Trimble	Adrien Patane	Novice - Expert
Sundial	General Session		Digitally Signing and Sealing Documents (Repeat)	Using x.509 compliant digital certificates to digitally sign and seal documents to meet the State of Florida's requirements for digitally submitting electronic documents.	IdenTrust	Richard Jensen	Novice - Expert
Sundial	General Session		iTwin Issues Resolution and Customs Forms	For years engineers have been designing in 3D but, with a lack of viable review tools, reviewers have been forced to review and certify on 2D sheets. Time allocation for design reviews continues to be compressed, leaving less and less time for design review preparation and duplication of design artifacts. Learn how iTwin Design Review enables a simplified, 2D/3D hybrid workflow for design review and collaboration. See how project teams can leverage a Digital Twin to easily share design context and provide review feedback on design deliverables through review, collaboration and quality tools.	Bentley / Atkins	Rob Riley / E. Gray	Novice - Expert
Sandcastle I	Workshop	5	** F-1-SC I FDOT Connect ORD: ROW CADD Workflows	This course will introduce users to the fundamentals of the Right of Way workflow for ORD in the FDOTConnect workspace	FDOT	John Hazlip	Intermediate - Expert
Sandcastle II	Workshop	3	* F-1-SC II Intersection Design - Horizontal and Vertical Geometry	This course teaches tools and techniques that can be used to lay out a complex intersection. It will focus on the Horizontal and Vertical Geometry tools to create 2D and 3D geometric elements. In this course, you will be designing a complex intersection that includes turn lanes, median islands and turn lane islands. 2D horizontal geometry will be created using the Horizontal Geometry tools and Profiles and 3D elements will be created using the Vertical Geometry tools. The objective is to create a terrain model of the proposed pavement surface and analyze the proposed drainage contours.	Bentley	Christiana Holmes	Intermediate - Expert
Seahorse	Workshop	5	* F-1-SH FDOT Connect ORD: Drainage Design/Modeling and Plan Details	This course was developed to introduce the Drainage and Utilities Workflow and OpenRoads Designer CONNECT Edition tools for drainage design and modeling on Florida Department of Transportation (FDOT) projects. The curriculum was developed within the FDOTCONNECT Workspace to provide sample exercises for many of the Drainage Tools on a sample project data set. Participants of this course will be introduced to the newest OpenRoads environment and a Workflow for designing two dimensional (2D) Plans, Profiles, and three dimensional (3D) Models for drainage related Construction Deliverables	FDOT/ACEC-FL	J. Worley/A. Shepard	Intermediate - Expert
Horizon	Workshop	5	* F-1-H FDOT Connect ORD: Roadway Plans Development	This course to introduce OpenRoads Designer CONNECT Edition - OpenRoads Technology tools for Plan Development Workflows on Florida Department of Transportation (FDOT) projects. The curriculum was developed within the FDOTCONNECT Workspace to provide sample exercises for most of the new Plan Development tools on a sample project data set to include the following: o Key Sheet o Signature Sheet o Typical Section Sheet o General Notes Sheet o Plan Only Sheets o Plan - Profile Sheets o Profile Only Sheets o Cross Section Sheets o Plan Sheet Annotation and Indexing o Plan Labeling	FDOT/ACEC-FL	C. Thorpe/D. Broom	Novice - Expert
Sandcastle II	Workshop	2	* F-2-SC II Intersection Design - 3D Model Detailing	This course teaches tools and techniques that can be used to accurately model a complex intersection in 3D. In this course, you will learn how to: Use Linear Templates to create the curb, sidewalk and side slope grading along the edges of pavement and islands. Use Surface Templates to apply material thickness to the pavement surface and median islands.	Bentley	Christiana Holmes	Intermediate - Expert