

# Feb. 16-17, 2023 E-Week Seminar Descriptions

**T** = Thursday Seminar and **F** = Friday Seminar

*Note: Some of these seminars might have been offered at other locations. It is your responsibility to determine what seminars you want to attend.*

## BRIDGES

### **F - Galvanized Steel Bridges** – Intermediate

**By: Frank Gerace, PE; Short Span Steel Bridge Alliance/ HDG Rebar Alliance - [geracefp@whyrust.com](mailto:geracefp@whyrust.com), Michael Barker, PE, PhD; University of Wyoming – [barker@uwyo.edu](mailto:barker@uwyo.edu); Peter Melewski, PE; Peter Melewski, LLC – [melewski@gmail.com](mailto:melewski@gmail.com)**

Galvanized steel bridges are a cost-effective solution to provide a vital component to critical infrastructure needs. Galvanizing bridges are economical and sustainable. This seminar will discuss workhorse bridge conditions, galvanizing applications, life cycle considerations for galvanizing and hot dipped galvanized rebar.

### **F - Route 34B over Salmon Creek Bridge Replacement** – Intermediate

**By: Andrew Clark, PE - [Andrew.Clark@dot.ny.gov](mailto:Andrew.Clark@dot.ny.gov) and Matthew Pertierra, PE - [Matthew.Pertierra@dot.ny.gov](mailto:Matthew.Pertierra@dot.ny.gov); NYSDOT – Structures**

The bridge carrying Rt 34B over Salmon Creek in the Town of Lansing in Tompkins County was replaced in 2022. The new bridge is a Slant-Leg Frame, also known as a Grasshopper structure, that replaced the existing Three-Barrel Arch structure. The existing structure was eligible for listing on the National Historic Register, a fact which impacted the structure selection. The Slant-Leg Frame structure provided unique design and construction challenges for the design team to overcome. Coupled with the onset of the COVID-19 pandemic, the designers were further challenged to complete this project with limited resources. The presenters will provide an insight into some of the design and construction challenges that were faced in this unique structure.

### **F - Restoration of the Wurts Street Suspension Bridge** - Intermediate

**By: Sean Casey, PE; Modjeski and Masters - [SECasey@modjeski.com](mailto:SECasey@modjeski.com)**

Exactly 100 years after the Wurts Street bridge opened to traffic in 1922, construction began on the structure's first major rehabilitation in nearly 50 years. This presentation will focus on the comprehensive restoration of this historic suspension bridge. Because of the bridge's age and condition, numerous complex construction operations were required to repair primary components of the suspension main cable system, stiffening truss and floor system. Attendees will learn about the unique challenges of suspension bridge construction including suspender replacement, main cable anchorage rehabilitation, and the deck replacement sequence. Other complex steel repair designs will also be covered such as gusset replacement and floor system retrofits.

### **F - Structural Modifications to the George Washington Bridge to Improve Geometrics for Pedestrian and Cyclist Traffic Flow** -

Intermediate

**By: Nicholas Rescigno, PE; Modjeski and Masters - [NARescigno@Modjeski.com](mailto:NARescigno@Modjeski.com)**

Presenting the first structural modification to the footprint of the George Washington Bridge since the addition of the lower level: widening of the main span sidewalk at the towers and anchorage to provide geometric improvements for pedestrian and cyclist traffic. The presentation will detail the design challenges associated with the application of AASHTO and ADA codes to the existing pedestrian facilities on a long span suspension bridge. Additional project highlights include the installation of an 11-foot height pedestrian safety fence, structural rehabilitation of various existing sidewalk supporting members, and the lighting design for the widened sidewalk.

# **BUILDINGS**

## **T - Thermal Performance of Concrete Masonry Wall Systems** – Intermediate

**By: Nicholas Carparelli; New York State Concrete Masonry Association - [ncarparelli@nys-cma.org](mailto:ncarparelli@nys-cma.org)**

This presentation is based on the National Concrete Masonry Association's (NCMA) Thermal Catalog of Concrete Masonry Assemblies. The contributions of concrete masonry's thermal mass to energy efficient structures will be highlighted. The presentation will also introduce several strategies for insulating both single and multi-wythe construction. In addition, attendees will receive an overview of various methods of compliance for masonry assemblies with respect to the current New York State Energy Conservation Code. As a result, participants will: 1. Have a greater understanding of the ways single wythe masonry assemblies can meet current Energy Conservation Construction Codes 2. Have a better sense of how concrete masonry's thermal mass contributes to energy efficiency 3. Have increased awareness of various strategies for insulating a variety of concrete masonry assemblies and 4. Have a better understanding of the methods used and the tools available to determine compliance with Energy Conservation Construction Codes.

## **T - Building Envelope Self-Help** – Introductory

**By: Matthew Copeland, PE; Copeland Building Envelope Consulting - [matt@copelandbec.com](mailto:matt@copelandbec.com)**

Building envelope problems are rampant in both existing buildings and new construction. Water and air infiltration, and the deterioration and occupant discomfort that results, plague buildings as much as ever. It doesn't have to be this way. The answers are out there—we know how to build better. Many building envelope problems can be traced back to misunderstanding of fundamental concepts and lack of familiarity with freely available information. This seminar will shine a light on easy-to-understand building science "first principles" that every engineer involved with building design, construction, and restoration should understand. We'll also present a roadmap to using the wealth of free information publicly available to help guide you in finding answers to many of the most common building envelope questions—and thereby help avoid many of the most common building envelope problems.

## **T - Erosion Control – Solutions Primer & Guidance** – Advanced

**By: Rusty Payne; Core and Main Geosynthetics – [rusty.paynejr@coreandmain.com](mailto:rusty.paynejr@coreandmain.com)**

Attendees will learn to apply the "Erosion Control Pyramid" and how erosion control wattles, erosion control blankets, turf reinforcement mats, high performance turf reinforcement mats, and heavy armor fit into the pyramid of specification options. Attendees will receive guidance on how and where to apply each technology.

## **T - Roof Preservation: A Sustainable Option** - Intermediate

**By: Peter Hamilton; Tremco CPG - [phamilton@tremcoinc.com](mailto:phamilton@tremcoinc.com)**

This seminar will answer the following questions: What is sustainable roof preservation? What types of roofing systems can be preserved? What are the different types of materials that can be used to preserve a roof system? What are the steps in the preservation process? What are the benefits of roof preservation?

## **F - Outdoor Airflow Control Improves Buildings** – Intermediate to Advanced

**By: Jim Riendeau; EBTRON/ESC - [jimr@ebtron.com](mailto:jimr@ebtron.com)**

The overall goal is to educate the HVAC market on how airflow monitors improve building control, aid in meeting green building programs like LEED, and prove compliance to building codes and ASHRAE standards. This seminar structure is geared to discussing real world situations and how other people in the industry handle these issues. We will also discuss all types of airflow measurement technology and everything you need to consider when properly validating the system to ensure proper building pressurization.

# CHEMICAL

## **T - Water Treatment Chemical (WTC) Form: Why, How, and When** – Intermediate

**By: Tim Clayton; Surpass Chemical, Co. Inc. - [Tim.clayton@surpasschemical.com](mailto:Tim.clayton@surpasschemical.com)**

An in depth review of why, how and when questions surrounding the water treatment chemical (WTC) form. If you are associated with a treatment plant that uses chemicals for treatment, they might be getting asked if they have a WTC form for every chemical used in the process. If they have not already heard of this form, if you have a SPDES permit you will know of it soon.

# CIVIL

## **T - Critical Factors for Stormwater Management** – Intermediate

**By: Jim McConnell, ACO, Inc - [Jim.McConnell@aco.com](mailto:Jim.McConnell@aco.com)**

A review of types and benefits of trench drains and Geo-cellular Subsurface attenuation products. Review of test standards related to each product type and providing critical points needed for accurate specifications.

## **T - What Will the New York Coastline Look Like in 2050?** – Intermediate

**By: Peter Hanrahan; Hanrahan Environmental, LLC - [hanrahanenvironmental@yahoo.com](mailto:hanrahanenvironmental@yahoo.com)**

This will examine necessary outcomes along New York's coastline by the year 2050. The state of New York can and must examine the realities of what can be expected by that year, including threats posed by climate change, sea level rise, increased storm surges and more severe weather events. The key to our future is to adapt our planning to confront these challenges based on sound planning and decision making.

## **T - Build to Last: Innovations in Erosion Control and Containment** - Advanced

**By: Melanie Fuhrman; Concrete Canvas - [Melanie.fuhrman@concretecanvas.com](mailto:Melanie.fuhrman@concretecanvas.com)**

Concrete Canvas offers a revolutionary new technology that is included in the classification of materials called Geosynthetic Cementitious Composite Mats (GCCMs). It is a thin, flexible, concrete filled, geosynthetic that hardens upon hydration. Essentially, it is concrete on a roll. Benefits of GCCMs include rapid and easy installation, lower project costs, and it is eco-friendly when compared to traditional construction methods. The CC product is intended for use in Channel lining, Slope protection, Bund lining, weed suppression, and many other applications.

## **T - Identifying and Preventing Inflow & Infiltration in Manholes and Other Structures** – Intermediate

**By: Don LeBlanc, PE; DLVEWS, Inc. – [don@dlviews.com](mailto:don@dlviews.com)**

This presentation is an overview of the leading causes of inflow and infiltration (I & I). The presentation begins with a brief recap of the point sources of I & I. We will highlight ways to identify inflow and infiltration and target them for remediation of manhole chimneys, barrel joints, and frames and covers. We will review basic applications and will answer proper design questions that engineers should ask themselves when considering a solution for I & I. Many project profiles will showcase unique engineering challenges and the versatile solutions that we used to meet the project parameters.

**F - Monitoring Construction Vibrations** – Intermediate

**By: Steve Moore, PE; Atlantic Testing Laboratories - [smoore@atlantictesting.com](mailto:smoore@atlantictesting.com)**

This presentation is a brief introduction to monitoring construction vibrations. The seminar will discuss some of the different types of construction vibrations, equipment used to monitor vibrations, how the equipment is set up, different vibration limitations used by the industry, as well as how and when to apply those limitations. The seminar will also discuss pre- and post-construction condition surveys, talking a look at various specifications for these surveys, how they're performed, and what could be expected from a pre-construction condition survey.

**F - Comprehensive Regulatory Review of Manufactured Solutions for Stormwater Management** – Introductory

**By: Ian Kuchman, Advanced Drainage Systems - [ian.kuchman@adspipe.com](mailto:ian.kuchman@adspipe.com)**

The seminar will provide a comprehensive review of the regulatory environment in NY that drive stormwater design decisions. The discussion will focus on post-development stormwater management and the requirements for qualitative, quantitative, and RRv performance criteria. The performance criteria will be reviewed within the context of the NYSDEC SPDES permit for construction activity and the implications they have on the options for manufactured stormwater management products. The goal will be to help the engineering community connect the dots for when, where, and how manufactured options can be chosen and optimally implemented.

**F - The Dislodging of A Massive Container Ship Grounded In Egypt's Suez Canal** - Introductory

**By: Ashraf Ghaly, PhD, PE, F.ASCE; Union College – [ghalya@union.edu](mailto:ghalya@union.edu)**

At the height of the pandemic when all supply chains were strained, a massive container ship ran aground in Egypt's Suez Canal, entirely blocking the waterway. The canal is a major trade artery where 12% of world trade go through. Hundreds of ships were stranded for 7 days while frantic efforts were being made to dislodge the stuck 220,000-tons vessel. This presentation intends to shed light on the factors that led to the grounding of the vessel and the roles hydraulics and geotechniques played to refloat it free.

**F - New Construction in Existing Flood Control Projects – The 408 Permit Process** – Intermediate

**By: Wayne Gannett, PE CFM; Bergmann - [wgannett@bergmannpc.com](mailto:wgannett@bergmannpc.com)**

Flood control projects have been constructed nationwide by the US Army Corps of Engineers (USACE). In New York, these projects are typically maintained by the NYS Department of Environmental Conservation, Bureau of Flood Protection and Dam Safety. USACE maintains control over flood control projects through the Section 408 permitting process. 33 USC 408 requires that requests made by private, public, tribal, or other federal entities to make alterations to, or temporarily or permanently occupy or use, any United States Army Corps of Engineers (USACE) federally authorized Civil Works project must receive permission from USACE before they can be implemented.

Will discuss three projects in this presentation (1. Alstom Railroad Bridge, Hornell, 2. Flood Gate Replacement, Herkimer & 3. Amboy Dam Removal, Camillus) – project background and need, description of solutions and effects on the existing flood control projects. These projects include a new railroad bridge crossing the Canisteo River, flood gate replacement at the Mohawk River and low head dam removal at Ninemile Creek.

**F - Gold Medal Improvements for Olympic Venue at Mount Van Hoevenberg** - Advanced

**By: Don Adams, PE, PTOE - [dadams@cmellp.com](mailto:dadams@cmellp.com) & Travis Rosencranse, PE, CPESC - [trosencranse@cmellp.com](mailto:trosencranse@cmellp.com); Creighton Manning**

The Olympic Sports Complex at Mount Van Hoevenberg is a \$29.2 million design-build project to improve the 1980 Olympic facilities and site infrastructure in Lake Placid to meet certification requirements necessary to host biathlon, cross-country skiing, and other events for the 2023 World University Games.

# CONCRETE

## **F - Concrete Overlays, Paving Equipment, and Mix Properties** – Intermediate

**By: Bill Cuerdon; ACPA-NYS - [bcuerdon@pavement.com](mailto:bcuerdon@pavement.com)**

Concrete pavement overlays represent a growing share of all concrete paving performed in the United States. This seminar will discuss the types and performance of concrete overlays in New York, the types of concrete paving equipment, and concrete mixture properties for successful paving and reduced concrete carbon footprints.

## **F - Accelerated Precast Construction** – Intermediate

**By: Trygve W. Hoff, American Concrete Pipe Association – [thoff@concretepipe.org](mailto:thoff@concretepipe.org)**

Like the FHWA Everyday Counts initiative, Accelerated Precast Construction (APC) is a concept intended to help Engineers and their clients finish major infrastructure projects in a short period of time using precast concrete drainage products. APC allows a contractor to replace an existing conventional bridge with precast boxes or pipe at an accelerated pace, often achieving completion in a matter of days rather than months. This course will provide the basics concepts as well as several case studies that display the wide range of possibilities of accelerated precast placement. Attendees will explore the following objectives: Basic precast concrete concepts, and how they differ from cast-in-place; The three “rules” of constructability: Several case study highlights of actual installation that “beat the clock”.

# ELECTRICAL

## **F - Commissioning & Periodic Maintenance of Microprocessor Based Protection Relays in Industrial Facilities** - Intermediate

**By: Peter Sutherland, PE, PhD; ABB - [peter.sutherland@ieee.org](mailto:peter.sutherland@ieee.org)**

Microprocessor Relays use Digital Signal Processing and Protection Algorithms. They have no adjustments. What does test and maintenance mean, and when is it required? This presentation covers relay testing safety, microprocessor relay design, relay failure modes, self-test, type, acceptance, commissioning, routine maintenance, needs based testing, maintenance intervals and relay testing standards.

## **F - Generator Fuel Choices, Natural Gas vs. Diesel** – Intermediate

**By: Michael Hainzl; Generac Power Systems - [Michael.hainzl@generac.com](mailto:Michael.hainzl@generac.com)**

Explores various aspects of generator fuel and the growth of natural gas generators in standby power applications. The discussion includes engine operational technologies, reliability of natural gas and onsite diesel, impacts of demand response programs on fuel choice, and total cost of ownership comparisons.

## **F - Alternative Fuels for Electric Power Generation** – Intermediate

**By: Christopher Alexopoulos; Milton Cat Inc. - [Chris.Alexopoulos@miltoncat.com](mailto:Chris.Alexopoulos@miltoncat.com)**

Introduction to alternative fuels for Electric Power Generator to the traditional Diesel and Natural Gas the industry traditionally uses. Presentation provides a guide to characteristics of alternative fuels such as Heavy Fuel Oil (HFO), Biodiesel, Propane Gas, Land Fill Gas, Gas from Biologically Processes and Coal Bed Methane.

## **F - Heating Cable Application** – Intermediate

**By: Rob Zerrillo; Liberty Electric Products - [rzerrillo@libertyelectricproducts.com](mailto:rzerrillo@libertyelectricproducts.com)**

Topics to be discussed are:

- \*Types of Heating Cable: Self Regulating, Constant Watt, Mineral Insulated
- \*Applications: Roof & Gutter De-Icing, Slab Snow Melting, Pipe Tracing Protection, Fire Sprinkler Protection, Grease Flow Protection
- \*Low Voltage Systems
- \*Common Cable Controls
- \*Specs and Installation

## **F - Operational Technology (OT) Cybersecurity Challenges in Critical Utilities** - Intermediate

**By: Jonathon Grant, PE, CISSP, CISM; National Grid - [Jonathon.grant@nationalgrid.com](mailto:Jonathon.grant@nationalgrid.com)**

As utility owners, operators and providers of critical services that support them, we feel that at any time, without warning, we could be the victim of a cyber incident. As if it's not difficult enough to keep the lights on, we must worry about someone intentionally trying to keep us from serving our customers. Ransomware is pervasive, with amateurs and professionals alike trying to earn a quick buck by taking advantage of the need to maintain the grid. In addition, the geopolitical climate has changed drastically in recent months, increasing the possibility that a politically motivated action could occur as well. To borrow a phrase from the immortal Kermit the Frog, "It's not easy being green."

This presentation will examine the challenges that utility system owners and operators face in protecting their operational technology (OT) assets from cyber threats. We will view the topic through the lens of the PPT Framework (People, Process and Technology) in order to identify not only the risks and concerns, but also potential actions to be taken. There is no 'silver bullet', but everyone can assess their current environment, prioritize the vulnerabilities with the greatest impact and take meaningful actions to 'move the needle' and reduce cybersecurity risks. The hope is that everyone attending will take away a few thoughts and ideas they can apply to their own situation and improve their security posture.

# **ENERGY**

## **T – Are your Buildings and its Systems Designed, Installed and Functioning Properly? Code Requirements, Common Mistakes, and Best Practices from an Engineer's Perspective** – Introductory to Intermediate

**By: Chonghui Liu, PE, CEM, LEED AP; Popli Design Group - [cliu@popligroup.com](mailto:cliu@popligroup.com)**

Commissioning related requirements have been in ASHRAE 90.1 since 1999 and in IECC since 2012. However, commissioning has only been recognized and enforced for most of jurisdictions in NYS in recent years. This presentation discusses the related energy code requirements, common mistakes and best practices from an engineer's perspective. So, for building owners, architects and engineers, and contractors, are your building and its systems designed, installed, and functioning properly?

## **T - Networked Geothermal Heat Pump Systems as an Alternative to Natural Gas** – Intermediate

**By: John Ciovacco; Aztech Geothermal, LLC - [jciovacco@aztechgeo.com](mailto:jciovacco@aztechgeo.com)**

As New York's Climate Law moves towards implementation, Networked Geothermal Heat Pump (GHP) systems are emerging rapidly. Last summer the passage of the Inflation Reduction Act (IRA) expanded and extended federal tax incentives for GHPs to unprecedented levels. Then Governor Hochul signed into law the Utility Thermal Energy and Jobs Act requiring all major utilities to file their plans for networked geothermal pilot projects with the Public Service Commission (PSC). Another bellwether is the participation of over forty (40) Community Heat Pump System projects being funded by NYSERDA's PON 4614, which guides projects in stages from feasibility to construction.

## **ENVIRONMENTAL**

### **F - Erosion Control – Photodegradable or Biodegradable and Why** - Intermediate

**By: Robert Lawson, CPESC - Western Green - [rlawson@westerngreen.com](mailto:rlawson@westerngreen.com)**

How and when do you know whether to utilize plastic sediment & erosion control or 100% Biodegradable products.

### **F - Vegetative Establishment with Biotic Soil Media as a Topsoil/Compost Alternative** – Introductory

**By: Ashley Chong; Profile Products LLC - [achong@profileproducts.com](mailto:achong@profileproducts.com)**

When it comes to erosion control and vegetation projects, hydraulically applied biotic soil media ignites the nutrient cycling necessary for the regeneration of depleted soils and the establishment of sustainable vegetation. This is an overview of soil health, soil testing, and compost and topsoil alternatives that accelerate sustainable soil regeneration and vegetation density.

### **F - Proper Application of Chemical and Industrial Tanks** - Intermediate

**By: Jay Frenette; Eastern Reliability - [jfrenette@easternreliability.com](mailto:jfrenette@easternreliability.com)**

Topics to be discussed are:

- \*Definition of Chemicals for purposes of Storage; NFPA Regulations.
- \*What fluids can and cannot be stored in Polyethylene and FRP tanks?
- \*What criteria are used for determining whether to use a polyethylene, FRP, steel or high alloy tank?
- \*What are the specific criteria included in the laws of each state?

## **ETHICS**

### **F - The Collision of Reality with Morality: When The Graceful Dead Helps The Grateful Living** – Introductory

**By: Ashraf Ghaly, PhD, PE, F.ASCE; Union College – [ghalya@union.edu](mailto:ghalya@union.edu)**

Car crashes claim over 100 lives daily in the United States. Safety features used to reduce injuries and fatalities can only be developed with research that includes not only computer simulations but also real crash tests. Crash tests may only yield meaningful results if test objects realistically simulate passengers. Dummies and mannequins are mostly employed but cadavers and animals have also been used, and this is when reality collides with morality. The presentation is designed to address such scenarios.

## **GEOTECHNICAL**

### **T - Composite Bentonite Aggregate for Geotechnical Sealing Solutions** – Intermediate

**By: John Collins; AquaBlok, Ltd. – [jcollins@aquablok.com](mailto:jcollins@aquablok.com)**

This technical presentation is on Composite Bentonite Aggregate and its properties and performance for use in geotechnical / civil sealing applications such as trench dams (anti-seep collars), cutoff walls, dam and levee enhancement, pond lining and sealing, and various infrastructure repairs.

## **OTHER**

### **T - Stainless Steels – From Your Kitchen Sinks to Medical Implants** – Intermediate

**By: Neville Sachs, PE; Neville W. Sachs, PE, PLLC – [nevsachseng@gmail.com](mailto:nevsachseng@gmail.com)**

This presentation will review the “families” of stainless steels, where they are typically used as well as the advantages and disadvantages of the various alloys.

### **T - Data Unraveled: Dynamic Facility Risk Assessment and Capital Planning** – Intermediate

**By: John Tobin, AIA; SMRT Architects and Engineers - [jtobin@smrtinc.com](mailto:jtobin@smrtinc.com)**

How can today’s facility managers identify, categorize and quantify risk? What about forecasting future expenditures for a sound, multi-year and lasting base for capital planning and budgeting purposes? Whether you are responsible for a single building or a multi-million square-foot campus, this seminar will provide you and your team with a clear roadmap for risk assessment and an insightful way to set up the data, resulting in a useful, living document.

### **T - Fighting for the Future of New York’s Infrastructure: 2022 ASCE NYS Report Card** - Advanced

**By: Peter Melewski, PE, F. ASCE - [melewski@gmail.com](mailto:melewski@gmail.com) & John Folts, PE, M. ASCE - [jfolts@dgeslope.com](mailto:jfolts@dgeslope.com); ASCE**

ASCE NYS Council released the 2022 Report Card for New York’s Infrastructure on July 19, 2022, showing both the bad and the good of our infrastructure. The goal of the Report Card is to raise public awareness about the needed investment in New York’s infrastructure, but also to reinforce the steps taken in recent years to address the mounting needs. Using a simple A to F school report card format, the Report Card provides a comprehensive assessment of current infrastructure conditions and needs, assign grades and make recommendations for how to raise the grades.

### **T - NYS DEC Dam Hazard Screenings: Evaluations & Assessments to Support Funding Prioritization for Over 200 State-Owned Dams** – Intermediate

**By: Zachary King, EIT – [zking@schnabel-eng.com](mailto:zking@schnabel-eng.com) & David Railsback, PE – [drailsback@schnabel-eng.com](mailto:drailsback@schnabel-eng.com); Schnabel Engineering**

The goal of the hazard screening program is to prioritize a limited program budget by understanding the dams’ hazard classifications and current conditions, a first step toward risk-informed prioritization. For the Low Hazard dams, a screening program was collaboratively developed to either confirm the hazard designation or identify the need for detailed hydraulic modeling. The screening-level study of each dam typically includes a desktop data review, visual inspection, reconnaissance of downstream hazards, simplified dam breach discharge estimates, and a semi-quantitative application of the Guidance document.

## **STRUCTURAL**

### **T - Compelling Theory for the Miami Condo Collapse** – Intermediate

**By: Joseph Englot, PE; HNTB Corporation – [jenglot@hntb.com](mailto:jenglot@hntb.com)**

This seminar will provide information on the background and nature of the Miami Condominium Building Collapse from publicly available information and will describe the Author’s theory about unique site conditions and indications that likely contributed to gradual progressive loss of pile foundation support over time leading to the sudden collapse. The Author draws upon his personal experience from a number of collapse and damage assessment projects that he has investigated in the past that support the theory.



**T - Structural Glass Reinforced Plastic Liners for Circular and Non-Circular Shapes** – Intermediate

**By: Don LeBlanc, PE; DLVEWS, Inc. – [don@dlvews.com](mailto:don@dlvews.com)**

This presentation is an introduction to glass reinforced plastic (GRP) liner technologies focusing heavily on challenging non-circular structures. The presentation begins with a brief comparison of traditional dig and replacement of a structure versus sliplining/reline of the host structure. We will review basic applications and will answer proper design questions that engineers should ask themselves when considering a sewer and/or culvert for a lining candidate. Many project profiles will showcase unique engineering challenges and the versatile solutions that we used to meet the project parameters.

**T - MSE Wall Design Basics and Critical Considerations** – Intermediate

**By: William Maier; Core and Main Geosynthetics - [bill.maier@coreandmain.com](mailto:bill.maier@coreandmain.com)**

Basic Understanding of Mechanically Stabilized earth options for designing retaining walls and reinforced soil slopes.

## **TRANSPORTATION**

**F - Pavement Preservation 101** – Intermediate

**By: Keith Manz, PE; Liquid Asphalt Distributors Association - [kmanz@gormanroads.com](mailto:kmanz@gormanroads.com)**

As agencies and owners continue to struggle with tighter and tighter budgets, engineers need to consider all treatment options when it comes to maintaining and rehabilitating infrastructure assets (roadways, parking lots, etc.). This presentation will discuss maintenance alternatives to traditional paving options.

**F - Geogrid Options for Subgrade Improvement and Paved and Unpaved Road Construction** – Intermediate

**By: William Maier; Core and Main Geosynthetics - [bill.maier@coreandmain.com](mailto:bill.maier@coreandmain.com)**

Attendees will learn how to deploy geogrid to mechanically stabilize soft subgrade soil and also to improve the performance of paved and unpaved roads.

**F - Technologies and Advantages in the Electrification of Railways** - Introductory

**By: Wes Coates; HNTB - [jcoates@hntb.com](mailto:jcoates@hntb.com)**

The presentation will discuss some of the principles and concepts in the design, construction and operation of railroad electrification. The focus will be on why electrify railroads, types of electrical supply systems, types of electric systems, electric supply to the trains (Overhead Contact System) or 3<sup>rd</sup> Rail, control and maintenance practices. Looking at alternatives to electrification, including battery supply, hydrogen, and how the industry is moving ahead outside of New York State, the nation, and on the international level.

**F - Asphalt & Sustainability** – Intermediate

**By: Bruce Barkevich; New York Construction Materials Association - [bruce@nymaterials.com](mailto:bruce@nymaterials.com)**

As the continued push to Sustainable Products continues to ramp up, the Asphalt Industry has continued to keep pace as the most recycled product in the US. Warm Mix Asphalt, Porous Asphalt, Operational improvements alongside the recycling efforts continues to keep asphalt at the forefront of Sustainable Infrastructure.

**F - Changes to the NYS DOT Asphalt Specifications** – Intermediate

**By: Bruce Barkevich; New York Construction Materials Association - [bruce@nymaterials.com](mailto:bruce@nymaterials.com)**

The New York State Department of Transportation Specifications continue to be the “go-to” specs as it relates to the use of Asphalt Pavements. Changes to the specs are supported by the latest/greatest research and are supported by a collaborative effort by the Agency and Industry. This program will get you up to speed on the most recent specifications to help ensure your Pavements have the greatest chance for success.