



Engineers' News

October 2015

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www.FortWayneEngineersClub.org

October Tour



Indiana Michigan Power Sorenson 765/345/138 kV Substation Site Visit

[Sorenson substation on Gundy Road](#)

Thursday, October 15th at 5:30 PM

The "site visit" will be conducted from the construction office trailer site located just south of and adjacent to the Sorenson substation, on the north side of N. Gundy Rd. approximately ¼ mile west of the (Huntington) County Rd. 1100 N intersection, approximately 2.25 miles northeast of Roanoke, IN. The easiest access is via County Rd. 1100 N which runs east off of US-24. County Rd. 1100 N intersects US-24 approximately 1.25 miles southwest of State Rd. 114, and approximately 6.75 miles southwest of I-69. Take CR 1100 N to the left (east), continue around the corner, across the railroad tracks, past the Sorenson substation to the stop sign (stop sign is 1.5 miles from US-24). Turn right (west) on Gundy Rd. The entrance to the construction office trailer parking lot is marked with an orange "Entrance 4" sign. The GPS coordinates are 40.981° N, 85.3397° W.

Due to safety and security reasons we will be unable to tour the substation or construction site itself. The gravel parking lot area where the construction office trailers are located offers a nice vantage point overlooking the substation site. We will congregate there and discuss the electric transmission system improvement project in general terms including related project components around the Fort Wayne area. There should be ample parking on site. Because this is an outdoor tour, be

sure to come dressed appropriately for the weather, including sturdy footwear due to this being a gravel parking lot.

The Sorenson substation was originally constructed in the early 1950's as a point to integrate American Electric Power's expanding 345,000 volt (kV) (originally rated at 330,000 volts) transmission network into the Fort Wayne area 138 kV transmission system that had been in existence since the late 1920's. Electric load growth necessitated a more efficient, higher voltage "overlay" of the 138 kV system, which was predicted to eventually become insufficient to serve the customer demand. Construction of the Tanners Creek coal-fired generating station in the early 1950's on the Ohio River near Lawrenceburg, IN and the plant's associated 345 kV switchyard offered a logical transmission integration plan.

Two 345 kV circuits were constructed between the Tanners Creek generating plant switchyard and Sorenson substation, the first being commissioned in the mid-1950's. A second circuit was added later in the early 1960's when a 345/138 kV substation (named Desoto) was built near Muncie, IN to further integrate the 345 kV and 138 kV transmission systems, this time in the Muncie area. The Sorenson substation also tied to American Electric Power's 345 kV system to the east near Lima, OH via a single-circuit 345 kV transmission line, also commissioned in the mid-1950's. Connections were made to the South Bend and Mishawaka areas in the late 1950's and early 1960's via a double-circuit 345 kV transmission tower line.

Sorenson substation originally contained a single 300 MVA 345/138 transformer, with a second 300 MVA unit placed in service on December 2, 1962. These transformers have been replaced and upgraded to higher capacity units over the years and are now rated at 675 MVA each.

A 345 kV partial transmission line "loop" was completed around the Fort Wayne area in 1970 when an "in-out" 345 kV transmission line was constructed to provide the source to a third 345/138 kV transformer in the Fort Wayne area at the Robison Park substation, located just northeast of the I-469/I-69 interchange. A fourth 345/138 kV transformer was added to the area at the newly constructed Allen substation in 1989. A fifth area transformer was added, also at Allen substation, in 2014.

The system improvement project currently underway will integrate AEP's highest voltage interstate transmission system, rated at 765 kV, into Sorenson substation by constructing two lines to provide the in-out path, and cutting into the Dumont – Marysville 765 kV circuit that passes north of Markle, IN. A 2,250 MVA 765/345 kV transformer bank consisting of three single-phase 750 MVA units is being added, including a fourth, switchable on-site spare. The 345 kV loop around the west side of Fort Wayne is being completed by reconstructing the 1925 vintage double-circuit 138 kV line between Sorenson and Robison Park substations with a new double-circuit

138/345 kV line, energized and operating at 138 kV on the “inside” circuit position to maintain 138 kV connections at existing connected substations, and a 345 kV “express” circuit in the outside circuit position. The reconstructed line utilizes a low-loss, high-efficiency design. Some say it is also more aesthetically pleasing.

Several other substations will have relatively minor improvements completed in order to properly interface with the protection and control instrumentation being installed on all terminal equipment at Sorenson.

A related project is completing major replacements and additions to the 138 kV and 345 kV switchyards at the Robison Park substation, which will also provide for transmission system improvements between Robison Park and the Auburn area to the north.

November Presentation



Indiana Michigan Power Transmission System Improvements
[Indiana Michigan Power Center, 110 E. Wayne St, Fort Wayne, IN 46802](#)

Tuesday, November 24th at 7:00 PM
(Plan to arrive beginning at approximately 6:40 PM)

****Note the Tuesday date****

The November presentation will complement our October tour and highlight the transmission system improvement projects in the Fort Wayne area. The presentation by the I&M/AEP Transmission planner is intended to cover the planning criteria justification for the Sorenson project along with a few other system improvement projects in the area, and the expected benefits to be achieved. Other AEP Transmission representatives will be in attendance to answer questions that the system planner may not be able to answer.

The meeting will take place in the video conference room on the 18th floor of the Indiana Michigan Power Center (former One Summit Square) located at 110 E. Wayne St.

The building is not open to the public after 6:00 PM so an I&M employee will meet

club members at the Washington Blvd. street level entrance to the building to escort attendees up to the 18th floor. Plan to arrive beginning at approximately 6:40 PM so all attendees can be escorted up to the 18th floor in time to begin the meeting at 7:00 PM.

Membership Dues

Fiscal Year 2016 is now upon us and it is time to ensure that all members dues are current. Dues to the FWEC have remained constant in our ever changing economy at \$10/year for full and associate members and only \$5/year for student members. Review the address label on the mailed newsletter; anything less than FY16 requires payment to be current.

[Dues paid online](#) are subject to an additional fee of \$1 for processing.

Northeast Indiana DiscoverE

Academic Award Donations



[Northeast Indiana DiscoverE](#) is a standing committee of the FWEC. Northeast Indiana DiscoverE is accepting contributions toward its Academic Awards that are given to regional engineering students during the Engineers Week banquet each February. Please consider a donation to this fund in addition to your FWEC membership dues.

2015-2016 Membership Year FWEC Board

President: Rod Vargo

Vice President: Dave Schaller

Treasurer: Ryan Stark

Secretary: Elizabeth Garr

1st Year Board Members: Marna Renteria & Ellsworth Smith

2nd Year Board Members: Mike Magsam & Jack Phlipot

3rd Year Board Members: John Magsam & Rob Cisz
Northeast Indiana DiscoverE Committee Chair: Jake Dinius
Resident Agent: Ryan Stark

Board positions are crucial to the planning of tours and events for the FWEC.
Please consult the [FWEC constitution](#) or contact us at
info@fortwayneengineersclub.org for information on specific duties on board
positions.



Fluid Power, Safety and Automation Specialists

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Welcome New FWEC Members

The FWEC would like to welcome the following new members.

Full members: David Beck, Nathan Bernolt, Joshua Cook, Dan Culbertson, Beth Hukill, Alexis Nicolette-Baker, Athar Safdar, and Jim Wiehle.

Associate Members: Steven Miller and Kenneth Athon.



In collaboration with the IPFW
College of Engineering, Technology, and
Computer Science

13th Annual OPPORTUNITY BANQUET

November 13, 2015 4:30-9:30

Walb Classic Ballroom, WU 126

Join us for a career fair and a networking dinner before the guest speaker,
Mark D. Federle, PE, PhD, CPC, F. ASCE

COMPANIES

City of Fort Wayne
Design Collaborative
Eaton Corporation
Engineering Resources, Inc.
Enspire Software
Extension Healthcare
Franklin Electric
General Dynamics Mission Systems
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Logikos
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Valbruna Slater Stainless Steel, Inc.
WaterFurnace International, Inc.
Wayne Combustion Systems
Wayne Metals LLC
Zuno Engineering

Ticket sales open to the general public Sept. 25—Nov. 5, 2015. Make checks (\$30) payable to the Society of Women Engineers and mail to

Elizabeth A. Thompson, Ph.D.
IPFW — Department of ECE
2101 E. Coliseum Blvd., ET 327E
Fort Wayne, IN 46805-1499

Include your dinner selection: Beef Brisket, Breast of Chicken Rosemary, or Grilled Vegetable Kebob.

Also include your title (e.g., IEEE member).

ATTIRE: Business Formal

Questions? Contact Dr. Thompson at (260) 481-6361

NO TICKETS SOLD AT THE DOOR

FWEC Board Meetings

Fort Wayne Engineers' Club board meetings are open to all FWEC members. The next FWEC board meeting will be Tuesday November 3rd at 7:00 PM. Board meetings are held on the [Indiana Tech campus in the Academic Center](#) in room ACC-201.



The Fort Wayne Engineers' Club would like to remember [Ralph Snyder](#). Ralph was a long time member and served as Vice President, President, and Board Member.

Advertise in the Engineers' News

The FWEC will be selling advertising space within the Engineers' News. Advertisements are \$10 per issue and limited to ½ page of content. For submissions please contact info@fortwayneengineersclub.org.

FWEC Membership

The FWEC exists through funding of its membership. Please forward your copy of the Engineers' News to prospective members and encourage their attendance at tours. Remember, the FWEC is the best deal in town, annual membership is \$10. We offer free monthly tours September through May. Please be sure to recommend FWEC membership to your colleagues and friends.

September Tour History - Get Fresh Farms

FWEC President Rod Vargo provides our September tour history.

Twenty-three people attended the September 24th tour of Get Fresh Farms. This is a research and commercial venture associated with Fort Wayne Metals owners near Fort Wayne International Airport. The facility started nearly three years ago and has been producing vegetables for J.K. O'Donnell's Irish Pub and farmer's markets in Fort Wayne, as well as some fish for the Pub on a regular schedule during the last six months.

Get Fresh Farms combines interconnected systems for hydroponic production of food plants, aquaculture of fish (Tilapia), bacterial cycling of fish excrement into plant

nutrients (mostly nitrate), and cleansed water for reuse among the fish. Organic guidelines are used except conventional potassium hydroxide and chelated iron have proven necessary for both pH and nutrient purposes.

The greenhouse and headhouse sections have been developed and managed by Patrick Ryan, who has experience in both hydroponics and agriculture. Victoria Mumaw's backgrounds in animal behavior as well as fisheries also seemed a critical match in getting the fish system to function. According to Ryan, economically viable operations of this type and size are rare, despite much effort and expense over decades. (Get Fresh Farms also has a business manager, Adam Bouthot.)

The greenhouse involves roughly 22,000 gallons of water cycling across nearly 4000 square feet of greenhouse every four hours. The headhouse includes an anaerobic sump system for initial processing of the fish excreta. Subsequent aerobic bacterial action, much of it within the hydroponics of the greenhouse, results in nitrate usable by the plants.

Leafy greens such as kale and spearmint are grown in abundance using rectangular Styrofoam floats on hydroponic beds. The beds are essentially twelve-inch deep rectangular pools covered by the floats. Each float houses plants of a specific planting date, allowing an endless succession from seedlings to productive plants in each bed. The necessary bacteria also develop in a similar succession within a membrane on the undersides of the floats. Trellis tomatoes are grown in beds filled with expanded stone such as shale and a steady flow of hydroponic water flushing through. Root crops such as beets and onions must be grown within a well-drained sand or soil-type media to avoid mushy product.

Pest and disease control is accomplished by sanitation and exclusion. Two layers of greenhouse covering can be used to help regulate sunlight and temperature. The floors in the overall facility are heated as needed.



The fishery involves roughly 5000 gallons associated with eight main tanks which are highly oxygenated. Water flow provides a circular current for the fish from upper rim to an outlet in the bottom center. Each main tank holds various numbers of fish depending on their size, but very roughly the same biomass per tank. Flow from the eight tanks feeds into a classic solids separator, where solids sink into a conical trap at the bottom (connects to the anaerobic sump) and clear water gently overflows at the top. There are four additional tank systems for developing nursery, fingerling, disease, and treatment/cleansing procedures.

The fish facility does not have windows and is closely regulated for photoperiod and temperature. After-hours tours and commotion such as ours are extremely disruptive, affecting how much the fish feed, grow, and excrete.

The facility started with catfish but switched to a species of Tilapia. The latter have far fewer inherent health issues than catfish and are far more tolerant than most fish to a range of water factors. The most important in this case was temperature, which must be the same for the greenhouse, fish, and underlying bacterial systems. The facility's target temperature of 73 degrees is a bit too cool for optimum plant growth and a bit too warm for the Tilapia, but workable. These Tilapia die at 83 degrees, about the same as many cool water fish including ornamental carp sold for water gardens. This Tilapia is a foreign species which Victoria is sure does not survive here in the wild.

Fort Wayne Astronomical Society



Fort Wayne Astronomical Society, Inc.

P.O. BOX 11093 • FORT WAYNE, IN 46855 • USA 1959

FortWayneAstronomicalSociety.com

The [Fort Wayne Astronomical Society](#) will have their next general meeting on Tuesday October 20th at 7:30 pm at the [University of Saint Francis Schouweiler Planetarium](#).

Yerkes Observatory, By Robert Miller

This is Bob's second, maybe third presentation to the Astronomical Society. He has done consulting work with many professional observatories and amateur clubs. Bob Miller is a past member of the Society back in the 70's. He graduated from Indiana University in Geology and has his Masters from Michigan State in Planetarium Science and followed that with more than two additional years of advanced study in astronomy and computer science. Bob co-authored the Abrams Sky Calendars for a number of years (mostly doing math and graphics), created the

Miller Planispheres and some other custom planispheres and was the principal author of Making and Enjoying Telescopes. In addition, he has contributed to several dozen books on astronomy, including Astronomy for Dummies.

The Society conducts public observing sessions at [Jefferson Township Park](#) every clear Saturday evening, from April through November, conducted by trained and experienced Society members. Public observing starts 1-hour after sunset and continues for two hours.

TekVenture Fall 4 Making



TekVenture's FALL 4 MAKING WORKSHOPS feature over 30 workshops begin Saturday October 10th at TekVenture's new building 1800 Broadway @ Swinney Streets. Subjects range from Welding for Women to 3D Printing to Setting up a Milling Machine to Quilting for Guys.

All workshops \$30 unless otherwise stated. 20% discount for members. Kids under 12 must be accompanied by an adult. Advanced Registration is Required!
www.tekventure.org/eventbrite or call 260.432.1095

Oct. 10, 9 - Noon Basic Electricity

Your introduction to electricity, how it flows, is measured, controlled; importance of wire size, voltages, how it is turned into mechanical motion. Electronic components: resistance, inductance, capacitance, semiconductors. Take away a battery stick and bulbs: kit \$6.00

Oct. 10, 1 - 4 Basic Digital Electronics

Now learn about binary logic: AND, OR, NOR gates, flip-flops, counters, adders, state machines and a brief introduction to microcontrollers.

Oct. 10, 9 - Noon Machining For Makers: Sharpening Tools

Sharp tools are essential to make sharp work! Learn the proper ways to sharpen drill bits, cutting and lathe tools for metal working by hand and machine.

Oct. 10, 1 - 4 Machining For Makers: Hand Machining Skills

Basic part measuring and layout, Sawing, Filing, and cutting threads are all essential skills for machining in metal. Learn to do them properly for best results.

Oct. 10, 9 - Noon The WoodMaker's Tool Box: Hand Tools
Learn to use many hand (non-power) tools including chisels, planes, saws, scrapers. Also learn how to mark out, lay out as well as sharpen tools.

Oct. 10, 1 - 4 The WoodMaker's Tool Box: Powered Hand Tools
No need to be scared of powered hand tools. Learn to properly and safely use circular saws, routers, sanders, drills and others.

Oct. 17, 9 - Noon SketchUp for Makers
Meet SketchUp, a freeware, easy to learn, design and modelling software that enables you to design objects for 3D printing and machining.

Oct. 17, 1 - 4 More SketchUp for Makers
Refine your SketchUp CAD skills by designing an object or part that you can machine or 3D print on TekVenture machines in another session.

Oct. 17, 9 - Noon Setting up the Vertical Milling Machine
Learn to set up, tram the mill, select and mount cutters, select feed and speeds, measure parts, use the numerical read out, and safely cut metal.

Oct. 17, 1 - 4 Practice on the Vertical Milling Machine
A follow-on workshop for those who took the Oct 17 morning workshop. Practice by setting up and milling a simple project in aluminum.

Oct. 17, 9 - Noon The WoodMaker's Tool Box: Stationary Power Tools
Learn to safely use band saw, scroll saw, table saw, radial arm saw, sanders, drill press, and other tools.

Oct. 17, 1- 4 The WoodMaker's Tool Box: Routing and Shaping
Learn to shape wood with the router using guides and templates and even do molding and cove cutting on the table saw.

Oct. 24, 9 - Noon 3D Printing: Meet The 3D Printer
Getting acquainted with 3D printing technology, types of printers, printing media, how the 3D printer works, selection and use of files, The role of CAD software in object printing and classy examples of maker 3D prints.

Oct. 24, 1 - 4 3D Printing: Printing and Tweaking Files
Creating and selecting files for 3D printing, tweaking files to produce better 3D prints; create or bring a file then print and evaluate results.

Oct. 24, 9 - Noon Welding for Women

Lose your fear of the Arc! Learn the tools, setup, safety and management of electric welding of metals from a professional female welder! No guys allowed!

Oct. 24, 1 - 4 Start Welding!

You've always wanted to learn how to weld with the MIG or Arc welder. Learn to use the tools, set-up, safety, layout and basics of metal joining from a professional welder.

Oct. 24, 9- Noon The WoodMaker's Tool Box: Joinery

Make the joints that connect materials together to make some thing including doweling, box joints, biscuit joints, dovetails, mortise and tenon joints and etc.

Oct. 24, 1- 4 The WoodMaker's Art: Your Personal jig Saw Puzzle

Bring a photo on durable paper you will laminate onto thin plywood. Then cut out shapes with a scroll saw to make a jigsaw puzzle!

Oct. 31, 9 - Noon The Sewing Machine for Guys

Make a custom case for your favorite tool set from your old jeans or other fabric and learn to set up, operate and maintain a sewing machine in the process.

Oct. 31, 1 - 4 3 D Quilting

21st Century quilts are not just wall or bed decorations. An award-winning retired engineer guy quilter takes you through the steps of making a 3 dimensional quilt and shows you how to get started. See his 3D quilts! The instructor will welcome into the class any guys who want to try their hand as a beginning quilter!

Oct. 31, 9- Noon The WoodMaker's Art: Assembling The WoodBeast

It's Halloween! What creatures will you conjure from raw wood stock, scrap, glue and fasteners to haunt your world?

Oct. 31, 1- 4 The WoodMaker's Art: The Artful Frame

Learn to frame your favorite pictures and objects in wood. Learn techniques in measuring, miter cutting, fastening and mounting.

Nov. 7,9 - 4 Electronics for Makers: Design a Simple Circuit Board Then Make It.

Using Eagle, a free-ware, CAD-type software, create a circuit board by laser-printing a design, heat-transferring the image to a copper-clad board, then etching, cleaning and drilling the board. After a lunch break, then solder components onto the board to create a simple electronic circuit device. Participants should bring a laptop computer to download and work the Eagle program. Workshop cost: \$60 including kit cost.

Nov. 7, 9 - Noon Machining For Makers: Metal Lathe

A master machinist introduces you to the manual metal lathe set up, truing, cutters and cutting, measuring and reading drawings.

Nov. 7, 1 - 4 Machining For Makers: Metal Lathe Refresher

You know a little about using a metal lathe; review set-up, cutting and cutters, knurling, boring and taper turning from a master machinist.

Nov. 7, 1- 4 The WoodMaker's Tool Box: Turning

Learn the tools, material selection and lathe set-up, tool sharpening, and basic techniques of spindle and bowl turning.

Nov. 14, 9 - Noon Using My Multimeter and Other Test Instruments

Learn to get the most use from your meter, oscilloscope, variable power supplies, clamping meters, household watt meters. Meter Kit cost \$5.

Nov. 14, 1 - 4 Make a Hobby Servomotor

Make little things move! Understand servo control, feedback, and programming. Build a battery stick-powered, potentiometer-controlled hobby servo. Kit cost \$10

Nov. 14, 9 - Noon The WoodMaker's Tool Box: CNC Machine Non-metals

Based on freeware SketchUP® learn how to set up and use the TekVenture CNC (Computer Numeric Control) Router to cut designs from card, plastic, foam or thin wood stock.

Nov. 14, 1 - 4 The WoodMaker's Tool Box: CNC Machining of Non-metals

Introduction to the CNC language of G-Code: writing and editing it is not as hard as you think. Then use the TekVenture CNC Router to cut designs from card, plastic, foam or thin wood stock.

Nov. 21, 9 - Noon or 1 - 4 Deconstruct Your Computer for Fun, Knowledge & Profit!

Novice makers are demystified about the fundamental components of the common desktop computer while simultaneously increasing their comfort in replacing internal components. Also learn methods of maximizing profits in recycling circuit boards and components. Bring your old computer(s)!

Northeast Indiana Chapter Project Management Institute



The [Northeast Indiana Chapter of the Project Management Institute](#) will have its next chapter meeting on Wednesday October 28th.

PMI-NEIC Chapter Dinner and Joint Co-Meeting with IIBA of Fort Wayne

JULIE KOWALSKI of Spizzerinctum Group LLC presents "Emotional Intelligence"

Come hear speaker extraordinaire, Julie Kowalski share exactly what EI is, how it is assessed / measured, take an EI assessment to learn your personal current level of EI and the specific steps you can take to dramatically improve your personal Emotional Intelligence score!

Emotional Intelligence: Just what is it and how can it help me achieve success as a Project Manager / Business Analyst

Emotional intelligence has become one of the hottest buzzwords in corporate America! Yet not many really know exactly what Emotional Intelligence is or for that matter how it is measured or how they can use their emotional intelligence to help them get ahead! Emotional Intelligence is often times more important than the "hard" business skills required to get the job done! Few Professionals know the 5 levels of EI and what their own personal EI level is.

Topics Include:

- Understanding EXACTLY what Emotional Intelligence IS and IS NOT
- The five levels of Emotional Intelligence and how you master each level
- A personal assessment of your current level of Emotional Intelligence and the actions required to increase your level of Emotional Intelligence
- How you can use Emotional Intelligence to significantly increase your promotability
- How a high level of Emotional Intelligence can help you more effectively (and efficiently) engage team members
- How to leverage EI in your leadership communications

Take-a-ways:

- A quick assessment of your current personal level of EI
- A strong understanding of exactly what EI is and is not as well as tools to help you strengthen your Emotional Intelligence
- Specific actions you can take to more effectively engage team members and stakeholders

Speaker Bio:

Julie Kowalski is a seasoned thought leader, consultant, executive coach and facilitator. She's also an energetic, and spirited professional trainer. Through her own working history, Julie has gained valuable

insight and acumen into the science of what it takes to start and run successful businesses as well as the art of earning and retaining customer and employee loyalty. Julie maintains working relationships with a wide variety of business owners and executives from small family-owned businesses to Fortune 100 companies.

Julie has spent her career helping employees create self-sufficient and streamlined processes which lead customers to be delighted and staff to be rewarded with success. Focuses include: development and implementation of effective business processes, management, leadership, Sales, customer service, and marketing tools. Julie's enthusiasm and energy naturally encourage her participants to actively engage in learning.

Besides being named one of the "World's Most Creative Thinkers" by bestselling author Seth Godin (Purple Cow), Julie possesses 24 years of first hand business experience. Her accomplishments include personally starting and successfully managing multi-million dollar companies.

Julie has been facilitating the learning of best practices in Sales, Customer Service, Marketing, Business operations, Leadership, Management, Coaching and Mentoring Programs for the past 11+ years.

[Register now](#) and meet with us at Don Hall's GuestHouse. Networking begins at 5:30 PM, dinner will be served at 6:00 PM, chapter announcements at 6:45 PM and the presentation begins at 7:00 PM. Reservations end 10/25/2015.

- NEIC chapter members: dinner and speaker-\$20, speaker only-free
- PMI Hardship Provision or PMI Student Membership-\$10
- Non-members: Dinner and speaker-\$30, Speaker only-\$10

All registrants must prepay; no pay at the door. Paypal account not required.

Note: This is a buffet dinner and will not be plated.

Northeast Indiana DiscoverE Committee Meeting



[Northeast Indiana DiscoverE](#) is a standing committee of the FWEC. The committee will meet on Monday November 2nd at 12:00 PM at [MSKTD & Associates](#) in the Main conference room. This is a planning meeting to discuss the needs of DiscoverE for the upcoming year.

Northeast Indiana DiscoverE functions include:

- [Middle school bridge competition](#)
- [High school bridge competition](#)
- [Academic awards](#) for college students
- [Citizen Engineer](#) award for professionals

- [Engineers Week banquet](#)
 - And more...
-

Maumee Valley Blacksmiths



The Maumee Valley Blacksmiths, part of the [Maumee Valley Antique Steam & Gas Association](#), meet on the 2nd Saturday of each month in the blacksmith building at showgrounds of [Jefferson Township Park](#), New Haven and also meet on the 4th Saturday of each month at the [Solomon Farm](#). For more information please contact John Schamber via e-mail at: fwtoolman@hotmail.com.

Engineers' News Past

The FWEC has a significant history; Treasurer Ryan Stark and his wife were able to find past Engineers News documents dating back to 1938! Here is an excerpt of the past newsletter (a scanned copy of the entire newsletter is available through the FWEC website):

[October 1985](#)

F.W.E.C. Oct. 24

Tour
I&M Electric Co.
Central Meter Shop (CMS)

7:30 to 8:30 PM

Demonstration
 Polyphase Testing
 Metering
 Electronic Metering
 Calibration
 Tour Lab

Demonstration & Tour by
James L. Andrews - Meter Supervisor
Irv Thomas - Technologist
Cliff Martz - Technologist
 (over 50 yrs. combined meter exp.)

Park in lot in front of Baer Field bldg. Complex

LOWER HUNTINGTON RD.
 BAER RD.
 BLUFFTON RD.
 BAER FIELD EXPRESSWAY

BLDG.
 Park

North Arrow
 Contact Person

Fort Wayne Engineers Club will tour Indiana and Michigan Central Meter Shop (CMS) for the October meeting on October 24, 1985, from 7:30 to 8:30 PM.

The tour will consist of the following:

1. Demonstration of various polyphase testing.
2. Electronic metering as the "way of the future".
3. Tour of the laboratory and demonstration of the I&M calibration techniques.
4. Demonstration of transformer testing on metering transformers.

[Note that the above artwork was created by current FWEC member Jim Delaney.]

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