



Engineers' News

April 2016

Vol. LXXVIII No. 8

www.FortWayneEngineersClub.org



Find us on 

April Tour



[City of Fort Wayne, City Utilities](#)

[Tunnel Works Program Presentation](#)

[Citizens Square, 200 E. Berry St. Fort Wayne, IN 46802](#)

Thursday, April 21st at 6:00 PM

Citizens Square, Omni Room

FWEC President Rod Vargo has arranged a presentation regarding the City of Fort Wayne's Tunnel Works Program.

This deep underground sewage transportation tunnel is part of Fort Wayne's agreement with the federal government for how the City will reduce the amount of sanitary sewage

mixed with stormwater that is currently being discharged to our rivers during wet weather. The plan for controlling these combined sewer overflows is intended to improve the quality of our rivers. The tunnel is part of a three part strategy to reduce the amount of combined sewage in the combined sewer system by doing sewer separation projects, collect more and transport more combined sewage to the sewage treatment plant and treat more combined sewage.

Volunteers Needed - FY17 FWEC Open Council Positions

The FWEC will begin FY17 in September. We currently have open council positions and need volunteers to help our club to continue to grow and interface with the community.

Board members are expected to attend board meetings, generally held on the first Tuesday of the month, and assist with club duties.

Available positions for FY17:

- Treasurer trainee
 - Train with existing Treasurer Ryan Stark with the intention of becoming Treasurer in FY18

Full duties can be found in the [FWEC Constitution](#). Please contact the [FWEC Council](#) with questions or interest.



Fluid Power, Safety and Automation Specialists

Jake Dinius Sales Engineer (260) 797-9819 Cell
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Welcome New FWEC Members

The FWEC would like to welcome the following new members.

Full Members:

- William Headlee BSME, MSE, & MBA
- Paul Verdeyen BSME & MsEM
- Craig Welch BSEM & MsEM

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.

FWEC Board Meetings

Fort Wayne Engineers' Club board meetings are open to all FWEC members. The next FWEC board meeting will be Tuesday May 10th at 7:00 PM. Board meetings are held on the [Indiana Tech campus in the Academic Center](#) in room ACC-201.

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.

Advertise in the Engineers' News

The FWEC provides 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.

March Tour History - VOSS Automotive

VOSS

FWEC President Rod Vargo provides our March tour history.

A tour of Voss Automotive, Inc., on March 17 was attended by thirty-five members of FWEC and/or SAE. Voss was founded in Germany in 1931 and has expanded with various specialty businesses worldwide. Their Fort Wayne facility of 60,000 square feet was built in 2014 near the junction of I-69 and Route 30. It serves as their U.S. administrative, warehousing, engineering, and marketing/technical support headquarters. Voss has three satellite offices spread from Seattle to Detroit, a manufacturing facility in Mexico, and thirteen other significant facilities near centers of commercial, passenger car, construction, and agricultural vehicle or engine production worldwide.

About thirty of their seventy employees at this location are engineers and two new engineering positions have been posted. Most are mechanical or materials related. At least nine of the overall seventy positions have been added since relocating to this new building.

About 60% of the non-warehouse portion of the building appeared to serve engineers' offices, varied conference rooms, a restricted access prototype lab, and a sizeable separate general development and testing lab. The latter also employs two individuals for quality control checks of items in the warehouse. An additional 20% appeared dedicated to marketing's technical support staff.

Products typically involve customized (optimized) lines for fluids or air in new vehicles of various descriptions. These applications include the engineering of connectors, clips, and sheathing. One of the insights from FWEC tours is that every vibrant business now involves a complexity of unforgiving inter-related details, confidentiality, multinational regulations, and unrelenting global competition.

Our hosts were gracious enough to linger over a seemingly simple 4 foot-long black corrugated flex-line, electrical in appearance, perhaps 3/8 inch in diameter with a connector on each end and support clips in-between. Many of us were not aware that

most diesel engines now require liquid urea injections to meet emissions standards. Government regulations vary worldwide regarding these lines including splitting/bursting standards, control of static electricity, and how quickly frozen urea in a line must thaw. Designing the size and route of the line (or paired lines in some high capacity instances), and how to minimize labor during vehicle assembly and/or damage during rugged use, is often passed to Voss after each year's model has already been largely finalized. Engine sizes range from 2.4 to 15 liters.

The flex-line contained a central conduit for liquid urea, surrounded by layers for heat transfer, electrical resistance heating, insulation to retain heat, abrasion and other resistance, static transfer, and occasional insulation against exhaust or catalytic converter heat. The array of potential connectors/materials at each end seemed a possible specialty in itself for worldwide purposes. Along the length of the flex-line were clips and bends to assist installation. These vehicle-specific urea lines range 4 to 25 feet, the longest being in buses.

Voss's engineering can serve air brake, air suspension, hydraulic brake and clutch, pneumatic, heat transfer to/from hybrid or fully-electric vehicle batteries, fuel, and other applications for potentially just about anything that moves.

The building was also an interesting study in modern design and choices. As commented during the tour, a hallmark of well-designed modern facilities is they continue looking new and clean despite steady commercial use. This particular design was northern European modern with many glass interior walls and an overall white scheme. The glass and generous open spaces (such as separate game and exercise rooms) allow for staff expansions and reconfiguration. The design of the glass walls and doors drew our attention because they were impressive sound barriers. Open concept workspaces were tempered by being broken up into groups separated from each other by solid structures such as centrally located IT and server rooms. Also, each individual's space was spacious with liberal use of outside windows. Lights, windows, and glass walls combined to provide notably uniform and/or aesthetic distribution with excellent near-daylight color rendition.

The warehouse is actually a separate building gracefully connected to the other, both situated on the ten-acre property so to allow further evolution. The existing foundations can also support taller buildings. Heating and cooling is geothermal ground loop. Temperature distribution seemed excellent even with forty four people filling their lunchroom and ample sunlight coming through the windows.

Our sincere thanks to Voss Automotive for a generous and insightful tour, and for

employing many engineers here!

Fort Wayne Inventors Club



The [Fort Wayne Inventors Club](#) will have its next meeting on Thursday April 14th at 7:00 PM on the [Indiana Tech Campus Center for Creative Collaboration \(C3\)](#).

During meetings FWIC members discuss our experiences—the successes, the failures, the aha's, and the oh-no's. We also bring in speakers to share what inventors need to know. The club is particularly useful as a venue to give inventors time to showcase their work and receive feedback about it from their peer inventors. We also point inventors to resources they need to be more effective and help them meet people to collaborate with on projects.

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 April 19th at 7:30 pm at the [University of Saint Francis Schouweiler Planetarium](#).

The Mural: An Artistic and Astronomical Redesign By Jackie Baughman

Jackie Baughman is a Staff Artist and Planetarium Educator. Her presentation will be about the planning and redesign of the Zodiac Mural that surrounds the planetarium walls.

Jackie has a Bachelor in Business with a focus in Graphic Design. She found her way to the Planetarium because she was pursuing a second Undergraduate degree in Illustration from the University of Saint Francis. Jackie has a passion for art and astronomy equally and jumps at any chance to combine them. In her free time, she enjoys reading and daydreaming.

Northeast Indiana Chapter Project Management Institute



The next NEIC PMI dinner meeting is Wednesday April 27th.

David A. Maynard presents 'Why is Project Management So Difficult?'

According to PMI's well-regarded international research conducted in 2015, the "Pulse of the Profession", companies need to get back to basics and focus upon three fundamentals: culture, talent and process.

PMI states that "High-performing organizations fully understand the value of project management and are creating a project management mindset." This presentation focuses upon the item: "The culture of managing by projects" and is based upon the author's work experiences as well as published research.

[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. Pay now with credit card. Pay at door option is no longer available.

- 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 Register Now

BIO: IUPUI & IPFW, Instructor

Dave is a native New Yorker who after graduation from college, traveled to Houston to

work for NASA at the Johnson Spacecraft Center, where he worked for many years. He participated in the Shuttle avionics architecture design, the “glass cockpit” development and in crew training. Incrementally David’s level of responsibility increased, becoming a Senior Engineer, Project Engineer, Project Manager and Program Manager. David then moved to the Space Operations and Planning Complex (SOPC) where he again participating in overall technical design and management efforts. After leaving NASA, Mr. Maynard was asked to become the General Manager of Systems Management Inc. (SMI) in Orlando, Fl. whose mission was to turn-around troubled projects, programs or operations. David teaches Project Management at Purdue University, Fort Wayne (IPFW) and Indiana University, Indianapolis (IUPUI). He is active the PMI-Northeast Indiana Chapter of which he was a founding member. He volunteers for PMI global in various capacities,

For PMI Global:

- Recently concluding a term as the manager of PMI’s risk community of practice
- David is a PMBOK guide version 6 contributor and Risk chapter SME
- A member of the 2016 and 2016 chapter awards review team
- Is reviewing the quality and content of PM Challenge questions on PMI’s newest website, ProjectManagement.com
- Was asked to participate in the PMI global Congress in 2015 as one of a group of “experts” who had scheduled meetings with attendees
- Currently participating in an eLearning development effort for PMI.org which forced him to travel to Madrid and drink lots of wine
- Is a member of the team developing PMI’s “Implementing Organizational Project Management Practice Guide”

TekVenture



TekVenture is now open five days per week for access to tools!

TekVenture is open for access by Maker Members from Noon until 8 PM Tuesdays,

Wednesdays, Thursdays, and Fridays. On Saturdays TekVenture is open from 9 AM until 4 PM. Hurry in and join up; access our five lab and workshop areas!

Maker MeetUps still happen every Thursday evening starting at 7 PM. Come in and bring a friend!

TekVenture is located at [1800 Broadway, Fort Wayne, IN 46802](#).

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):

[April 1986](#)

Fort Wayne Engineers Club presents

- FAMILY NIGHT - ★
- BRING A FRIEND -

ISPE
COMBINED
MEETING

Museum ?

A
LOOK
AT THE
PROPOSED



HEADWATERS STATE PARK

By

- ERIC · R · KUHNE -

WED. APRIL 23RD, 7:30PM, OSS 2ND FLOOR

- ONE SUMMIT SQUARE 2ND FLOOR AUDITORIUM -
(park in the parking garage and walk over the pedestrian bridge)

COME AND HEAR A GRAND PLAN TO CONVERT FLOOD PLANE,
ABANDONED POWER PLANT AND JUNK YARD TO SOMETHING GREAT.

"MEET THE SPEAKER" - DINNER AT DON HALL'S
5:30PM call Jim Delaney 422-3456 GAS HOUSE
or 484-8104 for Reservations

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