

Engineers' News

October 2019

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www.FortWayneEngineersClub.org



Find us on 

October Tour



Stoller Dental Labs

7224 Engle Rd, Fort Wayne, IN 46804

Thursday, October 17, 7:00 pm

The Stoller Dental laboratory has been serving the dental community since 1977. They supply dentists around the country with different types of fixed and removable dental implants. Autocad drawings are used to custom design implants.

Upcoming Events

Citilink-Hybrid Buses and Other Systems

Date: Thursday, November 21

Time: 1:30 pm

Location: 801 Leesburg Rd, Fort Wayne, IN 46808

FWEC Social

Date: Thursday, December 19

Time: 3:00 pm - 9:00 pm

Location: Rod Vargo's Home

January Tour- Therma-Tru Doors

Date: Thursday, January 23

Time: TBD

Location: 601 RE Jones Rd, Butler, IN 46721

September Tour Summary



Fourteen FWEC members and family members attended the tour of Fire Station 1 in downtown Fort Wayne. This station is the main station for the Fort Wayne Fire Department and is the home of Engine 1, Rescue 1, Truck 1, Battalion 1, a SCUBA truck and raft, and the Hazardous Material Response Trailer.

This is the busiest station with about 10 calls per day on average. A diverse system of 911 call centers decide which resources respond often aided by constant tracking of real-time vehicle locations and computerized estimates of response times. Dispatch uses GPS technology to send the closest rig to reduce response time.

Firefighters must remain updated on local construction activity and consider travel constraints such as overpass heights and bridge weight limitations to ensure they take the most effective route.

Fire responses typically involve heavy smoke rather than flames thanks to cell phones, smoke detectors, modern building codes and overall awareness and fire prevention efforts. Outright fires increasingly involve stockpiles of interesting materials such as hay, titanium, magnesium, or even aluminum. Strategies to deal with these vary according to the material, but can involve keeping the area rigorously dry and figuring out how to apply sand or foam to restrict oxygen and control heat.

Over 80% of calls are for medical emergencies. Firefighters can arrive at a scene faster than an ambulance so they must be prepared to provide basic medical support. Opioid overdoses were common last year but it is now more likely for them to encounter reactions to synthetic drugs. Cardiovascular medical emergencies continue to increase due to an aging population.

Other emergency types include car crashes, gas leaks, chemical spills, water emergencies and industrial hazards. They utilize modeling software to identify which areas to evacuate based on the hazardous material type, wind rate and other determining factors.

Crews serve 24 hours on, 48 hours off, in a three-shift cycle requiring them to eat, sleep and work at the station. A rotation leaves one individual responsible on a given day for purchasing and preparing meals for the team. Everyone takes part in general house cleaning assignments to maintain a clean firehouse. The living quarters are located on the second floor with functioning fire poles to the bay area. A fully equipped exercise room is available and although exercise is not required, it is highly recommended considering the physical demands of the job.

In the fire station, each firefighter had their personal boots and jumpsuit positioned on the floor, ready to step in and pull on. The individual doors to the trucks are kept open, intended to eliminate every possible moment of delay. Loudspeakers are constantly broadcasting what was going on around the City.

They rotate responsibilities, such as driver/pump operator, to enable anyone to reliably fulfill basic roles. Each individual has formal specialties such as scuba-diving or enhanced life support. Both basic and specialty responsibilities require ongoing updating and retraining. Crews also have specific properties in their territory to visit and remain updated about. Once a year, all FWFD personnel must pass medical exams and physical fitness minimums. This includes administrators.

The fire trucks were not strictly pump or ladder affairs but multi-role composites intended to address complex emergencies and complement each other's

capabilities. The sheer volume and weight of equipment would not be feasible in a single vehicle.

The pump truck dates to 2014 and has been a daily workhorse, averaging a response roughly every 2.5 hours around the clock. It has a conventional diesel engine with automatic transmission and a transfer case to shift power to the pump. Modern pumps are single stage centrifugal affairs, constructed of stainless steel. A 750-gallon water tank allows immediate response to a fire while a hose is connected to a hydrant. Three sizes of output hoses range from 1.75-inch and 100-200 GPM for hand uses to 4-inch and 1250 GPM for higher elevation monitor-type applications. A firefighter controls the pump system through ball valves actuated by old-fashioned push-pull rods, which have never failed. Even the 1.75-inch hoses are eight-ply and require teamwork to initially stretch out and control.

The ladder truck also has a pump system, with 300-gallon tank, intended to supply its ladder. This ladder system is affixed to the top of the truck, can rotate 360 degrees, and can extend an unspecified distance. Taller buildings are designed with their own internal firefighting systems, which these fire crews inspect and practice with every year. The ladder has its own air supply for firefighter breathing purposes. The pumps and other systems are electrically controlled. The back of the truck has an extension to store extra gear, which now includes initial supplies to suppress burning metals.

As our tour was approaching an end something over the loudspeakers energized our hosts. They were in their boots and gone in about 15 seconds, lights and sirens blazing. The perfect demonstration of their commitment to quick response time.

Proposed FWEC roster for FY2019-2020

The comment period will be open for 60 days, and the annual cards will be mailed to FWEC members on record:

President: John Magsam

Vice President: Nate Berndt

Treasurer: Ryan Stark (info@fortwayneengineersclub.org, or phone 456-0809)

Secretary: Marna Renteria

First-year Board Members: Rod Vargo, Craig Welch

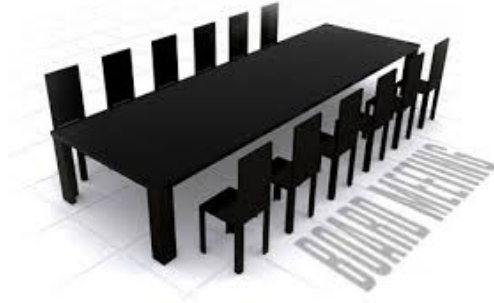
Second-year Board Member: Rob Cisz, Need volunteer

Third-year Board Member: Dave Gordon, Morgan Miller

Editor of Engineer News: Morgan Miller

Membership and Contact Chair: Dave Schaller
Northeast Indiana DiscoverE Chair: Rob Cisz

FWEC Board Meetings



The FWEC board meets eight times a year to plan and organize tours for our members. These meetings are open for all members to attend. We are always looking for new members to join our team! If you are interested in being a board member or have ideas for future tours please contact us at info@fortwayneengineersclub.org.

Next Meeting

Date: Tuesday, November 5

Time: 7:00 pm

Location: [Indiana Tech McMillen Library](#) Room ACC-201

TekVenture Meetings Open to The Public

TekVentue holds a free public Open house and Social with pizza and drinks every last Friday of each month at 6 pm. All ages welcome. The first floor is 15,000 sq. ft and entirely handicap accessible. Various clubs meet there. The clay working area is booming. Computers are available. There are a stage and some theater. Productions each year. Some underutilized space is available for working on motor vehicles, near their machine shop.

Got something you want to make, a technique you want to learn or a tool you want to use? Come to TekVenture and start Making your future! See tekventure.org. This location has also substantially lowered their overheads and costs of membership.



PUBLIC ART & TECHNOLOGY WORKSHOP

Access to Tools, Community Education and Services to Makers & Creatives
Interconnecting Imagination, Technology and Community
A 501.c.3 Non-profit Indiana Corporation since 2006

HOTSHOP

Metals fabrication including blacksmithing, forging, MIG, TIG, arc & gas welding & brazing, bending, sheet metals, flame-working, glass, aluminum & bronze foundry, CNC plasma cutting, heat treat furnace & bike customization.

WOODWORX

Machining & fabrication in wood & other materials with bandsaw, table saw, radial saw, jointer, drill press, lathes, shaper, mortising press, jigsaw, miter shear, many hand and power tools, and CNC routing.

PERFORMANCE STAGE

Supporting music, theater, theater arts, performance arts, demonstrations, lectures, workshops, auctions, cinematic and other presentations and events.

GREAT HALL

7,000 sq. ft. Multi-purpose space for exhibitions, lectures, meetings, public and private events, weddings, & sales with bar, Green Room, lighting and ADA restrooms.

CLAYWORX

For the production of art and functional ceramics and teaching of basic and advanced ceramic skills using wheels, ADA wheels, slab roller, extruder, Giffen grip, kilns, drying racks, glazes and clay supplies, and display area.

SOUTH LOADING RAMP

BOTZ & VOLTZ

YouthBot HQ
Robotics and Electronics design, fabrication and experimentation with soldering, oscilloscope, power supplies, circuit board design and fabrication, micro-controllers, pneumatics, electricity, magnetism and drones.

MACHINEWORX

Machine metals & other materials with lathes, CNC and manual mills, shaper, drill presses, grinders, press, injection molder, Marvel band saw, comparator, mold and pattern making, precision measuring & hand tools.

THE ZONE

CAD computing and rapid prototyping, 3D printers and full-body scanner, EggBot® CNC drawing machines, vacuum forming, button machine, sewing and electronic fashion design, user group meeting center

RESTROOMS

ADA compliant

BEACH VOLLEYBALL COURTS

Seasonal public access by others.

MAIN ENTRANCE

ASSEMBLY & DISPLAY YARD

Outdoor area for larger-scale fabrication, workshops, ceramics kilns, performance and other creative activities.

ASSEMBLY AREA

Workbenches and space for multi-media assemblage, individual and group projects.

GRIFFIN ST.

FREE PARKING

RIVER CITY 1550 Griffin Street, Fort Wayne IN USA 46803 WWW.TEKVENTURE.ORG facebook.org/tekventure 260.432.1095

Advertise in the Engineers' News

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