

Editor: Frank Huber | Layout Editor: Deb Huber

The President's Flight Deck

Have we turned the corner? Am I talking about winter, the pandemic, or the CH 701 project? Actually I'm talking about all three of these! Here we are mid-February with the days getting longer, vaccines rolling out, and the CH 701 build team beginning to project completion this summer. All of these are positive signs pointing to a fun aviation future for our chapter! The biggest event will be the fly-in we are planning for June. You will soon see a sign-up genius email outlining opportunities to volunteer.

I want to point out a leadership change to our VMC and IMC programs. As you are aware, Frank Huber has been heading these up since Curt Stoltz decided to move to a warmer climate. With the presence of the pandemic, the VMC and IMC clubs have not been able to meet in person, therefore Frank has been including VMC and IMC topics in the newsletter. Thank you, Frank, for keeping these clubs going! Taking on the leadership responsibility is new chapter member, Ellen Quist. Some of you may know her from Lynx FBO and D.A.D. During this pandemic, Ellen has finished her CFII certificate and has begun instructing student pilots. Since EAA requires the IMC leader to be a CFII, Ellen has agreed to lead these programs. Having an active VMC and IMC program is one of the attributes EAA looks for in recognizing us as a Platinum level chapter. Look for Ellen to begin promoting these programs. Thank you, Ellen, for taking on this responsibility! As an added benefit, Ellen's CFII capability will be convenient for those members who want to begin flight instruction. Ellen's business card is included in the back of this newsletter if you are interested in reaching out to her. I believe her addition makes three active instructors in our chapter!

Until next month, happy aviating! Kevin

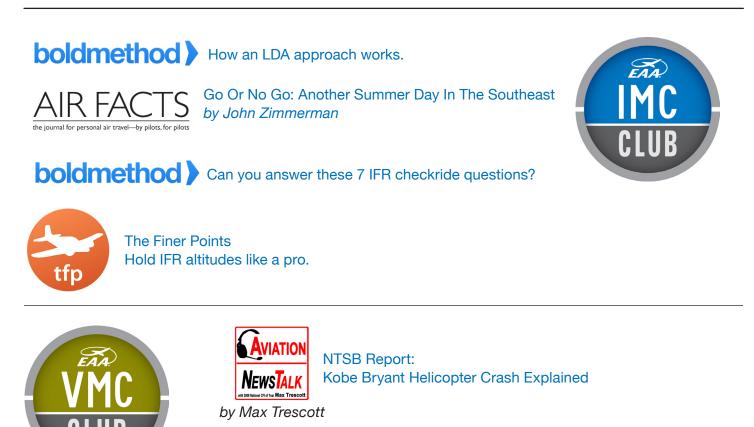


YOUR CHAPTER BOARD OFFICIERS

Kevin Sislo, President Lyle Peterson, Secretary Charles Jasicki, Director Robert Henkes, Vice President Mark Heule, Treasurer Michael Grzincich, Director GOLD CHAPIEBS * GOLD * GOLD * GOLD * GOLD

Contact the Board at: board@eaa237.org

Because of Covid-19, we will not be holding IMC Club and VMC Club meetings. In the mean time, I will be providing links to articles that will cover areas of interest for both IFR and VFR pilots.



boldmethod Eight optical illusions every pilot should understand.



Go Or No Go: A Windy Trip *by John Zimmerman*

I am pleased to announce that we have a new member of our chapter, Ellen Quist. Some of you may already know Ellen as she has been working as a line service technician and customer service representative at Lynx, the KANE FBO for the last few years. Ellen is originally from Anoka and is now living in Minneapolis. She earned a BA in Biochemistry from Vassar College, but after graduation, decided to pursue her real passion in aviation. She is now a full-time flight instructor and commercial pilot, with a CFII and Commercial pilot ratings and is a member of two flying clubs at KANE. As Kevin pointed out in the President's Flight Deck, Ellen has volunteered to take over the job of Coordinator for the IMC and VMC Clubs. She is also excited to offer her services for the coming 237th Aero Squadron light sport flying club that will be formed after we complete the Zenith 701 chapter project. *by Frank Huber*





The Aviation Explorer Post has continued to work on projects in spite of Covid-19. We held our first in person meeting in January. At that meeting the members worked on developing marketing material to promote the chapter's Young Eagle events. They also began work on developing a program to assist Boy Scout troops in offering Aviation Merit Badge training. Members of the post are also signing up for a Project Management Basics class. The training will be virtual and a part of our semi-annual University of Scouting on Saturday, April 17, 2021.

The next regular meeting will be held on Friday, February 19 at the EAA Chapter 237 building at 7 pm. For this meeting we will have Heidi Porch as a guest speaker. Heidi is a recently retired Airbus A330 Captain. She started her corporate career in the DC-9, then moved to the A320, then on to the 747-400, and finally to the A330 where she made Captain. Prior to her corporate career, Heidi ferried Cessna aircraft from their place of origin in Kansas, across the country to California, and then on to their new owners in New Zealand and Australia. On one of those flights, Heidi experienced engine failure and had to ditch the aircraft in the Pacific Ocean.

Remember the codes: Gates A & B on the West side, 9378. Gate E on the East side, 3278. Meetings are usually held on the first and third Fridays of the month. If you know a young man or woman who has an interest in aviation, please tell them to attend a meeting and give Aviation Exploring a try.

One more bit of good news I heard today is that, as of now, AirVenture and Aviation Explorer Base is on. This means we can start making our preparations for Oshkosh '21.

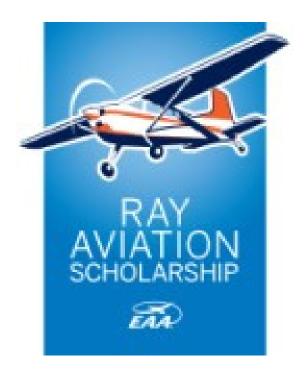
We're continuing to try to share the experience of flight with the next generation of aviators. COVID-19 and weather have not been kind to our efforts. We had a February 13 event scheduled for our 2021 YoungEagles.org kickoff from the Lynx FBO at KANE (Blaine, MN). But it was cancelled due to the extreme cold weather. Fourteen youth had signed up and 3 pilots, 2 ground crew, and 4 Explorer Scouts had volunteered. A make up event is tentatively



scheduled for February 27, with information to follow. There is also an event scheduled for Saturday, March 13 from 9 am until 2 pm.

If you, as chapter member, would like to help with Young Eagles, please create an account at www.YEday.org. We're always looking for pilots, ground support, "explainers", registration folks, and more. If you sign up, you will get an email alerting you to the next event and allowing you to sign up to volunteer. Share your experience and/or grow your knowledge of aviation related stuff. Generally, we hold Young Eagles events at the Lynx FBO on the second Saturdays of the month.

Hope to see you there! Michael Grzincich | Chapter 237 Young Eagles Coordinator



The severe weather we have been experiencing this month has brought the flight training of our 2020 Ray Aviation Scholars to a standstill. Owen Larson has been ready for his PPL checkride since the last week in January. Edward Christian is ready to begin his training with the Crystal CAP squadron. Ed is scheduled for his first lesson on Saturday, February 27. Hopefully with warmer weather forecast for next weekend, they will be able to make some progress with their training. I have applied for a 2021 Ray Aviation Scholarship for Chapter 237. I am expecting to hear the results of our request by the end of February. So far, I have received one application for the 2021 scholarship, with two more supposedly in the works. *by Frank Huber*





Fighter Pilot The Memoirs of Legendary Ace Robin Olds by Robin Olds with Christina Olds and Ed Rasimus From being a West Point All American football player, WWII P-38 and P-51 double ace, pioneer of jet age and leader of F-4 Wolfpack battling over North Viet Nam, this captures his amazing story and life.

Mustang Ace Memoirs of a P-51 Fighter Pilot *by Robert J. Goebel* Wisconsin native, Bob Goebel, joined the Army Air Corp in 1942 just 19 years old. By September 1944 he had completed his tour with the 31st Fighter Group in Europe with eleven confirmed victories.

The Fight In the Clouds The Extraordinary Combat Experience of P-51 Mustang Pilots of World War II *by James P. Busha* From the EAA Vice President of Publications, Marketing, and Membership/Editor in Chief of Sport Aviation, Jim Busha narrates a collection of stories of P-51 Mustang combat through WWII drawn from countless interviews over the years.



WHAT OUR MEMBERS ARE BUILDING, RESTORING AND FLYING.

HOMEBUILDERS

During the course of our chapters work on the EAA B-25, some of our members made the acquaintance of Stefan Wilski, a EAA volunteer from Belgium. He is a member and volunteer of the Belgian Aviation Preservation Association. BAPA is focused on the restoration, conservation and exhibition of aircraft and artifacts of Belgian aviation heritage. They are currently working on the restoration of a B-25J. I am guessing that Stefan came to Oshkosh to work on the B-25 to gather knowledge for BAPA's B-25J restoration. Stefan became an honorary member of Chapter 237 and has shared the story of a recent aircraft restoration for our newsletter.

The project, that was found in a barn, is a "Chanute" type bi-plane towed glider. It was built back in 1969 by an 18 year old young man. He used drawings, found in a do-it-yourself newspaper, that were published soon after WWII. After completing construction of the glider, the young man made a dozen successful flights, while being towed behind a car. Rethinking the safety of such flying, he decided to build other, more conventional machines. A few years back, he decided to donate his glider to BAPA if they committed to rebuilding it to good condition. What followed was a complete, beautiful restoration.

The accompanying pictures show the original aircraft being flown by the young man, who built it. There is also a picture of the restored aircraft with the same man, now some 50 years older. The other two pictures are of the restored glider, with Stefan pictured in one picture wearing a blue sweatshirt. It just goes to show that the love of aviation has no boundaries and the reach of the EAA is international.









The Zenith 701 Project

The Zenith 701 Project crew is continuing to make headway on the aircraft. Since the last update, they have installed the jury struts, the pitot tube and the flaperons on the wings. The fuel lines have been run from the wing tanks down to the header tank in the aft fuselage, completing the entire fuel system installation. The com radio, MGL XTreme mini EFIS and the ELT have been purchased for installation. The harnesses for the headsets and mics have been made and will be mounted behind the seats. The wiring harnesses for the com radio and transponder have been made and the harness for the EFIS system is being made. So the work on the instrument panel, electrical system and engine control system are nearly complete.

The next project will be the painting of the interior and glare shield and the production of a few panels for the cockpit. Once that work is completed, it will be time to install the three shelves that contain the electrical system, SDS engine control system and





engine monitoring system and then hook up all the wires. Once that is completed, the instrument panel will be installed and everything will be hooked up to the switches and devices.

Work on the engine has also progressed nicely. All the fuel lines, cooling hoses, cabin heating hoses and engine control system wires have been installed. We have figured out how to run the two cockpit throttle levers into one control arm on the throttle body. Fire shield has been installed on the fuel lines in the engine compartment and the crankcase breather hose has been installed.

Work is beginning on setting up the flying club that the aircraft will go to when completed. If you would like to help with the build and are interested in joining the flying club after the project is completed, please come out on Monday and Wednesday mornings from 9am to usually 12:30pm at Mark's hanger at 2155 Kansas on the southwest side of the field. *by Frank Huber*





EAA Announces Big Changes To AirVenture

PRESS RELEASE – Coordinating the countless moving parts of EAA AirVenture Oshkosh is a challenge in the best of times, but coming back from 2020's COVID-caused cancellation raises expectations regarding health and safety measures in planning this year's event on July 26-August 1.

During the coming months, we'll keep you informed with the latest information as the situation evolves in a dedicated area of our website with a highly visible logo. An important phrase to remember is "At this time...." As the return to events begins throughout the country, plans will change in conjunction with the current state of the pandemic.

"We will be hosting AirVenture 2021, but there will be areas that will look different and areas where we'll incorporate technology to limit touchpoints as we work with local and state health officials to establish and maintain the best possible standards for public events," said Jack J. Pelton, EAA's CEO and Chairman. "Some areas may look different at Oshkosh this year, but the feeling will be the same as we gather to celebrate the world of flight."

Some of the initial decisions made for this year's event, some of which will evolve and change as the event nears, include:

- Masks will be strongly recommended if you are unable to social distance (roughly 6 feet or 2 meters). Proof of COVID vaccine will not be required to attend.
- International visitation is dependent on current international travel regulations and mandates in the U.S. and individual countries of residence.
- Increased physical distancing will be encouraged in all areas.
- EAA is adding significant numbers of sanitizing facilities and working with industryleading companies for continual disinfection throughout the grounds.
- Theater in the Woods, forums pavilions, and other outdoor venues will operate with reduced seating capacity, with social distancing opportunities on the open grounds at that location.
- There will be fewer exhibitors in each indoor exhibit building, creating more walkways and separation between exhibitors. Additional venues on the grounds are being repurposed to accommodate indoor exhibitors that are moved this year.
- Wherever possible, ventilation will be increased in tents and indoor facilities.
- Several annual events where physical distancing is not possible will not be held this year, including the Monday night concert; the Young Eagles, EAA Lifetime Member, and International Visitors dinners; the Runway 5K run/walk; and large corporate events and receptions.
- High-demand forums and presentations will be scheduled more than once to accommodate demand while allowing for distancing.

In addition, look for more details on new programs for low-contact procedures for admissions, camping registration, points of entry, and other high-volume areas.

"EAA is incorporating innovative ideas for our presentations and even the air shows to keep you safe in 2021 while keeping the fun factor high," Pelton said. "We appreciate your understanding that these plans will evolve in the coming months. We expect changes as we gear up for Opening Day, so our goal is to bring you any new information regularly as soon as we confirm it. We also understand that the ultimate decision to join us is always yours, based on your personal situation and comfort level."

2021 FREE AIRVENTURE CAMPING



Dick Knapinski, EAA's Director of Communications has said "We are planning for a full AirVenture event in July 2021. It might not be a "full AirVenture" without concerts and awards dinners this year, but camping will not be an issue!" I have been informed that the free camping sites Chapter 237 earned for 2020 will be carried over to 2021. The following individuals volunteered the minimum of 40 hours at EAA during 2019, so are qualified for a free campsite:

Editors Note: These twenty-six chapter volunteers provided 3,214 hours of volunteer work for EAA, an effort that reflects very positively on our chapter. We all owe them our thank for their efforts. I am sure there are many members of our chapter that are looking forward to being able to volunteer their time at Oshkosh in the future, once Covid-19 is under control.

214 hours
114 hours
88 hours
188 hours
48 hours
620 hours
58 hours
62 hours
107 hours
240 hours
162 hours
246 hours
40 hours

Mark Heule 47 hours 76 hours Gene Louden Scott Nelson 44 hours 62 hours Dick Pugh Andrew Reinstra 41 hours Ken Schamberger 40 hours Curt Stoltz 96 hours Deb Stoltz 96 hours Charles Teichma 125 hours Robert Viltz 108 hours Jim Weinand 195 hours Mark Gurnik 56 hours Kim Reinstra 41 hours

We currently are eligible for 27 free campsites, down from 40 in 2019. Please check the list and let me know if I may have missed you. This list is from the Weeks Hangar volunteers only. If you volunteered at other venues and had more than 40 hours, please let me know that also.



Kirk Fjetland, Chapter 237 EAA Liaison fjetfamily@msn.com

AVIATION ADVENTURES Out and About in Our Neighborhood by Bob Henkes

Last months questions was, "Can anyone tell me where the first commercial airport in Minnesota was located? And, for a bonus, have you been there?" I'd like to thank everyone last month for their guesses. Mike Miller was the first to get it right so he receives a coveted COVID edition 2020 Airventure patch. Roseville claims Minnesota's first Target store, Stillwater the state's first prison. But, Falcon Heights, our first airport? Yep, who would have guessed. There's little today in Falcon Heights to let on that Minnesota's first commercial airport once stood there, other than the small park at the end of Iowa Avenue named Curtiss Field. But, there is enough history to write a book on it and Roger Bergerson did. Roger has since passed, but I remember this author talking to my Kiwanis club, and could he tell stories.

There were earlier airfields in Minnesota, including one at the Earl Brown Farm in Burnsville, but this site in the former Rose Township was the state's first full-service airport at the cross roads of Snelling and Larpenteur. With surplus training planes from World War I, Curtiss JN-4s, or "Jennies", Bill Kidder was able to sell planes, service them and train pilots in one location, just like a car dealership. The Minneapolis native secured the first commercial license for an airport in the state in April, 1919. After World War I, there wasn't much entertainment in the area and residents were enthralled with aviation. Snelling and Larpenteur avenues, two-lane dirt roads at the time, would be lined with cars on weekends as Kidder's planes took off and landed. Kidder offered short plane rides for \$15, akin to paying \$180 today.

According to an old interview with Kidder, an Iowa wrestling promoter and his passenger landed at the airport one day. Kidder offered to take them out to lunch. The promoter went along, but said his lanky

assistant would stay back and keep an eye on the plane. "I will bring him a sandwich. He is a good kid. He does the jumping and takes care of the ship and I am teaching him to fly," Kidder recalled. "He comes from someplace up here. I think his father was a congressman named Lindbergh."

Despite brushes with fame, or at least soon-to-be famous aviators, the Curtiss' small size and competition from the downtown St. Paul airport and Speedway Field, the forerunner to today's Minneapolis-St. Paul International Airport, helped speed the end of Kidder's operation. He left the business over some unknown dispute in the mid-1920s and went on to manage the airmail service at the St. Paul airport. He eventually got back into real estate and died in Minneapolis in 1974. He was 88 years old.

His airport didn't last as long. In the 1930s, a couple of golf driving ranges opened near the airport, and the surrounding land was platted for development. The Falcon Heights Shopping Center opened adjacent to the airport site in 1946. The northwest end of the airport's land eventually was dredged, for drainage purposes, Bergerson supposes, and became a de facto park known as "the Hole." The south end of the parcel took on the name "Curtiss Field" in 1991 during improvements funded by the state. The other section, closest to the Snelling-Larpenteur intersection, is now the Falcon Heights Town Square residential/commercial development.

"In the early days, the airport was in the news all the time," Bergerson said. "It was a sensation for a while." "Winging It at a Country Crossroads," by Roger Bergerson is available at St Paul Library or at the Minnesota History Center in St. Paul. It is a short but interesting read into MN Aviation history.



For next month, can anyone tell me the significance of this Cub and where it is at? Send your answers to Bob Henkes at VicePresident@EAA237.org.



ELECTRIC PROPULSION

by Ronald Borree

Roll Royce Accel Electric plane project... Pushing the limits of electric power.



Rolls-Royce is working to build the fastest single seat electric airplane of all time. To get there, it has to solve an assortment of complex engineering problems.

Imagine climbing to the skies from England in a sleek 500 HP electric plane over the White Cliffs of Dover heading to France at 300 MPH. The top speed of a Spitfire doing the same flight in 1944 was about 369 MPH with a 1,000 HP Merlin V12 gas engine. While not necessarily flying over the White Cliffs, this plane will soon be attempting a new speed record over England. Rolls Royce is pushing the electric propulsion design envelope with a plane called the Accel using a triple stacked set of electric motors combined with three 6,000 cell battery packs to break the speed record for electric flight. The first flight is anticipated in 2021.

What they're working on is very much in the performance-or-bust category, namely a largely stock Nemesis NXT airframe coupled with meaningful—if short legged—electric power. The Nemesis NXT—which wasn't even racing the year it was selected—looked perfect, mainly because it has no fuel in its wings. Instead it features one rather large gas tank between the cockpit and engine. This is perfect placement for the concentration of the battery pack—right atop the CG (center of gravity)—and so the NXT was selected.

The prototype airplane has three powerful stacked Yasa 750kW axial electric motors driving

the propeller. This arrangement allows lower rotating speed than conventional (internal combustion engine) power for a quieter, more stable ride. Should any of the battery cells inside the three ultra-strong battery cases fail, then artificial intelligence will shut that battery down. However, the aircraft can fly on two motors, or even one, or one battery pack if needed. The company considered different types of lithium-ion cells, including cylindrical, pouch and prismatic. It decided cylindrical cells were best for energy capacity and fast discharging at high power.

The entire propulsion system is liquid cooled. Instead of running coolant around the components, they've routed coolant right into the heart of both motors and batteries. This requires a non-conductive "dielectric fluid of some sort," along with a pump and two heat exchangers. The latter will live at the bottom of the cowling, about where the stock NXT cooling air exits live. According to a Rolls-Royce press release they packaged 6,000 cells in each battery pack to minimize weight while maximizing thermal protection, devising a liquid cooling system whereby every cell directly contacts the cooling plate.

In any case, the inside word is, left at maximum power the e-NXT exhausts itself in 6 minutes, which just goes to show how much energy there is in a tank of gasoline. Given a more typical flight profile using partial-power takeoffs, expect 10-minute flights over the airport but no more. This is exactly in keeping

General Specifications:

- One seat NXT airframe
- 24' Wingspan
- 2,600 lbs Empty Weight
- 3-Bladed Propeller/2400 rpm

- with the ACCEL NXT's mission, which is just as highly specialized for speed as other electrics are for endurance. As always, it's difficult to have both.
- Top Speed: 300 mph
- Range: 200 miles at medium output
- Max Cruise: 200 MPH for one hour
- Three 72kWh battery packs @ 450 lbs each
- Total power of 400kW power output on three stacked Yasa 750R motors(750 volts), liquid-cooled, axial flux AC motors with invertors/controllers
- 500 HP at max thrust per Rolls Royce with short term peak to 1000 HP.

https://www.rolls-royce.com/innovation/accel.aspx

https://www.safran-electrical-power.com/electrical-systems/our-engineustm-electrical-motors

https://spectrum.ieee.org/energywise/energy/batteries-storage/the-battery-innovations-behind-rolls-royces-ultrafast-electric-airplane

https://www.upsbatterycenter.com/blog/dense-electric-battery-for-rolls/

https://www.avweb.com/features/inside-the-electroflight-rolls-royce-electric-racer/

https://cleantechnica.com/2020/01/29/rolls-royce-claims-its-latest-electric-airplane-battery-has-the-highest-energy-density/

QUICK LINKS

The Minnesota Wright Flyer Presentation https://www.youtube.com/watch?v=yyLGrR39nFc

Toyota flying car, coming to your garage in 2023 https://www.theepochtimes.com/toyotasuccessfully-tests-manned-flying-car-for-the-firsttime-plans-to-roll-out-in-2023_3482535.html

Colorado by Drone https://player.vimeo.com/video/186483277

The Last Bomb | An excellent WWII documentary about B-29 bombing raids on Japan with P-51 escorts. https://www.youtube.com/watch?v=2j-Fgvs-zMU

EAA237 COMING EVENTS

The February chapter meeting will be held virtually on Monday, February 22 at 7:00pm. An email with the link to follow.

Young Eagles event on Saturday, February 27 from 9am to 1pm at the Lynx FBO. Email to follow.

Young Eagles event on Saturday, March 27 from 9am to 1pm at the Lynx FBO. Email to follow.

On The Lighter Side.



Dogs are welcome in this hotel. We never had a dog that smoked in bed and set fire to the blankets. We never had a dog that stole our towels and played the T.V. too loud, or had a noisy fight with his traveling companion. We never had a dog that got drunk and broke up the furniture....So if your dog can vouch for you, you're welcome too. Jke danagement



One day the first grade teacher was reading the story of Chicken Little to her class. She came to the part where Chicken Little warns the farmer. She read, "...and Chicken Little went up to the farmer and said, "The sky is falling!" The teacher then asked the class, "And what do you think that farmer said?" One little girl raised her hand and said, "I think he said: "Holy Sh"t! A talking chicken!" The teacher was unable to teach for the next 10 minutes.

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Do you purchase items on Amazon? If so, please consider using Amazon Smile for your purchases as our chapter is a supported non-profit organization. You pay exactly the same price for your purchase, and our chapter receives a .5% donation from Amazon. To use this service, simply choose https://smile.amazon.com while searching for your next purchase. When asked for the charitable group, enter *Chapter 237 Experimental Aircraft Association* and it should appear. You can use this service with your existing Amazon account. Here is a link for additional information on how to use this service on all devices: https://smile.amazon.com

Financial and Property Donations

As an educational entity, Chapter 237 reminds you that we are a 501 (c)(3) corporation and gladly accept donations to promote aviation education to our members. For additional information please contact EAA 237 treasurer Mark Heule at treasurer@EAA237.org.

https://flightexpo.org/sweepstakes

SWEEPSTAKES *"Rising Above for Education"*

Chance to Win A 2021 Polaris General or \$15,100 CASH



WWW.GALSTECHNOLOGY.ORG WWW.FLIGHTEXPO.ORG

In future Windsock editions, I plan to showcase aircraft that our members are building, restoring and flying. Please email me with the aircraft you are building, have completed building, are restoring or have purchased and are flying. I will follow up with you to provide a questionaire and will come out to take pictures to include with your article.

If you have a story or photo you would like to see in our newsletter, contact Frank Huber | eaap51@comcast.net | 763-245-0170

To view past issues of The Windsock, visit www.eaa237.org and select newsletters. Articles and photos for consideration in our MARCH issue are due on or before MARCH 10.

