THE SELFRIDGE **NTAGE**

107

13.13.00

STAND READY

WE STAND READY



WELCOME!

Welcome to Michigan's Hometown Air Force and the most unique and capable facility in the Air National Guard! I am confident that you will find the 127th Wing, Selfridge Air National Guard Base, Macomb County, and the entire State of Michigan "Stand Ready" as the premier choice to base the F-35 Lightning II. I'm confident that the 127th Wing stands head tall above our peers. Here's why:

PEOPLE

The hometown heroes of the 127th Wing are the best. That's not just hyperbole. As the current holders of the 2016 Spaatz Trophy as the best flying organization in the ANG, our men and women have proven their mettle in combat, under the inspection microscope, and all around the world every day. We also were awarded the 2016 Meritorious Unit Award - only the 3rd ANG Wing in history to be recognized as such for "outstanding devotion and exceptional performance." Our 127th Wing Citizen Airmen have the proven skills, determination, and tenacity to succeed at any mission.

FACILITIES

Selfridge has the ability to, immediately or with very small modifications, bed down the U.S. Air Force's premier fighter aircraft. I believe Selfridge is the only base under consideration that could house every one of the planned F-35s inside environmentally

littoral topography, a vast overland joint fires range with all-altitude ordnance capability to an overwater/ over land live fire ranges with moving targets, and mobile advance electronic threat emitters. We own it. We have scheduling priority. Alpena Combat

controlled hangars. This base's capacity and capability

One hundred percent all under one roof! The airspace,

ranges, and training infrastructure of the Michigan

base under consideration that can indigenously and

efficiently support 100% of the current Ready Aircrew

contiguous joint service range/airspace complex east

of the Mississippi River includes supersonic airspace,

Air National Guard has no peer. We are the only

Program requirements of the F-35. The largest

offers a robust and resilient infrastructure to provide

maintenance, operations, and security resulting in

unsurpassed readiness.

TRAINING



Readiness Training Center directly and efficiently supports joint training and offers superlative adversary hosting as well as flight operations safety. In addition, the 127th Wing concurrently operates the KC-135 Stratotanker in the global mobility mission – offering unparalleled synergy of training, efficiency, and mobility opportunities/operations.

SAFETY

Twenty-four years and >160,000 Class A mishap free hours! The 127th has a proven and well-earned legacy of excellence in stewardship and readiness.

SECURITY

From operating the airfield environment and all surrounding base infrastructure to the ability to house every aircraft in a secure and controlled hangar facility, Selfridge provides unmatched force protection and asset security.

COST

From a robust and resilient infrastructure, inherent security, zero identified MILCON requirements with only minor facilities modifications, and no "double conversions" – the bottom line is that Selfridge is by far the top value today for our Air Force of tomorrow.

Whether it's the ability to maintain and operate the aircraft, provide the proven best warfighters

The 127th Wing stands ready today to lead the Air Force of tomorrow

to the mission, utilize the best airspace and ranges to train to unparalleled readiness, or provide the best value to the American taxpayer – as our Wing motto states, "We Stand Ready" to operate the F-35 Lightning II. It's what we like to call – The Selfridge Advantage!

Brigadier General John D. Slocum

Ih P.h





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CONCLUSION





4 | THE SELFRIDGE ADVANTAGE



KEY FINDINGS AND OTHER CONSIDERATIONS

KEY FINDINGS

- Supports 100% of F-35 Ready Aircrew Program training requirements
- Robust infrastructure with current capacity to operate up to 24 F-35s
 - Only minor construction needed for mission change
 - Ready now to accept mission

OTHER CONSIDERATIONS

- Risk: Low
- Very minor manpower implications
- Excellent Environmental Assessment and encroachment baseline programs
- Overwhelmingly supported by community and local economy
 - Well suited for active-associate hosting
- Minor construction/facilities mod costs, Wing estimated at \$11.8 million

127TH WING ORGANIZATION & CONTACT INFORMATION



The iconic Base Operations Bldg 50 at Selfridge serves as a symbol of the rich heritage and unique infrastructure of the base and the dual aircraft missions (both A-10 and KC-135) of the 127th Wing.

The 127th Wing flies both the A-10 and KC-135 aircraft. The Wing organizational hierarchy matches ANG standards as an Air Combat Command (ACC) - gained Wing with the addition of a 5th Group: the 127th Air Refueling Group – the only Air Refueling Group in the ANG as well as the only ANG global mobility mission set assigned to an ACC-gained Wing. Other base-assigned organizations will be described later in this publication.





THE SELFRIDGE ADVANTAGE | 7

INTRODUCTION

AIRCRAFT

BASE AND WING HISTORY

Selfridge Air National Guard Base is one of the oldest continuously operating military airfields in the nation. The military first took possession of the field formerly known as Joy Aviation Field on July 1, 1917. It was renamed Selfridge Field and the first flight took place on July 8, 1917. The base has been



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With roots dating back to 1917, Selfridge Field has an amazing 100 year history as a continually operating military airfield.

in continuous use ever since. This year marks Selfridge's 100th year of continual service to the State and the Nation!

Since the first military unit – Company G, 33rd Infantry of the Michigan National Guard – arrived at the airfield in Macomb County's Harrison Township and the first Curtiss JN-4 Jenny wobbled into the air in the summer of 1917, Selfridge has time and time again been the location from which America's sons and daughters have answered their nation's call.

The State of Michigan historical marker refers to Selfridge as the "Home of the Generals" because over 145 officers made the rank of General using Selfridge Field/Selfridge Air Force Base as a springboard to that rank, including former Air Force Chiefs of Staff Gen. Carl Spaatz, Gen. Curtis

Beginning as both a flight training and aerial gunnery school in WWI, Selfridge Field rapidly expanded to meet the readiness needs of the country during WW2.



LeMay, and Gen. George Brown. Selfridge is known for many aviation "firsts"; from the first airplane to exceed 200 miles per hour (1922), and the first Air Force flight of a drop tank (1923), to the first use of

unit was disbanded following World War I and then reorganized as the 107th Observation Squadron on May 7, 1926. The Wing's 171st Air Refueling Squadron was first created as the 374th Fighter

liquid oxygen in flight (1931), and the first trans-Atlantic flight of jet fighter aircraft (1948), Selfridge is a pioneer in aviation.

Through every decade, Americans have served at Selfridge, flying dozens of different types of aircraft. Selfridge Airmen have served in wars and battles, flown countless test flights and experimental missions, and embarked on deployments to all corners of the globe. From a lineage including the Tuskegee Airmen to Captain Eddie Rickenbacker, Selfridge still carries on the proud heritage and amazing legacy of service to our nation's defense.

The Wing's 107th Fighter Squadron traces its history

to two key dates: an original organization as the 107th Aero Squadron on August 27, 1917. That

This year, Selfridge **Air National Guard Base is celebrating 100** years as a continually operating military airfield!

Squadron in 1943 during World War II. The modern configuration of the 127th Wing was created in 1996 by the merger of the 127th Fighter Wing and the 191st Airlift Group.

The Air National Guard took over management responsibilities of Selfridge in 1971 and the base was renamed Selfridge Air National Guard Base. The U.S. Army maintained and managed many parts of the base until Base Realignment and Closure (BRAC) 2005, when the 127th Wing assumed sole facility host responsibilities. To this day, the U.S. Army is a primary tenant of Selfridge operating multiple laboratories, testing facilities, and Morale, Welfare, and Recreation

(MWR) operations on the base. Today, the 127th Wing and more than 44 tenant organizations call Selfridge home.



KC-135 - 127TH AIR REFUELING GROUP



The 127th Wing Air Refueling Group consistently demonstrates readiness and operational prowess well above U.S. Air Force standards and averages - providing global mobility and enabling warfighters all around the world.

The 127th Wing is the home of the Air National Guard's only Air Refueling Group integrated into an Air Combat Command-gained Wing. The historic 171st Air Refueling Squadron "Six Pack" flies the KC-135 Stratotanker in the high-demand Global Mobility Mission. From refueling U.S. Air Force, joint service and allied aircraft all around the world, to excelling in the strategic 80XX mission set, the 127th Air Refueling Group conveys to Selfridge F-35s a depth of training, capability, and readiness that has no peer in the Air National Guard. There are multiple Air Refueling Tracks located throughout Michigan where 127th Wing tankers regularly train with and deploy with Wing fighter aircraft. Many of the tanker tracks are assimilated into the Michigan Air National Guard's outstanding joint training airspace complex. The fusion of assets, expertise, airspace, priority scheduling, and adversary support provide exceptional opportunities and efficiencies for the Wing's fighter aircraft.

In addition to incomparable daily RAP training, Wing

INTRODUCTION



Recent Air Mobility Command (AMC) inspections rated 127th KC-135 Operations as "outstanding" - demonstrating the Wing's versatility in maintaining both an AMC as well as ACC gaining Major Command (MAJCOM) committment.

The integrated Air Refueling Group brings outstanding efficiency, flexibility, and readiness to 127th Wing F-35 operations

KC-135s have directly supported Wing fighter aircraft TDYs, State Partnership Program support, spin-up deployments, water survival training, and short notice taskings. On numerous occasions in 2015, 127th Wing Tankers refueled 127th Wing A-10s during Operation Inherant Resolve combat missions – combat proven Wing integration of diverse mission capabilities!

The bottom line: We the only Air National Guard Wing with collocated and integrated KC-135s bringing extraordinary flexibility, resiliency, and efficiency to 127th Wing F-35 operations.



127th Wing KC-135s provide flexible support capacity and flexibility in both RAP training as well as operational requirements for the F-35 mission.

INTRODUCTION

TENANTS

The 127th Wing operates and manages the "... model of intergovernmental cooperation, " (Rep. Candice Miller – 2015) hosting more than 44 tenant organizations replete with capabilities, expertise, and unrivalled partnerships. The arrangement is unique in the U.S. government and offers distinct synergies and economies.

The 127th Wing is the installation host, coordinating base-wide safety and security, operating support, utility infrastructure, environmental management, and much more. The level of cooperation between tenants is facilitated by monthly tenant meetings where base-wide issues are addressed and corporate decisions discussed with all equity holders.

The diversity of services and experience at Selfridge provide amazing teamwork and synergies that no other ANG base can match. The tenants also provide a wealth of opportunities for spouses and families of the 127th Wing and for future Active Duty associate families.





TOP: The U.S. Marine Corps has both an infantry battalion as well as an aviation support element that call Selfridge ANGB home.

MIDDLE: The U.S. Coast Guard maintains a regional search and rescue aviation element at Selfridge flying HH-65 Dolphin helicopters.

BOTTOM: U.S. Customs and Border Protection Detroit Sector Michigan is based out of Selfridge and includes an Operations Integration Center as well as the regional Air and Marine Wing.



TENANT ORGANIZATIONS AT SELFRIDGE INCLUDE:

- U.S. Air Force Joint Personnel Recovery Agency (JPRA)
- U.S. Air Force 339th Air Force Recruiting Squadron
- Joint Reserve Intelligence Center (JRIC)
- U.S. Navy Operational Support Center Detroit (NOSC)
- U.S. Marine Wing Support Group 47
- U.S. Marine HQ 1st Battalion, 24th Marine Regiment
- Coast Guard Air Station Detroit, Department of Homeland Security (DHS)
- Detroit Border Patrol Sector (DHS)
- Border Patrol Operations Integration Center (DHS)
- Great Lakes Air & Marine Branch (DHS)
- Natonal Guard Bureau (NGB) Contracting Support PARC
- NGB Civilian Human Resource Office
- Michigan Army Guard Army Aviation Support Facility CH-47 Chinook
- US Army Reserves 2-337th Training Support Battalion
- US Army TACOM/TARDEC more than 12 research laboratories and administrative offices
- US Army Morale, Welfare, and Recreation
 - Bryant Child Development Center
 - Base Marina
 - Base Golf Course
 - Mulligans Café
- Air Air Force Exchange Services (AAFES) Base Exchange
- Commissary/ Defense Commissary Agency (DeCA)
- Selfridge Air Museum / Michigan Air Guard Historic Association
- STARBASE ONE- the country's first STARBASE STEM education program
- United States Civil Air Patrol (CAP)
- Military Retiree Affairs

COMMUNITY SUPPORT

The 127th Wing and Selfridge are blessed with phenominal community support across the board. From an amazing Base Community Council comprised of over 250 local community leaders and our Military Affairs Committee to The Macomb Regional Chamber and many more – Selfridge enjoys widespread and universal support from the State, Region, County, and local Townships.

When the 127th Wing at Selfridge was announced on the "short list" of five bases being considered for Air National Guard F-35 basing, the base's community partners sprang into action. The public mif35.org website was developed and published by Macomb County with the assistance of the Michigan Economic Development Corporation to assist in educating the populace on the F-35 and the impact of Selfridge's selection and potential future operation of the aircraft. Numerous town hall forums and press events have been hosted by community organizations.

Macomb County government commissioned a community comparative study between the five base



Macomb County and the Michigan Economic Development Corporation teamed to conduct a comparative community study of the five bases being considered for the F-35.



LEFT: Community support for F-35s at Selfridge is widespread and universal. Macomb County developed social media outreach through mif35.org and have engaged statewide with press conferences, billboards, and town hall meetings throughout the region.

RIGHT: Selfridge holds regular open house/air show events to showcase the base and Team Selfridge to the local community. There is widespread community support for Team Selfridge.

Selfridge enjoys amazing and universal community support and advocacy

communities. The study shows the Detroit region has superior employment patterns, recruitment opportunity, talent base, occupational demands, contract infrastructure, and veteran's support. It's not just the base and the Wing that stand ready to support the F-35 – so does the wonderful community.

There is widespread community support for Team Selfridge and in favor of F-35 basing. From unity in support from the entire Michigan Congressional Delegation, and State, to elected local leaders, and advocacy groups – Selfridge stands unique in having universal positive community support in favor of F-35 basing.







TOP: Col. David Brooks, 127th Wing Vice Commander with the Detroit Tigers.

MIDDLE: The Selfridge Base Community Council consists of more than 250 local leaders.

BOTTOM: Leadership Macomb KC-135 Familiarization Flight.

WING-OPERATED AIRFIELD



The National Guard Bureau established the Michigan Air National Guard as the host of the Selfridge facility in 1971, a unique arrangement offering unparallelled capacity, safety, security, and flexiblity to F-35 operations.

Selfridge is one of only four ANG-operated and maintained airfields, and the only one on the current list of F-35 candidate bases. The 127th Wing has received many accolades including recently being lauded as the 2015 ANG Airfield Operations Complex of the Year.

The airfield complex boasts an impressive 1.2 million square yards of taxiway/ramp/runway

including a 9,000' \times 150' runway that incorporates a 1000' additional overrun on the south end that is available for takeoffs and landings.

Maintaining the airfield brings several advantages for F-35 operations, including Foreign Object

Selfridge was the 2015 Air National Guard Airfield Operations Complex of the Year Damage (FOD) control, physical and program security, encroachment management, wildlife and environmental control, and traffic priority/efficiency.

Other flight operations out of Selfridge include a myriad of DHS-assigned aircraft, Coast Guard H-65 Dolphin helicopters, Army National Guard CH-47 Chinooks, and a wide variety of transient and air terminal aircraft. Visiting aircraft in 2016 included Air

Force One, Air Force Two, deployment support 747s, 777s, 767s, C-17s, C-130s, and many more. All tenant flight operations are compatible with and operate on a non-interference basis with the Wing's flying missions.

"The dedicated professionalism of these fine individuals led the way in setting and exceeding superior standards." - S. Scott Duke, NGB Chief of Airfields, Ranges and C2 Division



Readiness stands as the first and foremost consideration in 127th Wing resource decisions. The men and women of Michigan's Hometown Air Force demonstrate the highest levels of readiness and capability. In this photo, a 127th Wing A-10 lands on a highway strip in Estonia in 2016.

READINESS

The 127th Wing motto is "We Stand Ready" - and we do. The Citizen-Airmen of Selfridge have proven their mettle in combat, daily in operations around the world, and under the microscope of the Inspector General. Like every ANG Wing across the country, readiness in today's environment is a constant challenge of setting priorities and managing risk to achieve balance while maintaining the Wing's value proposition. Despite problematic pressures of multiple conversions and A-10 divestiture uncertainties, the men and women of the 127th Wing have consistently demonstrated their grit in not only meeting readiness standards - but being recognized as the best Flying Wing in the ANG in 2016 (Spaatz trophy winners) as well as being only the third ANG Wing in history to receive the Meritorious Unit Award.

During the last transition from the F-16 to the A-10 in 2008-2009, the 127th Wing completed the conversion well ahead of schedule and deployed to Afghanistan



In 2015, the 127th provided more than twice the downrange mobilization of any other ANG unit in the country, with the Wing A-10s flying more than 11,000 hours with only 12 jets in a 6 month period!

- proving the mission resiliency, adaptability, and the culture of success in Michigan's Hometown Air Force.

During the last three years, almost every measure of readiness has increased. In 2015, the 127th Wing



Despite the challenges of multiple conversions and A-10 future mission uncertainties, the Wing has proven remarkably resilient and adept at meeting every challenge.

was mobilized at a rate more than twice any other, and flew significantly more hours than any other Air National Guard Wing. The result was more precision ordnance on target over longer distances than ever recorded to date in the Area of Responsibility (AOR). The 12 deployed A-10s maintained an astonishing 79% Mission Capable (MC) rate, well exceeding U.S. Air Forces Central Command (CENTAF) goals. The Wing's Fighter Squadron also dropped the first A-10 GBU-54 precision weapons in combat, proving ingenuity despite technical challenges and introducing a new level of flexible lethality to the battlefield. Selfridge A-10s are brutally effective at warfighting.

As the Wing has consistently proven time and again, Michigan's Hometown Air Force "Stands Ready"!



An Airman of the 127th Wing, receives and immunization from one of the Wing's technicians.

SAFETY



In 2016 the Wing and Macomb County cut the ribbon on a new traffic roundabout approaching the base front gate. This remarkable monument to community/federal cooperation eliminates numerous safety hazards and exponentially increases the efficiency of traffic both on base and in the community.

The 127th Wing offers a distinct safety and stewardship advantage. Selfridge's 24 years of Class A mishap-free aviation are testimony to a rich heritage of risk management and a proven safety culture permeating all aspects of Wing operations. Not resting on its safety laurels, the Wing stands vigilantly on guard regarding "near miss" indicators and robustly plans for contingencies.

The most effective Wing strategy to ensure a positive safety culture is to not only prioritize resources and strategic communication, but also to proactively address enterprise safety vulnerabilities. The 127th Wing maintains aggressive programs for Wildlife Management, Midair Collision Avoidance, Maintenance Safety, mishap reporting and investigations, Crew Resource Management, and



Safety is in the DNA of the 127th Wing! Selfridge boasts a remarkable record of proactive resource stewardship and efficiency that testify to the Wing's readiness to excel in future F-35 operations.

much more. Safety's Bird/wildlife Aircraft Strike Hazard (BASH) program maintains the highest standards using aggressive bird deterrent strategies, including modern acoustic and laser technologies in addition to traditional methods, resulting in a five year history with zero damaging wildlife strikes and an annual average of less than nine strikes.

The Wing's safety record speaks volumes to a commitment to strict adherence to our Air Force Core Values – Integrity, Service, and Excellence. Safety preserves our treasured talent and resources – and ensures our combat capability, both now and in the future. The 127th Wing safety record and current safety focus make Selfridge a smart choice to base and maintain future combat capability.

Selfridge's Safety Legacy: 24 years and more than 160,000 hours without a Class A mishap!



Your Homelown Air Loree Mc Stand Ready

COMBAT TESTED AND PROVEN



In 2015, the 107th Fighter Squadron deployed to the AOR for 6 months of continuous combat operations flying 1,700 sorties, logging 11,000 flight hours, and dropping 1,700 precision weapons - 272% above peer unit performance, proving both capacity and capability resulting in unsurpassed combat effectiveness.

The recent history of the 127th Wing showcased its mission of providing trained, equipped, and motivated air refueling, fighter, and support resources serving the Community, State, and Nation. With a long and very proud heritage, the 107th Fighter Squadron deployed to U.S. Central Command (CENTCOM) in 2015 for its the longest unit deployment since the Korean War. After nearly seven months of leading the fight in Operation Inherent Resolve it amassed a record of combat successes that remains intact to this day. The squadron deployed to fight ISIS. The squadron logged 1,700 combat sorties, dropped 1,594 precision munitions, and employed 19,000 rounds of 30mm. Finally, the unit pioneered the employment of the GBU-54 precision weapon from an A-10 platform with superior results destroying enemy forces. Following the lauded combat deployment, the 107th

127th Wing A-10s are brutally effective in combat!

"We should be so proud, they were perfect, they show the spirit of Michigan." - Michigan Governor Rick Snyder

shined again in supporting NATO efforts in Eastern Europe. 107th Fighter Squadron A-10s conducted the first highway landings with tactical aircraft since the height of the Cold War. In this high intensity media event, the unit demonstrated the ability to land A-10s on European highways underscoring the jet's continued rugged combat capability.

Concurrently, the 127th Air Refueling Group also deployed to CENTCOM in 2015. During that time, their aircraft had the best mission capable rate of all KC-135 units deployed then. Furthermore, the unit successfully accomplished a major U.S. Strategic Command (STRATCOM) Nuclear Operational Readiness Inspection (NORI) in 2015. The group's operations were rated "Outstanding" with the first ever in history perfect test scores in the history. It further was described as "almost flawless" during mission generation and unit employment. The Governor of Michigan's response was, "We should be so proud...they were perfect...their performance shows the spirit of Michigan." The CENTAF Commander described the 127th Wing as his, "go to" lead unit for critical Southwest Asia joint operations providing refueling, strike, personnel recovery, and Intelligence, Surveillance and Reconnaissance (ISR) capabilities. Indeed, the 127th Wing helped push Operation Inherent Resolve much closer to its end state.



Wing A-10s led the USAF in providing the first A-10C combat use of new GBU-54 precision weapon, increasing effectiveness more than 25% against dynamic targets "pushing OIR closer to an end state."

110TH ATTACK WING - BATTLE CREEK ANGB



The 110th Attack Wing is Selfridge's sister Wing of the Michigan Air National Guard, stationed at Kellogg Air National Guard Base, Battle Creek, Michigan. Formerly flying the A-10, C-21, and C-27J, the BRAC decision of 2005 changed missions

for the Wing, which has ultimately led to its current mission configuration.

The 110th Attack Wing operates MQ-9 Reaper operations through the 110th Operations Group. Starting in 2009, the 110th hosted an Air Operations Group (AOG) as a HQ Detachment. Through the years, the Group has evolved into the 217th Air Operations Group currently supporting the 603 Air Operations Group out of Ramstein Air Base, Germany – part of the 3rd AF assigned to U.S. European Command (EUCOM). Formerly, the 217th supported U.S. Africa Command (AFRICOM) and the 617th AOG which was part of the 17th Air Force. With four Squadrons including Combat Operations, Intelligence, Communications, and Air Combat Operations Support, the Group is largely a self-contained unit deployable for Command and Control during contingency operations.

The 110th Attack Wing at Battle Creek can immediately provide outstanding mission support integration into Selfridge F-35 operations, including ISR and cyber assimilation into the joint training airspace/ranges and incorporation of real-world cyber protection and security.



The 110th Attack Wing's 217th Air Operations Group (AOG) began operations in April 2009 providing critical support to 17th Air Force and includes five squadrons encompassing a wide array of career fields, combining medical, communications, logistics, with operations and planning.

CARING FOR PEOPLE

The 127th Wing maintains a robust "caring for people" emphasis in everything we do. The men and women who work at Selfridge are the true strength of the Wing. There are plans underway to consolidate all of these services under one roof as an Airman's Wellness Center in the near future.

Wing Chaplains provide spiritual care and the opportunity for Airmen, their families, and other authorized personnel to exercise their constitutional right to the free exercise of religion. This is accomplished through religious observances, providing pastoral care, and advising leadership on spiritual, ethical, moral, morale, core values, and religious accommodation issues.

127th Wing Family Readiness supports individuals,

families, and leadership with programs and services to strengthen communities, encourage self-sufficiency, and enhance mission readiness.

The Wing Director of Psychological Health advocates, promotes, and guides Wing members and their families by supporting psychological fitness for operational readiness.

The Employer Support of the Guard and Reserves contractor develops and promotes supportive work environments for service members in the Reserve Components through outreach, recognition, and educational opportunities that increase awareness of applicable laws, and resolves employment conflicts between the service members and their employers.



Deployment homecomings are special moments for Wing members and their families. Supporting deployed members and their families is always a top priority in the 127th Wing.

INTRODUCTION

The Wing Sexual Assault Response Coordinator (SARC) is available to assist victims of sexual assault. The SARC serves as the single point of contact for integrating and coordinating sexual assault victim care for members and is also responsible for providing Sexual Assault Prevention and Response (SAPR) training throughout the Wing.

The Suicide Prevention program manager encourages members' help-seeking behaviors and trains them to attain proficiency in the "Ask-Care-Escort" principles training.

The Wing Yellow Ribbon coordinator manages a legislatively mandated program to help service members and their families connect with their local support community before, during, and after deployments.

Many of the Wing contacts and caring for people resources have been incorporated into the Wing's pioneering smart phone 127 Wing app – providing one-touch access to care. The bottom line is: the 127th Wing Stands Ready to provide trained, capable, and resilient Airmen to support the F-35 mission.







TOP: Family services, chaplains, yellow ribbon coordinators, and more provide abundant support and service options. All Wing services are easily accessible through an innovative 127 Wing app.

ABOVE: The Wing and Team Selfridge annual holiday party draws thousands of members and their families together for wonderful food, activities, music, and fun.

BOTTOM: Yellow Ribbon events support deployed members' families. In 2015, the Detroit Pistons hosted children for a great afternoon of fun, food, and excitement.

OPERATIONS



A 107th Fighter Squadron A-10 lands at Selfridge ANGB having completed a local training sortie.



Two 107th Fighter Squadron A-10s depart a 127th Air Refueling Group KC-135 in the Alpena Airspace Complex and head towards Grayling Range to conduct a Close Air Support (CAS) mission.

OPERATIONS

CURRENT OPS TEMPO / MISSION

The 127th Operations Group consisting of the 107th Fighter Squadron and 127th Operational Support Squadron continues to meet the highly demanding Combatant Command requirements as well as sharpen its skills by participating in extremely demanding operational off-base exercises.

Over the last four years, the 127th Operations Group has participated in six large scale exercises, two of which were located in Germany and Latvia. In 2015, the 127th Operations Group deployed for its first ever six-month deployment to Ahmed Al Jaber Air Base, Kuwait in support of Operation Inherent Resolve. This was the longest deployment for the 127th Operations Group since the Korean War. Selfridge was one of only three Guard units to deploy for this long of duration, and accomplished the mission with great success.

The 107th Fighter Squadron's home station training consists of four days a week with two flight periods. This usually consists 10 - 12 sorties a day, but with the significant increase in pilot numbers filling the manning document, the unit will be increasing its local operational tempo to 16 - 18 sorties per day in the near future. The unit's annual flying allocation is usually between 3,500 and 4,000 hours. In 2015, the unit flew over 11,000 hours, nearly tripling its normal annual flying.

The unit's current missions consist





TOP: Col. Shawn "Lou" Holtz prepares to step to fly.

ABOVE: Daily flying operations leverage outstanding facilities as well as nearby airspace, ranges, and air refueling assets to ensure wartime readiness. of Close Air Support (CAS), Combat Search and Rescue (CSAR), Air Interdiction, and Forward Air Controller. Over the past several years, the Air National Guard has led the combat armed forces in developing new systems for the A-10 to better advance the aircraft and make it the premier and most highly sought after aircraft to support our troops on the ground for CAS. Combat Commanders specifically requested 107th Expeditionary Fighter Squadron aircrew and aircraft to be available 24 hours a day, seven days a week during Operation Inherent Resolve to provide Combat Search and Rescue and personnel recovery. Selfridge does not have an Aerospace Control Alert (ACA) mission.

The following tables compare current A-10 pilot Ready Aircrew Program (RAP) requirements vs. F-35 requirements.



The Combined Forces Air Component Commander stated the 107th Fighter Squadron was his "go to" lead unit for critical Southwest Asia joint operations including Strike, ISR, CSAR, and Personnel Recovery.



A-10 maintenance professionals ensure A-10 aircraft Mission Capable (MC) rates and are prepared to support all F-35 maintenance requirements in the future.

Sorties	Inexperienced Pilot	Experienced Pilot
A-10	92	68
F-35	108	96
Difference	+16	+28
Simulators	Inexperienced Pilot	Experienced Pilot
A-10	8	8
A-10 F-35	8 48	8 48

F-35 operations tempo would increase over current A-10 operations, but the utilization of hot pits, both at Selfridge and Alpena, will provide added capability to meet requirements. In addition, the 127th Wing has KC-135 tankers giving home-station F-35s a tremendous advantage for multiple fight-tank-fight operations.

AIRFIELD MANAGEMENT (AM)

Airfield Management/Airfield Operation's normal operating hours are seven days a week from 7:30 a.m. to 11 p.m. and closed on federal holidays. Since the airfield and Air Traffic Control facilities are Selfridge assets, the hours of operation can be adjusted to meet any operational need. The current pavement evaluation was conducted by Air Force Civil Engineering Support Agency (AFCESA) in November 2013. The Pavement Condition Survey was conducted in June 2017. The AM shop is comprised of nine contractor employees (full and part time), four Drill Status Guardsmen, a full time military Airfield Manager and Deputy Airfield Manager.

BASH conditions are determined daily during airfield inspections and checks. Wing Civil Engineering has a pest management shop that greatly assists in permits, harassment, depredation, and training. The airfield also uses an air cannon system, Long Range Acoustic Device (LRAD), and pyrotechnic devices for harassment measures.

Selfridge has two types of friction measuring equipment available to obtain runway condition readings during winter operations: The Decelerometer and the Continuous Friction Measuring Equipment.

The clear zones are maintained to ensure proper approach and departure airspace (50:1) is maintained. Many acres of trees have been removed or topped to meet weather minimums of base assigned aircraft.

The facility provides such excellent capacity and service that the airfield is used as a primary Hurricane Evacuation location by east coast and southern units.



127th Wing airfield managers maintain and manage one of the largest ANG facilities in the United States.



TOP: 127th Wing utilizes a new Long Range Acoustic Device (LRAD) to help manage wildlife hazards around the airfield.

BOTTOM: The 127th Wing operated and maintained airfield provides incomparable F-35 force protection, encroachment/noise management, and operational flexibility guaranteeing the long-term viability, efficiency, and sustainability of the F-35 mission.

RAMP SPACE / SHELTER SPACE / AIRCRAFT PARKING / AIRFIELD EFFICIENCY



The expansive ramp space of Selfridge provides unmatched capacity to accomodate up to 48 fighter aircraft and still routinely operate the KC-135 as well as multiple transient/deployment support aircraft.

Selfridge has two primary ramps. The East Ramp is comprised of 337,193 square yards and the West Ramp consists of 241,271 square yards of ramp space. One hundred percent of the East Ramp pavement joints replacements have occurred over the past five years with ongoing routine maintenance.

The East Ramp has designated locations for A-10s, Transient Alert, and KC-135s. The A-10 parking area consists of three parking rows: Alpha, Bravo, and Charlie. Alpha Row consist of 12 sunshades which were installed in 2009. All 12 sunshades have required tie-downs and grounding locations. In addition, the sunshades are equipped with GPS repeaters and are currently powered by portable generators, and could easily be retrofitted with permanent power. Bravo Row is currently sited for 12 additional A-10 parking spots with six spots having re-enforced tie-downs and grounding locations. Six additional grounding locations will be added to Bravo Row prior to the end of 2017. Charlie Row is sized to accommodate six KC-135s or 12 A-10s. It serves as the current hot pit re-fueling and rocket loading location for A-10s and has five grounding locations.

The pavement condition conducted by AFCESA for the A-10 ramp is GOOD.



Selfridge's extensive parking ramp make the base a "go to" location for hurricane evacuation support as well as a wide variety of transient aircraft. Selfridge's capacity and security/force protection make the base a regular destination for Air Force One/POTUS as well as numerous other VIPs and dignitaries.



In 2016, the U.S. Marine Corps staged deployments off of Selfridge's East Ramp, which easily accomodates six C-130H/Js in addition to the Wing KC-135 and A-10 operations.

The East Ramp has the Advantor Security System installed in the pavement as an additional security protection.

The West Ramp located west of the runway has a gun berm for unsafe forward firing ordnance located on the southeast corner of the ramp. The berm meets F-35 requirements for two aircraft and has painted lead-in lines to accommodate two aircraft simultaneously.

The 127th Wing/Selfrige ramp offers exceptional capacity to support F-35 operations



TAXIWAYS AND END OF RUNWAY (EOR)

Selfridge has excellent taxiway and End of Runway (EOR) facilities to support F-35 operations. The table below depicts Selfridge taxiway characteristics. All taxiways support F-35 operating weight requirements of the F-35 up to the 70,000 pounds maximum takeoff weight.

The simple addition of two 25' paved shoulders will be required on Alpha taxiway to meet F-35 requirements (See diagram on next page).

EOR (Arm/De-arm) operations are conducted on Kilo and Echo taxiways. Echo can currently accommodate four A-10s at a time with the ability to expand to five parking locations for the F-35. Kilo can currently accommodate seven A-10s at a time with the ability to expand to nine parking locations for the F-35. The most westerly parking position on echo EOR serves as the alternate unsafe gun location.



A 107th fighter squadron A-10 in "Last Chance" being readied for a local training sortie.

Taxiway	Width/ft	Waiver	Paved Shoulders
A	75	Yes (note 1)	No
B+	75	No	No
E	75	No	Yes (south edge)
G	75	No	Yes
Н	75	No	No
J	75	No	No
К	75	No	Yes (north edge)
L	50	Yes	No
Hot Cargo/LOLA		Yes	
East Apron		No	

(Note 1) Alpha Taxiway has seven waivers. One is for reflectors; this is scheduled to be corrected fall of 2017. The other six are due to non-frangible obstacles within 200' of taxiway centerline. None of these waivers have any effect for fighter aircraft.

OPERATIONS



SOUTH EOR



AIRFIELD TAXIWAY SHOULDER IMPROVEMENTS



RUNWAY CAPACITY



Selfridge ANGB boasts a 9,000' runway with capacity to meet all F-35 requirements. There are also multiple alternate/emergency airfields in the local area providing a variety of safe and efficient divert options.

There is a single grooved runway at Selfridge (Runway 01/19) with 25' paved shoulders. The runway is 9,000' x 150' with 1,000' overruns on each end. The southern overrun has the capability for takeoffs with an operational turn-around with the capacity to accommodate heavy airlift assets at maximum weights.

Although Selfridge is a single runway airfield, there are nine alternate airfields available within 150 miles with runways greater than 8000'. Of these nine, two of the airports are joint military-civilian airfields with runways in excess of 9,000' with BAK 14 barriers installed. There are three additional divert airfield options between 150 – 200 miles with runways in excess of 8,000', one of which is an Active-Duty base with BAK 12/14 barriers.



A KC-135 Stratotanker from the 171st Refueling Squadron lands at Selridge Air National Guard Base.


An Air Force C-17 on the Selfridge East Parking Ramp being loaded with equipment to support a wing deployment.

Selfridge previously had Aircraft Arresting Systems (AAS) installed on the runway, but they were decommissioned in 2009. The AAS were BAK-12 barrier systems without cable retraction. Pads were installed beneath the cable to control erosion of the runway surface from cable slap. BAK-12 barriers were set in shelters rather than pits due to high groundwater.

A BAK-12 barrier system could be installed in above ground shelters in conjunction with a BAK-14 cable retraction system (radio control from Air Traffic Control Tower). Significant cost savings can occur if the BAK-12 equipment is overhauled and supplied from other bases that no longer require an AAS.



The runway South end includes a 1,000' stressed overrun that can be utilized for takeoffs as well as a turn-around area for large aircraft use.

TERMINAL AIRSPACE (AIR TRAFFIC CONTROL)

The 127th Wing Air Traffic Control (ATC) fully supports F-35 requirements. The 127th Wing provides both Tower as well as Radar Approach Control (RAPCON) services to an area of responsibility covering more than 3,100 square miles. ATC services are provided to five base flying units on DoDs most diverse airfield environment, represented by every branch of US Armed Forces, Coast Guard, Homeland Security and Customs and Border Patrol Air and Marine. Tenant unit pilots are familiar with the local flight patterns as well as routes to and from training areas commonly used by 127th Wing aircraft.

Selfridge Air National Guard Base is home to AS-65, AS-350, H-60 and H-47 helicopters, C-206, B 350,



127th Wing aircraft routinely fly missions exclusively utilizing Selfridge ATC services from takeoff through RAPCON and into the working airspace and back, leveraging Selfridge/127th Wing operated facilities and airspace to accomplish training missions.



SELFRIDGE RAPCON CONTROL AIRSPACE



Selfridge Tower and "Selfridge Approach" RAPCON are located on the West side of the airfield in a modern facility built in 1999.



Recent expansions of Selfridge RAPCON controlled airspace resulted in a 43% increase in traffic handling events.

C-550 and A-10 fixed wing as well as heavy KC-135 tankers operating in a non-civil aircraft environment. It is routine for these highly experienced controllers to mix dissimilar airframes in local flight practice patterns and boast a perfect safety record doing so. Annual ATC operations traffic count for Selfridge RAPCON is 36,000+/ Tower 24,000+ with facility ops tempo resulting in an average of 100 operations daily for the RAPCON and 65 for Tower.

Operating hours for the RAPCON are 7 a.m. to 11 p.m. seven days a week, 365 days a year. The Tower operates 7:30 a.m. to 11 p.m. seven days a week, excluding federal holidays. Both facilities can easily transition to 24 hours operations if necessary to

A Selfridge run Airfield, Tower, and RAPCON allow for flexibility and prioritization to meet all F-35 flight operational requirements

provide mission support. Current manning provides 24 ATC and seven maintenance personnel to support flying operations.

All of the following ATC equipment, facilities, and Navigational Aids infrastructure are completely modernized, fully digital, highly reliable, and are equipped with auto-start generator capability: Digital Airport Surveillance Radar (DASR- ASR 11); Standard Terminal Automation Replacement System, the Air Force's most up-to-date ATC automation platform with high resolution color displays allowing controllers to monitor, control and hand-off air traffic; Airfield Automation System; automated weather equipment (AN/FMQ-19); Enhanced Terminal Voice Switch; Digital Audio Legal Recorder; Flight Data System II; ATC simulator (AT Coach); and Remote Status Indicators for ILS and TACAN.

The RAPCON/Tower are co-located, constructed in 2002 and renovated in 2014, STARS/DASR installed in 2014, ILS replaced in 2015, and TACAN in 2017. The Wing is commissioning a new Ground-To-Air-Transmit-Receive radio site in July 2017.

The northern-most 75 feet of the East Ramp is the only Tower blind zone on all movement areas. The feasibility of a Precautionary Flame-Out (PFO) pattern is high. Very similar to PFOs, straight-in and Overhead Simulated Flame-out patterns are already in place and addressed in the base flying regulation and Letter of Agreement with an adjacent ATC facility.

Civilian and commercial operations are not a factor for the 127th Wing flying mission. Selfridge RAPCON

safely manages and deconflicts all air traffic in the local area. Arrival/departure flows into/out of Detroit Metro Airport pass no closer than 20nm south of Selfridge, are at high altitude and have no impact on operations. The nearest civilian airports to Selfridge are Ray Community, 8 miles north northwest, and Romeo State, 13 miles northwest. Instrument Flight Rules (IFR) traffic to and from these airports is controlled by Selfridge Approach Control and annual traffic count numbers are low.

Selfridge ATC provides a unit based Terminal Intrument Procedures (TERPs) program that has developed, published, and maintained the following instrument procedures: Hi-ILS or Localizer (LOC) / Distance Measuring Equipment (DME) Runway 01/19; Hi-TACAN Runway 01/19; ILS or LOC/ DME Runway 01/19; and TACAN Runway 01/19. An RNAV/GPS procedure for Runway 01/19 has been developed and is at NGB/ACC awaiting final approval.

Noise abatement procedures are utilized at Selfridge for legacy fighter aircraft. These procedures include minimizing practice approaches between 11 p.m. and 7:30 a.m. and avoidance of heavily populated areas and nearby schools. Historically, the noise impact to nearby residences and businesses has been relatively low as indicated by noise complaint data. There are very few recorded noise complaints from Selfridge dating back to the early 1990s, when Selfridge was operating F-16s. Noise mitigation is optimized by runway selection and utilizing over-lake approach patterns and climbouts.



The location of Selfridge Tower provides an unobstructed view of all airfield areas of fighter aircraft operations.

COMMAND AND CONTROL (C2) / COMMAND POST

The 127th Wing operates a 24/7 Command Post supporting AMC 80XX requirements for the KC-135 mission. Having a persistent and enduring Wing C2 structure provides a range of responsiveness and resiliency above and beyond contemporary ANG fighter organizations. The Wing also maintains 24/7 fire response as well as a Base Defense Operating Center in support of base-wide operating requirements.

The 127th maintains a robust 24/7/365 vigilance and response to ensure a safe and secure installation for F-35 operations.

The Wing has recently declared Initial Operating Capability for a new Emergency Operations Center (EOC) and Crisis Action Team (CAT) facility incorporating state-of-the-art information management and communications systems providing outstanding situational awareness for Wing operations and emergency management.

A new EOC/CAT co-located with the Command Post facility is scheduled to become fully operational by fall 2017. The new Command Post facility will bring another significant improvement in Wing integrated command and control across a broad spectrum of mission requirements.



The 127th Wing command post provides 24/7 command and control of wing operations.



The Wing recently declared IOC of a new Emergency Operations Center (EOC) providing vastly improved C2 coordination and leadership decision-making and communication capability.

AIRSPACE AND RANGES

Michigan is home to the largest inland range complex east of the Mississippi. The vast expanse of training airspace/ranges allows Selfridge to meet 100% of the current F-35 RAP training requirements. The airspace measures an extraordinary 180 x 100nm, which at 12,750nm², is comparable to the Nellis Range complex in Nevada. Not only is there capacity, but the Selfridge airspace is also unsurpassed in capability. The Michigan Air National Guard's airspace and ranges provide ideal joint and large scale opportunities in a littoral environment directly overlying and integrated with ranges that allow for all-altitude, all ordnance deliveries as well as moving and fixed target capabilities. The 127th Wing's airspace provides a massive three dimensional arena to accomplish Supression of Enemy Air Defenses (SEAD), Air Interdiction (AI), Close Air Support (CAS) and Air-to-Air training requirements to include large



A depiction of the Alpena Complex with the Nellis Range Complex illustrating the expanse of Michigan's training capacity.

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package training. The Alpena (Selfridge) airspace and range complex ideally supports the regional Operational Training Infrastructure Flight Plan being developed by the Air Force and has the capacity to easily integrate live virtual construct (LVC) capabilities. WIth it's proximity to Canada, the Alpena Training Complex offers tremendous joint training capabilities with Canadian CF-18s and F-35s as well as international and other service partners as part of Michigan's annual Northern Strike Exercise. The airspace is owned and scheduled by Michigan Air National Guard (MIANG), ensuring scheduling optimization and prioritization resulting in efficiency and increased readiness. This impressive airspace begins a mere 53nm north of Selfridge.

Michigan's extensive and contiguous airspace and ranges meet 100% of the F-35 aircrew readiness requirements!



In addition to its immense size, the Alpena complex offers the capability for:

- Three Mobile Joint Threat Emitters
- Supersonic flight
- Ground Control Intercept capability through "Huntress" control
- Live Virtual Construct (LVC) capability (future capability)
- Airspace conducive to large force exercise execution flown out of Selfridge and Alpena

MICHIGAN MILITARY AIRSPACE

The Alpena airspace complex is comprised of the Steelhead, Pike East, Pike West, and Grayling Military Operations Area (MOAs) as well as the Garland, Molson, Lumberjack, Firebird, and Steelhead Air Traffic Control Assigned Airspace (ATCAAs). This contiguous airspace complex overlies the R4201 and R4207 restricted areas as well as the Alpena Combat Readiness Training Center (CRTC) itself. Combined, the Alpena training complex airspace provides allaltitude training from low altitude up through FL450 – and is scheduled to expand even more in the near future!

The Alpena CRTC is currently working on airspace expansion which would vastly increase the size of the Michigan training airspace, both horizontally and vertically. These changes would increase the volume of training airspace allowing for a greater number of combined air assets and increase Low Altitude Training options. This expansion will also tie the Alpena complex to R-4201 in the low to medium altitude regime which is critical for joint training with rotary wing assets.



The Michigan airspace allows the F-35 to take full advantage of long-range advanced sensors and joint platform cooperative engagement capabilities.

The 127th Wing has scheduling priority in Michigan Military Airspace.

ALPENA COMPLEX HIGH ALTITUDE AIRSPACE



ALPENA COMPLEX LOW ALTITUDE AIRSPACE



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RESTRICTED AREAS

GRAYLING – (R4201 A/B)

As one of the nation's world class Joint Maneuver Training Centers, Camp Grayling combines unique resources that provide a wide variety of training scenarios to meet unit readiness requirements. Grayling not only includes an expansive aerial gunnery range, but concurrently hosts large artillery, mortar, tank ranges, and maneuver courses making Grayling one of the best joint training environments in the United States.

R4201A extends from the surface up to 23,000'. R-4201B extends from the surface to 9,000'. Both of these ranges together provide an exceptional low to medium altitude training environment encompassing approximately 100 square miles. The Garland ATCAA overlies R-4201A connecting it to the Alpena Complex providing a tremendous high altitude capability to integrate air-to-air and air-to-ground training.



Grayling range offers conventional weapons delivery options as well as dynamic and joint integration training opportunities.

Grayling fully supports F-35 RAP requirements including:

- Live fire capable range, score capable arrays, heated targets
- F-35 laser certification (survey completed July 2017)
- Joint Direct Attack Munition (JDAM) approved targets
- Joint Terminal Attack Controller (JTAC) instructors on staff full-time
- Co-located with Army National Guard artillery range
- JTAC simulator for Live-Virtual-Constructive
- Joint Threat Emitter adjacent to impact area
- Multiple villages and urban areas for theater-specific training
- Datalink capable with Joint Range Extension (JRE)
- Low and medium altitude live/inert/ training ordnance capability (BDU-33/Mk76)
- Aerial gunnery targets including 20/25/30/40mm TP/HEI
- Full range of heavyweight live and inert ordnance from all altitudes including BDU-50/56, Mk-82, GBU-12/51, GBU-10/16 (inert), the Laser-Guided Training Round (LGTR), GBU-31, GBU-32 (inert), GBU-38, GBU-44B, and GBU-54.
- Full capability to support self-protection flares, illumination flares, and chaff

GRAYLING RANGE AIRSPACE



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SECTIONAL MAP DEPICTING GRAYLING RANGE





127th Wing A-10s overfly the Grayling Range complex.

RESTRICTED AREAS

LAKE HURON OVERWATER RANGE (R4207)

Michigan's expansive 50 x 20nm overwater range supports F-35 RAP training by providing moving and fixed maritime target capability fused with the ability to support allaltitude deliveries of a wide range of training, inert, and live free-fall ordnance, live missiles including AGM-65 through AGM-114 as well as self-protection chaff/flares. Weapons delivery capability includes aerial gunnery up through 40mm.



The Lake Huron Range offers exceptional and unique training capacity for F-35 operations. In this picture, an inert 2,000 pound GBU-10 laser guided bomb is about to impact a remote controlled boat target.



R4207 is an exceptional littoral environment for unique maritime training. It is also one of the very few inland ranges east of the Mississippi that allows missiles such as AGM-65 Maverick missiles to be fired offering a great opportunity for joint fires integration with other fixed wing and rotary assets. The Pike East MOA overlies R-4207, once again providing tremendous opportunities for large scale exercises integrating air-to-air and air-to-ground training.

The Lake Huron Range not only provides F-35 RAP/readiness but ensures a wide range of joint training opportunities not available anywhere else in the nation. The over water and littoral training capability integrated into the expansive Michigan airspace and Grayling Range provide unequalled F-35 training. The Lake Huron Range provides unique maritime and littoral training including all-altitude weapons deliveries for both fixed as well as moving targets



JOINT THREAT EMITTERS / MAST

Michigan boasts an impressive threat replication and Electronic Warfare (EW) training capability to support F-35 and joint training. Assets include widely deployed and mobile Joint Threat Emitters (both wideband as well as KIT 1) as well as a Man-Portable Aircraft Survivability Trainer (MAST). This currently fielded capability provides realistic double-digit Surface to Air Missile (SAM) EW as well as visual recognition training through life size Opposition Force (OPFOR) threats that can produce IR signatures, rotating radars, and target engagement training supported by the joint threat emitters, "Smokey SAMs," and other means.



The handheld MAST provides pilots realistic Man Portable Air Defense (MANPAD) threat simulations.

Mobile threat emitters incorporated into Alpena's vast airspace complex offer unrivalled EW and SEAD training opportunities for the F-35.

The Alpena complex's three mobile Joint Threat Emitters provide realistic replication of modern threat systems for realistic and efficient F-35 training.

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JTAC SUPPORT

Grayling and Alpena CRTC offer excellent Joint Terminal Attack Controller support for fighter operations on the exceptionally capable Grayling Ranges. A full-time Combat Training Flight supports integration of JTACs into air and land operations and training, including six staff JTAC instructors and evaluators. This includes facilitating unit-level and large force exercise training events, as well as Joint, State Partnership Program, NATO, and other Coalition JTAC training engagements. Routine JTAC partners include US Army, US Marine Corps, U.S. Special Operations Command (SOCOM), Latvia, Canada, Poland, Lithuania, Estonia, UK, Germany, and Denmark. The Grayling range is collocated with the Army National Guard Artillery Range and incorporates training into the on-site JTAC simulator for Live-Virtual-Constructive.

Grayling Range is one of the largest JTAC training facilities in the US offering joint service as well as international coalition F-35 integration.



Grayling Range operates one of the USAF's premier JTAC training operations - ensuring consistent and proficient Joint Close Air Support coordination and training opportunities.

DRY TARGET TRAINING UNDER TRAINING AIRSPACE

There are abundant and diverse dry training targets available for F-35 operations. On the Grayling Range complex there are replicate air defense systems (including EO/IR/RCS signature) for the ZSU-23-4 Shilka, SA-8 Gecko, SA-6 Straight Flush/Gainful and SA-15 Gauntlet. Off-range dry targets of all varieties are limitless when leveraging the all-altitude, all-speed 180 x 100nm low population density airspace complex expanse that includes over land, over water, littoral, sea lines of communication, maritime, and land arrays.



AIR-TO-AIR REFUELING



Colocated training and air refueling airspace combined with readily accessible 127th Wing KC-135s ensures efficient and flexible F-35 training opportunities.

The 127th and Michigan provide excellent Air-to-Air Refueling (AAR) support for F-35 operations and training. Michigan Air Refueling Airspace includes AR107, AR632 (Garland), Pike West, Steelhead, AR321, and AR109H. These abundant and operating airspace co-located AARs along with 127th Wing assigned KC-135s (discussed separately) results in flexible, efficient AAR support that is easily accessed and available.



A-10s regularly refuel with 127th Wing KC-135s in the Alpena complex.

ALPENA CRTC

The Michigan Air National Guard's Alpena Combat Readiness Training Centers provides premier support, facilities, instruction, and airspace to DoD, DHS, coalition, and emergency responders. Alpena is one of four CRTC's in the United States and operates the largest airspace east of the Mississippi River, including 147,000 acres for ground maneuver units. More than 20,000 joint and coalition personnel train at Alpena annually.

Only the second organization in the Air National Guard to be certified as a Joint National Training Center, the base boasts a 9,000' runway with barriers, parking for up to three squadrons of fighter or F-35 training adversary aircraft, as well as live load/flight operations and service. Alpena offers unparalleled JTAC training including a JTAC four-meter dome simulator. Comprehensive base operations, fire, operations, range instrumentation, lodging, and base support offer an efficient and comprehensive training environment.

Alpena capabilities include but are not limited to:

- Certified Joint National Training Center
- Billeting / dining facilities for 1,000+ personnel
- Configurable facilities for operations, maintenance, and support
- Ramp space for three flying squadrons (including joint operations or adversary aircraft)
- Instrumented air-to-air ranges (ACTS) and Ground Controlled Intercept GCI (AWACS sim) airspace capability
- Three Joint Threat Emitters
- Drop zones and assault landing
- Military Operations On Urban Terrain



Alpena CRTC underlies the F-35 training airspace complex and provides exceptional efficiencies and safety opportunities for F-35 operations.



The Alpena CRTC airfield can accomodate up to three squadrons of adversary aircraft, support live weapons operations, as well as provide deployed and emergency support to the F-35.

NORTHERN STRIKE

The true capabilities of Michigan's airspace and range complex are highlighted every year in the joint exercise known as Northern Strike. It is a National Guard Bureau-sponsored exercise uniting approximately 5,000 Army, Air Force, Marine, and Special Forces service members from 20 states and multiple coalition countries at the Camp Grayling Joint Maneuver Training Center and the Alpena CRTC.

The unparalleled success of the Northern Strike exercises underscore the immense capability, capacity, and growth opportunities for F-35 training in Michigan. Acclaimed by the Joint Chiefs of Staff and the Chief of the National Guard Bureau, Northern Strike serves as a testament to the immense capabilities of the Michigan joint training complex.



Northern Strike offers unique joint training. USMC LVTP-7 amphibious vehicles are seen traversing Lake Margarethe in Camp Grayling during Northern Strike 16.

Michigan's Northern Strike is the only accredited reserve component joint training exercise in the United States!

Senior DoD Leaders observe Exercise Northern Strike 2016. Diagonally from left to right Deputy **Assistant Secretary of Defense for Manpower and Reserve Affairs, Hon. Todd** Weiler, Gen. Robert Neller, Commandant USMC, Gen. Joseph Lengyel, Chief of National Guard Bureau, Lt. Gen. Raimonds Graube, **Chief of Defense Republic** of Latvia, GEN. Robert Abrams, Commander U.S. Army Forces Command.





Northern Strike allows combined arms and joint fires exercises for all services including Reserve and Active component members as well as international coalition partners.



LEFT: An A-10 dispenses self-protection flares after completing a live weapons delivery during Northern Stike 16.

RIGHT: Grayling Range offers live joint fires training. Army National Guard soldiers coordinate artillery fire from a M777 155mm Howitzer during Northern Strike 16.

OTHER SELFRIDGE F-35 ACCESSIBLE AIRSPACE AND RANGES



In addition to exceptional in-state training airspace, Selfridge has multiple other Airspace and Ranges available within 243nm, providing multiple weather alternatives. These include:

- Hersey MOA (108nm)
- Minnow MOA (R6903) (175nm)
- 12-Mile/Hilltop (177nm)
- Misty MOA (185nm)
- Buckeye/Brush Creek MOA (190nm)
- Duke MOA (195nm)
- Jefferson Range (R3403)- (237nm)
- Atterbury Range (R3401A) (242mn)

MILITARY TRAINING ROUTES

In addition to airspace, the 127th Wing's local flying area also incorporates a wide range of low-altitude training routes for use by military aircraft to gain and maintain proficiency in tactical "low level" flying below 10,000' and greater than 250 knots. Selfridge local area VR routes include: VR 632, VR 634, VR 664, VR 1617, VR 1624, VR 1625, VR 1626, VR 1627, VR 1628, VR 1638, VR 1640, VR 1642, VR 1644, VR 1645, VR 1647, VR 1648, VR 1667, and VR 1668.



EMERGENCY/ALTERNATE AIRFIELDS

Nearby emergency and alternate airfields with runways at least 8,000' that could support F-35s include:

Windsor, Canada	202/21nm from Selfridge	8,700' runway, emergency divert, excellent condition, limited services
Detroit Metro	232/33nm from Selfridge	12,000' multiple runways, no cables, excellent condition, limited services/security
Toledo, Ohio	221/75nm from Selfridge	10,600' runway, BAK-12/14, excellent condition, full service and security
Battle Creek, Michigan	267/108nm from Selfridge	10,000' runway, no cables, excellent condition, 110ATKW support available
Mansfield, Ohio	178/108nm from Selfridge	9,000' runway, no cables, excellent condition, ANG unit support available
Oscoda, Michigan	348/114nm from Selfridge, underlies operating airspace	11,800' runway, emergency divert, marginal condition, limited services
Ft. Wayne, Indiana	234/144nm from Selfridge	12,000 & 8,000' runways, no cables, excellent condition, full service and security
Alpena, Michigan	353/152nm from Selfridge, underlies operating airspace	9,000' runway, BAK 14, excellent condition, full service and security
Rickenbacker, Ohio	168/168nm from Selfridge	12,100' runway, no cables, good condition, limited services available
Springfield, Ohio	221/175nm from Selfridge	9,000' runway, no cables, excellent condition, ANG unit support available
Wright Patterson AFB, Ohio	205/177nm from Selfridge	12,600' runway, BAK 12, excellent condition, full service and security
Grissom ARB, Indiana	239/190nm from Selfridge	12,500' runway, no cables, excellent condition, services/security available

SELFRIDGE F-35 COMPATIBLE ALTERNATE AIRFIELDS



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AIRSPACE/RANGE SUMMARY



An A-10 fires the impressive GAU-8 30mm cannon on Grayling Range during a JTAC controlled CAS mission. The versitility of the Michigan range and airspace provide exceptional training for a wide range of aircraft from all services as well as international allies.

Michigan has no peer when it comes to integrated and comprehensive F-35 training/readiness/RAP capability. Whether it's deliberate or dynamic, small formation or large force employment, adversary or ground range supported, cooperative or contested environment, Michigan stands alone when it comes to 5th Generation Fighter readiness support and integration potential. Michigan is rapidly building a future robust joint live virtual construct integration in the airspace and ranges.

The bottom line is that Michigan Airspace and Ranges stand alone. With the 127th Wing priority over the Michigan ranges, the state offers exceptionally robust and overlapping capabilities of airspace, ranges, threat replication, and operating environment diversity to meet 100% of the F-35 RAP requirements. Michigan has no peer when it comes to integrated and comprehensive F-35 training/ readiness/RAP capability. Michigan meets 100% of the F-35 training requirements!

SAFETY AND ENVIRONMENTAL



As one of the Air National Guard's only Wing operated and maintained airfields, the 127th Wing maintains a flexible independence to proactively manage encroachment and wildlife issues in and around the airfield environment as well as prioritize flight scheduling to maintain optimal F-35 flight efficiency and safety.

The 127th Wing operates and maintains its own airfield environment. There are no encroachment, noise, or environmental issues. Selfridge maintains inclusive management plans and strategies including the only ANG base with a comprehensive Installation Comprehensive Encroachment Management and Action Plan (ICEMAP) in development.

The Wing maintains a robust BASH plan to ensure safe aircraft operations. The Wing averages fewer than nine birdstrikes per year and has had zero damaging strikes in the last five years. Most Selfridge wildlife hazards peak in the summer months (June - August). Less than one percent of the typical flying schedule periods see any restrictive bird watch conditions. This minimal impact is due to aggressive wildlife management including two full-time civilian employees as well as USDA support that has increased this last year to include a full-time wildlife expert. The Wing is one of the few ANG organizations to purchase and employ a LRAD for the management and mitigation of airfield wildlife hazards.

SQUADRON OPERATIONS

Intelligence, weapons, mission planning, and flight briefings are conducted in a 4,939 sq. ft. JAFAN6/9 area which includes a Top Secret (TS) level vault, six briefing rooms and one large force employment briefing room.







The Squadron patch reads Mors Hostibus, which translates as Death to the Enemy - a fitting motto for a unit with a distinguished combat record.



Top: An A-10 parks after completing a training sortie.

Left: Close up of the 30mm GAU-8 Avenger Gatling gun from an A-10 Thunderbolt II of the 107th Fighter Squadron.

Bottom Left: A crew chief with the 127th Aircraft Maintenance Squadron, marshals an A-10 Thunderbolt II from the 107th Fighter Squadron.

VAULT SIZE AND CLASSIFICATION

The Mission Planning Cell (MPC) has a certified Class "A" vault integrated into the suite (Room 158). The vault is complete with a GSA certified Class 5 vault door with an X-09 electro-mechanical lock installed. The vault also has a pedestrian gate door that is used for circulation control while the vault door is open. The vault is alarmed separately from the rest of the suite and is currently certified to store classified up to collateral TS.



BRIEFING ROOMS AND SIZE

There are six Flight Briefing Rooms at approximately 120 square feet each with access to the classified local network drive. Four of these briefing rooms will be modified with folding walls separating them to allow for multi-ship configurations. A large force employment briefing room measuring 21.5' x 14.5' is also available for large package brief/de-brief.





Further squadron briefing rooms support up to 24 fighter aircraft operations.

AIRCREW FLIGHT EQUIPMENT (AFE) PILOT FLIGHT EQUIPMENT (PFE)

A 5,491 sq ft Aircrew Flight Equipment shop currently supports 62 pilot equipment/chemical lockers that would only need minor internal modifications for an 18" x 18" x 18" pilot helmet shelf. The flight equipment shop has a dedicated, climate-controlled parachute packing room, an aircrew egress hanging harness room with a simulated cockpit, Night Vision Goggle room with an HMIT tester, climate controlled floatation room, and survival kit room. AFE equipment is supplied with a 70K electronic supply storage system, dedicated helmet repair/inspection section, and four sewing areas.



107th Fighter Squadron Aircrew Flight Equipment facilities offer excellent capacity for up to 24 aircraft F-35 operations.



107th Fighter Squadron pilots enjoy outstanding Aircrew Flight Equipment expertise and facilities.

MISSION PLANNING ROOM/INTEL

The total classified Intelligence area consists of nearly 1,500 sq ft with a traditional vault, two private offices, two storage rooms, and a common work area. The vault is 360 sq ft with an XO-9 lock provisioned up to TS and includes an additional intrusion detection system availability within the overall Mission Planning Intrusion Detection System.

The Operations Facility vault has six SIPRnet terminals, three NIPRnet terminals, STE hardware, and a soonto-be-installed SVOIP capability. The two offices have three NIPRnet terminals. The common work area has three NIPRnet terminals and access to the Mission Planning Room classified computers for mission planning training with capability to add an additional three terminals.

The total mission planning area, including Flight Briefing Rooms, is nearly 5,000 sq ft and is built to JFAN 6/9 Standards. It can be converted to a Special Access Program (SAP) facility or a Sensitive Compartmented Information (SCI) facility for mission planning use. It contains two restrooms and two emergency safety exits. The entire mission planning complex is wired with an intrusion detection system and an access control system.



There are seven Flight Briefing Rooms including a large multi-ship briefing room which is approximately 300 sq ft and is connected to the NIPRnet and has access to the classified local network drive.

The six Flight Briefing Rooms are approximately 120 sq ft with access to the classified local network drive. Four rooms will be modified to expand into multi-ship configurations with folding walls.

The Weapons Section is over 750 sq ft and includes a classified weapons library (up to SECRET / NOFORN) and four NIPRnet terminals.

MASS BRIEFING ROOM SIZE/CLASSIFICATION



The Main Auditorium is 1,302 sq ft and can comfortably seat 100 personnel. It is built to JAFAN 6/9 standards with an access control system. There are cameras that monitor the building's exterior and is connected to the NIPRnet with computer access.

107th Fighter Squadron briefing room has a seating capacity of 100.

SIMULATOR TRAINING

The current Operations Bldg 34 Simulator Facility is not large enough to host the four co-located F-35 simulator bay square footage requirement. Instead of new construction/MILCON, Selfridge can utilize Bldg 117, located across the street, to renovate to meet requirements. Current internal dimensions of Bldg 117 are 115' \times 202' – providing 23,200 sq ft of space with a facility height of 22' – well exceeding the prescribed 19,000 sq ft simulator and simulator support requirements. The current Bldg 34 simulator facility can be repurposed for hosting F-35 Autonomic Logistics Information System (ALIS) requirements The 127th Wing can support the F-35 simulator requirements without any new construction/MILCON.

TOP: The 107th Fighter Squadron currently houses two full fidelity A-10 simulators in building 34.

BOTTOM: Simulator training provides pilots unique 2-ship distributed flight training scenarios that can be customized to any area of the world, allowing pilots to fly and practice in real-world scenarios 24/7.





BACKGROUND: Building 117 is accessible just across the street from Squadron Operations and provides a ready-togo existing facility to easily house a 4-bay F-35 simulator as well as all support requirements.



127th Wing can expeditiously support the F-35 simulator requirements without any new construction/MILCON.



TOP: Draft engineering diagrams depict the proposed layout of Building 117 supporting all four F-35 simulator bays and all required support.

BOTTOM: Building 117 has a capacious 23,000+ sq ft of space easily able to house F-35 simulators.



OPERATIONS FACILITY

The 107th Fighter Squadron operates from within a newly renovated (2013) 28,798 sq ft facility capable of supporting F-35 operations. The squadron contains a 2,450 sq ft JAFAN6/9 secure room with raised computer floor / static free and environmental controls that currently supports two A-10 simulators that would easily convert to support ALIS. The intelligence, weapons, mission planning, and briefings are conducted in a 4,939 sq ft JAFAN6/9 secure area which includes a TS vault, six briefing rooms and one large force briefing room. The ops facility also has a JAFAN6/9 secure 100 person/1,302 sq ft capacity theater.

The 107th Fighter Squadron facility meets or exceeds all F-35 requirements and has the capacity to support a 24 aircraft F-35 squadron.



Building 34 is the home to the historic 107th Fighter Squadron "Red Devils."



MUNITIONS STORAGE AREA (MSA)



An aerial view of the 127th Wing's Munitions Storage Facility - which offers such a capacity that it has been used as a regional War Reserve Material (WRM) weapons repository.

The 127th Wing operates a robust MSA facility, which was formally a regional WRM munitions storage facility, with four buildings each containing 30 multicubes capable of storing 1.1 explosives. Selfridge's extensive MSA also includes an igloo/ earth covered magazine with a total MSA storage capacity of 27,500 pounds of net explosive weight. Also, three additional earth covered igloo's, utilized by other government agencies on support agreements, could be returned to further bolster our munitions storage capabilities.

The Selfridge munitions flight can perform three simultaneous build operations utilizing two modern facilities, which were constructed in 2012, and their sited MAC pad. Selfridge also boasts a HOT cargo pad / Live Ordinance Load Area (LOLA) capable of handling 21,000 pounds of live munitions. Unlike most Air National Guard MSA operations, Selfridge can conduct concurrent explosive build operations, has a functioning MAC pad for live munitions build up.



The spacious MSA of the 127th Wing supports live weapons deliveries out of Selfridge ANGB.

Selfridge ANGB is Explosives Site Plan (ESP) cited to accommodate four live load parking spots located on taxiway Mike. Four hundred pounds of net explosive weight per spot is authorized. Current storage, build up, live load, and operations procedures accommodate live ordnance training in support of A-10 operations. Located near the MSA, this site is a convenient location to expeditiously transfer
munitions minimizing impact to airfield aircraft and vehicles. Selfridge is approved to fly live munitions out of our own airfield. Combined with additional live ordnance capability at Alpena CRTC, the 127th Wing is well suited for F-35 ordnance requirements. The 127th Wing Munitions Storage Area can fully support F-35 operations



A precision-guided, 500-pound weapon loaded on a 107th Fighter Squadron A-10.

OPERATIONS

WEATHER

The weather at Selfridge provides realistic training and operations capability. Temperatures range from 18 to 32 degrees Fahrenheit in February and 62 to 80 degrees Fahrenheit in August.

Selfridge experiences all four seasons of weather. Macomb County averages two to three inches of precipitation each month. Weather attrition is factored into the annual flying program. Hazards associated with Michigan weather are below average compared to other parts of the country. There are occasional thunderstorms and exceptionally rare tornados (21 recorded in the county over the last 30 years).

Approximately 40% of the high altitude training airspace within the Alpena complex overlies Lake Huron. Seasonally, lake temperatures can fall to levels requiring aircrew to wear anti-exposure suits when operating beyond gliding distance from the shoreline.



Michigan enjoys four distinct seasons of weather providing the Wing a diversity of operating environments.



MAINTENANCE / LOGISTICS

The 127th Maintenance Group (MXG) is uniquely qualified and ready to bed down the F 35. The depth and breadth of experience of the maintainers is proven by winning the Spaatz Trophy as the top flying Wing in the Air National Guard. With experience in multiple airframes and aircraft conversions, the 127 MXG is eager and ready to accept the F-35 mission. With a combat proven track record and accolades from standing up one of the first Air Sovereignty Alert sites on September 11, 2001, to being the first fighter aircraft (F-16) to deploy inside Iraq in 2004, and achieving multiple successes with the A-10 (Afghanistan, Latvia, Estonia, Kuwait for Operation Inherent Resolve), the Group has the motivated and skilled Airmen with the know how to be the premier F-35 unit. Most importantly, the men and women of the 127 MXG are extremely excited and ready for this new challenge.

Although the facilities are capable of handling the F-35 mission, with minor modifications, there is



Maintenance facilities of the 127th Wing easily support a 24 fighter aircraft operation and could support up to 48 with only minor modifications.

an A-10 maintenance complex facility upgrade currently in programming. These new upgrades would consolidate Maintenance Group functions, address some longstanding infrastructure issues and could easily be adapted to meet F-35



Current MXG Facility Map

requirements. This plan, follows the recent MSA upgrade which provided new facilities and affording new capability of building and storing live munitions to support combat flying training requirements directly from Selfridge.

Under the Enduring Fighter Mission Facility Upgrade plan, several buildings are in the programming phase of modernization to meet the 127th Wing Enduring Fighter mission. This upgrade is a combination of MILCON and Sustainment Restoration Maintenace (SRM) projects which upgrades Buildings 3, 4, 5, 18, and 120. This upgrade allows consolodating geographically separated maintenance functions into a more centralized complex while upgrading some longstanding infrastructure issues. This upgrade has been in planning stages for over ten years but has been delayed based on previous Base Realignment and Closure (BRAC) and the potential A-10 divesture. Our plan has a 5 - 8 year construction timeline, which modernizes our 80-year-old buildings. This project is independent of any F-35 beddown actions.

The 127 MXG Stands Ready for this new and exciting mission.



An A-10 Fighter Squadron A-10 being prepared for flight by 127th Maintenance Group professionals.

MAINTENANCE / LOGISTICS

Selfridge's robust infrastructure provides ample hangar space and the capability to shelter up to 24 F-35 aircraft. Regular aircraft storage and maintenance operations in environmentally controlled hangars equips the 127th Wing with a unique ability to efficiently maintain and operate the F-35 as well as provide physical and program security above and beyond program requirements.





The iconic Base Operations Building 50 at Selfridge serves as a symbol of the rich heritage and unique infrastructure of the base and the dual aircraft missions (both A-10 and KC-135) of the 127th Wing.

BLDG 50

Building 50 currently houses the 127 Maintenance Operations Flight personnel to include Maintenance Operations Control, Plans, Scheduling and Documentation, Training, Analysis, Unit Deployment Manager and the MXG Resource Advisor.



BLDG 18

Building 18 houses flightline avionics and consists of 1,800 sq ft supporting most AMU shops complete with a Datum (space saving) Storage System. The Avionics Back Shop (AIS) will not be required by the F-35 and the space can be repurposed for other areas.



BLDG 45

Building 45 Current maintenance area consists of four maintenance bays (two drive-through bays) and one wash rack totaling 6,280 sq ft. The required 120/460 VAC and LAN drops are available. Located adjacent to aircraft parking ramp, the current storage area is sufficient to store all powered/non-powered (203 pieces of AGE equipment) as required.

AGE FACILITY

The AGE facility will move to the west end of Hangar 3 West under the Enduring Fighter Mission Facility Upgrade plan.

BLDG 46

Building 46 is currently the Electronic Counter Measures (ECM) shop which provides maintenance and storage for 27 ALQ-184 pods. Under the Enduring Fighter Mission Facility Upgrade programming plan, ECM would move to Bldg 117. ECM is not required for F-35 support.

BLDG 120

Building 120 currently houses 127th Maintenance Squadron Accessories and Fabrication elements. Under the Enduring Fighter Mission Facility Upgrade programming plan, this facility would only support Non-Destructive Inspection (NDI), machine shop, sheet metal/corrosion, and associated composite maintenance, paint prep room, and paint booth. Other entities currently in the facility will move to Bldg 18. Under the F-35 construct, this building would support the increased manning associated with Low Observable (LO) maintenance.



127th MXG facilities support a wide range of metals and fabrication requirements.



A trained and proficient 127th MXG metals craftsman welds a container in the machine shop at Selfridge.

AIRCRAFT HANGARS



An aerial view of Hangar 3 and Hangar 5 as well as Bldg 18 and the flight line access next to the 12 aircraft sunshelters on the 127th Wing flightline.

Selfridge's robust infrastructure supports the ability to hangar up to 24 F-35 aircraft. Regular aircraft storage and maintenance operations in environmentally controlled hangars presents the 127th Wing a unique ability to more efficiently maintain and operate the F-35 as well as provide increased physical and program security.

Hangar 5 East provides 13,500 sq ft of hangar space. It would house two F-35s with sufficient clearances to perform engine maintenance. One space is dedicated for weapons load training. The hangar has 440 VAC and 120 VAC, grounding points, eye wash/ showers and compressed air in addition to energy efficient LED lighting. Two additional F-35 aircraft could fit inside this facility for sheltering purposes while maintaining structural clearance requirements. Hangar 5 Center is a two story, 4,000 sq ft facility for administrative and Aircraft Maintenance Squadron (AMXS) leadership functions, mechanical rooms, and bathrooms. Weapons load training academics and training occupy 640 sq ft of the space.



Hangar 5 East is used for aircraft storage and maintenance operations as well as a weapons loading training "load barn."

Weapons load training is currently conducted in Hangar 5 East, which provides 13,500 sq ft of hangar space. The hangar has 440 VAC and 120 VAC, grounding points, eye wash/showers, and compressed air in addition to energy efficient LED lighting. **Hangar 5 Center** is a two-story, 4,000 sq ft facility for administrative and AMXS leadership functions, mechanical rooms, and bathrooms. Weapons load training academics and training occupy 640 sq ft of the space. Under the Enduring Fighter Mission Facility Upgrade programming plan, this space will repurposed to locker room space in addition to mechanical rooms and bathrooms.

Hangar 5 West is a 13,500 sq ft facility that house weapons administrative functions, weapons armament, and weapons gun system maintenance for the A-10 aircraft. This space is utilized to meet weapons armament and gun system maintenance and incorporates a hoist, gun storage, power, and air to support F-35 FRD weapons maintenance requirements. Additionally, this facility is home to the 127 AMXS Command Staff and administrative space.



HGR 5 (1ST FLOOR)



HGR 3 (1ST FLOOR)

Hangar 3 East has 13,500 sq ft of hangar space which can house two F-35s with sufficient clearances to perform engine repair and inspection. The hangar has 440 VAC and 120 VAC, grounding points, eye wash/ showers and compressed air in addition to energy efficient LED lighting. Under the Enduring Fighter Mission Facility Upgrade programming plan, this space will modernized to include fire suppression and lightning protection. This building can easily be modified from current programmed design to support all F-35 FRD requirements. It would house two F-35s with sufficient clearances to perform engine repair and inspection with the ability to fit two additional F-35 aircraft could fit inside this facility for sheltering purposes and maintain structural clearance requirements.

Hangar 3 Center is a two-story, 4,000 sq ft facility for administrative space for A-10 crew chief section, A-10 phase maintenance, mechanical rooms, and bathrooms. Currently the F-35 does not have a phase or similar inspection requirement, but one is eventually anticipated. The Phase office is located in the center, but phase inspections are conducted in either Hangar 3 East or West. Under the Enduring Fighter Mission Facility Upgrade programming plan, this space will repurposed to locker room space in addition to mechanical rooms and bathrooms.

Hangar 3 West has 13,500 sq ft of hangar space which can house two F-35s with sufficient clearances to perform engine repair and inspection.

Hangar 3 has 440 VAC and 120 VAC, grounding points, eye wash/showers, and compressed air in addition to energy efficient LED lighting. Under the Enduring Fighter Mission Facility Upgrade programming plan, this space will modernized to include fire suppression and lightning protection. This building can easily be modified from current programmed design to support all F-35 FRD requirements. It 🖸 would house two F-35s with sufficient clearances to perform engine repair and inspection with ability to fit two additional F-35 aircraft inside for sheltering purposes and to maintain structural clearance requirements.

Hangar 7 and Hangar 9 can provide additional F-35 hangar space with minor modifications to existing facilities. In addition, the F-35 will not use a hush house or require an engine run tie down. The current hush houses can be repurposed to F-35 climate controlled facilities for aircraft storage, aircraft maintenance, or LO maintenance.



HGR 7 (1ST FLOOR)



HGR 9 (1ST FLOOR)

SELFRIDGE FACILITIES DEPICTING HANGAR PARKING FOR 24 F-35'S IN ADDITION TO THE 12 OUTSIDE SUNSHELTER LOCATIONS



AIRCRAFT GROUND EQUIPMENT (AGE)



The 127th Wing has extensive AGE equipment used for both A-10 as well as KC-135 operations and has excellent capacity to support F-35 AGE requirements.

The AGE maintenance area, Bldg 45, consists of four maintenance bays (two drive-through bays) and one wash rack totaling 6,280 sq ft and located adjacent to aircraft parking ramp. The required 120 and 460 VAC and LAN drops are available. Current AGE storage area is sufficient to store all powered/non powered (203 pieces) as required. F-35 ventilation requirements for running diesel equipment are met by testing the equipment outdoors. Future plans will move this facility to the west side of Hangar 3.



BLDG 45

PRECISION MEASURING EQUIPMENT LABORATORY (PMEL)

Building 71 houses the 127th Wing PMEL which is one of four Air National Guard operated Air Force Precision Measurement Equipment Laboratories. The Type IIB lab also supports 15 other Air National Guard, Army National Guard, and Coast Guard units throughout four states. The PMEL is comprised of an a Title 5 civilian workforce that is stable with an amazing average of 25 years calibration laboratory work experience. 127th Wing PMEL currently supports over 12,700 items with an annual throughput of over 10,250 items. Both conformance and availability rates exceed 95%. The 127th Wing PMEL meets and/or exceeds all requirements to support F-35 operations and maintenance.



FUEL CELL HANGAR



Building 154 is the Wing A-10 fuel cell maintenance area and provides excellent maintenance facilities and parking for up to four F-35 aircraft.

The Wing Fuel Barn, Bldg 154, is the primary fuel systems maintenance facility with 12,500 sq ft of hangar space able to support two F-35s in separate bays. Both bays are fuel cell certified and can be utilized to wash aircraft. This facility has a complete push/pull ventilation system, infrared fire detection, installed fire suppression system, and fuel/oil separator for spill control. The facility maintains a support equipment maintenance area of 1,420 sq ft and has 440 VAC/60Hz power.



The fuel cell facility offers excellent capacity to support F-35 maintenance requirements.

ELECTRO-ENVIRONMENTAL/ BATTERY SHOP

The Wing battery shop, Bldg 120 has 134 sq ft for charging, and 96 sq ft in a separate room for storage. The battery charging and storage rooms have 36" entry doors, a wet pipe sprinkler located in the battery room, and a 20-pound fire extinguisher at the entrance. NIPR LAN access ports are located throughout the room as well as four 220V/60Hz and a 120V/60Hz ports are located in the battery charging room. This shop will move to Bldg 18 as part of the programmed Enduring Fighter Mission upgrades and could be easily modified to meet F-35 FRD requirements for battery charging and storage (this function would most likely be assumed by support section in Bldg 18).



BLDG 120

MAINTENANCE/LOGISTICS

EGRESS

The Egress shop includes a 734 sq ft maintenance area with 375 sq ft of explosive storage. The area is capable of simulataneous storing and maintenance on up to four ejection seat systems. It is equipped with electro static dissipative flooring and grounding bus bars. The facility is licensed for the storage of 26.92 pounds of net explosive weight for 1.3 and 1.4 CAD/PAD items.







JET ENGINE INTERMEDIATE MAINTENANCE (JEIM)

Building 117 is the current A-10 engine shop. All engine maintenance, to include module replacement, is performed by flight line personnel. The F-35 Engine Module Maintenance concept of operations only requires space to perform engine maintenance and can be located anywhere to include, in the shadow of the aircraft. The F-35 will not utilize the JEIM concept.

This space can be utilized to perform maintenance and to store spare engines, spare engine modules, propulsion support equipment, as well as associated crating. Bldg 117 can be quickly repurposed to serve as the F-35 simulator facility.



A 127th MXG Engine technician works on a TF-34 engine.



Macomb County's manufacturing base provides a large pool of talented mechanics.

STRUCTURES/CORROSION CONTROL/ MACHINE SHOP FACILITY



A robust metals fabrication capability supports A-10 sortie generation requirements.

Building 120 currently houses equipment to support both structural and metals technology repairs in two separate areas and administrative duties for A-10/support equipment. Under the Enduring Fighter Mission Facility Upgrade programming plan design, both work centers will share equipment and common areas and leave more space for LO capabilities within the building. The facility has 2,745 sq ft for preparation and painting of all support equipment. Programmed facility improvements will increase square footage to 4,286 sq ft and will meet all corrosion control, safety, and environmental requirements (i.e., clean rooms, showers, etc.). This facility will accommodate off aircraft LO repair requirements.

WHEEL/TIRE

The Wheel and Tire shop consists of 904 sq ft. The facility includes multiple regulated dry air drops, certified tire cage and bead breaker, and a thermostatic water and ventilation hood located within the room over automated parts cleaning tank.



Wheels/tires readied for installation on Wing A-10 aircraft.

NON-DESTRUCTIVE INSPECTION (NDI)

F-35 NDI support requirements will be similar to legacy aircraft. The current facility has 1,705 sq ft and meets all requirements to support complete array of NDI function (optic, dye penetrant, magnetic particle, eddy current, ultrasonic, radiographic, etc.). The work center currently maintains a Joint Oil Analysis Program.



127th MXG NDI supports A-10 jet engine JOAP requirements.

ARMAMENT/WEAPONS LOAD TRAINING

Weapons load training is currently conducted in Hangar 5 East, which provides 13,500 sq ft of hangar space. The hangar has 440 VAC and 120 VAC, grounding points, eye wash/showers, and compressed air in additional to energy efficient LED lighting.



A 127th Wing weapons load technican checks an AIM-9 air-to-air missile.



127th Wing weapons loaders support a wide range of free-fall and forward firing weapons.

WEAPONS

Selfridge is Explosives Site Plan cited to accommodate four live load parking spots located on taxiway Mike. Four hundred pounds of net explosive weight per spot is authorized. Current storage, build-up, live load, and operations procedures accommodate live ordnance training in support of A-10 operations. Located near the MSA, this site is a convenient location to expeditiously transfer munitions minimizing impact to airfield aircraft and vehicles. Combined with additional live ordnance capability at Alpena CRTC, the 127th Wing is well suited for F-35 ordnance requirements.



The expansive Munitions Storage Area, munitions build up facilities, and live load ramp allow for a wide range of live and inert weapons to be flown from Selfridge.



END OF RUNWAY

Operations are conducted on Kilo (North) and Echo (South) taxiways. Echo can currently accommodate four A-10s at a time with the ability to expand to (five/six) parking locations for the F-35. Kilo can currently accommodate seven A-10s at a time with the ability to expand to (eight/nine) parking locations for the F-35. The most westerly parking position on echo EOR serves as the alternate unsafe gun location.



The Selfridge airfield EOR locations provide ample space for fighter aircraft "last chance" and arming procedures.



Four 107th Fighter Squadron A-10s preparing for launch on a deployment.

MUNITIONS STORAGE AREA ADMINISTRATION BUILDING

Building 898 is the recently renovated "state of the art" administrative building in the MSA. This administrative building includes munitions control, SIPR room, office spaces, a large training room, and two equipment maintenance bays. The munitions maintenance bays consist of a newly constructed inspection bay, precision guided munitions bay, conventional munitions bay, and a 30 mm processing bay. All munitions assets are stored within an earth covered igloo, 120 multi cubes, a 50' x 75' inert storage building and an additional 50' x 75' equipment and mobility storage facility. The current MSA site plan allows for concurrent operations to include MK82 bomb assembly operations for delivery to aircraft parking locations. Also, three additional earth covered igloo's, utilized by other government agencies on support agreements, could be returned to further bolster our munitions storage capabilities.



127th Wing munitions personnel manage the allocation, storage, and expenditure of a wide variety of live, inert, and training munitions.



HYDRAULICS

The hydraulic shop offers ample space and is currently functioning to support A-10 back shop maintenance operations. This shop will move to Bldg 18 as part of the Enduring Fighter Mission Facility Upgrade. The hydraulic back shop will not be required for the F-35.



Easy flightline access for support backshops enable efficient aircraft maintenance.

F-35 EXHAUST CHARACTERISTICS

The 127th Wing East Ramp provides ample room for F-35 exhaust danger/caution areas while operating from the aircraft shelters as well as Bravo and Charlie parking locations while still fully accommodating KC-135 East Ramp operations.



SUNSHADES/WEATHER SHELTERS

There are 12 sunshade shelters currently in use for A-10 operations. Sunshades are not an F-35 requirement, but if utilized will need to have an approved/certified Lightening Protection System in accordance with NFPA 780. The existing Sunshades were built to NFPA 780 standards.



The 127th Wing has 12 sunshade shelters used for daily aircraft launch and recovery operations.



SUPPLY MAIN SUPPLY

The main warehouse facility is 37,456 sq ft, and includes 4,800 sq ft for receiving operations and 2,590 sq ft for packing and crating operations. The existing square footage significantly exceeds FRD requirements. The receiving area contains four docks, one of which incorporates a mobile ramp. The current ramp does not meet FRD requirements for engine loading and unloading operations, but a larger ramp can be purchased. There are two back-up options for engine loading/unloading operations.

The Vehicle Maintenance Building has a 3-ton hoist that can be maneuvered across any of eight large vehicle/ equipment bays, and the Civil Engineering Squadron has a 30-ton mobile crane. The facility also incorporates a permanently installed classified vault with a 63 sq ft shelved storage area.





The 127th Wing Main Supply Building 105 provides ample storage and inventory control of a wide range of equipment.

MAINTENANCE SUPPORT/PARTS STORE/MRSP AREA

Aircraft Parts Store and Mobility Readiness Spares Package (MRSP) operations are located directly on the flight line and consist of 9,125 sq ft. The flight line location allows for quick response to aircraft maintenance customers' needs and thereby facilitates higher levels of aircraft availability. The MRSP area contains 11 ISU 70/90 containers and room remains for expansion. The Aircraft Parts Store area contains two ISU 90's Classified Vaults totaling 63 Sq ft. Current vault dimensions do not meet the FRD dimensional requirements and would need to be replaced with one large enough to store classified damaged low observable parts.

HAZMAT AREA/STORAGE

Bldg 105 contains 1,460 sq ft of low combustible hazardous materials storage and 323 sq ft of office space for hazardous materials program management. Flammable and corrosive hazardous material storage is available in Bldg 109 and consists of 722 sq ft. This square footage is divided into four cells to allow for segregated storage by hazard class. Both building's storage areas are heated. Gas cylinders are stored in two mobile storage buildings and the total storage area is 640 sq ft.



The 127th Wing supply building provides a large Hazardous Materials handling and storage facility.



BLDG. 105



INDIVIDUAL PROTECTIVE EQUIPMENT

The Individual Protective Equipment functional area is located in Hanger 9 and consists of 8,348 sq ft of shelved storage for chemical, cold weather, and mobility gear. The area currently stores 285 prebuilt A, B, and C mobility bags, as well as enough bulk storage items to support the mobility requirements of 1,487 Wing members. The Individual Protective Equipment functional area also manages the storage and issue of 906 small arms utilizing an alarmed weapons vault with a newly renovated storage container system. Hanger 9 is located on the flight line and is an optimal location for quickly and efficiently meeting operational mission needs. Additionally, the storage areas within Hanger 9 can easily accommodate larger quantities of both small arms and individual protective equipment.



Hangar 9 Individual Equipment Storage currently holds mobility equipment for 1500 personnel.

MAINTENANCE/LOGISTICS

In 2016, construction began on a new \$37 million fuel storage and distribution system for the 127th Wing.

PETROLEUM, OIL, AND LUBRICANTS (POL)

POL operations are managed out of Bldg 192 which consists of 2,820 sq ft, and includes a 321 sq ft testing lab. The mobile fueling fleet is parked in a fenced area with spill containment, and allows for quick access to the East Ramp Parking Apron.

Adjacent to the facility, the Base Service Station consists of two diesel pumps and two gasoline pumps. Also adjacent to Bldg 192, the cryogenics storage and issue area consists of two 3,000 gallon LOX tanks, a purge unit, vacuum pump and maintenance building, and an overhang that shelters the storage tanks. Fuel storage capacities are one 1,000,000 gallon tank, one 360,000 gallon tank, two 12,000 gallon diesel tanks, two 6,000 gallon gasoline tanks, one 12,000 gallon aircraft deicer tank, one 12,000 gallon runway deicer tank, one 5,000 SKAT tank, and one 6,000 gallon (2/3,000 split compartment) diesel fuel tank.

Selfridge's new fuel storage and distribution system demonstrates the extensive investments in Selridge's capacity and capability for aircraft operations for decades to come

of 2017. The new fuel system will offer significant advantages over the system originally constructed in 1958 and is comprised of three primary components: 1. An above ground, 630,000 gallon storage complex

completion date has been moved up to December

with two R11 fill stands located next to the aircraft parking ramp. Relocating the tanks and fill stands next to the parking ramp eliminates 30 minutes of R11 refill travel time and will greatly enhance operational support.

2. An eight-station hydrant refueling system that will allow even the largest Air Force aircraft to "pull up to the pump." In addition to refueling large aircraft, the stations located on India row may be used for fighter aircraft hot pit refueling operations.

3. A new, remote fuel truck unloading site that will further enhance safety and security on the installation by moving offload

Currently, a \$36.6M state-of-the-art TYPE III Hydrant System is under construction and the projected

operations of fuel laden commercial vehicles outside the security fence.



LEFT: Current A-10 fueling is accomplished by trucks or by "hot pit" refueling on B/C rows on the east ramp area. RIGHT: A-10's currently refuel from trucks while under the sunshade shelters.



An aerial view of the 127th Wing's new \$37 million fuel storage and distribution infrastructure under construction.

TRANSPORTATION FACILITIES

Building 139 houses the Wing Vehicle Maintenance and Vehicle Operations functions and is a facility that rivals many active duty counterparts. The facility consists of 43,500 sq ft, with 11,191 sq ft of office space, supporting the maintenance and repair of a 264 vehicle fleet. Maintenance capabilities include eight large vehicle/equipment bays, 15 general purpose vehicle bays, six 12K vehicle lifts, one 50K vehicle lift, one 30K vehicle lift, one 26K vehicle lift, and two maintenance pits. The facility also has a 3-ton hoist capable of being maneuvered over any of the eight large vehicle/equipment bays. In addition to Bldg 139, Vehicle Operations uses Bldg 138 for 6,047 sq ft of heated vehicle storage. This facility has dual purpose use potential and could be used to store spare support equipment, air vehicle spares, spare propulsion spares or other large aircraft spare parts.



Building 139 currently supports maintenance of 264 Wing-assigned vehicles and provides excellent capacity in supporting all F-35 requirements.

Lastly, Bldg 190 provides 2,700 sq ft of maintenance capability to support a fleet of nine R11 refueling vehicles and two C300 ground product vehicles.



BLDG 139

SNOW REMOVAL

Snow removal is accomplished using 100 percent Selfridge Air National Guard Base assets. Unlike joint civilian/ military airfields, snow removal priority is accomplished based on an annual snow removal plan with flexibility to ensure mission priority for military requirements. The 127th Civil Engineering Squadron has seven snow plows, four snow brooms, three snow blowers and three salt trucks for airfield snow removal. The civil engineering heavy horizontal flight is authorized 24 personnel to operate these vehicles and can augment with other civil engineering personnel as needed.







Although snow is not a common limitation to operations on the east side of Michigan, the 127th Wing maintains a capable arsenal of snow removal equipment for efficient removal operations. A variety of snow plows and salt dispensing vehicles ensure year-round Selfridge base and flight operations.

DEPLOYMENT PROCESSING CENTER

The 127th Wing Deployment Processing and Small Air Terminal functions operate out of Hanger 9 and consist of 4,124 sq ft and 15,190 sq ft respectively. The Deployment Processing Center is capable of supporting large deployments and includes a personnel-processing line area, a small - and largecapacity passenger briefing room, and a Deployment Control Center with SIPR access.





Hangar 9 supports all wing deployment storage and processing requirements. The 127th Wing is one of the highest operational tempo Wings in the Air National Guard.





PHYSICAL SECURITY



The 127th Wing Security Forces provide 115 welltrained Defenders who support not only A-10 PL-3 requirements, but train to and exercise to the PL-2 requirements of the KC-135 strategic mission.



MANNING (PL3)

The 127th Security Forces Squadron consists of 115 well-trained Defenders prepared to address any security threat at any time. The Wing's full-time staff is currently comprised of 21 Active Guard Reserves (AGR)s, 18 Temporary Technicians and three Title 5 civilian employees.

The Security Forces Squadron, Bldg 160, houses a state-of-the-art Base Defense Operations Center, BDOC and armory. The vehicle fleet contains six, six-passenger trucks and four, three-passenger trucks with two brand new trucks being delivered later this year.

The squadron provides level PL2 security for the KC-135 801X mission during generation and have been lauded by AMC inspectors for Security Forces best practices. The squadron's primary mission is to provide immediate response to PL3 restricted areas which house KC-135s and A-10s.

Base Defenders also control entry and exit into the base utilizing contract security funded by the Security Control Agreement (SCA) program. The Visitor Control Center is located at Bldg 901 and manned by two title 5 employees and is supervised by a full-time military Non-Commissioned Officer (NCO). The 127th Wing does not maintain an Air Sovereignty Alert Mission.

The visitor center welcomes approximately 15,000+ visitors on an annual basis, ensuring they are properly vetted before allowing them access to the installation.





Top: 127th Wing Security Forces maintain a robust capability to secure the flightline, Wing, and base facilities.

Bottom: a 127th Wing Security Forces Defender guarding a 107th Fighter Squadron A-10 deployed to Lielvarde Air Base, Latvia.

INTRUSION DETECTION SYSTEM AND CCTV MONITORING

The East Ramp is protected by a robust Buried Line Sensors (BLS). There are a total of 40 sections that cover the entire perimeter of the East Ramp. The BLS has the ability to detect personnel and vehicles that enter the area without warning the intruder. The Advantor annunciator is located in the Security Forces (BDOC) where a response can be dispatched immediately upon alarm. The Closed Circuit Television (CCTV) is monitored 24 hours a day by highly trained Defenders. Two additional cameras are scheduled to be installed in 2017.



Closed Circuit TV cameras managed by the BDOC comprehensively covers the flightline and all access points.
PROGRAM SECURITY

The 127th Wing currently has numerous security assets that currently support or can be easily converted to support the F-35 program.

There are currently three areas that were built to JAFAN 6/9 construction standards when Bldg 34 (Operations) was renovated in 2013. This renovation occurred at a time when the Air Force had made the determination to retire the A-10 platform. In response, the combined Intelligence and Mission Planning Cell and current flight simulator bay were built to the JAFAN 6/9 standard in anticipation of a potential follow-on mission to the A-10 Thunderbolt. There is also a 100-seat auditorium that is built to the JAFAN 6/9 standard that can be used for secure briefings.

Because the 127th Wing maintained their fleet of A-10s, these areas were never required to be operated as a Special Access Program Facility and so have never been "accredited" as a SAPF but could easily be accredited by the F-35 Program Security Officer. These areas represent a cost saving in that the perimeter security walls and access control system are intact and the interiors could be reconfigured for little cost.

In addition to repurposing these existing areas, the following plans are being developed:

- The renovation of a 24,000 sq ft facility to act as the flight simulator/academic facility. Current plans are to renovate Bldg 117 to house the four F-35 flight simulators and bring the facility up to JAFAN 6/9 requirements for a SAPF.
- The construction of both collateral and SAP storage capability in Bldg 18 for the storage of classified parts and maintenance equipment.
- The construction of a collateral storage area to store maintenance parts for supply in Bldg 7.

Though not a part of the 127th Wing, Selfridge Air National Guard base is home to the Joint Reserve Intelligence Center. The JRIC operates a 22,000 sq ft facility including a Special Compartmented Information Facility that could be leveraged if the need arises. The 127th Wing already has a working relationship with the JRIC to support SCI read-ins for wing personnel. In addition, Bldg 34 has an integrated Class A vault that could be utilized in the construction of a SCIF if the need should ever present itself.



COMMUNICATIONS FACILITIES

The 127th Wing facilities and infrastructure support the F-35 Autonomic Logistic Information System (ALIS) requirements. The ideal location for the ALIS equipment (non-classified and classified main equipment) is within the secure room, located in the current OPS location within Bldg 34. This location is currently a climate controlled environment, maintaining a temperature between 60-84 degrees Fahrenheit with humidity levels between 40% and 70%.

In addition to meeting the climate control requirements, the location currently has an intrusion detection system and security cameras installed. Bldg 34 (Operations) is an ideal location for the ALIS equipment (non-classified and classified). Home-station equipment and deployable equipment along with the required space for the system administrators and is nearby the mission planning areas as required. There is adequate space for the primary equipment, as well as the deployable equipment (to be housed within deployable open containers) and storage space for the container lids.





ABOVE: Building 34's current simulator facility makes an excellent most location for ALIS.

LEFT: Building 128 is the Communications Flight headquarters building and provides infrastructure and security support for the entire Selfridge facility.

COMMUNICATION INFRASTRUCTURE

The 127th Wing communication infrastructure was recently upgraded with new switches and ITN's across the wing network. The current A-10 Ops facility is supported by a minimum of 24-strand fiber optic cabling, with 1 Gbps to the desktop. The Second Generation Wireless LAN is scheduled for upgrade during the summer of 2017, and will extend beyond the current coverage of the maintenance areas. Although wireless is not a current requirement for the F-35 operations, it is a future desire for the mission. The current SIPRNET Circuit does not support ALIS, however, the 127th Wing submitted the requirement for a new circuit early in FY17 and expect an upgrade in the near future.



ABOVE LEFT: Trained communication technicians working on an antenna assembly.

ABOVE RIGHT: The 127th Wing maintains a robust communication infrastructure that readily supports all F-35 requirements.

EQUIPMENT

The 127th Wing currently has over 6,000 IT assets, and is able to fully support the computer, printer, phone, and radio requirements for the F-35 mission.



127th Communications Flight maintains ample storage for a wide range of IT assets.

PERSONNEL

ALIS requires the support of approximately six system administrators to provide support. The facility identified as the potential ALIS location has the needed space within the secured area to house the ALIS main equipment. The Compuer Security (COMSEC) requirement to support the F-35 program associated can be met with the current three-person COMSEC shop in the 127th Wing.





127th Wing communications technicians maintain the communications infrastructure not only for the 127th Wing, but also for the entire installation.

BASE SUPPORT

Not only do our 44 tenant organizations set Selfridge apart from traditional ANG Wing operating facilities, but there are several direct base and personnel support benefits derived from tenant capabilities and synergies.

Selfridge is home to an extensive collection of amenities and services not available at a typical Air National Guard installation.





FITNESS FACILITIES

Selfridge and the 127th Wing maintain extensive indoor and outdoor physical fitness facilities. The expansive Base Gym in Bldg 165 houses more than 20 aerobic machines, 35 pieces of weight lifting equipment, a full-sized basketball court, a racquetball court, and shower/changing facilities. Several Selfridge tenants have contributed to the base gym capabilities and share the facility with 127th Wing members.

The Wing also operates a quarter-mile rubberized outdoor running track facility to primarily support PT testing requirements that was built in 2013. In addition, there are a broad range of trail running options inside the base boundaries.

There are numerous other physical fitness facilities located around the base, including squadron-level facilities that provide easy and convenient workout facilities and equipment to ensure a fit and ready force.



The 127th Wing operates a large gym facility with free weights, machines, cardio machines, a basketball court, a raquetball court, as well as locker rooms.



BASE EXCHANGE/AAFES



The Selfridge Base Exchange (BX) - awarded the Small BX/Base Exchange 2016 Director/CEO Cup - provides patrons easy base shopping and services access.

AAFES on Selfridge hosts a full-scale Base Exchange. The recently renovated main operations includes a Military Clothing Store, and Express retail facilities under one roof. The exchange also hosts a barber shop, military pride store, clothing/uniform alteration, dry cleaners, embroidery, dining, and many short term vendors that offer a variety of goods. AAFES also hosts a base gas station offering convenient amenities and benefits.

The Selfridge BX was awarded the Small BX/Base Exchange 2016 Director/CEO Cup Award recognizing outstanding leadership, customer service, innovation, and business results.





The Selfridge BX offers convenient and affordable onbase shopping.

From clothing to firearms, the Selfridge Base Exchange caters to Team Selfridge and the local veteran/retiree community needs.

COMMISSARY



As the only Commissary in the State of Michigan, the Selfridge Commissary draws customers from the Upper Peninsula and from Ohio to take advantage of their excellent services and affordable prices.

Selfridge hosts Michigan State's only Commissary, providing grocery services to uniformed service and retirees including a bakery and a recently renovated deli department. Thousands of active-duty and retirees from around the State and Northern Ohio make the trip to Selfridge to utilize DeCA services and benefits. DeCA provides groceries to military personnel, retirees and their families in a safe and secure shopping environment.

Authorized patrons save thousands of dollars annually on their purchases compared to commercial prices when shopping regularly at a commissary. A core military family support element, and a valued part of military pay and benefits, commissaries contribute to family readiness, enhance the quality of life for America's military and their families, and help recruit and retain the best and brightest men and women to serve their country.



BRYANT CHILD DEVELOPMENT CENTER



The U.S. Army operates the award winning Selfridge Bryant Child Development Center, offering accessible and affordable family support to 127th Wing and Team Selfridge members.

The award-winning Bryant Child Development Center has the capacity to care for up to 124 children from ages six weeks to 10 years old. Operated by the Detroit Garrison as a tenant on Selfridge, the center provides child care services during normal business hours.

The Selfridge facility offers full-day, part-day and hourly care for children in rich and stimulating environments where children (Ages 6 weeks kindergarten) can develop motor, cognitive, social and emotional skills through a balance of exploration and planned curriculum. Learning activities are designed to support the natural development of children and include individual, small group and large group experiences. Their services are available to all military members as well as civilians working at the Detroit Arsenal and at Selfridge.



UNIFORM CLOTHING SALES

The Selfridge BX offers a full-sized uniformed clothing sales department providing uniform items supporting requirements for all US military services. This Exchange facility helps Selfridge Airmen, Soldiers, Sailors, and Marines achieve excellence daily by providing top-quality uniforms backed by first-class customer service. The Exchange is the primary source for Army and Air Force uniforms that are certified to meet or exceed the military's specifications.



AAFES stocks uniform items for all military services.



Having a full-size, full-service uniform clothing sales is another service convenience that sets Selfridge apart from most ANG facilities.

CREDIT UNION / POST OFFICE



FreeStar Financial Credit Union and the U.S. Post Office provide outstanding base support and convenience.

FreeStar Financial Credit Union calls Selfridge home. Sharing Bldg 712 with the U.S. Post Office, FreeStar Financial provides comprehensive financial and banking services on location for Selfridge and 127th Wing personnel. FreeStar Financial Credit Union was established at Selfridge in 1957. In its early years, the Credit Union's field of membership consisted of military personnel and supplemental staff at Selfridge Air Force Base. A new chapter in its history began in 1999 when FreeStar was chartered by the state of Michigan to serve all of Macomb County and base members as a full-service financial institution.



The interior of the recently remodelled Bldg 712 showing both the Credit Union tellers and the Post Office front desk.

DINING FACILITY



The Base Dining Facility can accommodate up to 450 people.

The Joint Dining Facility at Selfridge was built in 2006 as a joint venture with the 927th Air Refueling Wing of the Air Force Reserves. In 2005, the 127th Wing become the sole user of a spacious facility that not only provides 127th Wing Force Support Squadron a great venue to provide RSD meal services, but also equips the Wing with a meeting and multi-purpose space that can accommodate up to 450 people.



An evening view of the 127th Wing Dining Facility.

TENANT SUPPORT

The 127th Wing Base Operating Support (BOS) function at Selfridge provides a myriad of services in an effort to support the warfighter directly and the mission comprehensively. BOS supports the infrastructure including utility and communication systems, installed installation equipment, engineering services, contracting services, fire protection and crash rescue, emergency management, security and law enforcement, vehicle maintenance and support, logistics including fuels and supplies, custodial, refuse, snow removal/ grounds maintenance, budget and real property functions for the installation. BOS also supports personnel in a wide array of functions including, but not limited, to public affairs, safety, payroll, personnel management, and veteran support.



The 127th employs a diverse force of civilian and military personnel to maintain and operate the more than 3,000 acre/260 structure Selfridge ANGB.

Federal and State civilian employees team with 127th Wing military members to provide installation operating support to more than 4,500 employees from 45 organizations.





U.S. Army MWR operates the Selfridge Golf Course.

MWR FUNCTIONS

The Detroit Garrison (U.S. Army) runs numerous Morale, Welfare, and Recreation functions at Selfridge. 127th Wing members and other Team Selfridge partners utilize services such as a Lake St. Clair Marina, Selfridge Golf Course, Mulligan's Café, playgrounds, and many other family-centric functions. Army Family and Morale, Welfare, and Recreation Programs is a comprehensive network of quality support and leisure services that enhances the lives of Soldiers, Sailors, Marines, Airmen, Civilians, families, military retirees and other eligible participants.



The recently renovated Selfridge playground maintained by U.S. Army MWR.

NORTHWOOD UNIVERSITY

Selfridge hosts intermediate and advanced education opportunities on the base through Northwood University. Supporting Community College of the



Air Force (CCAF), bachelors' degree programs, and continuing education opportunities

Northwood is a top rated military friendly, veteran friendly, and quality rated institution. On installation education is another distinct and defining advantage of Selfridge – not only for members

of the 127th Wing, but also tenants, families, and future active-duty associate members and their families.



Northwood University offers on-base bachelor degree and CCAF educational opportunities for 127th Wing members.

RETIREE AFFAIRS

The Selfridge Retiree Affairs Office (RAO) is located in the dining facility and provides information and resources to Michigan m ilitary retirees of all services.



The RAO conducts an annual Retiree Appreciation Day that draws hundreds of veterans who are able to access services and information from several organizations.



MEDICAL

The 127th Medical Group supports one of the largest Air National Guard units in the country and is one of the few units that supports two airframes, the A-10 and the KC-135. This state-of-the-art Joint Medical Training Facility consists of 44,034 sq ft and is shared space providing synergies with naval and U.S. Coast Guard medical functions.

The Group continues to provide outstanding medical services and deployment support to members of the Wing. The Group is currently staffed at 143 percent and continues to grow even further. There are 14 licensed and credentialed medical providers (with an authorization for six), and more individuals seeking to join the group than there are authorizations.

The 127th Wing Medical Group stands ready to support F-35 operations.





The 127th Wing Joint Medical Training Facility provides not only ANG related services and readiness, but leverages medical expertise with Coast Guard and U.S. Navy medical services.

Wing medical services include comprehensive dental facilities which boast two panoramic x-ray machines.

ENVIRONMENTAL

As the installation host, the 127th Wing manages a broad range of environmental and encroachment programs not only to comply with requirements, but also to safeguard the future operating viability of the base and airfield. The Wing maintains a very active community and governmental engagement strategy in order to protect Wing readiness and ensure facility sustainability. As one small example of the success of the Wing's approach – the local communities are not only supportive of Wing efforts to be selected as a future F-35 base, but have unanimously signed a proclamation letter of universal support for the effort.

The 127th Wing proactively maintains a wife range of environmental menagement plans that ensure safe and effective stewardship both now and in the future.

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ENCROACHMENT MANAGEMENT

Selfridge boasts a robust program to address encroachment management opportunities with the surrounding communities. The successful encroachment management strategy is based on effective communication with installation stakeholders and neighbors. Selfridge has proactively engaged local governments and stakeholders by employing informational exchanges regarding Air Installation Compatible Use Zone (AICUZ) and BASH, working with local governments on Readiness and Environmental Protection Integration (REPI) proposals, as well as implementing an internal/ external Installation Comprehensive Encroachment Management Action Plan.

Selfridge's current AICUZ was completed in 2011 and has been diligently and dynamically updated to reflect operational changes as necessary. Maps depicting current AICUZ noise contours, accident potential zones and FAA exclusion zones have been communicated to surrounding community planners, township supervisors, and planning commissions. Local officials and planners can use this tool when evaluating zoning and ordinance changes. In addition, Selfridge personnel review and provide comment regarding development proposals from surrounding planning commissions. Success stories of these initiatives include a recent plan modification to bury electrical lines that would have otherwise encroached upon the north end runway approach glideslope.

Selfridge has also recently engaged multiple surrounding jurisdictions concerning ICEMAP



The 127th Wing maintains proactive and effective encroachment management plans

implementation. Selfridge is the only F-35 candidate in the Air National Guard to have a comprehensive ICEMAP. This plan will be useful to both on-base and off-base personnel in managing future encroachment in order to ensure the long-term sustainability of the Selfridge flying missions. Selfridge's ICEMAP will easily network into our upcoming Joint Land Use Study (JLUS) scheduled for FY 2018 and our newly established Installation Encroachment Management Team (IAW AFI 90-2001) will continue to eliminate or mitigate future challenges to the military readiness delivered by the 127th Wing.

SELFRIDGE ANGB CURRENT NOISE CONTOURS



SELFRIDGE ANGB PRIOR NOISE CONTOURS



LEFT: Selfridge 1995-1996 Contours - Base Assigned Aircraft (Average Daily Operations): F-16, C-130, KC-135, C-26.

MIDDLE: Selfridge 1999 Contours - Base Assigned Aircraft (Average Daily Operations): F-16's, KC-135, C-130, HH-56.

RIGHT: Selfridge 2009 Contours Base Assignged Aircraft (Average Daily Operations): KC-135, A-10, HH-65, CH-47, Cessna, Beechcraft 300, EC-120, H-60, AS-350.

CLEAR ZONES (CZ) AND ACCIDENT POTENTIAL ZONES (APZ)

The purpose of the AICUZ program is to promote compatible land development in areas subject to aircraft noise and accident potential. The Air Force provides the AICUZ study to all local communities to assist them in preparing local land use plans. Construction of noise-sensitive land uses near areas of elevated noise, land uses in the CZs and APZs that unduly increase risk associated with aircraft mishaps, and obstruction to flight in the airspace are of great concern to Selfridge. As Macomb County and the townships of Harrison and Chesterfield prepare and modify land use development plans, recommendations consistent with the AICUZ Study are provided in the planning process to prevent incompatible land use development.

All property within the CZs with the exception 29 acres south of the Clinton River, congressionally exempt from Clear Zone acquisition, is under the direct ownership of the Air Force or protected from incompatible development under restricted easements purchased by the Air Force.

Regarding APZs, the Air Force has ownership of only a small portion of property. According to the 2009 AICUZ Encroachment Report of the property in the APZs approximately ³/₄ is conditionally and/ or fully compatibility developed. In recent years leadership from Selfridge has reached out to local communities focusing on property which is not developed and incompatibly zoned to prevent



future incompatible development. While property owners are protected from forced re-zoning under state regulations, several programs are available for partnering with the local community and property owners to address future incompatible development, such as the REPI and JLUS Programs. A REPI proposal was certified by DOD for property south of the Clinton River and the installation is actively engaging with Macomb County, Harrison Township, and the property owner for acquisition of the property for future compatible development. Several other potential opportunities are located in Chesterfield Township, which will be investigated under the JLUS, are being planned for 2018.

CLEAR ZONES (CZ) AND ACCIDENT POTENTIAL ZONES (APZ)



ENERGY SAVING AND RESILIENCY INITIATIVES

The 127th Wing has spirited conservation efforts underway through new and existing facility upgrades for Heating Ventilation and Air Conditioning Systems (HVAC), Lighting, and Energy Controls. In addition, the 127th Wing is vigorously pursuing alternative energy systems research and development, including testing for a mobile micro grid system, energy mobile encampment waste to electrical power system, hydrogen vehicles, and syntroleum. Energy conservation and resiliency initiatives currently being pursued include a corporate partnership to develop a 5 Mega-watt Solar Power Generator with microgrid capability. With appropriate battery storage capability, this could provide utility security and resiliency for the installation.

Other areas of energy conservation under review include a joint NGB and Air Force study to determine if Selfridge methane capture is a viable power generation source. Geothermal energy is in use at the Wing's MSA and is a technology the Wing continues to explore in all new construction to The 127th Wing has made extensive progress towards making Selfridge a future model of alternative and resilient energy management

utilize the natural temperatures of the earth in heating and cooling.

Several other energy conservation and/or alternative energy proposals are underway to include large area re-lamping with LED, ramp re-lamping with LED, and solar panel installations in hangars to produce direct current power to supply aircraft test instruments.

INSTALLATION PLANNING SUPPORT

INSTALLATION	STATUS					
PLANNING ELEMENT	Complete and available (or N/A)	Draft update in progress*	Not up-to-date or available*			
1. Integrated Natural Resource Management Plan (INRMP)						
2. Biological Assessment / Biological Opinion						
3. Integrated Cultural Resource Management Plan (ICRMP)						
4. Acoustic Management (Air Installation Compatible Use Zone Study)						
5. Historical (Programmatic Agreement)						
6. Air (Synthetic minor permits, Title V, Air Emission Inventory)						
7. General Plan (Installation Development Plan)						
8. Installation Complex Encroachment Management Action Plan (ICEMAP)						
9. Other (specific planning elements not addressed above):						

1) Integrated Natural Resource Management Plan (INRMP) -The installation is currently working under a 2011 Integrated Natural Resource Management plan, which is currently under a contract for a 5 year update. The installation is working towards addressing various goals and objectives under the plan.

2) Biological Assessment / Biological Opinion – Neither a Biological Assessment or Biological Opinion has been necessary in the past for operations conducted at the installation. T&E species surveys and rare plant surveys have recently been accomplished at the installation, which would support similar determinations.

3) Integrated Cultural Resource Management Plan (ICRMP) – The installation has an Integrated Cultural Resource Management Plan and a Cultural Resources Survey is currently underway.

4) Noise (Air Installation Compatible Use Zone Study) - Selfridge is operating under the 2009 Study. Three Biennial Reviews have been accomplished since the 2009 Study was published. There have been no significant changes resulting in a need to update the Study over the last 8 years. However, the current AICUZ for Selfridge ANG Base will need to be updated to address changes to noise contours due to F-35 operations.

5) Historical (Programmatic Agreement) - The installation operates under a Programmatic Agreement, which documents procedures for management of Historically Eligible properties

6) Air (Synthetic minor permits, Title V, Air Emission Inventory) – Selfridge operates under a synthetic minor permit with lots of headroom.

7) General Plan (Installation Development Plan) The installation has developed a Comprehensive Land Use Plan (CLUP) to manage future development of the base, consistent with current and future installation missions.

8) Installation Complex Encroachment Management Action Plan (ICEMAP) - Selfridge is the only candidate installation authorized an ICEMAP. The initial internal/external ICEMAP is currently in development at the 30% review stage. The final ICEMAP is anticipated in January 2018.

ENVIRONMENTAL RESOURCE AREA	STATUS
1. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	
2. AIR QUALITY (Emission, attainment status, state implementation plan, etc.)	
3. WATER RESOURCES (Quality, quantity, source, etc.)	
4. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	
5. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	
6. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	
7. CULTURAL RESOURCES (Native American burial sites, archeological, historical, etc.)	
8. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)	
9. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	
10. OTHER (Potential impacts not addressed above.)	

Key: No major issues

Some actions/studies may/will be required but there are no issue jeopardizing implementation of the action proposal **1) AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE** - The current AICUZ study for Selfridge will need to be updated to address changes due to F-35 operations. Historically noise contours have been much larger then they currently are under the existing noise study. However trends over the last two updates have resulted in reduction of contours. This would be the first update to the AICUC noise contours, which would increase the contours. Historically operational abatement of noise has been accomplish to minimize contours to the south of the installation by having the majority of operations depart and arrive from the north as well as limiting night flying, which will like occur as well for F-35 operations as they are planned as appropriate.

2) AIR QUALITY - The U.S. Environmental Protection Agency (USEPA) has designated the areas within Macomb County to include Selfridge as attainment for all criteria pollutants, and a maintenance area for the PM 2.5 and the 8-hour O3. The installation operates under a synthetic minor permit. There should have no problems in accommodating the F-35 Mission.

3) WATER RESOURCES – The majority of operations will be accomplished through renovation of existing facility. Therefore there would not be any anticipate increase in impervious surfaces and/or impact to water resources or quality.

4) SAFETY AND OCCUPATIONAL HEALTH - Renovation of some facilities will involve the testing for and abatement of asbestos containing material.

5) HAZARDOUS MATERIALS/WASTE - Selfridge is regulated as a large quantity generator of hazardous waste. Hazardous materials and waste at Selfridge are managed under the policies and procedures set forth in the Hazardous Waste Management Plan. Selfridge disposes of its generated hazardous waste through the Defense Reutilization and Marketing Office (DRMO) or through contractors managed by the Wing Environmental Office. Selfridge has established policies and procedures for the handling, storage, and disposal of hazardous waste generated at the Base. F-35 Operations would easily be incorporated into plans and procedures without any significant changes.

6) BIOLOGICAL RESOURCES - Construction over fiscal thresholds must accommodate 100-year floodplain considerations. The vast majority of Selfridge is either developed vegetation or impervious cover. Based upon recent endangered species surveys conducted there are no federally listed species present on the installation or rare plants were documented. State listed species are present as well as bald eagles. However under current operations state and federal permits have been obtained, which allow for appropriate harassment and depredation to occur under the BASH Program.

7) CULTURAL RESOURCES - Renovation/construction of facilities will involve coordination with the State Historic Preservation Office (SHPO) using established procedures.

8) GEOLOGY AND SOILS - Soil and groundwater from previously contaminated sites will be required to be handled in accordance with established protocols.

9) SOCIOECONOMIC - Basing of F-35 has the potential to have slightly increase impact on the economic development of the county and the township. However, due to the relatively small number of additional personnel and families moving into the area, and the large size of the urban area, no immediate or significant impacts are anticipated to the economics of the area.

There are no anticipated environmental impact issues impacting F-35 operations out of Selfridge!



PERSONNEL

There is very little difference in the number of forecast Operations and Maintenance personnel to support F-35 operations at Selfridge resulting in little to no increased personnel costs or authorizations required. Based on provided requirements and compared to current DSG (part-time or "drill status guardsmen") and full-time employment authorizations, it is anticipated that the 127th Wing could support the F-35 transition with the reduction of 15 DSGs and the addition of 4 full-time employees. The 127th Wing should have little / no increased personnel costs or authorizations required to support the F-35

	A-10		F-35		DIFFERENCE	
	DSG	Fulltime	DSG	Fulltime	DSG	Fulltime
107FS	34	1	30	1	-4	0
1270SS	38	20	41	25	3	5
1270G	9	7	9	6	0	-1
Ops Total	81	28	80	32	-1	4
127MXG	29	12	30	10	1	-2
127AMXS	162	59	207	75	45	16
127 MXS	247	90	186	78	-61	-12
127M0F	20	16	21	14	1	-2
MX Total	458	177	444	177	-14	0
Total	539	205	524	209	-15	4

Selfridge stands uniquely ready to support a USAF Active Associate for the F-35 mission The personnel requirements in both the Logistics Readiness Squadron (LRS) and Communications Flight (CF) remain difficult to forecast. Due to the unique structure of Selfridge as the only dual-MDS (multi-aircraft) Wing under consideration, it is anticipated that up to 13 DSGs and 5-6 full-time authorizations may be necessary to meet F-35 requirements – far fewer than a single aircraft/mission equivalent Wing.

The addition of a Total Force Initiative (TFI) active associate would bring an anticipated 51 additional active-duty Air Force personnel (8 in Operations and 43 in Maintenance). Any Air Force personnel would find Selfridge to provide many active-duty-like amenities including day-care, a Commissary, a BX, Uniform Clothing sales, education opportunities, MWR and many other familiar support mechanisms. In addition, active-duty spouses and families would find widespread employment and community opportunities through robust base tenant activities as well as proven regional economic employment along with affordable and convenient housing options.

CONCLUSION

Selfridge offers many clear advantages when it comes to F-35 basing. Selfridge has the people, the infrastructure, the airspace/ranges, and community support to quickly, efficiently, and economically transition from the A-10 to the F-35A. The proven excellence of the men and women combined with the inherent base and regional amenities add up to an unprecedented Air National Guard organization ready today to provide the Air Force of tomorrow.

- THE SELFRIDGE **D NTAGE**
- People

- Airspace
- Facilities/infrastructure Community



Readiness, Economy, Resiliency, Excellence

Devito

MICHIGAN'S HOMETOWN AIR FORCE WE STAND READY!

NOTES:

ALL SYSTENS GO

BRING THE F-35 TO SELFRIDGE ANGB

