

Air Force Civil Engineer Center



SAME Sustaining Members Forum

Colonel John Tryon
Commander, Det 1
20 August 2021



AFCEC Vision & Mission



AFCEC Vision

Revolutionizing Civil Engineer solutions to enhance readiness and increase lethality

AFCEC Mission

Deliver Civil Engineer expertise and services . . . strengthening installations and enhancing combat power



AFCEC Organizational Chart



External Partners

HAF/A4C

Local Partners

AFLOA/JACE

SAF/GCN

AFICC

Civilians	890
Military	138
Contractors	1182
Total	2210

Maj Gen John Allen
Commander

Mr. David Dentino, SES
Executive Director

Col Brad Johnson
Vice Commander (CV)

Col John Tryon
AFCEC-Tyndall
Det 1/CC

Dr. Ivette O'Brien
Director of Business Info
Systems & Requirements (CB)

Mr. Dennis Guadarrama
Strategic Acquisition &
Category Mgt (CCL)

Mr. Kirk Phillips
Office of Energy Assurance
(OEA)

Brig Gen Mark Slominski
Tyndall Program Management
Office (PMO)

SAF/IEI

**Environmental
Directorate (CZ)**

**Planning and
Integration Directorate
(CP)**

**Facility Engineering
Directorate (CF)**

**Installations
Directorate (CI)**

**Energy
Directorate (CN)**

**Operations
Directorate (CO)**

**Readiness
Directorate (CX)**

Col Greg Mayer
Director

Col Eric Fajardo
Director

Col Travis Leighton
Director

Mr. Jeff Domm
Director

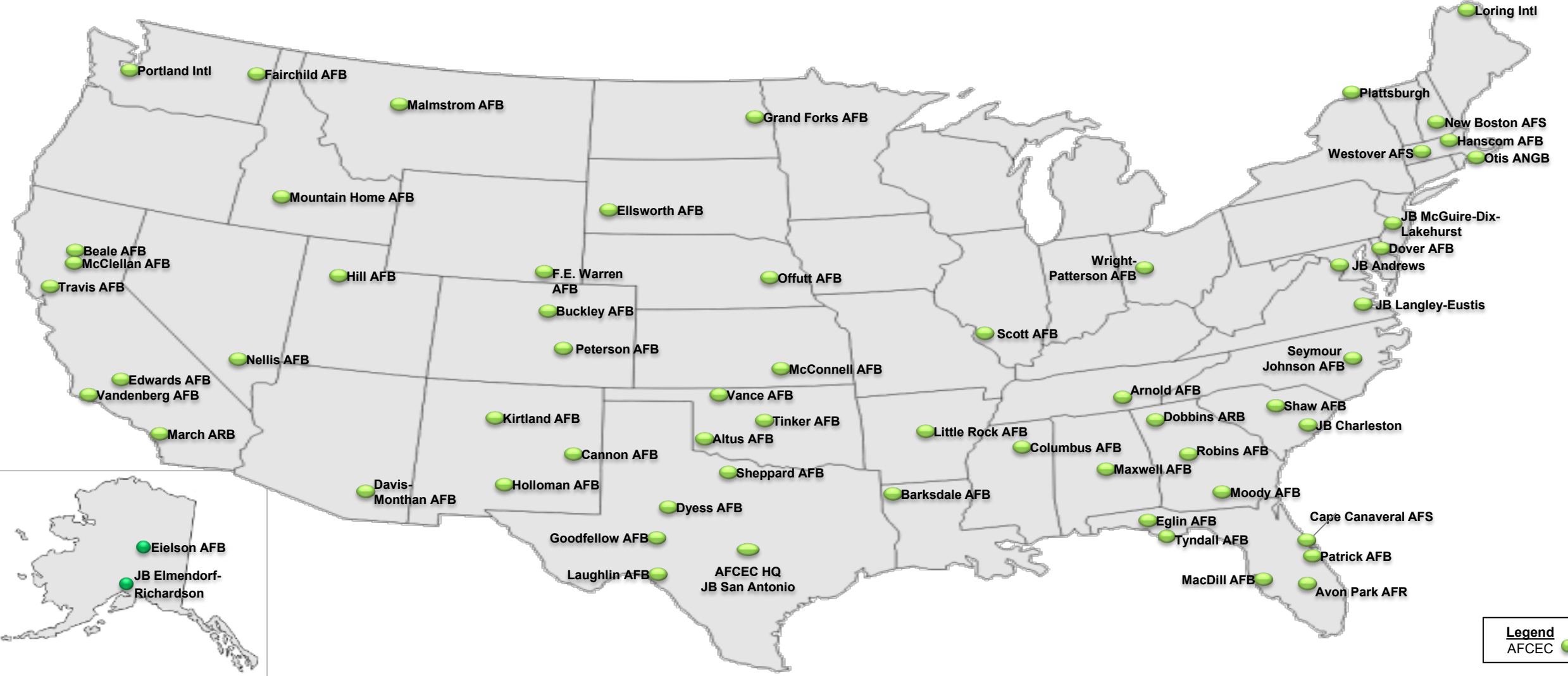
Mr. Dan Soto
Director

Lt Col Steve Thomas
Director

Lt Col Scott Stanford
Director



AFCEC Enterprise



Legend
 AFCEC



Air Force Physical Plant Profile

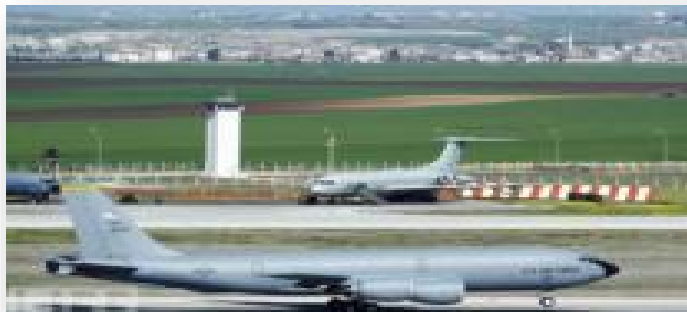
161 Air Force Installations



FAMILY HOUSING



74,500 Homes
3 x Bermuda



9M ACRES OF LAND
3 X CONNECTICUT

AIRFIELDS



184M Sq Yds of Pavement
169 x Atlanta
Hartsfield-Jackson Airport

FACILITIES



615M Sq Ft of Buildings
3 x Target
205 x Dallas Cowboys stadium



Plant Replacement Value
\$240B PRV
Revenue of entire
US restaurant industry

DORMITORIES



66,300 Dorm Rooms
1/2 total hotel rooms in Las Vegas



Civil Engineering Our Business



We provide the combat platforms...at home and abroad...from which the Air Force delivers Global Vigilance, Global Reach and Global Power



PLAN



ACQUIRE



OPERATE



SUSTAIN



PROTECT



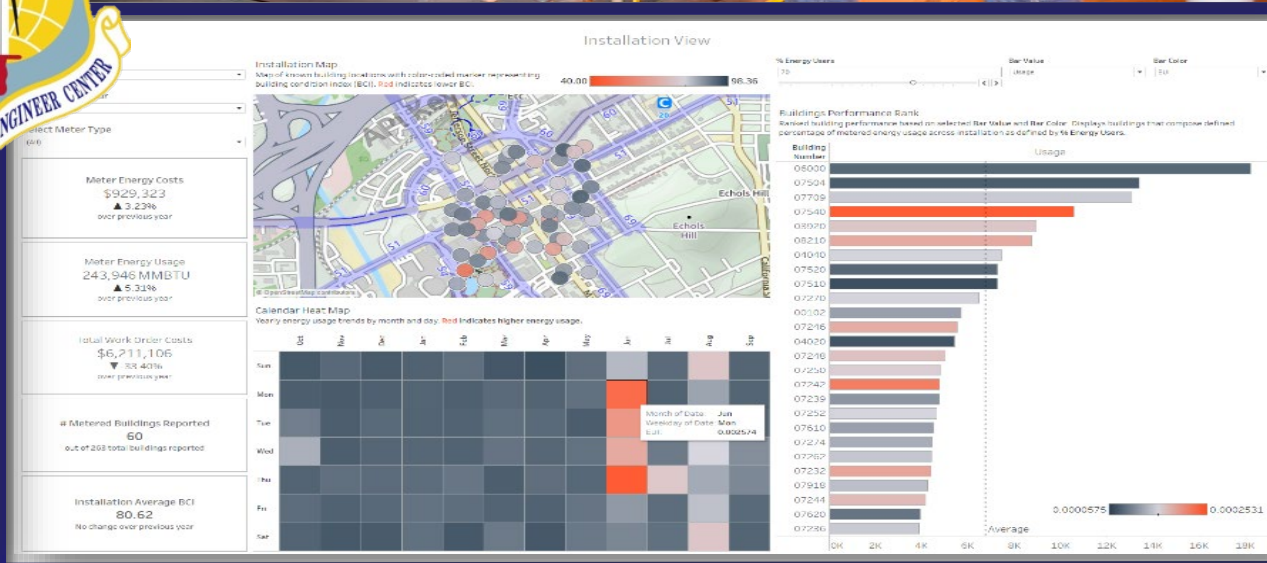
RECOVER



DIVEST



Energy (CN)





Recent Energy Projects



UNITED STATES AIR FORCE
ENERGY SAVINGS
PERFORMANCE CONTRACT



LOCATION

CANNON
AFB

VALUE

\$20
MILLION

MBTU'S SAVED

77.8
THOUSAND

AWARDED TO



UESC



UNITED STATES AIR FORCE UTILITY ENERGY SERVICE CONTRACT



LOCATION

HOLLOMAN
AFB

VALUE

\$9.4
MILLION

MMBtu'S SAVED

22.8
THOUSAND

AWARDED TO

NEW MEXICO GAS
COMPANY

PROJECT HIGHLIGHTS

- 5 ENERGY CONSERVATION MEASURE UPGRADES TO 64 BUILDINGS
- 10,700 METRIC TONS OF REDUCED CARBON EMISSIONS ANNUALLY
- LED RETROFIT LIGHTING WITH CONTROLS
- HIGH-EFFICIENCY TRANSFORMERS
- NEW SOLAR PHOTOVOLTAIC SYSTEM
- HVAC DUCT SEALING

PROJECT HIGHLIGHTS

- LIGHTING UPGRADES IN 84 FACILITIES
- NEW ROOFTOP SOLAR PHOTOVOLTAIC SYSTEM
- FIRST UESC TO REQUIRE GUARANTEED SAVINGS WITH ANNUAL MEASUREMENT & VERIFICATION BY THE UTILITY
- INCLUDES CONSERVATION AND GENERATION THAT COULD BE TIED INTO FUTURE RESILIENCY COMPONENTS LIKE BATTERY ENERGY STORAGE

Your Success is Our Mission!



Operations (CO)



Asset Visibility & Assessment



Technical Support



Airman Force Development



Field Support



CE Control Systems



- **Air Force Guidance Memo (AFGM2018-32-01*)**
 - **Secure Infrastructure and facilities**
 - All Facility-Related Control Systems
 - Supervisory Control and Data Acquisition Systems
 - Building Automation (e.g. EMCS)
 - Life Safety Systems
 - Utility Monitoring & Control Systems
 - Airfield Control Systems
 - Traffic Control Systems
 - Intrusion Detection Systems**
 - **Migrate from DIACAP to RMF**
 - **Establish worldwide CE network enclave**
 - **Practice Cyber Hygiene**
 - **AFCEC to Contract Support**





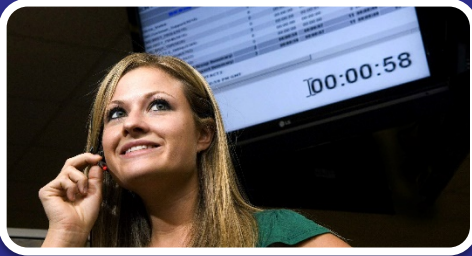
CE Control Systems COINE Summary



- **Overview: Community of Interest Network Enclave (COINE)**
 - 5 year contract effort covering 144 installations (General Dynamics IT)
- **Intent: Preserve the ability to execute the mission**
 - **Support efforts to manage cyber risk**
 - **Deliverable:** Deploy and maintain enterprise COIN & base level COINEs
 - **Deliverable:** Migrate FRCS on COINEv1 to COINEv2 (45 systems)
 - **Identify, mitigate, monitor, and predict cyber vulnerabilities**
 - **Deliverable:** Achieve ATOs for all control systems
 - **Migrate stand-alone Control Systems into the CE COINE by:**
 - Assessing the systems to determine risk & developing projects to mitigate the highest risks
 - Migrating the systems into CE COINE using an ATO with Conditions
- **Comm Sq Support**
 - Project Support Agreement for AFNET access
 - Provide IP addresses
 - Provide validation of DCIM facility ID & address location for MAJCOM DCOR requirements
 - After installation and activation, Comm Sq's are not required to sustain, restore and/or modernize COINE
- **End State: Best protection & isolation available today...3 years ago at least**



Overview – 5 Year Program



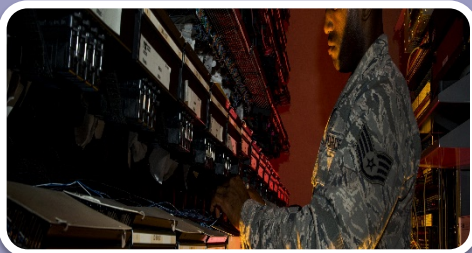
Enclave ISSO deployed to each base

- Information Systems Security Officer (ISSO) reports to COINE v2 ISSM
- Supports local enclave and cybersecurity tasks for base CECS
- Provides RMF support for securing Authority To Operate (ATO)



Deploy worldwide CE enclave

- Isolate network traffic to and from CECS
- Provide threat monitoring, incident response and patches from HQ
- Provide dynamic routing so if one node goes down another node is opened



Deploy base-level CE enclaves

- All new hardware provided by AFCEC
- Integrate stand-alone CECS onto one network
- Network traffic and vulnerabilities can be monitored and fixed remotely

Goal: Provide better Cybersecurity for CECS at an Enterprise Level

Your Success is Our Mission!



Readiness Directorate (CX)



Air Force Installation & Mission Support Center



Modernize AF Civil Engineer Contingency Training



CE Training Vision, Goals & Framing



■ Vision:

- Restructure the execution of the contingency training program, robust unit-level home station, and further leverage regionalized training sites; while establishing a validation method for engineer forces.

■ Goals:

- Produce mission ready Airmen capable of excelling at full spectrum operations, against a near-peer adversary, in a “Fight Tonight” scenario.

■ Mission Ready:

- A mission ready Airmen Engineer is organized, trained, and equipped to execute designated mission essential tasks, UTC mission capabilities, wartime, and contingency skills in-and-through any military operation. Airmen Engineers primary mission is to rapidly establish airbases as power projection platforms, repair battle-damaged facilities and infrastructure, respond to and recover installations from man-made and natural disasters. They are flexible enough to execute assigned missions at bare bases, main operating bases, joint bases, forward operating bases, and cooperative security locations.



Current vs Future Contingency Training



■ Current Tiered Training

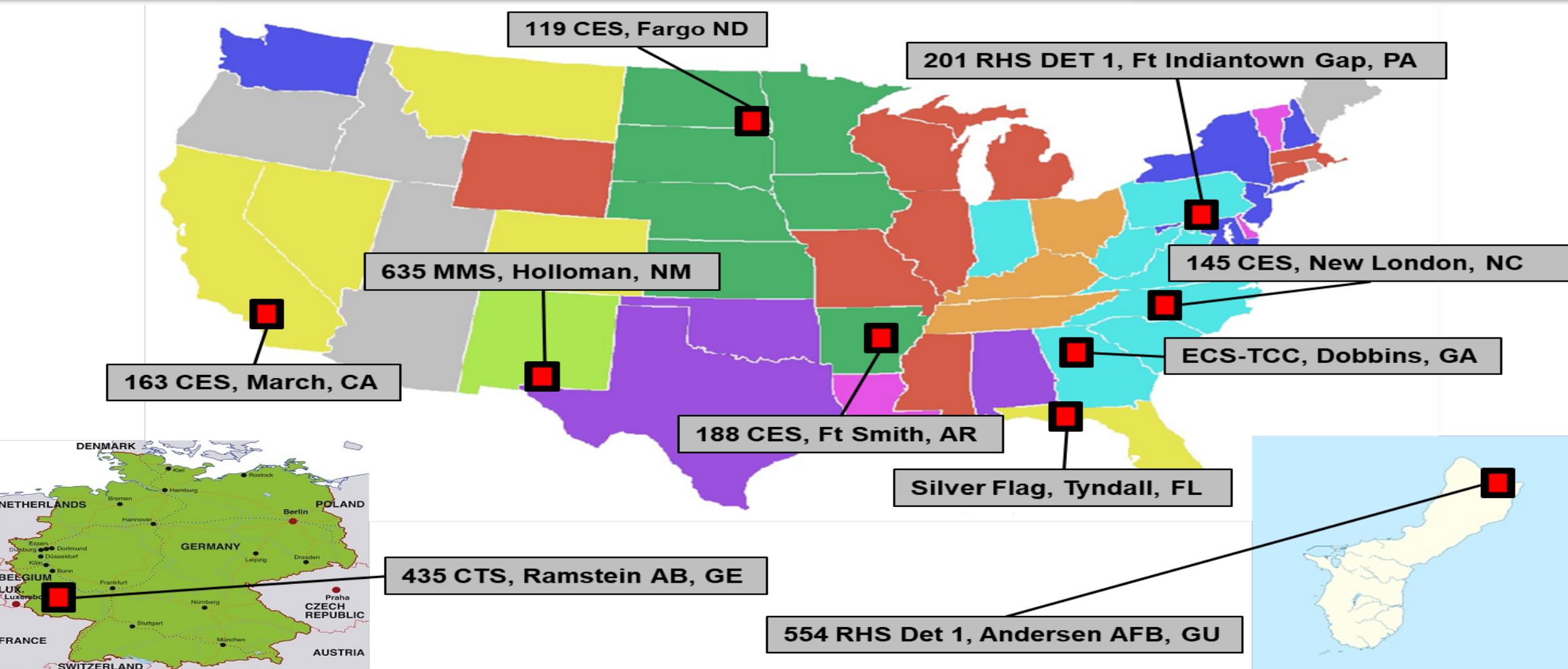
- **Tier I – Home station training**
 - Largely limited to on-site assets
- **Tier II – Mission Essential Equipment Training**
 - ROWPU
 - BEAR High Voltage Distribution
 - MAAS
 - EALS
 - RADAS
 - LASMR*
- **Tier III – Silver Flag**

■ Notional Future Tiers

- **Tier I – Foundational Training**
 - Foundational Training
 - Off-site asset availability
- **Tier II – Skills and Knowledge Training**
 - ROWPU
 - BEAR High Voltage Distribution
 - MAAS
 - EALS
 - RADAS
 - LASMR*
 - Residual hours**
 - RDR
- **Tier III – Validation (Location(s) TBD)**

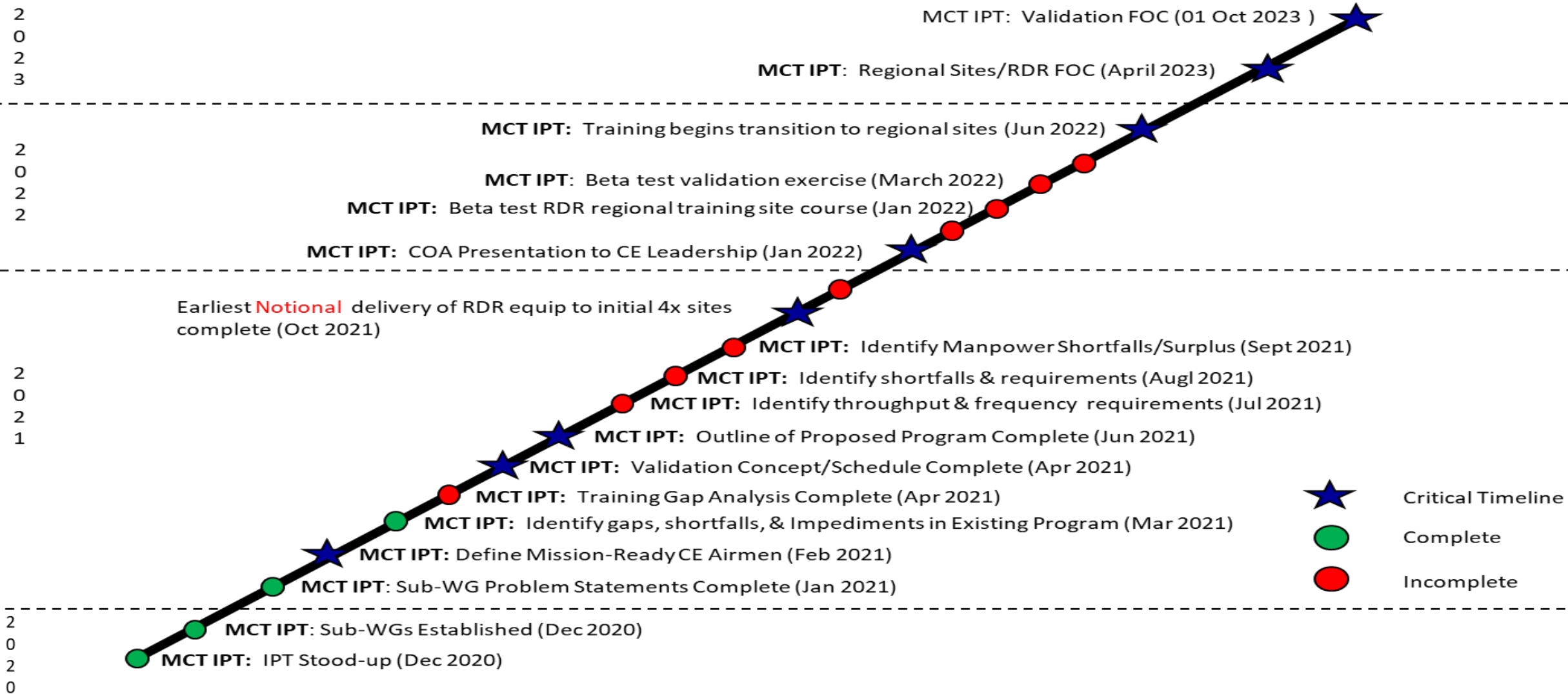


Current Training Locations





Plan of Action & Milestones



- Critical Timeline
- Complete
- Incomplete

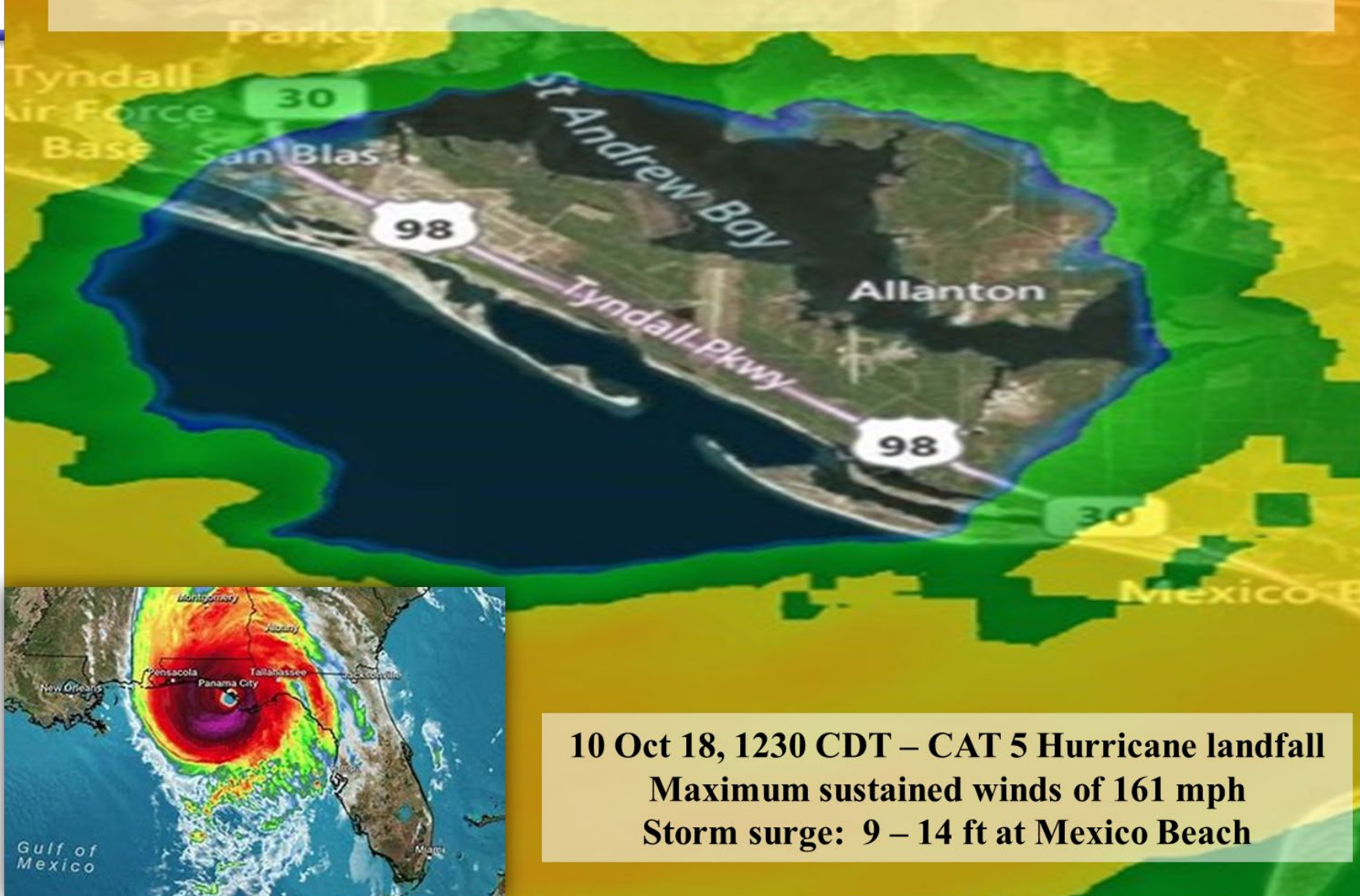
Air Force Installation & Mission Support Center



Tyndall AFB Natural Disaster Recovery Program



Hurricane Michael – 10 October 2018





Natural Disaster Timeline

'Complete devastation' at Tyndall AFB after direct hit from Michael
Some F-22 fighters may have been damaged by the storm.
 By Leth Merdian
 October 12, 2018 5:22 PM • 6 min read

10 Oct 2018

Your Air Force F-35 fighter jets coming to Tyndall Air Force Base
 The Associated Press
 date_range August 6, 2019

7 Dec 2018

Your Air Force Cost to rebuild Offutt after the flood now estimated at \$420 million
 The Associated Press
 date_range May 2, 2019

15-17 Mar 2019

Your Air Force Air Force eyes Langley-Eustis as new F-22 training home
 Stephen Losley
 date_range March 27, 2019

May 2019 Jun 2019 Jul 2019


USAF Expects to Need Nearly \$1B for Tyndall Recovery in FY19
 March 13, 2019 | By Rachel S. Cohen

Aug 2019

Congress Pentagon finally gets its 2020 budget from Congress
 By Joe Gould
 December 19, 2019

Dec 2019




 Department of the Air Force
Military Construction Program
 Fiscal Year (FY) 2020
 Budget Estimates

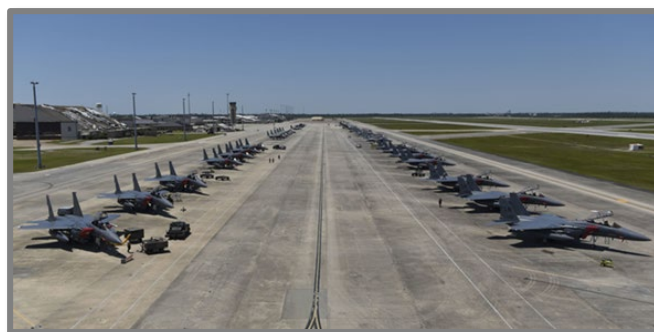
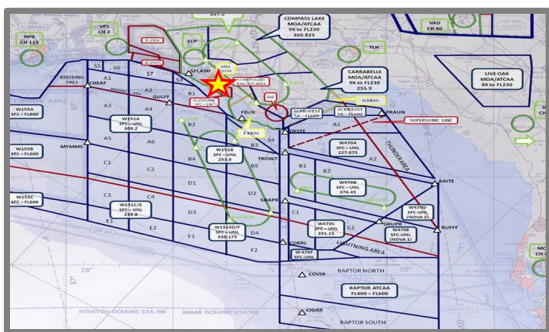


SECAF Guidance



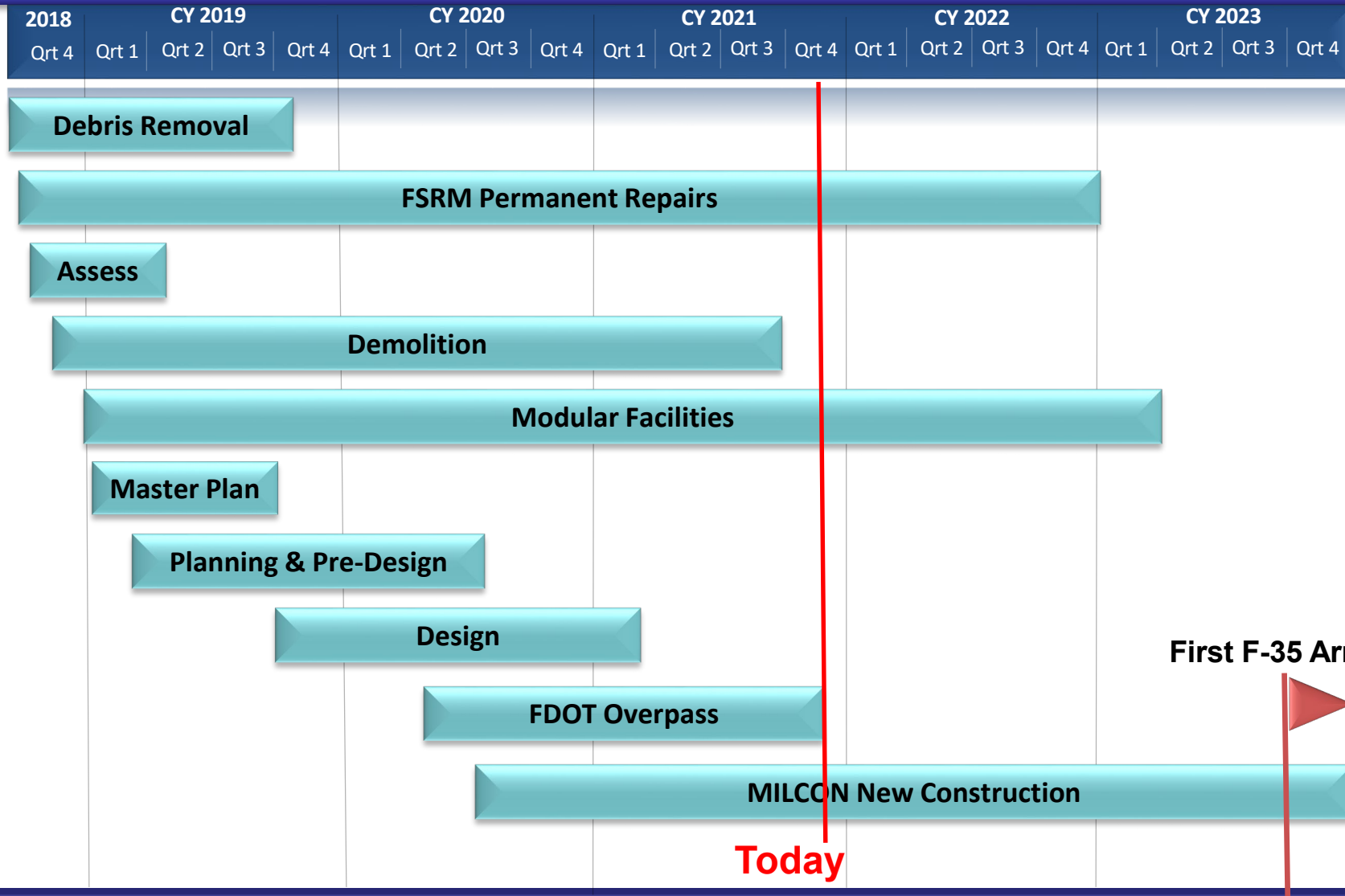
Former Secretary of the Air Force, Honorable Heather Wilson:

- *Build “The Air Force Installation of the Future”*
- *Plan for three (3) F-35 squadrons by 2023*
- *Meet current, anticipated, and future mission requirements*
- *Build the base we need, not the base we had - rebuild Tyndall AFB as the model 21st Century Installation.*





Tyndall Rebuild Timeline

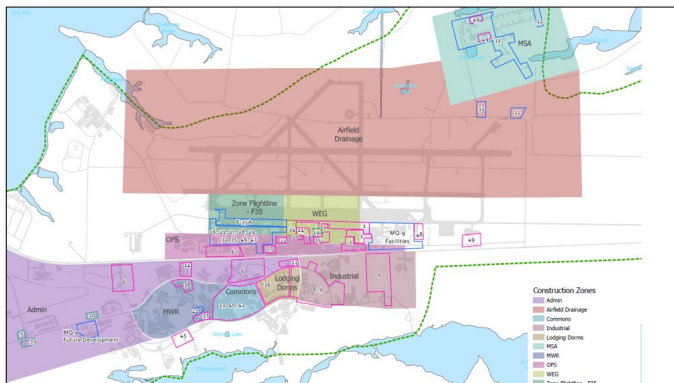




Tyndall Program Scope



\$4.9B Program



12 Geographic Zones



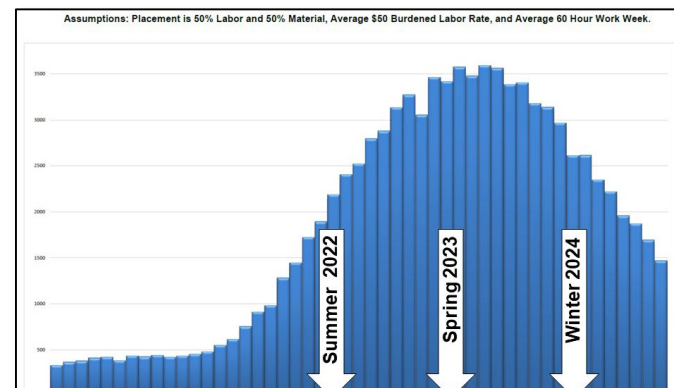
~260 FSRM Projects



44 Projects = ~120 New Facilities



Demolish 247 of 484 Facilities



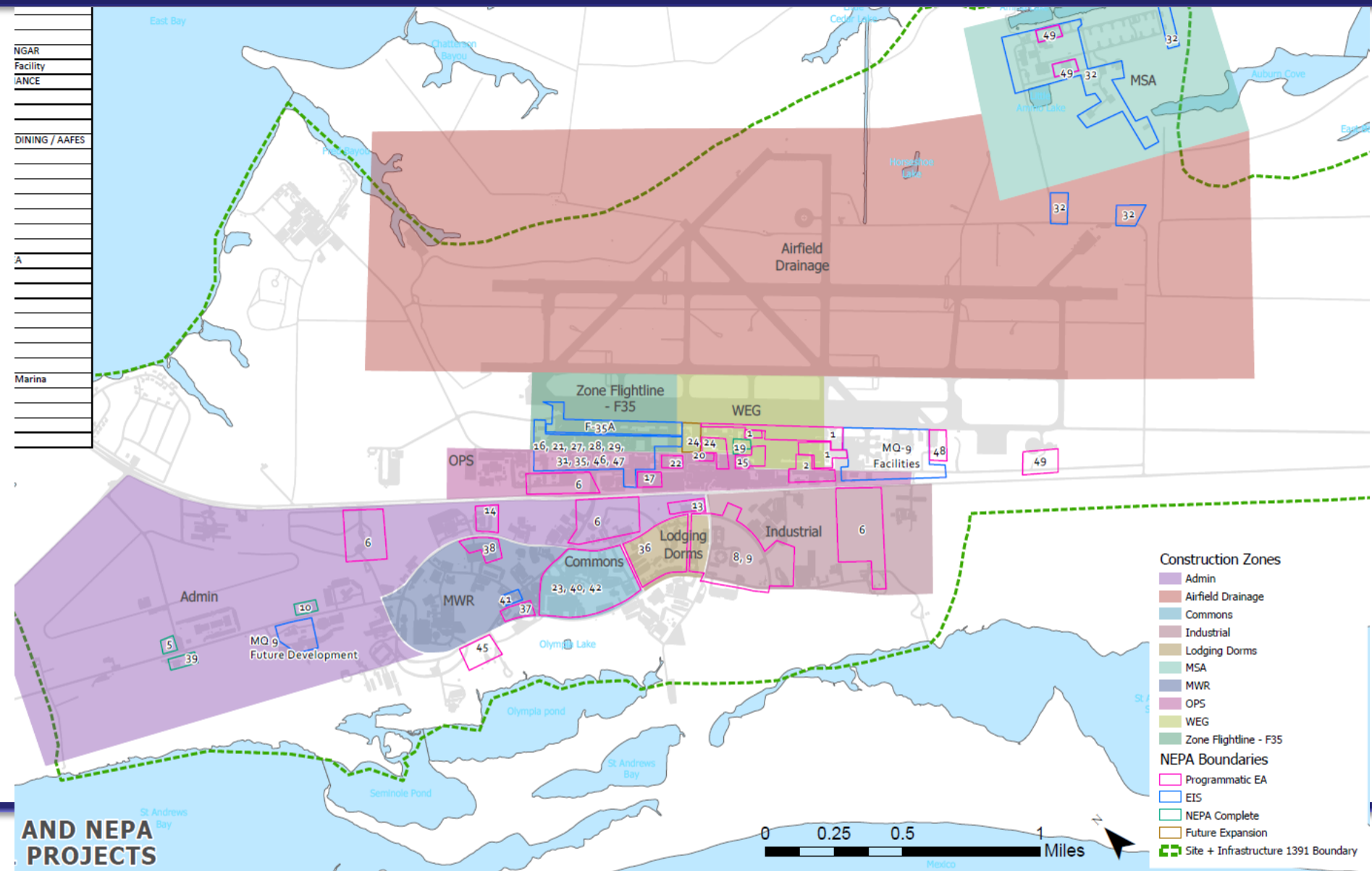
Up to 3,500 Craft Labor



Current Program – Overview



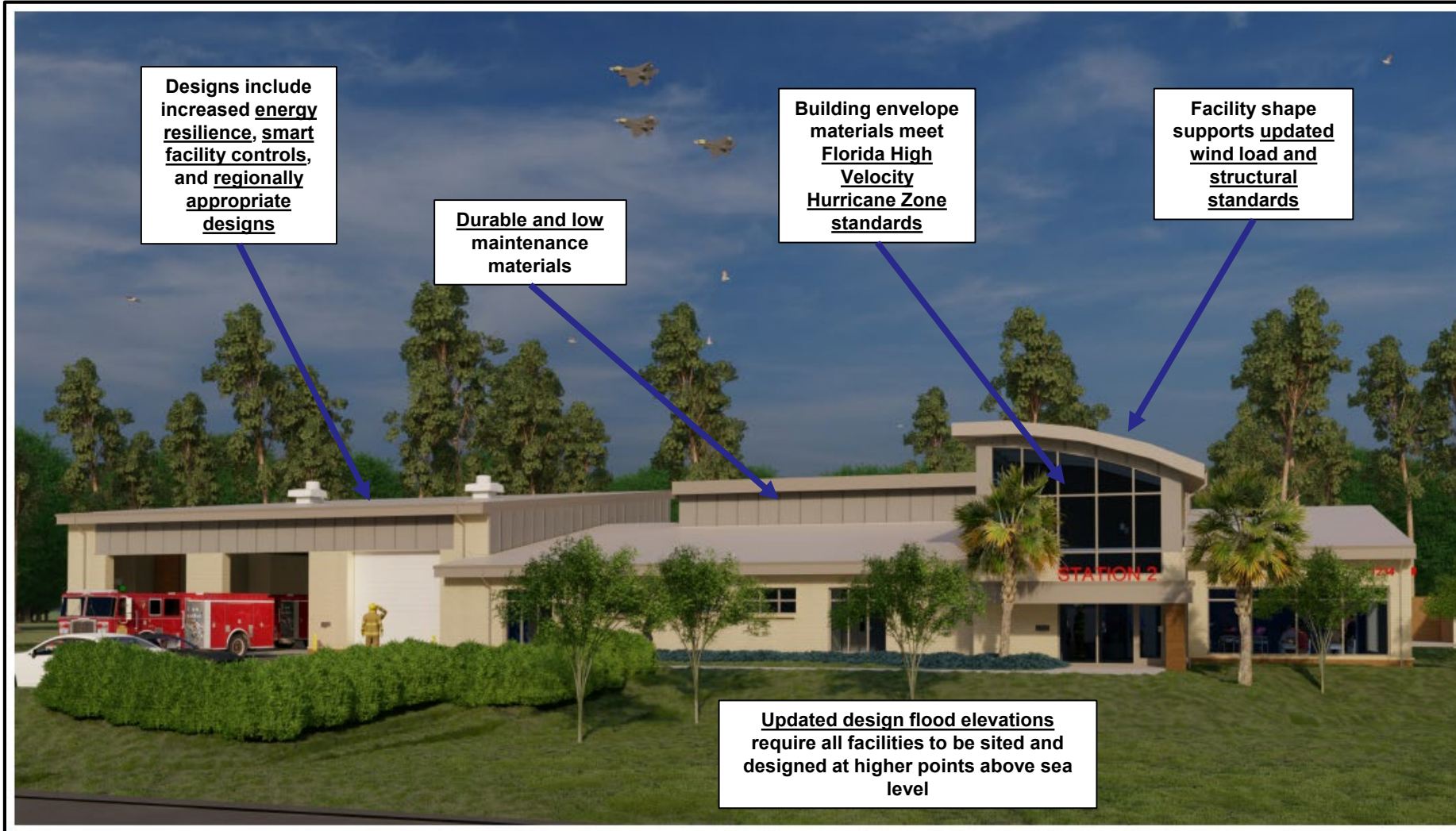
PROGRAM
FY18 MILCON
2854 MILCON
Zone 1 – 5th Gen Fighter
Zone 2 – Flightline Ops (OSS/IDRC)
Zone 3 – WEG
Zone 4 – Infrastructure
Zone 5 – Industrial (LRS/CES)
Zone 6 – Airfield Drainage
Zone 7 – MSA
Zone 8 – Admin (Fighter Wing HQ)
Zone 9 – MWR (Ballfields/Pool/Marina)
Zone 10 – Lodging/Dorms
Zone 11 – Community Commons
Zone 12 – Silver Flag & AFCEC RDT&E



AND NEPA PROJECTS



Installation Facility Standards



Designs include increased energy resilience, smart facility controls, and regionally appropriate designs

Durable and low maintenance materials

Building envelope materials meet Florida High Velocity Hurricane Zone standards

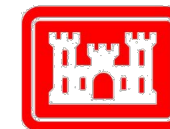
Facility shape supports updated wind load and structural standards

Updated design flood elevations require all facilities to be sited and designed at higher points above sea level

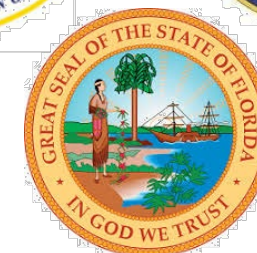
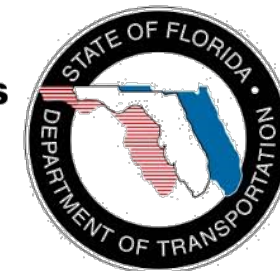
Your Success is Our Mission!



Tyndall Stakeholders



US Army Corps of Engineers®
Savannah District



US Army Corps of Engineers
Mobile District





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