



THE SECRETARY OF THE AIR FORCE
CHIEF OF STAFF, UNITED STATES AIR FORCE
WASHINGTON DC



Airmen,

We fight from our bases. Resilience of our infrastructure supports our ability to fight and provides the quality of life and quality of service we all want for our Airmen and their families.

Over the past year, the Air Force has analyzed how we maintain our bases. Our analysis shows that increasing funding for infrastructure will not work unless we also change how we are managing infrastructure investments. It shows that if we change our strategy and increase our infrastructure budget to a base level of 2% of replacement value, the condition of our bases will significantly improve over a 20-30 year period.

Going forward, every base will have a master plan. We will shift from a "worst first" approach to prioritization based on mission needs. We will shift funds to upgrade infrastructure before it becomes so decrepit that it is too expensive to fix. We will put money in the budget to demolish our worst 5% of buildings over time. We will expand acquisition planning by putting contracts in place to responsibly use end of year money for high priority projects.

The Air Force leadership is committed to this data driven infrastructure investment strategy. The Airmen who developed it are to be commended for their innovative approach that will make life better for Airmen and bases more ready to fight.

A handwritten signature in blue ink that reads "Heather Wilson".

Heather Wilson
Secretary of the Air Force

A handwritten signature in blue ink that reads "David L. Goldfein".

David L. Goldfein
General, USAF
Chief of Staff



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

MEMORANDUM FOR RECORD

SUBJECT: U.S. AIR FORCE INFRASTRUCTURE INVESTMENT STRATEGY (I2S)

1. The foundation of Air Force readiness and lethality is an integrated network of resilient installations that enable advanced-generation, multi-domain operations while also providing safe communities for our Airmen and families. To achieve this end, we must work toward the common goal of ensuring effective asset management policies are in place to prevent impacts to mission due to failing infrastructure and to reduce life-cycle cost. Additionally, we need to consistently allocate adequate resources and personnel to update installation development plans and to proactively invest in sustainment, recapitalization, maintenance, and energy assurance requirements.
2. This Infrastructure Investment Strategy endeavors to meet these requirements. Unity of effort, better management practices, and fiscal stewardship is the only way this gets done given the myriad of readiness and modernization priorities required to build the Air Force we need. Our respective teams must all commit to working together to ensure the foundation of our mission success remains viable now and for our future Air Force.

TOD D. WOLTERS, General, USAF
Commander, U.S. Air Forces in Europe

JAMES M. HOLMES, General, USAF
Commander, Air Combat Command

JOHN W. RAYMOND, General, USAF,
Commander, Air Force Space Command

CHARLES Q. BROWN, JR., General, USAF
Commander, Pacific Air Forces

MARYANNE MILLER, General, USAF
Commander, Air Mobility Command

TIMOTHY M. RAY, General, USAF
Commander, Air Force Global Strike Command

MARSHALL B. WEBB, Lieutenant General, USAF
Commander, Air Force Special Operations Command

ROBERT D. MCMURRY, Lieutenant General, USAF
Interim Commander, Air Force Materiel Command

L. SCOTT RICE, Lieutenant General, USAF
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STEVEN L. KWAST, Lieutenant General, USAF
Commander, Air Education and Training

RICHARD W. SCOBEE, Lieutenant General, USAF
Commander, Air Force Reserve Command

JAMES A. JACOBSON, Major General, USAF
Commander, Air Force District of Washington



“Airbases are a determining factor in the success of air operations. The two-legged stool of men and planes would topple over without this equally important third leg.”

– General Henry H. “Hap” Arnold



PURPOSE

This Air Force infrastructure investment strategy will guide facilities sustainment, restoration, modernization and recapitalization requirements and investment in a way that restores readiness to our power projection platforms, cost effectively modernizes our infrastructure, and drives innovation into our installation management practices. Four imperatives will align and unify infrastructure investment efforts: adequate, stable funding; smart infrastructure business management; unified efforts across the enterprise; and revitalized squadrons.

Problem Statement: Air Force decisions to take risk in infrastructure over the past two decades have eroded its power projection platforms and, left unchecked, will ultimately disrupt combat readiness and lethality.

INSTALLATIONS GENERATE COMBAT POWER

Installations – both enduring and expeditionary – are foundational platforms from which the Air Force successfully executes its five core missions – air and space superiority; intelligence, surveillance, and reconnaissance; rapid global mobility; global strike; and command and control. Today’s complex, advanced-generation, multi-domain operations rely on installations as an integral component to overall combat readiness. While all services open, establish, operate, and sustain installations, the foundation of Air Force lethality begins with its integrated network of installations which provide flexibility to mass forces, resiliency to enable freedom of maneuver, and a footing from which to project decisive combat power in the highly-contested air, space, and cyberspace domains. Air Force bases are power projection platforms led by installation and mission commanders and operated by Airmen whose in-garrison infrastructure management duties hone expeditionary skills. An effective Infrastructure Investment Strategy is inextricably linked to ensuring readiness, lethality and combat power.

End State: Adaptive, resilient, right-sized and fiscally sustainable infrastructure to assure combat readiness, lethality, and Airmen resilience.

The 180 Air Force Active, Guard, and Reserve installations worldwide, equating to a total plant replacement value (PRV) of \$263 billion¹, comprise a multitude of facility types to support operations and training, mission generation, mission support, and Airmen & community support missions. Two decades of taking risk in infrastructure created a fiscally unsustainable posture. At currently

¹ Plant Replacement Value is the cost in current year dollars to design and construct a replacement facility to modern standards using modern construction costs (materials and labor), excluding site preparation, earthwork, landscaping, and surveys/studies.

programmed resource levels, the \$33B in deferred maintenance and recapitalization will triple in the next 30 years. This resource profile creates readiness and lethality risks due to continued and increasingly rapid degradation of infrastructure. Failures in infrastructure can have a direct impact by significantly disrupting mission generation capabilities and rendering the Air Force incapable of delivering organic support to Airmen and their families. Through targeted policy and resourcing we can develop predictable investments to shape our installations and reverse this unsustainable path. Without investments that assure lethality, restore readiness, properly fund and train personnel, and deliver cost effective adaptive infrastructure, we will rapidly lose our power projection advantage.

INFRASTRUCTURE INVESTMENT STRATEGY IMPERATIVES

For this infrastructure investment strategy to be effective, there are four key concepts that align and unify efforts to achieve the desired end-state of this strategy.

➤ **Resources and Capacity**

We must establish a sufficient, stable and predictable funding strategy to ensure the readiness of our base infrastructure and provide the workforce capacity capable of accomplishing this complex mission. Align capital investment (sustainment, restoration, and modernization) with industry standards by pursuing funding levels at two to four percent of a right-sized plant replacement value and a minimum “programmed budget-level” of two percent. Concurrently, we must reduce costs by leveraging public and private sector partnerships and divesting facilities in the poorest condition.

➤ **Infrastructure Business Management**

We must drive down the cost of doing business through more proactive and data-driven asset management. By capitalizing on powerful new data analysis tools, facility management system technologies, and best practices from the private sector and academia, we can apply life-cycle cost principles to our infrastructure investments, develop a five-year Integrated Priority List and associated Construction Tasking Orders, leverage economies of scale in acquisition through category management, and incorporate smart facility technology to maximize benefit from every tax dollar spent.

➤ **Unity of Effort**

We must unify infrastructure strategy, investment decision-making, and execution efforts across the total force. This imperative requires that we codify clear and effective roles, responsibilities, and governance which link Air Force priorities with installation-level planning, programming, and execution. Key tools to facilitate unity of effort will include approved Installation Development Plans, common investment priorities, and integrated processes.

➤ **Revitalized Squadrons**

We must develop exceptional civil engineering leaders, with the proper mix of capabilities to compete, deter and win. Decades of manpower cuts and a sustained high operations tempo

have eroded Air Force civil engineering capacity and strained our ability to provide the full spectrum of Airman-Engineer competencies. Key to the success of this Infrastructure Investment Strategy is a sufficiently diverse and capable workforce trained across the spectrum of Air Force civil engineer and contracting specialties. Working under the leadership of Wing Commanders and functionally-aligned headquarters, these engineers and contracting professionals form the foundational system to ensure the readiness and lethality of our long-term infrastructure. To revitalize squadrons, we must thoroughly analyze doctrine, organization, training, materiel, leadership, personnel, facilities, and policies to appropriately assess and correct skill gaps, build expeditionary infrastructure management aptitude, and update civil engineering and contracting manpower standards.

LINES OF EFFORT

The Air Force will prosecute this Infrastructure Investment Strategy along three primary Lines of Effort:

1. Restore Readiness to Power Projection Platforms: The Air Force requires power projection platforms capable of generating combat effects to support full spectrum, multi-domain conflicts with near-peer competitors, while also protecting against, responding to, and recovering from attacks or disruptions that degrade operations. This requires a sustainable, diversified and agile basing network that is resilient in contested environments. To restore readiness to our power projection platforms, we will pursue the following four objectives:

- **Ensure Airbase Resiliency:** Assess mission threat vulnerabilities and employ initiatives to include hardening of infrastructure, adaptive basing, resilient energy sources, dispersal, industrial control systems protection, and allied partnerships. Goal is to reduce vulnerabilities, while enhancing our ability to protect, respond and recover from disruptions to operations and supporting infrastructure.
- **Prioritize Repair of Mission-Critical Infrastructure:** Identify, assess and mitigate risk of critical infrastructure failure that impacts the mission. Goal is to optimize infrastructure investments by carefully scrutinizing requirements to achieve a facility mission capable rate of 90% or higher for critical infrastructure.
- **Enhance Strategic Basing Posture:** Using a military value methodology, assess long range strategic basing posture to identify requirements, gaps, and potential actions necessary. Goal is to enhance the overall readiness of Air Force basing squadrons, maximize the effectiveness of existing infrastructure, and align present and future infrastructure requirements and investments with the National Defense Strategy.
- **Strengthen Installation Planning:** Develop Installation Master Plans to align infrastructure requirements and investments with the National Defense Strategy, optimize use/re-use of existing facilities, offset new construction growth, and divest failing and underutilized facilities. Goal is to create enduring plans for the installations we need while reducing total facility square footage by 5% in 20 years through divestment, demolition, conversion, and consolidation.

2. Cost Effective Modernization of Infrastructure: We must deliver affordable, sustainable, and safe installations through efficient processes and simplified governance. We must operationalize the principles of asset management while cost-effectively modernizing our infrastructure to ensure required infrastructure is constructed, operated and sustained at the lowest overall lifecycle cost. This will require pursuit of the following three objectives:

- **Pursue Proactive Infrastructure Investment:** Leverage advanced analytics to inform targeted infrastructure investments at the optimum point in the facility life cycle. Goal is to substantially drive down the life-cycle cost of recapitalization while improving the enduring readiness of our infrastructure.
- **Implement Standard Designs:** Develop and adopt standard and modular enterprise-wide designs and design criteria. Goal is to significantly reduce overall planning, design, and construction cost and risk, and to ensure appropriate levels of quality.
- **Improve (Front-End) Acquisition and Programming:** Implement standardized planning and programming tools and employ certified cost estimates. Goal is to improve requirements definition, schedule refinement, and costing/budgeting to reduce project schedule and cost growth.

3. Drive Innovation in Installation Management: We must strategically align infrastructure requirements with mission requirements by leveraging new technologies, innovative funding models, intelligent procurement methods, and new authorities. We will do this through the following objectives:

- **Employ Partnerships and Third-Party Finance:** Pursue innovative service delivery models by leveraging private sector capital and expertise. Goal is to better-support mission requirements while reducing facility maintenance and repair costs, divesting infrastructure where justified, and fostering enduring partnerships with surrounding communities.
- **Utilize Facilities Management Technologies:** Implement the use of state-of-the-art building monitoring systems, predictive condition-based facility maintenance technologies, and artificial intelligence. Goal is to improve infrastructure readiness while reducing the cost of facilities maintenance.
- **Exploit Category Management:** Leverage innovative business analytics and powerful acquisition tools to achieve economies of scale in the procurement of facilities sustainment, restoration, and modernization services. Explore early contractor involvement in execution of facilities sustainment, restoration, modernization and military construction projects. Implement standardized planning/programming tools and certified cost estimates. Goal is to improve scope, schedule budget and curb time and cost growth.
- **Leverage New Authorities:** Maximize the use of new authorities made available by Congress through the National Defense Authorization Act. Goal is to more effectively re-use and restore existing facilities and reduce the backlog of new military construction requirements.

IMPLEMENTATION FRAMEWORK

Implementation of the Air Force Infrastructure Investment Strategy will be overseen by the Assistant Secretary of the Air Force for Installations, Environment and Energy. The Air Force

Deputy Chief of Staff for Logistics, Engineering, and Force Protection will synthesize the organization, training, and equipping requirements and serve as the Air Force lead for implementing this strategy. The Air Force Materiel Command will serve as the supporting MAJCOM for mission execution and mission support, through the Air Force Installation and Mission Support Center. With support from the Air Force Installation and Mission Support Center, MAJCOM Commanders will be responsible for successful execution of this strategy at the base-level. Air Force Materiel Command will provide quarterly updates to the Installations Executive Council; the Assistant Secretary of the Air Force for Installations, Environment, and Energy will provide written summaries of these updates and associated metrics to the Secretary of the Air Force, the Under-Secretary of the Air Force, the Chief of Staff of the Air Force, and the Vice-Chief of Staff of the Air Force.

SUMMARY

When implemented, this Infrastructure Investment Strategy will reverse the trend of backlogged maintenance and restoration while greatly improving our ability to project combat power when and where our Nation needs it. It focuses efforts on the Air Force Base as the foundation of combat readiness and lethality, with an intended end-state of delivering adaptive, resilient and fiscally sustainable infrastructure to assure combat readiness, lethality and Airmen resilience. This strategy is underwritten by the imperatives of adequate resources, proven management practices, unity of effort, and highly skilled and available team members. Implementation will be coordinated by Air Staff, led by the Deputy Chief of Staff for Logistics, Engineering, and Force Protection, with executive oversight provided by the Installations Executive Council.

We are proud of our military and civilian Airmen who serve diligently every day to accomplish the critical and complex mission support functions that enable our bases to serve as power projection platforms, force generation centers, and safe communities for our Airmen and families. This strategy serves as a significant step forward to ensuring that they have the resources and capabilities they need to continue accomplishing this critical mission for decades to come.