

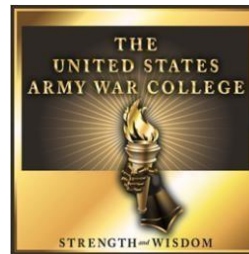
# Strategy Research Project

## Strategic Investment Analysis: Army National Guard Facilities and Infrastructure

by

Lieutenant Colonel Kendrick L. Cager  
Mississippi Army National Guard

Under the Direction of:  
Professor Charles Allen



United States Army War College  
Class of 2018

### DISTRIBUTION STATEMENT: A

Approved for Public Release  
Distribution is Unlimited

The views expressed herein are those of the author(s) and do not necessarily reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

REPORT DOCUMENTATION PAGE			Form Approved--OMB No. 0704-0188		
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 01-04-2018		2. REPORT TYPE STRATEGY RESEARCH PROJECT		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Strategic Investment Analysis: Army National Guard Facilities and Infrastructure			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Lieutenant Colonel Kendrick L. Cager Mississippi Army National Guard			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Professor Charles Allen			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College, 122 Forbes Avenue, Carlisle, PA 17013			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Approved for Public Release. Distribution is Unlimited. I understand this document will be included in a research database and available to the public. Author: <input checked="" type="checkbox"/>					
13. SUPPLEMENTARY NOTES Word Count: 6,958					
14. ABSTRACT The reserve component has deployed Soldiers and Airman on continual basis since the 9/11 attacks on the homeland. Since 9/11, the Army National Guard (ARNG) has been an integral part of the Army's operational force by augmenting its combat capacity and capabilities. Accordingly, the ARNG struggles to maintain its facilities and infrastructure in the wake of increased training and deployment activities. The increased and training and deployment activities has had negative impacts on both active and reserve components in terms of readiness, modernization, quality of life, and retention. This paper examines the fiscal environment and the negative effects of the Budget Control Act of 2011 and sequestration. This document provides the underlying framework of the problem that currently there are higher expectations for ARNG will maintain the readiness posture that requires an investment strategy to support and sustain its aging facilities and infrastructure. The paper concludes by proposing three investment strategies that incorporates a multifaceted approach to address the challenges associated with investing resources to support ARNG facilities and infrastructure.					
15. SUBJECT TERMS Facility Investment Strategy, ARNG Readiness, ARNG Modernization					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 33	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU			19b. TELEPHONE NUMBER (w/ area code)

# Strategic Investment Analysis: Army National Guard Facilities and Infrastructure

(6,958 words)

## Abstract

The reserve component has deployed Soldiers and Airman on continual basis since the 9/11 attacks on the homeland. Since 9/11, the Army National Guard (ARNG) has been an integral part of the Army's operational force by augmenting its combat capacity and capabilities. Accordingly, the ARNG struggles to maintain its facilities and infrastructure in the wake of increased training and deployment activities. The increased and training and deployment activities has had negative impacts on both active and reserve components in terms of readiness, modernization, quality of life, and retention. This paper examines the fiscal environment and the negative effects of the Budget Control Act of 2011 and sequestration. This document provides the underlying framework of the problem that currently there are higher expectations for ARNG will maintain the readiness posture that requires an investment strategy to support and sustain its aging facilities and infrastructure. The paper concludes by proposing three investment strategies that incorporates a multifaceted approach to address the challenges associated with investing resources to support ARNG facilities and infrastructure.

## **Strategic Investment Analysis: Army National Guard Facilities and Infrastructure**

Our fundamental task is like no other - it is to win in the unforgiving crucible of ground combat. We must ensure the Army remains ready as the world's premier combat force. Readiness for ground forces is – and will remain – the U.S. Army's #1 priority.

—General Mark A. Milley,  
Chief of Staff of the Army<sup>1</sup>

Over the past 25 years, the employment and reliance on the Reserve Components to meet operational requirements have dramatically increased. The reserve component has deployed Soldiers and Airman on continual basis since the 9/11 attacks on the homeland. Consequently, the Army National Guard (ARNG) has been an integral part of the Army's operational force by augmenting its combat capacity. The ARNG struggles to maintain its facilities and infrastructure in the wake of increased training and deployment activities.

Maintaining a higher state of readiness over an extended period of time has had negative consequences for ARNG facilities. The increased training and deployment activities have had negative impacts on both active and reserve components for readiness, modernization, quality of life, and retention. Senior leaders have been forced to reprioritize critical facilities resources to support other readiness activities such as training and equipment sustainment.

The ARNG shares in managing resource frictions between readiness, modernization, and force structure. Regional and global commitments in conjunction with funding uncertainties challenged the ARNG's overall readiness posture.<sup>2</sup> However, degraded facilities and critical space shortages threaten the ARNG's ability to provide trained and ready forces as part of the Total Army support to the Geographic

Combatant Commanders (GCCs). The ARNG cannot sustain the current level readiness without revised strategic investments in facilities and infrastructure.

The Department of Defense (DoD) must change its approach to resourcing Army National Guard (ARNG) facilities and infrastructure requirements. Decision making models that support resource allocations must consider innovative ways for the ARNG to construct, sustain, restore, and modernize mission critical facilities. Internally, the ARNG must also pursue new ways to balance its facilities and infrastructure requirements within the realities of resource constraints. Sustaining and improving the quality of ARNG facilities and infrastructure are essential to meet current and future readiness requirements.

This paper assesses the strategic guidance at the Army and ARNG levels for facility and infrastructure investment priorities. It then examines the fiscal environment and the negative effects of the Budget Control Act of 2011 and sequestration. This document provides the underlying framework of the problem while exploring an investment strategy to support and sustain ARNG facilities and infrastructure. The paper concludes by proposing investment strategies that incorporates a multifaceted approach to address the challenges associated with investing resources to support ARNG facilities and infrastructure.

## NG Background

In 1903 Elihu Root advocated for a trained military reserve and convinced Congress to increase support for the National Guard. The 1903 Militia Act established conditions under which to federalize state militias and resourced them for training and equipment.<sup>3</sup> Previously, the National Guard Association (NGA) successfully lobbied Congress to increase the National Guard's annual appropriation from \$400,000 to \$1

million. The states adopted the same organizational structure and standards of discipline as found in the Active Army such as Uniformed Code of Military Justice (UCMJ) and Title 10 responsibilities. Congress created Title 32, U.S. Code to consolidate all laws governing administration and regulations of the National Guard while operating under State authorities.<sup>4</sup>

With the *National Defense Act of 1916* (NDA–1916), the term “National Guard” became the official name of the organized militia of the United States. NDA–1916 expanded the role of the National Guard in national defense. Though the Guard remained a State force, NDA-1916 increased federal oversight and assistance for training and provision of equipment. The *National Defense Act of 1933* established the National Guard as a permanent reserve component of the Army, consisting of federally recognized units and established the role of the Guard as a permanent part of the Army, both in peacetime and in war.<sup>5</sup>

These efforts to shape the National Guard in the early 20th century reflect its unique mission and posture. The National Guard is the only organization in the U.S. military that has the responsibility to support both state and federal missions. National Guard forces may serve in three distinct statuses for active duty service: 1) State Active Duty (SAD), 2) Title 32, or 3) Title 10. Each status carries distinct operational and resource implications. Title 10, U.S. Code authorizes the President to call-up the National Guard for federal service in response to national emergencies.<sup>6</sup> The ARNG has a federal obligation to maintain properly trained and equipped units that are ready for active duty, for mobilization in support of contingency operations, national emergencies, or when the need for the armed forces exceed the capacity of the Active component.

Figure 1 shows the specific authorities and responsibilities by which the ARNG forces may operate.

	State Active Duty	Title 32	Title 10
Command & Control	State Governor	State Governor <sup>1</sup>	President <sup>2</sup>
Who Performs Duty	The Guard	The Guard <sup>3</sup>	Active Services, National Guard, Reserves
Where Duty Performed	The State	United States	Worldwide
Pay	State Law	Federal Pay & Allowances	Federal Pay & Allowances
Federal Reimbursement	Stafford Act <sup>4</sup> or Cooperative Agreement <sup>5</sup>	N/A: Costs Paid by Federal Funds	N/A: Costs Paid by Federal Funds
<i>Posse Comitatus</i> Applies <sup>6</sup>	No	No	Yes

1. 32 USC §502(f)(1)

2. Under Presidential Reserve Call-up (10 USC § 12304), partial mobilization (10 USC § 12302), or full mobilization (10 USC § 12301(a))

3. 10 USC §§ 3062(c) and 8062(c)

4. Stafford Act (42 USC § 5121) for disaster-related activities

5. Cooperative agreement if to perform an authorized National Guard function

6. Posse Comitatus Act (18 USC § 1385) [*SAD & T32 Guard not considered part of active military*]

Figure 1. National Guard Duty Status Matrix<sup>7</sup>

### Strategic Vision and Guidance

In 2017, Headquarters, Department of the Army (HQDA) transitioned from the Army Force Generation (AFORGEN) model to the Sustainable Readiness Model (SRM). The ARFORGEN model was found lacking because units were in an ‘available’ status for nine months and reverted back into ‘reset’ phase.<sup>8</sup> In contrast, the SRM provides a tiered readiness system that synchronizes the force generation with the Program Objective Memorandum (POM), budget, and execution years.<sup>9</sup> The central focus of the SRM is not only to ensure formations are surge ready but also rotationally focused. The SRM requires units to be prepared to deploy in response to global contingencies and able to conduct decisive action operations.<sup>10</sup> Under SRM ARNG forces must sustain readiness levels for prolonged periods.<sup>11</sup> The SRM, provides for one year modules for ARNG forces to meet readiness requirements. However, consideration must be given to an increased number of training days during that year to meet the

prescribed training gates. Home station training is more critical for ARNG units to meet the SRM's mission readiness modules. Facility and infrastructure investments set conditions for the ARNG success in meeting the new mission readiness standards per the SRM.

The Army has now set an increased goal to sustain 66% of the aggregate active duty force in a combat ready status for global contingencies.<sup>12</sup> The change is intended to optimize available resources to generate the Total Army capacity and capability. The intent of the Total Army concept is to leverage Guard and Reserve capabilities as operational forces rather than the strategic reserves. Headquarters, Department of the Army (HQDA) directed the ARNG to increase its overall readiness posture accordingly by 30 September 2019. The intent is to reduce post mobilization timelines to provide the Army sufficient capacity in support of the GCCs.<sup>13</sup>

Decision Point 58 (DP 58), now referred to within the ARNG as enhanced readiness initiative, evolved from an HQDA inquiry in 2015.<sup>14</sup> The Chief of Staff of the Army (CSA) requested options to maximize the employment of the Army's reserve components for operational contingencies and to build the Army to support operations through 2025. The CSA directed the ARNG to provide recommendations on "strategic actions, events and processes" that would improve the Total Army force. The CSA directed the ARNG to consider five initiatives to increase readiness and to access capabilities in the ARNG. Those initiatives included: 1) Increased ARNG Combat Training Center (CTC) rotations; 2) Employment through increased use of Title 10 U.S. Code 12304b which provides the authority to service secretaries to involuntarily order to active duty reserve members to augment missions in support of Combatant



Commands<sup>15</sup>; 3) Increased training days for select units; 4) Operationalizing Round Out/Up (multi-compo) efforts to augment larger organizations such as brigade or higher with subordinate units from other components;<sup>16</sup> and 5) Capitalizing pre and post mobilization training activities.<sup>17</sup> Each initiative provides opportunities for the ARNG to provide trained and ready forces but requires a significant investment strategy to meet each requirement.

The Joint Operating Environment (JOE) provides baselines and trends upon which to base assumptions. This ambiguity poses significant challenges for strategic and operational leaders to anticipate 21<sup>st</sup> century requirement and responsibilities. Likewise, there is no specific model or analytical tool that guarantees success. The character of war continues to evolve with competitive environment for multi-domain operations. This affects the strategic calculus by which the US military prepares, plans, and executes operations. In contrast to future uncertainty, ARNG readiness relies upon the stability of its training facilities and infrastructure to meet the increased readiness requirements. This requires a resource balance between sustainment, modernization, and restoration programs to ensure the reliability of ARNG facilities and infrastructure.

Going forward, the investment strategy requires a long-term approach to improve efforts to sustain, restore, and modernize ARNG facilities and infrastructure. Army initiatives such as DP 58 and the Sustainable Readiness Model have strategic implications for ARNG facilities because of the increased demand for new construction, sustainment, restoration, and maintenance projects. The DoD and HQDA must establish realistic expectations, while providing the strategic framework for ARNG facilities to keep pace with increased training and readiness activities. The Army also

acknowledges that today's funding models do not necessarily provide effective resource investments for ARNG facilities and infrastructure. The Army's posture statement acknowledges the relevance of its facility portfolio to strengthening readiness:

....the Army deferred maintenance of our installations for many years. The Army generates readiness on the installations where Soldiers live, work, and train. Installations provide the platforms where the Army focuses on its fundamental task—readiness. Our military construction investment remains at historically low spending levels and focuses on replacement of failing and obsolete training, operations, maintenance facilities, and footprint consolidation. Deterioration of our installations adversely impacts Soldier and Family quality of life, maintenance of equipment, deployment of forces, and our ability to mobilize reserve components.<sup>18</sup>

Thus, sustained operational tempo and increased readiness require a facility investment strategy that enables the Joint Force to maintain its competitive advantage. Consequently, operational demands have forced the reprioritization of readiness at the expense of modernizing and sustaining facilities and infrastructure for both active and reserve components. Strategic leaders made the difficult decision to assume risk with facilities and infrastructure investments in order to preserve resources for other readiness priorities. Active and reserve components are reevaluating facility and infrastructure investment strategies in the wake of the FY2018-2019 budget projections.

As with war planning or technology development, neither initiative would be successful without the appropriate strategy. Likewise, facility investments require a strategic approach to optimize resources to meet current and future readiness demands. The DoD, Army, and ARNG may have slightly different approaches with regards to ways and means but each has the common end state to improve warfighting readiness. Each entity shares a strategic interest in optimizing resources to address aging and degraded infrastructure. Facility investments strategy commonalities between

DoD, Army, and ARNG include identifying capability shortfalls, exploring opportunities to make an immediate impact, and divesting non-mission essential infrastructure.

### The Army's Facility Investment Strategy

The Army Facility Investment Strategy (FIS) takes an enterprise approach that guides resources decisions for sustaining and improving installations and infrastructure.<sup>19</sup> It establishes the framework by which senior leaders make informed facility investment decisions such as the demolition of unsustainable facilities or new construction priorities. The Office of the Assistant Chief of Staff for Installation Management (OACSIM) is the proponent for the Army FIS. OACSIM nests the priorities from the installation management community with the Army Campaign Plan (ACP).<sup>20</sup> The key strategic outcomes for the Army FIS are to: sustain required facilities, dispose of excess facilities, improve facilities quality, and to address critical facility shortfalls.<sup>21</sup> The FIS leverages three major funding programs to target strategic outcomes: Facilities Sustainment, Restoration and Modernization (FSRM), Military Construction (MILCON) and Facility Reduction Program. Ideally, the FIS leverages MILCON to build new facilities critical to mission readiness.

### Assistant Secretary of the Army of Installations, Energy and Environment (ASA (IE&E))

The Army Installations 2025 provides a holistic approach that enables the Army's strategic readiness. The guidance in the Army Installations 2025 describes key readiness tenets of installations as a central part of the Total Force's ability to address Army priorities while supporting mission requirements of Senior Commanders. This translates to the ability to provide a growing and transforming Army with the facilities and infrastructure to support current and future readiness requirements.<sup>22</sup>

The guidance also emphasizes the Army's commitment to maintain the appropriate balance between FSRM, MILCON, and the Facility Reduction Program.<sup>23</sup> The ASA (IE&E) nests its policies and programs within the Army's FIS to support facilities and infrastructure requirements. As the Army works to align its operational priorities with the installations support requirements, the ASA (IE&E) seeks collective opportunities to improve readiness by maximizing the use of existing facilities, reducing facilities inventory, and prioritizing Army resources to support MILCON requirements.

#### ARNG Capital Investment Strategy

Currently, the ARNG nests its Capital Investment Strategy (CIS) within the guidance published by Department of the Army and ASA (IE&E). The ARNG CIS is intended to shape resource decisions at the DoD and Army levels. The CIS prioritizes facilities and infrastructure requirements based on three areas: mission critical, mission dependent, and mission support. Narrowing the focus these areas is an internal mechanism to help the ARNG prioritize projects that compete for resources.<sup>24</sup>

The ARNG's long-term strategy is to explore more innovative solutions to modernize its facilities inventory to enhance mission readiness. This approach includes strategically investing in facilities and infrastructure that are most critical to the readiness such as Readiness Centers, support facilities, and ranges. In addition, the ARNG CIS promotes the divestiture of facilities no longer viable for recruiting, training, and retaining Soldiers.<sup>25</sup>

While the Army and ARNG may have similar views on investment priorities at the enterprise levels, resources are often the center of gravity for successful execution. Moreover, strategic leaders must apply critical thinking skills to develop long term solutions for facility and infrastructure investments. Leaders must foster decisions that

align guidance, vision, and resources. The operational design framework enables strategic leaders to scan or understand the environment, frame the problem, and develop an operational approach while assessing risks.<sup>26</sup>

### Understand the Operational Environment

Political leaders and the DoD made the commitment to pursue the full budget request for the Fiscal Year 2018.<sup>27</sup> This effort is in keeping with political promises to rebuild and strengthen the armed forces after nearly two decades of conflict. By comparison, the previous budget sequestration, a provision of the Budget Control Act of 2011, imposed across the board budget cuts. Many senior military and civilian officials argue that the impacts of sequestration pose the most significant threat to readiness.<sup>28</sup> As a result, significant budget cuts and fiscal uncertainties have led to failing infrastructure that will take years to address.

For example, the MSARNG was funded at \$2.5 million in FY17 to support sustainment, restoration, and maintenance projects. However, the average Backlog of Maintenance and Repairs (BMAR) is \$6.7 million. This equates to roughly 37.3% annual funding to support increasing BMAR requirements. The *Senate Armed Service Committee (SASC) Report Directive 111-201*, dated June 4, 2010 noted that over 40% of ARNG facilities are over 50 years old and do not meet requirements for the support of training for the full range of mission essential tasks.<sup>29</sup> To this point, the Presidential Budget Request must include an accurate estimate of ARNG facilities and infrastructure requirements to justify resources considerations over other items or programs.

In 2005, there was enough Congressional support to allow the Army invest over \$18B in Base Reduction and Closure (BRAC) in an effort to reduce its installations footprint and maximize resources.<sup>30</sup> While the ARNG and Army Reserve benefited from

BRAC, resource competition among each stakeholder still exists. Military construction programs remain at historically low spending levels. The Army, ARNG, and Army Reserve remain in competition for these finite resources. There has to be an equitable shift in resources to support facilities and infrastructure over the next decade to strengthen the ARNG's mission readiness. Adequate resourcing is a critical step toward sustaining, restoring, and modernizing ARNG facilities to meet current and emerging mission requirements.

### Framing the Problem

The 2016 National Commission on the Future of the Army highlighted that the Nation has one Army with three distinct but essential components: the Active Army, Army National Guard, and Army Reserve.<sup>31</sup> Despite the differences among all three components the Nation's one Army is intended to operate under the Total Force Policy. Managing the tensions among the components to achieve a better alignment is particularly important to prioritizing facility investments.

The Army National Guard (ARNG) now serves as an operational force rather than strategic reserve. The ARNG has distinct roles within the Nation's land-power force as the Combat Reserve of the Army, as well as providing the State's response capability for the nation's governors. While each state's National Guard maintains responsibility for state missions such as hurricane relief and domestic support to civil authorities, the ARNG provides the strategic depth across the full range of military operations.

There are higher expectations across the DoD that the ARNG will maintain the readiness posture to effectively augment the Army's response to future regional and global contingencies. Greater use of the ARNG and the need for an increased

readiness posture requires a revised investment strategy to support and sustain its aging facilities and infrastructure. The Installation Status Report (ISR) shows that roughly 70% of the ARNG Readiness Centers have a functionality ISR functionality rating of “F3,” which defines facilities displaying significant functional and configuration deficiencies. The average facilities have an ISR functionality rating of “F2,” which relates that the facility meets the minimum functional requirements for the designed use. Additionally, the degraded conditions of Readiness Centers provide the greatest concerns for ARNG in terms of enabling training and readiness activities. Readiness Centers are the primary facilities utilized to support the individual training requirements.<sup>32</sup>

Additionally, there is a significant gap between the current ARNG installations portfolio and the resource allocation to support them. Failing facilities conditions, insufficient quantities, and misaligned installation locations are interconnected issues that magnify the shortfalls between facilities requirements and allocated resources. For example, the ARNG currently has an estimated \$18.7B MILCON requirement to fully modernize its nationwide portfolio.<sup>33</sup> National Guard Bureau (NGB) conducted an internal analysis that concluded an additional \$2.2 billion investment above the annual MILCON base budget to support modernization efforts over the next fifteen years.<sup>34</sup> One has to maintain realistic expectations for these funding levels in the current fiscal environment. Nevertheless, the accumulation of resource shortfalls, deferred maintenance activities, and increased training and readiness activities are issues that threaten the sustainability of ARNG facilities.

## Readiness Priorities/Implications

The FY 18-25 *Army National Guard Campaign Plan* (AGCP) provides the road map for the ARNG to meet combatant commander requirements along with the methodology for future programming of resources and equipment.<sup>35</sup> Through 2025, the ARNG, as a component of the Army, has the requirement to provide rotational forces on a continual basis to combatant commanders for steady-state operations. In support of this requirement, the AGCP promotes two key objectives for the ARNG: The ARNG must be fully interoperable with the joint force, and ARNG Joint Task Forces (JTF) must be responsiveness to governors in providing support to civil authorities.<sup>36</sup>

The AGCP codifies the Lines of Effort (LOE) along three areas: 1) Force Generation (Decisive); 2) Human Capital Management (Sustaining); 3) Modernization & Investment (Shaping).<sup>37</sup> ARNG facilities and infrastructure play an important part in supporting each LOEs. Arguably, ARNG facilities are the centers of gravity for building and maintaining readiness. However, the ARNG has numerous facilities that fail to support mission requirements. For example, the MSARNG supports over 9,800 Soldiers who work and train in inadequate facilities. Most MSARNG Readiness Centers were built over thirty years ago. Many of these facilities have significant risks associated with them such as systems failures and higher life-cycle costs. Consequently, the conditions of ARNG facilities and infrastructure have long-term impacts on each LOE as directed in the AGCP.

Force Generation (LOE #1) requires that ARNG installations provide support to recruit and train Soldiers.<sup>38</sup> To accomplish this, the facilities must be located and aligned with the population centers to maximize recruiting and training opportunities. This approach affects future investment decisions whether to relocate, reconsolidate, or



establish new ARNG facilities. Demographics and stationing provide the framework by which the ARNG generates quality forces. Readiness is contingent upon the ability to man, train, and equip forces to provide operational and domestic response capabilities.

Human Capital Management (LOE #2) relates to building ready forces in support of the combatant commander's forecasted and contingency requirements.<sup>39</sup> In support of this LOE, the ARNG must be resourced to provide quality facilities that support recruiting, training, and retention efforts. This LOE is predicated on the Army established Sustainable Readiness Model (SRM). The ARNG must take a continuous approach to maintaining readiness that provides the combatant commander ready forces. The approach makes home station training more vital to the ARNG's ability maintain and project combat power. The quality of each Readiness Center now becomes more essential to home station training activities because each provides the basis from which the ARNG builds readiness.

Modernization & Investment (LOE #3) relates to innovative infrastructure and equipping solutions to ensure the ARNG keeps pace with national defense requirements.<sup>40</sup> The average age of ARNG training facilities is over 37 years old, and 40% exceed 50 years of age.<sup>41</sup> Facilities and infrastructure modernizations are necessary to meet the expectations of LOE #3. A comprehensive modernization plan for the ARNG facilities would enhance the overall readiness posture and mission support capabilities.

#### Current Facility Assessment

Many ARNG facilities and infrastructure are in poor or failing conditions. Degrading conditions of mission critical facilities such as Readiness Centers have taken significant toll on training and operational readiness. ARNG facilities have not evolved

with the growing operational requirements. Over time, Modified Table of Equipment (MTOE) changes have led to space issues at the majority of ARNG facilities. Personnel stationing, new aircraft, vehicles, and other sensitive equipment do not fit into previous spaces such as hangars, motor pools, or vaults. Many ARNG facilities were not designed to accommodate the increased quantity of equipment and personnel. The discrepancies contribute to insufficiencies in key areas such as billeting and barracks.

The most recent issue of *Foundations of Readiness* highlighted several concerns as result of inadequate facilities. The lack of training bays and workspace forces Soldiers to find alternative ways to meet their assigned missions.<sup>42</sup> Defense Support to Civil Authorities (DSCA) missions often require ARNG facilities to serve as logistical support hubs for civilian and military operations. Key areas such as motor pools, drill halls, and kitchens are critical to ARNG's DSCA support capabilities. Many of these key areas will no longer support DSCA requirements due to aging infrastructure and inadequate space deficiencies.<sup>43</sup> ARNG facilities have secondary missions to operate as Emergency Operations Centers (EOC) during domestics responses. Many ARNG facilities do not have the latrine, kitchen, and parking capacity to support sustained operations for emergency response personnel. Many states must leverage contracting support to provide facilities on a temporary basis. This requires additional resources and extended lead times to ensure adequate facilities are available during emergency operations.

Information Technology (IT) based requirements is another area in which facilities provide the basis for support. There has been a spike in training requirements that require the use of computer technology to meet Soldier qualifications. Many

facilities do not provide sufficient computer labs or provide the climate-controlled space for critical automation and IT equipment. The shortage of space and limited computer labs severely affect the Soldiers' ability to meet distance-learning requirements. As a result, Soldiers must travel to other locations for specific network capability, which detracts from the ARNG's readiness posture. These critical space deficiencies contribute to an increased time requirement to complete mandatory computer training, thus allowing less time for other collective training events.

The lack of sufficient storage space is another consistent trend among ARNG facilities. Many facilities are forced to utilize commercial storage containers to store Organizational Clothing and Individual Equipment (OCIE) and weapons. Often when many of the ARNG facilities were constructed, the OCIE and number of assigned weapons were significantly less than the numbers issued today.<sup>44</sup> It has reached the point that, lower ranking Soldiers are being directed to maintain their individual equipment at their homes. This reduces accountability and increases the risk of loss or damage to government property. More importantly, this also affects the ARNG's training and readiness. Table 1 is an example tabulation summary for a typical MSARNG Readiness Center. The example documents one Readiness Center's space deficiencies for mission critical areas.

Table 1. Key Area Tabulation Summary<sup>45</sup>

Area	Authorized SF	On-Hand	MISSION CAPABILITY Y/N
Classroom	2,060 SF	1,000 SF	N
Admin	3,860 SF	1, 596 SF	N
Supply/Storage	14,910 SF	2,590 SF	N
Parking (POV)	3,340 SY	2875 SY	N
Parking (Org) (Paved)	5,350 SY	1000 SY	N
Vault	600 SF	300 SF	N
Locker Room	2,108 SF	1,220 SF	N

Finally, ARNG ranges and training areas are also mission critical facilities that sustain readiness and require resource investments. Per the FY18 first quarter Installation Status Report (ISR), many ARNG operations and training facilities ranges and training areas are marginally meeting mission requirements per the Army's Training Circular 25-8, which governs the standards of training ranges.<sup>46</sup> ARNG ranges and training areas have both degraded from the lack of maintenance and modernization. Serviceable ranges and training areas are critical to maintaining high readiness postures for both Army and ARNG. Figure 2 highlights at risk operations and training installations that do not meet mission standards.

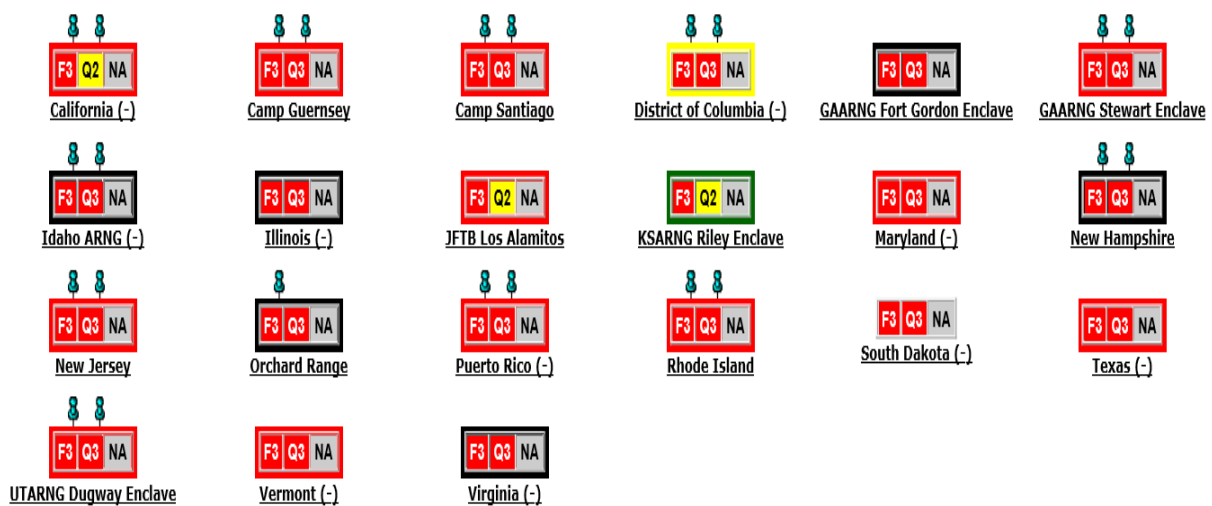


Figure 2. Operations and Training Assessment, 1<sup>st</sup> Quarter FY18 ISR Data<sup>47</sup>

ARNG training installations provide facilities that support each branch of service in their mission requirements. Modernization of ARNG range complexes and training areas is vital to providing realistic training venues to all services. However, many ARNG ranges continue to experience high throughput and utilization from all service components without the adequate funds for maintenance and repairs. For example,

Camp Shelby has a habitual relationship with Army, Navy, and Air Force units that utilize its training areas and ranges. Arguably, joint utilization of ARNG facilities requires a revised approach facility and infrastructure investments to resource improvements and upgrades.

### Assessment Metrics

The Installation Status Report (ISR) models predict that over 65% of ARNG facilities will degrade to 'F4' ratings by fiscal year (FY) 2020.<sup>48</sup> ISR provides the metrics to assess each facility in terms of infrastructure, services, and mission capacity. ISR-Infrastructure (ISR-I) is the primary Army reporting tool that captures facilities readiness. ISR assists commanders in obtaining appropriate resources and to establish resource priorities. ISR-I data is a commander's tool and reporting mechanism that informs Senior Leaders of challenges and risks faced by installations when considering the physical condition and mission support functional capability of facilities.<sup>49</sup> Typically, there are three main category considerations that enable resource decisions: Q-Ratings, F-ratings, and Facility Condition Index (FCI).

The Q-Rating measures the quality of each facility, which ranges from Q1 to Q4. Q-Ratings indicate whether facilities components are working order. For example, the facility's exterior may be aesthetically pleasing but the does not meet Anti-Terrorism Force Protection (ATFP) standards. In many cases, the component may require a physical alteration to meet mission requirement. The Q-Rating assesses the overall condition of an asset use against Army standards. The rating is based on the ratio of restoration cost to Engineered Replacement Value (ERV) as follows: Calculated Q Score =  $(1 - (\text{Restoration Cost} / \text{ERV})) \times 100$ .<sup>50</sup> Based on this formula, the quality assessment for ARNG facilities is based on the following rating bands:

Table 2. Quality Rating Bands<sup>51</sup>

Rating Bands	Calculated Score Ranges	Condition Descriptions
Q-1	100 to 90	Good Condition
Q-2	89 to 80	Adequate Condition
Q-3	79 to 60	Poor Condition
Q-4	59 to 0	Failing Condition

The F-Rating measures the facility’s functionality and mission support based on its designed purpose. The F-Ratings range from F1 to F4 based on a mission-weighted average of component ratings. For instance, administrative area capacity with a weight of ten is considered more critical to the facility’s mission capability than interior doors with a weight of six.<sup>52</sup> The functionality assessment for ARNG facilities is based on the following rating bands:

Table 3. Functional Rating Bands<sup>53</sup>

Rating	Break Points	Description
F-1	88.83	<b>Good</b> - Good - Capable of adequately supporting the function with reasonable maintenance and without a need for a restoration and modernization project.
F-2	66.67	<b>Adequate</b> - Has a minimal requirement for restoration and modernization funds to be capable of adequately supporting the function. RM cost is available in ISR-I
F-3	50	<b>Poor</b> - Has a significant requirement for restoration and modernization funds to make the asset capable of adequately supporting the function.
F-4	Below 50	<b>Failing</b> - Requires major restoration and modernization funds to be capable of adequately supporting the function.

The Facility Condition Index (FCI) is a financial calculation of the percentage of maintenance and repair backlog or ISR calculated Restoration cost to improve versus the facility replacement value. FCI provides a benchmark for comparison of the current condition to new condition for its designed purpose. It allows analysis of the effects of investing in facility improvements by providing a comparison method. The calculation

formula is one minus the sum of the Restoration Improvement Cost (RIC) divided by the sum of the Engineered Replacement Value (ERV) multiplied by 100.  $(1 - (\text{sum of RIC} / \text{sum of ERV})) \times 100$ .<sup>54</sup>

The ISR-I codifies the cost to improve facilities to Q2 standards. At the current funding levels, the rate of deterioration of the ARNG facilities exceeds the annual investment, forcing maintenance deferment to the following year. At this rate of deferred maintenance, the ARNG is projected to have an operational rate of Q4 in FY23.<sup>55</sup> This deterioration of facilities will cause a direct impact to readiness for the ARNG. Figure 3 is analytical example of the correlation between the FCI and deferred maintenance activities.

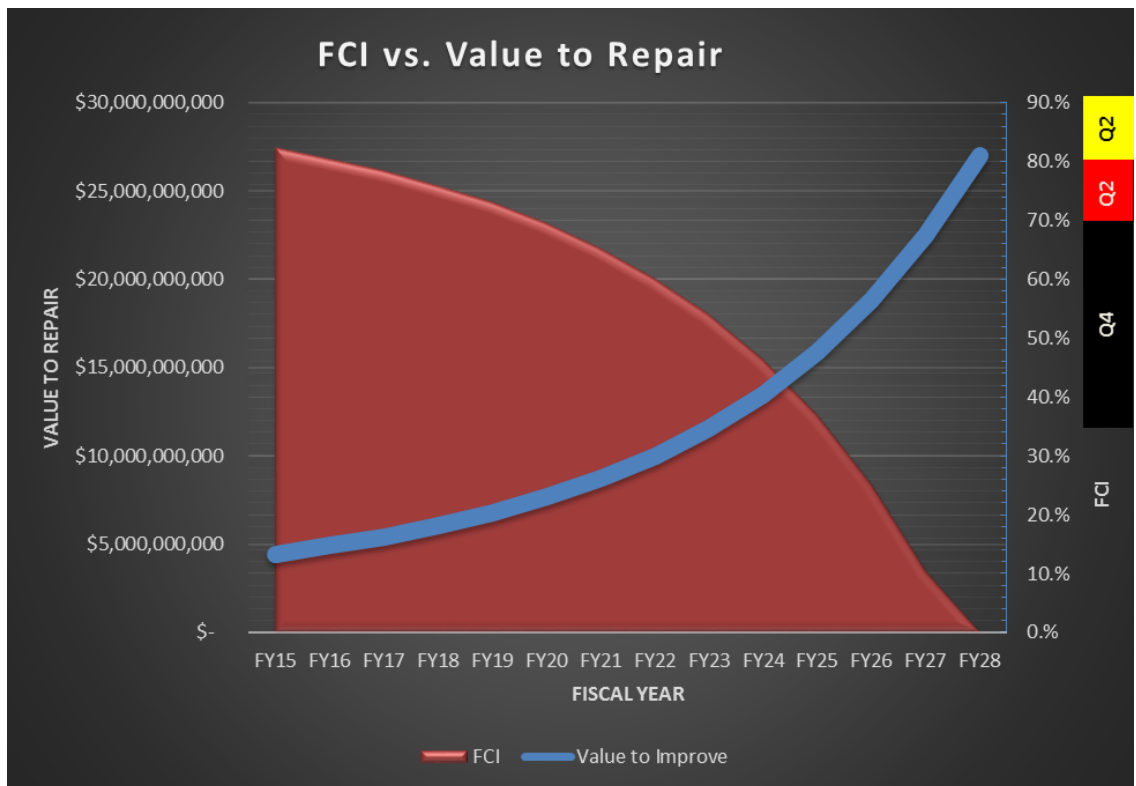


Figure 3. FCI to Deferred Maintenance Trend Analysis Model<sup>56</sup>

## Budget

Every aspect of generating, projecting, and sustaining combat power starts with facilities and infrastructure. Reduced resources, emerging requirements, and persistent OPTEMPO contributed to poor or failed condition of nearly 33,000 Army-wide facilities. Collectively, there is a \$10.8 billion requirement to address the deferred maintenance of all Army facilities and return them to adequate condition.<sup>57</sup> MILCON funding continues to fall well below the needs of the ARNG's facilities and infrastructure requirements. By comparison, the FY18 budget projects \$920M needed to fund 26 MILCON projects for the Army, while projections reflect only \$211M to fund 8 ARNG projects.<sup>58</sup>

Additionally, ARNG leverages Facilities Sustainment, Restoration, and Modernization (FSRM) program to meet facilities and infrastructure challenges. The FY18 budget reflected an upward trends in funding levels. The FY18 FRSM program increased from approximately \$693M to \$782M.<sup>59</sup> Regardless of the FY18 budget increase, funding levels do not fully address the \$1.1B critical facility requirements.<sup>60</sup> This equates to funding approximately 72% of the total FSRM requirement.

## The Way Forward

The ARNG will not be able to sustain the required level of readiness for maintaining quality facilities if it is not resourced accordingly. Leveraging MILCON funding for projects every 6-8 years is not a sustainable plan. The need is evident for its facilities to provide Soldiers with sufficient space and infrastructure to sustain readiness. Serviceable facilities are critical components to the ARNG ability to provide trained and ready forces.

Budget constraints, deferred maintenance, and aging facilities are key strategic concerns for operational readiness. Using the same approach to resourcing its facilities



will not achieve the desired end state for enhanced readiness. The ARNG simply cannot afford to 'wait it out' through normal resourcing channels. Facilities and infrastructure will continue to degrade if there are no changes in resource investment strategy.

The ARNG must refocus its strategic approach to better align ways and means to address facilities challenges. It must take actions outside the traditional methods to develop solutions to resource shortfalls. The leadership at National Guard Bureau (NGB) must take a collaborative approach to codify the priorities of all the 54 states and territories. Each state and territory has competing priorities based on the guidance from the Governors and Adjutants General.

The objective is to ensure synchronization of requirements, while systematically addressing the critical needs of each state or territory. In essence, this provides NGB a unified approach to nest its strategies for facility and infrastructure investments. NGB mandates that each state performs a master planning analysis to determine if there is an excess or deficit based on the facility category code associated with each project submission. The intent of the process is to ensure resources are not allocated to any excess inventory or low priority facilities. The following recommendations support a strategic approach to address the challenges associated resource investments for ARNG facilities and infrastructure.

Recommendation #1: Consolidate and Divest. The ARNG needs facilities in locations where they most effectively support recruiting, retention, and training activities. In essence, facilities must be located near the major population centers. Demographics have shifted significantly toward urban areas, leaving many ARNG facilities in rural areas that are not conducive to manning and response requirements.

The ARNG benefited from BRAC 2005 because the initiative provided resources to reduce the number of substandard and undersized facilities. Also, BRAC provided an opportunity to utilize the MILCON program to construct new facilities that better met force modernization needs. The ARNG received 56 MILCON projects with a combined budget of \$1.7B as an investment from the BRAC implementation.<sup>61</sup>

The ARNG must explore opportunities to consolidate and rationalize its footprint, while divesting excess facilities. The Adjutants' General (TAGs) has the authority to reconsolidate and divest state owned facilities. However, the state absorbs any clean-up and transfer costs associated with these actions. Many ARNG facilities are built on state property with lease agreements with local municipalities. In most cases, the legal process allows local municipalities to take ownership of excess facility without incurring costs. This creates a positive condition for both ARNG and the local community. More importantly, this creates an immediate reduction in facility sustainment costs.

Recommendation #2: Leverage FSRM/MILCON Programs concurrently to Address Shortfalls. The DoD and HQDA must resource the ARNG to achieve balance between FSRM and MILCON programs. To do this, there must be an acceptable balance between new construction, renovations, and large-scale maintenance and repair projects. NGB should issue better strategic guidance to help synchronize facility and infrastructure priorities for the 54 states and territories. Currently, the distribution of resources is based on an internal process using the Infrastructure Requirements Planning (IRP) model. The IRP is data-driven model based on specific metrics such as ISR rating, Adjutants General priorities, and the Army FIS to ensure an equitable distribution of resources throughout the 54 states and territories.

The ARNG must leverage both FSRM and MILCON programs to address those facilities deemed mission critical to readiness. For example, the FSRM funds could provide expedient measures such as restoration projects to resolve immediate facility challenges until MILCON projects are executed. Currently, the MILCON award cycle does not keep pace with the growing demands of the 21st century modernization requirements. On average, states receive MILCON funding every 8-10 years to support a new construction requirement.

The ARNG CIS must also leverage the sustainment, restoration, and modernization opportunities to transform existing facilities to meet new requirements. The ARNG CIS must reflect a prioritized list of mission critical projects nested within the Army FIS. This can be accomplished by prioritizing additions and alteration projects to accommodate rapidly emerging requirements. This is an option to improve mission critical facilities as a short-term solution. In addition, there is no Congressional approval for projects less than \$1M.<sup>62</sup> The shortened time horizon permits greater opportunities to execute smaller projects to enhance the ARNG's readiness posture.

**Recommendation #3: Partnerships and Joint Projects.** The ARNG must leverage partnerships with other DoD, state, and or federal agencies to maximize resource availability. For example, the MSARNG works with a local Navy installation to provide facilities that support a Regional Counterdrug Academy (RCTA), which provides training support to regional law enforcement personnel. A Memorandum of Understanding (MOU) between the MSARNG and the Navy provides the details with regards to construction, maintenance, and sustainment costs. Partnerships are cost effective mechanisms for the ARNG to leverage additional resources to sustain and improve its

facilities. Productive partnerships can provide mutual benefits to the ARNG and other agencies. Additionally, partnerships provide an increased opportunity to address facilities and infrastructure shortfalls.

Joint projects with other DoD entities are other prospective solutions for planning and executing new construction. Joint projects provide a unique opportunity for the ARNG to address critical facilities shortfalls through shared use and cost sharing. Additionally, they can maximize the cost-effectiveness for shared facilities, services, and infrastructure.

There is a distinct difference in the way ARNG construction and modernization projects are funded. The law requires a 25% state contribution unless the project is constructed on federal property. However, joint projects with other DoD entities are authorized 100% federally funding, which increases the likelihood of the project execution.

### Conclusion

Reserve component forces have proven to be an indispensable operational asset for the last seventeen years of war. Increased security threats both at home and abroad will continue the reliance on ARNG capabilities. The ARNG must maintain a sustainable readiness posture that enhances its ability to provide ready forces for both domestic and global contingencies. Facilities and infrastructure are the foundation by which the ARNG builds and sustains readiness.

The ARNG continues to face readiness challenges derived from shortfalls in resource allocations, as well as political and fiscal uncertainties. There has to be a paradigm shift in the ARNG's approach to develop an investment strategy that addresses facilities challenges. The ability to efficiently sustain, restore, and modernize

ARNG facilities and infrastructure will contribute to an enhanced readiness posture. The ARNG must develop ways to address both short-term and long-term solutions for its facility and infrastructure challenges. Utilizing the FSRM program to execute facility renovations and large-scale maintenance and repair projects are examples of short-term solutions. Conversely, the MILCON program addresses new construction requirements but is usually more costly and requires longer lead time for execution. Both programs can be used together as means to employ short-term and long-term solutions.

The ARNG must continue to leverage DoD relationships and processes to communicate the risks of simply maintaining the unacceptable status quo. Uncertainties in the operational environment will require ARNG facilities to support more frequent training events, accommodate more Soldier throughput, and to facilitate an increased demand to support civil authorities. Hence, ARNG leaders must gain better situational awareness of where they can effectively influence change for DoD resource distribution to support these demands.

The current decision making models fail to take into account the ARNG total facility and infrastructure requirements. The ARNG must continue to develop new ways to maximize facility resources, while reducing the shortfalls in areas that adversely impact its readiness posture. The ARNG must be consistent in defining facility and infrastructure requirements in order to shape resourcing decisions. Accurately assessing and validating these requirements will enable the ARNG to justify resources to support its MILCON and FSRM programs. The operational and strategic challenges will continue to challenge the ARNG aging facilities and infrastructure to meet readiness

demands. The ARNG must explore new ways to maximize facility resources, while reducing the shortfalls in areas that adversely impact its readiness posture.

## Endnotes

<sup>1</sup> Mark A. Milley, *Initial Message to the Army* (Washington, DC: Department of the Army, August 27, 2015), [https://www.army.mil/e2/rv5\\_downloads/leaders/csa/Initial\\_Message\\_39th\\_CSA.pdf](https://www.army.mil/e2/rv5_downloads/leaders/csa/Initial_Message_39th_CSA.pdf) (accessed October 14, 2017).

<sup>2</sup> Ibid.

<sup>3</sup> Michael D. Doubler., *A History of the Army National Guard, 1636-2000* (Washington, D.C.: GPO, Army National Guard, 2001), 129.

<sup>4</sup> Ibid.

<sup>5</sup> U.S. Army War College, *How The Army Runs: A Senior Leader Reference Handbook, 2011-2012*, 29th ed. (Carlisle, PA: U.S. Army War College), 2011, 7-4.

<sup>6</sup> U.S. Code Title 10-Armed Forces (2011), 209 § 12304b, [https://www.law.cornell.edu/uscode/text/10/12406\\_national\\_guard\\_title\\_10](https://www.law.cornell.edu/uscode/text/10/12406_national_guard_title_10) (accessed October 15, 2017).

<sup>7</sup> Lee Smithson, "MS National Guard Defense Support to Civil Authorities," briefing slides, Jackson, MS, December 2012, 12.

<sup>8</sup> Edward J. Filiberti, *Generating Military Capabilities* (Carlisle Barracks, PA: U.S. Army War College, 2017), 5.

<sup>9</sup> Ibid., 6.

<sup>10</sup> Flem B. "Donnie" Walker, "Building and Sustaining Readiness Across Forces Command Formations," *Army Sustainment*, May-June 2016, [https://www.army.mil/article/166101/building\\_and\\_sustaining\\_readiness\\_across\\_forces\\_command\\_formations](https://www.army.mil/article/166101/building_and_sustaining_readiness_across_forces_command_formations) (accessed October 15, 2017), 28.

<sup>11</sup> Timothy J. Kadavy, Vice Chief, *National Guard Bureau, ARNG 4.0: Enhanced Readiness Posture and Initial Planning Guidance* (Arlington, VA: National Guard Bureau, February 23, 2016).

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Timothy J. Kadavy, Vice Chief, National Guard Bureau, "DP 58 (ARNG Enhanced Readiness Posture) Implementation Guidance," Arlington, VA, National Guard Bureau, August 12, 2016.

<sup>15</sup> Selected Reserve and Certain Individual Ready Reserve members; Order to Active Duty Other Than During War or National Emergency, *U.S. Code, Chapter 1209* § 12304b, [https://www.law.cornell.edu/uscode/text/10/12406\\_national\\_guard\\_title\\_10](https://www.law.cornell.edu/uscode/text/10/12406_national_guard_title_10) (accessed October 15, 2017).

<sup>16</sup> National Commission on the Future of the Army (NCFA) Headquarters, *The Total Force Policy and Integration of Active and Reserve Units*, (Arlington, VA: National Commission on the Future of the Army, December 17, 2015), 2, [http://www.ncfa.ncr.gov/sites/default/files/Operational%20Subcommittee%20Multicomponent%20Units%20paper%2017%20DEC%2015\\_0.pdf](http://www.ncfa.ncr.gov/sites/default/files/Operational%20Subcommittee%20Multicomponent%20Units%20paper%2017%20DEC%2015_0.pdf) (accessed October 17, 2017).

<sup>17</sup> Kadavy, “DP 58 (ARNG Enhanced Readiness Posture) Implementation Guidance.”

<sup>18</sup> Mark. A. Milley, *Posture Statement of the 19<sup>th</sup> Chairman of the Joint Chiefs of Staff*, Posture Statement presented to the 115<sup>th</sup> Senate Armed Services Committee (Washington, DC: US Department of the Army, May 25, 2017), 7, [https://www.army.mil/article/163561/2017\\_posture\\_statement\\_of\\_the\\_us\\_army](https://www.army.mil/article/163561/2017_posture_statement_of_the_us_army) (accessed October 28, 2017).

<sup>19</sup> U.S. Department of the Army, *Army Installations 2025* (Washington, DC: US Department of the Army, August 11, 2016), 10, <https://www.army.mil/e2/c/downloads/454188.pdf> (accessed October 29, 2017).

<sup>20</sup> Office of the Assistant Chief of Staff for Installation Management, “Operations” <http://www.acsim.army.mil/operations/plans.html> (accessed March 15, 2018).

<sup>21</sup> Association of the United States Army, *Installation of the Future* (Arlington, VA: Association of the United States Army, March 2015), 5, <https://www.ausa.org/sites/default/files/SR-2015-Installation-of-the-Future.pdf> (accessed October 28, 2017).

<sup>22</sup> U.S. Department of the Army, *Army Installations 2025*, 5,

<sup>23</sup> Ibid.

<sup>24</sup> National Guard Bureau, *Army National Guard Readiness Center Transformation Master Plan* (Arlington, VA, National Guard Bureau, December 19, 2014), 14.

<sup>25</sup> Ibid.

<sup>26</sup> Department of Military Strategy, Planning and Operations, *Campaign Planning Handbook Academic Year 2018* (Carlisle, PA: U.S. Army War College, 2018), 45.

<sup>27</sup> Thomas A. Horlander, *Army FY 2018 Budget Overview*, (Washington, DC: Department of the Army, March 9, 2017), 4, [www.nationalguard.mil/Portals/31/.../fy2018-army-budget-overview-060817.pdf](http://www.nationalguard.mil/Portals/31/.../fy2018-army-budget-overview-060817.pdf) (accessed November 2, 2017).

<sup>28</sup> Lisa Ferdinando, *Sequestration Poses Biggest Threat to Readiness* (Washington D.C.: Department of Defense News, March 15, 2016), 1, <https://www.defense.gov> (accessed October 28, 2017).

<sup>29</sup> U.S. Congress, Senate, Committee on Armed Services. *Chairman Opening Statement: Department of Defense Authorization of Act FY 2011 and the Future Years Defense Program*, 111th Cong., 2nd sess., June 4, 2010, <https://www.congress.gov/congressional-report/111th-congress/senate-report/201/1> (accessed October 29, 2017), 280.

<sup>30</sup> Katherine Hammack, "BRAC-2005- The Closing Chapter: A Successful Investment in Army Capability, Soldiers, Families, and Communities," *U.S. Army Journal of Installation Management*, Summer 2011, 1.

<sup>31</sup> National Commission on the Future of the Army, *Report to the President and the Congress of the United States* (Arlington, VA: National Commission on the Future of the Army, January 28, 2016), <http://www.ncfa.ncr.gov/> (accessed October, 29, 2017)

<sup>32</sup> National Guard Bureau, *Army National Guard Readiness Center Transformation Master Plan* (Arlington, VA, National Guard Bureau, December 19, 2014), 40.

<sup>33</sup> *Ibid.*, 11.

<sup>34</sup> *Ibid.*, 68.

<sup>35</sup> National Guard Bureau, "Memorandum of Instruction for implementation of the FY 18-25 Army National Guard Campaign Plan," memorandum for SEE DISTRIBUTION, Arlington, VA, December 1, 2017, 2.

<sup>36</sup> *Ibid.*, 4.

<sup>37</sup> National Guard Bureau, "Logic Map for Army National Guard Campaign Plan," memorandum enclosure 1, Arlington, VA, December 1, 2017, 1.

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.*

<sup>41</sup> National Guard Bureau, *Army National Guard Readiness Center Transformation Master Plan*, 54.

<sup>42</sup> Steve Hines and Paul McDonald, "Facility Impact on Readiness," *Journal of the National Guard, The Foundation of Readiness*, Fall 2017, 7.

<sup>43</sup> *Ibid.*

<sup>44</sup> *Ibid.*

<sup>45</sup> Construction and Facilities Management Office, *Mississippi National Guard, Picayune Readiness Center Evaluation Report* (Jackson, MS: Joint Forces Headquarters, 2012), 4.

<sup>46</sup> Office of the Assistant Chief of Staff for Installation Management, "First Quarter, 2018 ISR Infrastructure Report," October 1, 2017, *ISR-I*, <https://isr.hqda.pentagon.mil> (accessed November 1, 2017).



<sup>47</sup> Ibid.

<sup>48</sup> National Guard Bureau, *Army National Guard Readiness Center Transformation Master Plan*, 10.

<sup>49</sup> Office of the Assistant Chief of Staff for Installation Management, *FY18 ISR Infrastructure Implementing Instructions* (Washington, D.C. October 1, 2017) <https://isr.hqda.pentagon.mil> (accessed November 1, 2017), 45

<sup>50</sup> Ibid., 8.

<sup>51</sup> Ibid., 45.

<sup>52</sup> Ibid., 51.

<sup>53</sup> Ibid., 52.

<sup>54</sup> Ibid., 57.

<sup>55</sup> Army National Guard Installations and Environmental Division, “ARNG-I&E Status of Funds FY18 & POM FY19-23,” briefing slides, Arlington, VA, National Guard Bureau, January 2018, 646.

<sup>56</sup> Ibid.

<sup>57</sup> Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Defense Budget Overview, Fiscal Year 2018*, 139, (Washington, D.C: Office of the Undersecretary of Defense (Comptroller), May 2017), 13, <https://www.defense.gov/Portals/1/.../FY2018-Budget-Request-Overview-Book.pdf> (accessed November 1, 2017).

<sup>58</sup> Thomas A. Horlander, Director, Army Budget, “Army FY 2018 Budget Overview,” briefing slides, Washington, D.C.: Department of the Army, March 9, 2017, [www.nationalguard.mil/Portals/31/.../fy2018-army-budget-overview-060817.pdf](http://www.nationalguard.mil/Portals/31/.../fy2018-army-budget-overview-060817.pdf) (accessed November 2, 2017), 14.

<sup>59</sup> Office of the Undersecretary of Defense, *Defense Budget Overview, Fiscal Year 2018*, 139.

<sup>60</sup> Army National Guard Installations and Environmental Division, “ARNG-I&E Status of Funds FY18 & POM FY19-23,” briefing slides, Arlington, VA, National Guard Bureau, January 2018, 655.

<sup>61</sup> Richard Nord, “The Army National Guard Completes its First round of BRAC,” *U.S. Army Journal of Installation Management*, Summer 2011, 13.

<sup>62</sup> U.S. Code Title 10- Unspecified Minor Construction, § 2805, [https://www.law.cornell.edu/uscode/text/10/12406\\_national\\_guard\\_title\\_10](https://www.law.cornell.edu/uscode/text/10/12406_national_guard_title_10), (accessed November 2, 2017)