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ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2016

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES HEARING

ON

FISCAL YEAR 2016 GROUND FORCE MODERNIZATION AND ROTORCRAFT MODERNIZATION PROGRAMS

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FISCAL YEAR 2016 GROUND FORCE MODERNIZATION AND ROTORCRAFT MODERNIZATION PROGRAMS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES,
Washington, DC, Thursday, March 19, 2015.

The subcommittee met, pursuant to call, at 10:46 a.m., in room 2212, Rayburn House Office Building, Hon. Michael R. Turner (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. MICHAEL R. TURNER, A REPRESENTATIVE FROM OHIO, CHAIRMAN, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

Mr. TURNER. Hearing will now come to order. Today, the subcommittee convenes to receive testimony on the fiscal year 2016 budget request for Army and Marine Corps ground force and rotorcraft modernization programs.

I am pleased to welcome our distinguished panel of witnesses. We have Lieutenant General Michael E. Williamson, Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics and Technology); Lieutenant General Anthony R. Ierardi, Deputy Chief of Staff, G–8; Major General Michael D. Lundy, Commander, Army Aviation Center of Excellence; Vice Admiral Paul A. Grosklags, Principal Military Deputy to the Assistant Secretary of the Navy (Research, Development and Acquisition); Brigadier General Joseph Shrader, Commanding General, Marine Corps Systems Command; Mr. William E. Taylor, Program Executive Officer Land Systems.

Gentlemen, thank you all for being with us today. And thank you for your service. Modernization continues to be a top priority for this committee. The committee, through the annual defense authorization process, has prevented production breaks for critical armor platforms, such as the Abrams tank. Given the current situation in Ukraine and the return of armor to Europe, this was the right decision.

The committee has also helped to ensure the Department was developing and buying the best possible personal protective and individual equipment for the warfighter. We will continue to work to find ways to help incentivize the industrial base to continue investment and innovation in this area.

For the Army, this will be an important year for the ground program such as Abrams, Bradley, Paladin MV, and Stryker modernization. The Marine Corps has finalized requirements for a family of amphibious combat vehicles and is pursuing a streamlined acquisition strategy that, of course, we are watching closely.

As we go forward, the committee will continue to ensure modernization strategies address current and future threats. However, all that progress could come unraveled, given the budgetary environment. As you know, I voted against sequestration. And recently, I wrote a letter to the Speaker about the need to increase the topline to the defense budget. The letter had over 70 signatures committing to fully funding our national security.

The budget process is still playing out. But I fear that the nightmare of marking the budget request to sequestration levels may become a reality. And of course, as you know, the Budget Committee is diligently working today.

So what does that mean for modernization? Tradeoffs and significant funding reductions to critical programs will have to be made. The industrial base will be impacted at every level. General Odierno, the Chief of Staff of the Army, has stated the Army would experience an overall modernization investment decrease of 40 percent, effectively impacting every program.

The Department survived the first round of sequester, but not by much. Programs were still delayed, cutbacks were made for training, and we essentially robbed Peter to pay Paul. We have exhausted those options. The reality is the military is caught between rising obligations and shrinking budgets.

So in addition to receiving updates on Army and Marine Corps programs, I have asked our witnesses to prepare to discuss potential impacts of sequestrations on these programs. I am concerned that we are dropping our guard right as the world is falling apart. We either make smart, targeted investments now, or we pay for that as failure on down the road.

The protection of our national defense and of the security of the American people must come first. I would like to thank Loretta Sanchez, my ranking member, who has not yet been able to make it to the hearing. When she does, I know she has an opening statement. I am going to be turning this hearing over to the able hands of my vice chair, Paul Cook, after I open it with this question. And I would like——

STAFFER. [Off mike.]

Mr. TURNER. Sorry. Yes. Great, excellent.

I am going to pose this question for you, that after your opening statements I would like you to begin with and perhaps work into your statements. And that question is that in the budget discussion, they currently are looking at funding overseas contingency operations [OCO], and with a base budget that is at the budget control levels. How does the mix between OCO and base budget affect your overall operations and issues with respect to acquisition?

Now turning to then the opening statements. We will go to General Williamson. And I will be handing the gavel over to Mr. Cook. Thank you, gentlemen.

STATEMENT OF LTG MICHAEL E. WILLIAMSON, USA, MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS AND TECHNOLOGY); ACCOMPANIED BY LTG ANTHONY R. IERARDI, USA, DEPUTY CHIEF OF STAFF, G–8, AND MG MICHAEL D. LUNDY, USA, COMMANDER, ARMY AVIATION CENTER OF EXCELLENCE

General WILLIAMSON. Thank you, Chairman Turner and other distinguished members of the Subcommittee on Tactical Air and Land Forces. Thank you for the invitation to discuss the Army's fiscal year 2016 ground force modernization and rotorcraft modernization programs and for this opportunity to appear with our Navy and Marine Corps counterparts.

With me today are Lieutenant General Tony Ierardi and Marine Corps—the Army's Deputy Chief of Staff G–8 and Major General Michael Lundy, the Commanding General of the U.S. Army Aviation Center of Excellence in Fort Rucker.

Mr. Chairman, I respectfully request that our written statement be made a part of the record for today's hearing.

Equipping soldiers to meet Army warfighting challenges and to become a leaner, more lethal, and expeditionary asset to the joint force requires investments in both non-developmental and developmental capabilities. Non-developmental capabilities, such as information technology, will leverage commercial technologies that don't require a significant Army science and technology or research and development investment, saving both time and taxpayer dollars.

Developmental capabilities will most often be used in areas where the Army drives advancement and investment, such as combat vehicle technology; rotary aviation; lethality; and intelligence, surveillance, and reconnaissance. We will continue to take advantage of existing technologies, while investing in the research to produce significant technological change with military application.

We are also working to ensure a balanced approach to modernization. First, the Army will preserve science and technology investment in key enabling technologies to support next-generation modernization efforts when resources become available. Examples of this investment include the development of the future lift—future vertical lift capability to guide future aviation modernization, advanced body armor and individual protective equipment to provide force protection against a range of evolving threats, and addressing emergency gaps such as cyber and electronic warfare as we operate in a contested information environment.

Second, the Army will continue selected investment in new capabilities that improve lethality, such as Patriot Missile Segment Enhancement and the Joint Air-to-Ground Missile, as well as network mission command capabilities such as the family of tactical radios, including the Manpack and Rifleman Radio.

Third, the Army will invest in incremental modernization of existing platforms to improve performance and address existing limitations in the area of network communications and energy consumption. Combat vehicle modernization includes the Abrams tank, the Bradley infantry fighting vehicle, and Stryker engineering change proposal programs. Aviation modernization includes existing upgrades to our Black Hawk, Apache, and Chinook aviation

platforms to improve engine performance, digitize cockpits, and support joint operations.

Fourth, the Army will continue to reset our existing inventory of equipment returning from theater to enable near-term readiness for contingency operations.

Fifth, the Army will continue the divestiture of selected legacy systems to reduce our sustainment costs. Examples include divesting tactical wheeled vehicles in favor of the Joint Light Tactical Vehicle and divesting the aging M–1113 armored personnel carriers in favor of the Armored Multi-Purpose Vehicle.

Mr. Chairman, while General Ierardi will discuss with the committee this morning his concerns on sequestration from a resource perspective and share the impacts that the Budget Control Act will have on instability to our programs across all of our portfolios, I will discuss with you how our modernization accounts ensure our soldiers have the best equipment available and to maintain critical parts of the defense industrial base.

Another round of defense sequestration in fiscal year 2016 will have major impacts on Army modernization. These impacts include delays in equipment support to expeditionary forces, delays in combat vehicle and aviation modernization, increases in sustainment costs to fix older equipment, increases in capability gaps, higher unit cost, and stretched procurement schedules.

The Army's modernization budget remains near historic lows. Still, our modernization mission to develop and procure systems that allow our soldiers to dominate across the full spectrum of operations remains essential. We must always ensure our soldiers have the right equipment at the right time and at the right place to accomplish their assigned mission.

Mr. Chairman and distinguished members of the subcommittee, we greatly appreciate and thank you for your steadfast and strong support of the outstanding men and women of the United States Army, our Army civilians, and their families.

This concludes my opening remarks. And we look forward to your questions.

[The joint prepared statement of General Williamson and General Ierardi can be found in the Appendix on page 23.]

Mr. COOK [presiding]. Thank you, General. Because of the time constraints, what we are going to do is just have two opening statements. And then, of course, we will get right to questions and answers. And I apologize for, you know, what is going on here today. This is a very, very important hearing.

But right now, if I could turn to Admiral Grosklags, if you could give your opening statement, I would appreciate it.

STATEMENT OF VADM PAUL A. GROSKLAGS, USN, PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT AND ACQUISITION); ACCOMPANIED BY BGEN JOSEPH SHRADER, USMC, COMMANDING GENERAL, MARINE CORPS SYSTEMS COMMAND, AND WILLIAM E. TAYLOR, PROGRAM EXECUTIVE OFFICER LAND SYSTEMS, U.S. MARINE CORPS

Admiral GROSKLAGS. Sure. Mr. Chairman, distinguished members of the subcommittee, thank you for the opportunity to appear

before you today to address our Marine Corps ground systems and rotorcraft modernization programs.

Joining me today is Brigadier General Joe Shrader, Commander of the Marine Corps Systems Command, and Mr. Bill Taylor, our Program Executive Officer [PEO] from Marine Corps Land Systems. We also have submitted a formal statement for the record. And I will be brief in my opening remarks.

The challenges of the current and future environment demand that our Nation maintains a force and readiness that is capable of global response, literally today or tomorrow. Your force for that readiness is the United States Marine Corps. And to ensure the readiness and capability of our Marine Corps required to execute that global response, we continue to pursue a balanced approach, a balanced perspective to our force that is flexible, survivable, lethal, and highly expeditionary.

From a modernization-specifics perspective, this requires careful allocation of our limited resources to those areas which promise the most operationally effective payoff. Our ground combat tactical vehicle modernization strategy is a prime example of that approach. The Amphibious Combat Vehicle, or ACV, is the Marine Corps number one modernization priority. The Joint Light Tactical Vehicle program, or JLTV program, is our second-highest priority.

Together, those two programs form the core of a strategy that will sustain and enhance the mobility of our ground combat element well into the future. Our PB16 [President's budget for fiscal year 2016] requests support of the ACV development program and, in coordination with the Army, supports low-rate initial production of the JLTV.

In parallel, we continue modernization of the vertical lift component of our air combat element. With the continued support of Congress, we will complete our procurement of the UH–1 Yankee [Y] in fiscal year 2016 and the AH–1 Zulu [Z] in fiscal year 2019. The current V–22 multiyear program continues through fiscal year 2017 and will nearly complete the procurement objective of 360 aircraft.

And finally, the CH–53K development program is anticipating a first flight this calendar year in 2015, and low-rate initial production starting next year.

The Marine Corps will remain America's expeditionary force in readiness. And as already stated, this means that the Marines must be ready to fight tomorrow. This in turn requires readiness of the current force to be prioritized over all other investments.

However, the Marines tasked with meeting the future threat will be dependent upon the equipment provided by the modernization programs of today. These programs, such as those I have just mentioned, are dependent upon stable, predictable funding at a level commensurate with our PB16 request. Over time, under-investing in modernization will result in maintaining older or obsolete equipment at a higher cost and with degraded capabilities. It will erode our Marines' warfighting advantage.

If I could, I will just continue into answering the chairman's question about OCO. Our preference is certainly to fund our programs in accordance with how we have proposed the PB16 submit. That provides us with a stability and the predictability that our

programs require to execute their tasks efficiently. It enables industry to plan effectively and efficiently because they understand what is in the budget.

While we certainly wouldn't turn down OCO—I mean, funding the program regardless of the source of the funds is better than not funding the program, to ensure that we have the readiness and the capabilities that we need. But it presents a significant number of challenges for us to effectively and efficiently utilize those dollars.

Some things to consider. If we take more of our base and put it into OCO, is a discussion of which parts of that base do go into OCO. Because it will have potential long-term ramifications for the health of those areas of our programs who are no longer considered part of the base. So in concert with Congress, if we go down this path, we would ask that we have some significant discussions, if you will, about how we mechanize that.

Enabling additional flexibility in how we spend dollars that are funded via OCO would also be important, as there are restrictions on us today that would make—again, dependent upon which part of the base is put into OCO, very difficult to execute.

So there are some near-term implications. But quite honestly, I am more concerned about the long-term implications for our planning, our budgeting. Not only internal to the services, but also with our industry partners and where are they going to invest, where do they see the budget going in the future.

Thank you, Mr. Chairman.

[The joint prepared statement of Admiral Grosklags, General Shrader, and Mr. Taylor can be found in the Appendix on page 39.]

Mr. COOK. Thank you, Admiral.

And I just want to make a couple of comments. And maybe we should have had this hearing in a couple of weeks. Because obviously, everybody has been following the drama. And of course, that is going to be the big question in terms of operational contingencies and what part of the budget—and I don't want to get ahead of the Budget Committee. I don't want to throw anybody. But that right now is being discussed. And the reason I said maybe we should have this hearing in 2 weeks is exactly we would address those methods or ways how we can do that.

You have got a lot of support on this committee and on the House Armed Services Committee in general. But you have to remember—and I am not preaching to you. You know, your establishment knows more about the military than anybody else. But I think I get educated pretty well. But if you are not on the House Armed Services Committee, a lot of the people don't understand the importance of some of these programs that we are talking about.

So maybe what I am suggesting is if you could expand who you talk to in the district or what have you. And it is going to become even more complicated when we start discussing the role of the OCO and the operational contingencies and what fits in there. It is lot of money. We are going to have a lot of battles going on one way or the other. And a lot of us are going to come back to you—and I am probably going to be one of them—saying that how do we do this in terms—and it is not going to be about how much armor is on this or the plating for the M–1 battle tank or—it is going to be probably in the next few weeks a budgetary question. And I

hate to sound so pedantic. But that is—that is what we have to look forward to.

What I am going to do right now is—the ranking member is not here. But I was going to ask Ms. Duckworth to be the ranking member right now in the absence of Ms. Sanchez. Thank you.

Ms. DUCKWORTH. Happy to serve, Mr. Chairman.

Mr. COOK. Thank you.

Ms. DUCKWORTH. General Shrader, I wanted to sort of chat with you a little bit about the JLTV specifically. And I know the Marine Corps and the Army have been working well together to develop the JLTV to replace the Humvee. My understanding is that the sustainment modification initiative [SMI] was going to be put into place to help us bridge that gap to modernize your existing Humvees before the JLTV procurement process is completed. However, last week on the Senate side, General Krulak testified that SMI for Humvees has since been canceled due to sequestration and there is no money for this program in the budget.

So my question is, given that the Marine Corps is expecting only 5,500 JLTVs in service by 2022 and the original modification plan has been canceled, what is the plan to bridge the gap of sustainment and modernization of the legacy vehicles until the JLTV program is fully realized?

General SHRADER. Ma'am, thank you for the question. So within the ground combat tactical vehicle strategy that we have put out there, we did have a balance and a plan to cover both the JLTV and the Humvee as they come on board. If I could, ma'am, the program rests within PEO Land Systems, Mr. Bill Taylor, who is here, and if I could invite him to address the more—the details of your question.

Ms. DUCKWORTH. Great. Thank you.

General SHRADER. Yes, ma'am.

Ms. DUCKWORTH. Mr. Taylor.

Mr. TAYLOR. Congresswoman Duckworth, you are correct that the program was, in fact, terminated. But we were allowed to continue the non-recurring effort associated with that program such that we have actually completed the development work and put three capability packages on the shelf. So if in times of prosperity, the Marine Corps can return to those engineering proposals and reconsider instituting them in terms of procurement. But the R&D [research and development] is completed and those capability packages are on the shelf and ready for procurement if the Marine Corps decides to do that.

Ms. DUCKWORTH. So what you are saying is—are you saying that you are willing to assume the risk of not modernizing the Humvees or the SMI packages, but you have the information—you have the packages there ready——

Mr. TAYLOR. That is a service-level decision. They have decided to assume the risk and sustain the remaining fleet of Humvees. But they have these capability packages at the ready, should they determine that they need to pursue those.

Ms. DUCKWORTH. What is the timeline from when you decided you wanted to go ahead and implement if the services decided yes, we actually do want to implement this?

Mr. TAYLOR. I would say approximately 1 year to the point that we could start procuring those capability packages.

Ms. DUCKWORTH. Okay. And then will the Army National Guard and Marine Corps Reserves unit receive their JLTVs concurrently with the Active Duty counterparts, along with the SMIs, as well?

Mr. TAYLOR. The fielding strategy is in draft form right now. They have identified quantities and major commands. Beyond that, the Reserves are scheduled to get those after the Active forces.

Ms. DUCKWORTH. And what is the projected status of the Humvees in the Marine Corps right now in terms of protection and interoperability in light of the canceled SMI?

Mr. TAYLOR. The current plan is to sustain the fleet as is. They will continue to go through a depot reset.

Ms. DUCKWORTH. You know, I really do—and again, I am preaching to the choir here. You guys are being forced to make some really tough decisions that put our troops at great risk, potentially great risk, as a result of sequestration; something that we certainly on this side of the hearing room need to do our job to end. And I have some real concerns that with the short timeline we expect you to react to fielding of troops and equipment, that we are putting you in a very difficult situation. Thank you for that.

My next question is really going to be, obviously, on the Army, the aviation modernization program and also the restructuring initiative. I understand the important cost-saving reforms from last year—and some of this continues a hot topic in ARI [Aviation Restructuring Initiative] as it stands. My understanding is all Apaches are on hold in terms of the transfer, except for 48 that can be transferred starting next fiscal year. Is that correct? I don't know who——

General LUNDY. Yes, ma'am, that is correct.

Ms. DUCKWORTH. That is correct? So if ARI was to be fully implemented, what is the timeline for the modernization of those 111 Black Hawks going to the Guard as part of the ARI?

General LUNDY. Ma'am, I can answer that one. The modernization strategy for the National Guard, as well as for all compos, it is multiple components. It is not just whether we are going to go from an A to—from an Alpha [A] model to a Lima [L] model or a Lima to a Mike [M]. But it also has ITEP [improved turbine engine program] and other things. So there are multiple modernization efforts that are going on.

As we look at moving forward, 2023 is when we are going to divest—2023 right now. We have been able to accelerate that because of ARI—we will be able to divest all of the A models. And we have 600 right now that are across the inventory. So they will be out of the National Guard by 2023 and out of the Active Component.

We are currently converting Limas to Victor [V] models, which is the full-integrated glass cockpit. Those we are going to start fielding in 2018. The majority of those are going into the National Guard and the Army Reserve. And we are continuing to field Mike models.

So by 20—depending on which piece of the modernization you are looking at, the oldest ones, the ones we really have to get out, will be out of the inventory by 2023. We will have Victors starting to go in. And that will go between 2018 and 2032. And then our Mike

models will finish about 2028. So there are a number of modernization efforts. And then we will go back in and put the new turbine engine into each one of them. So that is going to be another modernization effort. And that is going to be balanced between all three compos.

Ms. DUCKWORTH. Okay. Well, I am from a State that doesn't have Apaches. So I have got no dog in that——

General LUNDY. Yes, ma'am.

Ms. DUCKWORTH [continuing]. In that hunt. But I have got to say that I am concerned about those States that do have Apaches. And I want to make sure that if you are moving the Apaches out of the Guard, before those Hawks show up, that those crews are actually getting the slots to go to schools so that they can get qualified and the qual [qualification] courses, the Q courses, so that they are ready to go when those aircraft show up. I wouldn't want to see crews sitting around for 18, 24 months and then suddenly the Apaches show up and they are not qualified. Now you are just sending guys—it is going to take forever for them to get up to RL1 [Readiness Level 1].

General LUNDY. Yes, ma'am. No, you are exactly right. That is clearly a part of our strategy. That is why the timing is so important. Because we only have so much capacity in the schools. So as we—you know, this is a pretty good integrated effort across modernization and all of the different things, training and sustainment. And so we have to have the timing to where I have got space in the school to do that. We have that space set aside. It is clear within the plan right now that we will be able to train not only all of the National Guard aviators, Army Reserve aviators, and our Kiowa aviators that are going to be converting to 64 [Apache AH–64].

So ARI is very important from a timing perspective. And it also gives us the space to do all this modernization. Because if we don't do that, all of those UH–60s are going to slide out to the right. That is going to be the bill payer for that—if we don't do ARI.

Ms. DUCKWORTH. Right. And the schools are not just for the pilots; correct? You are talking about all the aviators, the entire air crew?

General LUNDY. Yes, ma'am. The crew chiefs, we are training them at Fort Eustis, as well as at both the National Guard training centers. So we—this is a fully integrated effort across all three compos, components, and we have it locked pretty tight right now. So that has been the most difficult thing. And we just completed fully synchronizing that. So I think we are in great shape.

Ms. DUCKWORTH. Okay. Great. Well, if you ever want to see the oldest flying Black Hawk in the Army inventory, I invite you to come to Illinois and——

General LUNDY. Yes, ma'am.

Ms. DUCKWORTH [continuing]. And visit it. Fourth off the production line, 1978 model.

General LUNDY. And that is a—that is a huge concern for me as I look at all three components. I still have a number of EH–60s that are converted to Alpha models down in Fort Rucker. So we do need to get, you know, the National Guard modernized, as well as the Army Reserve.

Ms. DUCKWORTH. Yes. Because I like to get those—we call them "Frankenhawks" in Illinois because of the——

General LUNDY. Yes, ma'am.

Ms. DUCKWORTH [continuing]. They are not actually true Alpha models——

General LUNDY. Yes, ma'am.

Ms. DUCKWORTH [continuing]. But they are Frankenhawks. Thank you.

Again, I think that the fact that you are here and that what we are all talking about here—the common theme is we need to work on sequestration so that our military and our men and women who put on a uniform and who are willing to take the fight to the enemy have everything that they need.

And I am concerned that what we are doing is we are structuring the force to the dollars and the political will, as opposed to figuring out what we need you to do and then sustaining and giving you the resources to do what you need. And the games that we are playing, we are putting money into OCO funding as opposed to the base budget, puts you in a really tough position as the professionals that we ask you to be to maintain our Nation's military.

So I thank you for what you do. And we are going to work as hard as we can on this side. And I know I certainly will. So thank you.

Thank you, Mr. Chairman. I yield back.

Mr. COOK. Thank you. The latest is vote is going to be 11:30.

And right now we will go with Congressman Gibson.

Mr. GIBSON. Well, thanks, Mr. Chairman. I appreciate the panelists being here. Thank you for your service to our country, sacrifices of your family.

And I want you to know I am listening very carefully and you are communicating effectively. We understand impacts of sequester, which was never meant to be the plan. It was a backup to force—really, for us to get our work done. And, you know, in 2012, we had a budget—bipartisan budget that was fashioned roughly off Simpson-Bowles. And I was one of 38 that voted for that. And then in December of 2013, I supported the bipartisan agreement that delayed the sequester for a couple of years.

So, you know, ideally we will get an agreement that completely eliminates sequester. But at a minimum, I want to get one that we can have several years of stability of the consistent important funding levels that you need. I wanted to say that up front.

The question has to do with the transition from Kiowa to the Echo [E] model of Apaches. I am hearing good things on that. This is an Army program, obviously. So—and in addition to the Echo model, also the Drone [D] interim solution. So one, the reports I am getting, which are sort of anecdotal, I would like to confirm that that transition seems to be going well. And in particular, I am interested in knowing how from a human dimension, a training perspective, how the Kiowa pilots are doing in making that transition to the platform, the Echo model.

General LUNDY. Sir, I can answer that pretty quickly. I know we are short on time. One, the E model just—our first battalion deployed to Afghanistan, and the performance was absolutely phenomenal. It is a leap between the AH–64D and the AH–64E. And

we did man-on-man teaming over there. We are doing man-on-man teaming right now as we do operations in the other part of the theater.

We have just recently done some training at the National Training Center. We just really had our first integrated rotation out there. So that is going very well. We are finishing training some of our first OH–58 [Kiowa] crew members, both in the Apache and we actually had a number that volunteered to go into the unmanned systems, as well.

So we are putting some trained Scout aviators flying our unmanned systems, which is really going to pay big dividends. We just graduated three. We are actually—two of them have done so well, we are keeping them at the schoolhouse to be instructor pilots on the flight line. So I think we are in very good shape. I don't see any issues with the training. And I am pretty happy with where we are at.

Mr. GIBSON. That is encouraging. And particularly appreciate hearing it from General Lundy, somebody who I know firsthand is a remarkable warfighter and a great leader. I want to—the next question has to do—it is a little deeper.

And I am thinking here the new Armed Aerial Scout platform, I am very interested to know how the planning is going for that. Talk to me in terms of who we are engaging in the planning process and timelines and how that is going.

General LUNDY. Well, we are still developing—we still have a valid requirement for an Armed Aerial Scout. That has not changed. I mean, we made a fiscal decision based on the original 40 percent cuts that came into the aviation modernization portfolio, one of the reasons it drove ARI. So it remains a valid requirement. The chief has said it remains a valid requirement.

We are continuing—really, where we are taking that now is taking a look at as we go into future vertical lift, what is going to be the armed reconnaissance capability that we have in future vertical lifts.

We are doing a number of analysis of alternatives [AOAs] that are associated with the armed reconnaissance variant. We have got the—we have got the requirement already clearly identified for a conventional aircraft right now. So we are looking again at future vertical lift as being that next iteration of the armed Scout. Now, if something materializes between now and then, we are certainly going to remain agile enough that we can look at it. Because it is a valid requirement. But we are certainly going to be dependent upon the fiscal restraints that we have.

Mr. GIBSON. And just to follow up. In terms of engagements with think thanks and industry, is there a—has there been a plan to engage in that way, or has it been—talk me through that.

General LUNDY. Well, in future vertical lifts, which is where—we have a working industry group that is within that. So we meet at the joint level. This is a fully-integrated joint program from inception, which is great. The Marine Corps participates, as well as the Navy and the Air Force. And we have an industry consortium that participates in that. And we are really looking at all of the variants. And one subcomponent of that variant is the armed re-

connaissance component. So as we are going through, that is where that is interacting.

But I meet pretty routinely. We have done some industry days. And recruitment process outsourcing [RPO] is pretty active with that as well on engaging industry on future concepts and requirements.

Mr. GIBSON. I thank you for the update.

And I yield back, Chairman. Thanks so much.

Mr. COOK. Thank you.

Congressman Veasey.

Mr. VEASEY. Thank you, Mr. Chairman. I had just one question, as I know the time is short.

I wanted to ask particularly about if there is a slowdown in production on JLTV, what sort of impact would that have on the price, you know, per vehicle? Obviously, if you are going to be buying less due to sequestration, that you—there could be obviously be more cost per vehicle, as opposed if that was not present. So if you could just kind of help me understand that, that would be great.

General WILLIAMSON. Sir, so your instincts are absolutely on target. The challenge for us is that—so we have developed a pretty detailed program plan for JLTV. I would tell you that it is probably one of the better programs that I have witnessed as an acquisition officer. And so the challenge for me is that—so when we perturb that plan because of fluctuations in the programming, that means we are going to have to negotiate in production—we will have to negotiate in production, if it is fewer quantities, which will drive the cost up considerably.

And so we have worked really hard on affordability. And I will ask General Ierardi to comment on that. But it has been a focus of ours with this platform to maintain that affordability cap.

General IERARDI. And sir, we have obviously worked, as General Williamson indicated, to keep the program affordable as we look to the future.

In the context of BCA [Budget Control Act] levels of funding, JLTV and all of these programs, obviously, would be, you know, put in a position where we would have to evaluate carefully how we are buying, how we are programming for future buys. There will be impacts, regrettably, across the board in a number of programs if we are marked at BCA and have a BCA level of funding throughout our program period.

Mr. VEASEY. Thank you, Mr. Chairman. I yield back my time.

Mr. COOK. Thank you.

Congressman Knight.

Mr. KNIGHT. Thank you, Mr. Chair. And again, because we are so short on time, can you explain to me on the armored personnel carriers, the 113s, where we are on the fleet; how many we still have in service, how many are in theater, and where we are going with that and how quickly will they be gone?

General IERARDI. Sir, I don't have the exact number of 113s in the inventory. There are quite a few. We have since stopped using these vehicles operationally. It is the Army's intent, and it is under execution now, to move away from the employment of M113s, which brings into the discussion the AMPV [Armored Multi-Purpose Vehicle], which is the follow-on vehicle to the M113 variant.

It is an important capability for the Army the replace mobility that the M113s bring in the varied terrain that our armored and tracked vehicles operate. And so it is—AMPV is an important program for us to replace the M113s. They are not being used and haven't been used in some time in deployed environments.

They are—having come from the 1st Cavalry Division as the commanding general, we still had them in our motor pools and used them in training. But by and large, we need to have that vehicle replaced. And it is our intent to replace it with the AMPV to get increased mobility and increased survivability for our soldiers.

Mr. KNIGHT. Very good. Thank you, sir.

And Admiral, on the Joint Strike Fighter, I get the Joint Strike Fighter at Edwards Air Force Base, so we get the Air Force variant, but we don't get carrier variant as much. We do a little bit of testing out there. But since most of that is done at Pax River, I would like to see if there is an update on what you think about the Joint Strike Fighter, when it is going to be coming IOC [initial operating capability] and all that.

Admiral GROSKLAGS. Yes, sir. So the Marine Corps is up first with the IOC. We are still planning on that in summer, June or July. They are on track with both the software and the reconfiguration of the air vehicles for the IOC configuration. The squadron has stood up over the last year, the folks who are being trained and put in place. We think the Marine Corps IOC is definitely on track for this summer.

The Air Force follows behind that. I won't speak to their timeline. Although, from everything I am aware of, they are on schedule as well for their IOC. The Navy is the third one out of the barrel. We have a threshold date of February of 2019, an objective date 6 months prior to that. We require release of 3F software, which a short explanation is that is the release that we believe is required for our carrier-based aircraft to be fully integrated with the rest of the air wing. So that is why the Navy is kind of at the end, because we are waiting for that 3F software.

That software is making progress. It has been delayed somewhere between 4 and 6 months based on a joint program office's estimate. That estimate has not changed over the last 18 months. So it is not sliding to the right; they are holding the schedule. And we anticipate that that 3F will be available to the fleet approximately 6 months before we actually require it for IOC.

So overall, the program is making steady progress forward. And we think they have been on track for the last year or two. The cost of the air vehicles is coming down and things are progressing.

Mr. KNIGHT. I fully agree. Thank you, Admiral.

Thank you, Mr. Chair. I yield back.

Mr. COOK. Thank you.

I would like to welcome the ranking member that has arrived, Congresswoman Sanchez.

Ms. SANCHEZ. Thank you, Mr. Chairman. And I do apologize to everybody for arriving late. And I thank Ms. Duckworth and others for holding down the fort, shall we say, when I was unfortunately detained.

Okay. So I heard that you were talking about the helicopters. So I am not going to go into all the—I am talking about the Black

Hawks. But I still have some very, very specific questions to that. And the first would be is it possible to accelerate the UH–60L helicopter upgrades in fiscal year 2016? There are already 40 in the budget. What is the limit at the Army depot in Corpus Christi, Texas?

Secondly, the Army's budget already has 94 UH–60 helicopters. The Navy budget has another 29. Could the production line and the multiyear contract with Sikorsky accommodate more helicopters in fiscal year 2016?

And finally, am I right to be worried about the promised helicopters in the 2000—in the 2020s in terms of the pressure on the Army's budget? And can we be confident that funding will actually happen? Why don't we start there, gentlemen, because I don't see a lady——

General IERARDI. Ranking Member, I will start with your final question. I think all programs at lower levels of funding would require our continued evaluation. So obviously, UH–60 modernization for us is a very important effort. We would not want to change the priority that we have to modernize the UH–60 Alphas. And we will strive to do that. Under——

Ms. SANCHEZ. Can we accelerate them in the 2016 budget?

General WILLIAMSON. So ma'am, we——

Ms. SANCHEZ. The upgrades?

General WILLIAMSON. Ma'am, we can go back and look at that. As you know, we workload our depots and maintenance facilities. And so they have sized their workforce, and they are associated with that funding. So I will take the action to go back and see what the growth capacity is within the current——

Ms. SANCHEZ. Yes, if there is any capacity within the resources we currently have there would be interesting, since everybody wants Black Hawks.

General WILLIAMSON. Yes, ma'am.

Ms. SANCHEZ. What about multi—more helicopters?

General WILLIAMSON. So ma'am, it is the same thing.

Ms. SANCHEZ. Okay.

General WILLIAMSON. So as you know, as we negotiate a multiyear contract, it is based on the number of aircraft and the timing. And so it would require us to go back and engage to see what it would take, if there is some ceiling.

Ms. SANCHEZ. At what point could you give us a report on that? I mean, how long will it take you to sort of figure out is there capacity for us to get the modernization through? And is there also capacity to maybe buy a few more? Or if we wanted to buy a set of 10 more, for example, what would be the add-on cost would——

General WILLIAMSON. Ma'am so——

Ms. SANCHEZ. On the back of an envelope, I am asking. I am not talking about some historic big study.

General WILLIAMSON. So on the back of the envelope, it would probably take me a couple of weeks. And the reason why is because there is some negotiation involved with the folks who have to do the work. And so I would actually not be inclined to say it is something that I would turn in days. I want to make sure that we come back with some accuracy. So I will get back with your office very

quickly on the timeline and make sure that we provide those answers.

[The information referred to can be found in the Appendix on page 59.]

Ms. SANCHEZ. Perfect. And then with respect to the budget out into the 2020s, how do y'all feel?

General LUNDY. Well, ma'am, from a proponent perspective, the UH–60 modernization in the Guard is one of our number one issues. And it is obviously an issue for the National Guard, and it is also an issue for the Army Reserve and the Active Component. You know, we have got a mix of those aircraft.

So from a proponent perspective, that will remain a priority. Certainly, you know, as the G–8 talked about, depending upon what funding levels come down, the Army may be forced to reprioritize. But certainly from the aviation level, that is a priority for us.

General IERARDI. Ma'am, I have concerns given the lack of predictability in funding what past 2020 is going to look like. And frankly, I would not necessarily say that we would have the ability to accelerate based on where we are financially right now into the 2020s. I would hope that we would have the resources to be able to do what it is we are planning to do to modernize those aircraft. But can't speak to that right now.

Ms. SANCHEZ. Thank you.

Mr. Chairman, I have another question. But I am going to—since I came late, I would like to get some of these newer members to get to ask their questions first. If you would indulge me on the return—on the round robin. Thank you.

Mr. COOK. Thank you for being so magnanimous. It is tough for a marine to say that word. I certainly can't spell it.

Congressman Moulton, you have a question? Oh, I am sorry. I thought we were going to go—I apologize. Gosh, such magnanimity.

She didn't have any questions.

[Off mike.]

We are going to have a verse of kumbaya.

Ms. SANCHEZ. You can tell we are all Democrats here.

Mr. COOK. Hey, hey, hey.

Mr. MOULTON. Thanks very much, Mr. Chairman and my colleagues. I actually have just a question from the Marine Corps representative general. Could you speak a little bit about your small arms modernization plans and how much you intend to follow the Army's lead? Are you going to stick—are you going to move from the M16 to the M4, are you going to look for a replacement for the M9?

General SHRADER. So thank you for the question, sir. First I will address the rifle. So right now, the Marine Corps does plan to stick with the M4. We have also moved to the fourth generation of the M16, which is the M16A4. So those are the two workhorses, if you will, of the M16 family.

Mr. MOULTON. Are you continuing to buy M16A4s, or has the lessons from Iraq and Afghanistan pushed you more toward the M4? I mean, as someone who was issued an M16 and then worked hard to acquire an M4, I know there is a lot of feedback from the troops in the field that an M4 would be a more appropriate weapon. But you may have good reason to disagree.

General SHRADER. Sir, I would have to just go back to what I said earlier. Right now, we are not seeing a requirement to go away from the M16A4 that we are issuing, and then the M4 also. We do have a small number of M4A1s that we are issuing as well. But right now we are staying with the M4 and the M16A4.

On the handgun systems, sir, we do not have a requirement to move away right now from the M9 service pistol. And the other pistol that we have is the M45A1 close-quarters combat pistol. Those are our two service pistols that we have. We are working with the Army on their effort to—their modular handgun system program that they are working on and collaborating with them on that and working to see what will come out of that and make a decision downstream from that if we need to.

Mr. MOULTON. So you don't know at this point whether you will join in that program or not? You are just observing, collaborating?

General SHRADER. Yes, sir. Observing, collaborating. But right now we do not have a requirement that I am aware of to move away from the M9 and the M45A1, sir.

Mr. MOULTON. Do you not share some of the Army's concerns with lethality of the M9?

General SHRADER. Sir, I am not aware of the concerns that we would have that would cause us to move away from the M9, sir.

Mr. MOULTON. Okay. All right.

Thank you, Mr. Chairman. I yield my time.

Mr. COOK. Thank you. Before I give this back to Congresswoman Sanchez, just a comment about the questions there which I thought were great. Just a historical note that many years ago I was there when we made the transition from the M14 to the M16. I must have cursed that weapon so many times. Because when it was first issued in Vietnam, it didn't work very, very well. And I said this thing would not last 5 years. And miracles happen. I have actually—that weapon has almost outlived me. And we are going to see who lasts longer. Miracles do happen.

Congresswoman Sanchez, top that one.

Ms. SANCHEZ. What were you talking about?

Mr. COOK. The M14 to the M16. You weren't even born yet, I know you are going to tell me.

Ms. SANCHEZ. Of course not, Mr. Chairman. I was not. You are totally correct on that.

Okay. So I continue to hear inside and outside the military that the individual soldier or marine want a replacement for the M4 and the M4A1. Supposedly, the Army is conducting the caliber study that is going to take quite a long time. As far as I know, the Marine Corps is not doing a study.

I know the services don't currently have a requirement for replacing the M4 and the M4A1, but do you think there should be such a requirement, given that when I look at the blogs, when I get calls, it is always about these things are jamming. The Army did a study a while back, 2 or 3 years ago. There are other weapons out there that jam less often. Requirement?

General IERARDI. Ma'am, as the Army's G–8, I would say that right now our strategy to enhance—to continue to enhance, there has been over 90 improvements to the M16—the M4 Carbine, which moves forward that weapon, continues to move it forward.

And it is a capable weapon. In my service in 1st Cavalry Division, I did not hear one complaint from my soldiers about the M4 Carbine. As a matter of fact, soldiers wanted the M4 for what it brings, which is a compact, easy to maintain, and capable weapon. And so——

Ms. SANCHEZ. So you never heard a reliability issue with respect to that with the men that served with you, the men and women—men.

General IERARDI. As I said, there have been a number of improvements in this weapon system. And our strategy right now is to continue to improve what we have while we look to procure new M4A1s.

Ms. SANCHEZ. Okay. Well, I would beg to differ, with what I hear. So I will continue down this warpath of trying to get the individual soldier and marine a better weapon, especially with some of the studies that I have seen.

My next and last question is about the ammunition that the Army and the Marines use. I am talking about the 5.56 millimeter round. Obviously, you guys are using two different things, two different rounds. And you have procured several million rounds to date and you have used them in combat.

While I understand how the demands of combat might have gotten us into the situation where two services are not using the same bullets, but I would like to better understand how we get out of that situation in the future. Because maintaining two different inventories of the same size combat ammunition is probably not the most efficient way to go. And I just think it looks bad. It makes us all look bad. At a time when Chairman Turner and many others are arguing about more funding for the DOD [Department of Defense], it appears very wasteful from the outside to have the Marines and the Army not buying the same bullets.

So my questions are, do the Army and Marine Corps agree that the M855A1, the Army round, meets the requirements for an improved 5.56 millimeter round? If not, where do you diverge or disagree? What specific test events, if any, are planned to provide more information on the performance of the Army's round? And finally, it has been suggested that the Army's round somehow does damage to the weapons that it is used in. Do you believe that is true?

General WILLIAMSON. So ma'am I will give a short answer. So we have standardized on this ammunition. And as you know, we buy considerable quantities. I have no test data to support the fact that it caused more jamming or damage to the weapon. As you know, when we looked at the upgrade for the M4, one of the things we looked at was the feed mechanism to understand if it was caused by the round or the mechanics of the weapon.

We think that we have addressed that. To be honest with you, we have addressed that in the magazine, where we were having some problems with the feed mechanism. But we are confident that we have picked the correct round. And we continue to support that.

General SHRADER. Ma'am? Ma'am, if I could address on—from the Marine Corps side of the house. Right now our current round is the M855, the 5.56. But we are conducting testing with the Army on the M855A1 round. That testing is—I believe is going to begin

in April and should go through July/August timeframe. I can get the exact dates for that if you would like.

Ms. SANCHEZ. That would be great.

General SHRADER. Yes, ma'am.

Ms. SANCHEZ. And what are you testing for? What do you anticipate out of this test? What do you anticipate to reach?

General SHRADER. So the—what we are pursuing in a new round, ma'am, or an upgraded round, would be the three things are precision, lethality, and reduced signature, or muzzle suppression, if you will. Those are kind of the big three that we are pursuing in enhancing small arms ammunition. But those are the three things I would offer. The testing is going to begin. And once we are complete with the testing, we will have to analyze the data and make logical decisions out of that. Yes, ma'am.

Ms. SANCHEZ. Great. We will be watching that also.

Thank you, Mr. Chairman.

Mr. COOK. Thank you very much. Congresswoman, I—by the way, I thought that was a great question. I am very, very sensitive to it for obvious historic reasons. And years ago, all the jamming, failure to extract. And it was like back to the Revolutionary War with a cleaning rod to get that out.

Ms. SANCHEZ. Mr. Chairman, it is still going on. And the answer is we just have to teach our soldiers how to clean their weapons better.

Mr. COOK. Well, I think it was more than that. You might not have been around at that time. But what they did was they changed the buffer plate, they looked at the examination, they examined the ammunition, the clearance. And it was a serious problem. And as I said, I never envisioned that it would stay around that long. But we are going to have further hearings on that very subject.

But right now we are—they have called votes. But more importantly, I want to thank the panel. You know, we are changing the schedule and blah, blah, blah, and we are speeding up and everything like that. And I actually thought it was a great hearing. And I appreciate everybody's patience. And to come here right in the middle of this. And thank you so much for your testimony. And look forward to hearing more. Thank you. This meeting is adjourned.

[Whereupon, at 11:41 a.m., the subcommittee was adjourned.]

A P P E N D I X

March 19, 2015

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 19, 2015

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL MICHAEL E. WILLIAMSON
PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY
FOR ACQUISITION, LOGISTICS AND TECHNOLOGY AND
DIRECTOR, ACQUISITION CAREER MANAGEMENT

AND

LIEUTENANT GENERAL ANTHONY R. IERARDI
DEPUTY CHIEF OF STAFF OF THE ARMY, G-8

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

ON

FISCAL YEAR 2016 U.S. ARMY GROUND FORCE MODERNIZATION AND
ROTORCRAFT MODERNIZATION PROGRAMS

FIRST SESSION, 114TH CONGRESS
MARCH 19, 2015

NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Introduction

Chairman Turner, Congresswoman Sanchez, distinguished Members of the Subcommittee on Tactical Air and Land Forces, thank you for the opportunity to discuss the Army's Fiscal Year 2016 (FY16) President's Budget request as it pertains to Army Modernization.

The U.S. Army remains the world's decisive land force. Soldiers and units operate as part of joint, inter-organizational, and multi-national teams. The Army protects the homeland, prevents conflict through regional engagements, shapes security environments, and gives our political leadership multiple options for crisis response. The Army must be equipped to win in a complex world across multiple mission sets, under widely varied conditions, in unforgiving geographies, and against evolving threats. The strategic environment is complex, meaning that it is unknown, unknowable, and constantly changing. In the last year the Army had to rapidly respond to assure our allies in Europe by expanding our regionally aligned forces to respond to the deteriorating situation between Russia and Ukraine; deploy to conduct humanitarian assistance in Africa in response to the Ebola crisis; and deploy to deter our enemies in the deteriorating security environment in Iraq. These three diverse, yet critically important missions highlight that our Army and our Army's equipment needs to be effective as the foundation of the Joint Force in diverse environments and mission sets, be tailorable and scalable across all echelons, and support equipping demands across all warfighting functions.

In the midst of this uncertain strategic environment, the Army continues to balance end strength, current force readiness, and equipment modernization. To equip Soldiers to meet the Army Warfighting Challenges and become a leaner, more lethal, and expeditionary asset to the Joint Force, we will have to invest in both non-developmental and developmental capabilities. Non-developmental capabilities will leverage commercial technologies that don't require significant Army Science and Technology (S&T) or Research and Development, such as information technology, in order to save time and money. Developmental capabilities will most often be utilized in areas where

the Army drives advancement and investment, such as combat vehicle technology; lethality; rotary aviation; watercraft; and Intelligence, Surveillance, and Reconnaissance (ISR). To achieve this, we require an industrial base that is rewarded for reducing costs and can react to the increased quantity demanded during national emergencies while still retaining the Army's ability to affordably procure smaller quantities between major conflicts. We will continue to take advantage of existing technologies, while investing in the research to produce significant technological change with military application.

The Army's modernization budget remains near historic lows. Still, our modernization mission – to develop and procure systems that allow our Soldiers to dominate across the full spectrum of operations – remains essential. We must always ensure our Soldiers have the right equipment, at the right time, and at the right place to accomplish the assigned mission.

On behalf of our Secretary, the Honorable John McHugh, and our Chief of Staff, General Ray Odierno, we look forward to discussing with you the Army's FY16 modernization budget request that takes the next step towards meeting the equipping needs of our Soldiers.

Resourcing Army Modernization

Decreases to the Army's overall budget over the last several years have had a significant impact on modernization and threaten our ability to retain overmatch through the next decade. From FY12 to FY16, Research, Development and Acquisition (RDA) investments declined roughly 28 percent. In FY12, the Army's RDA budget was $32 billion. In FY16, the RDA budget request is $23 billion. The proposed increase of $2.6 billion for procurement, over the FY15 budget request, is vitally important to ensure that our Soldiers have the best equipment available and to maintain critical parts of our industrial base.

The Budget Control Act continues to cause significant instability to our programs across all portfolios. Army modernization is particularly hurt by sequestration. With another round of defense sequestration looming for FY16, hundreds of programs are

in flux. Major impacts include delays in equipping to support expeditionary forces, delays in combat vehicle modernization, increases in sustainment costs to fix older equipment, increases in capability gaps, and limited options.

Few choices remain if modernization continues to bear the brunt of sequestration. Most programs are already at minimum economic sustaining levels and further reductions will increase the number of cancellations. Those programs remaining will have higher unit costs and procurement schedules will be significantly stretched out. Overall, long-term funding uncertainties inhibit the Army's ability to plan and execute programs which provide critical operational capabilities for our Soldiers.

A Balanced Approach to Modernization

It is the Army's responsibility to address current and emerging threats and to ensure every deployed Soldier is equipped to achieve decisive overmatch, regardless of the situation. Overall, long-term funding uncertainties challenge the Army's ability to plan and execute programs and provide new capabilities to our Soldiers. Therefore, to ensure a balanced modernization strategy, the Army will ensure we (1) protect S&T investments in key technologies that will enable next-generation capabilities when resources become available; (2) selectively invest in new capabilities for priority areas; (3) incrementally upgrade existing platforms; (4) reset equipment returning from current contingency operations; and (5) divest select platforms to reduce operations and sustainment costs. These areas allow us to Enable Mission Command, Remain Prepared for Joint Combined Arms Maneuver, and, most importantly, Enhance the Soldier for Broad Mission Support.

Equipment Objectives

☐ **Enhance the Soldier for Broad Joint Mission Support.**

The centerpiece of Army modernization continues to be the Soldier and the squad. The Army's objective is to facilitate incremental improvements by rapidly integrating technologies and applications that empower, protect, and unburden the Soldier and our formations. This provides the Soldier and our formations with the mobility, protection, situational awareness, and lethality to accomplish assigned missions. The FY16

budget supports this priority by investing in technologies that provide the Soldier and squad with advanced warfighting capabilities. We are pursuing enhanced weapons effects, next generation optics, night vision devices, advanced body armor and individual protection equipment, unmanned aerial systems, ground based robots, and Soldier power systems.

☐ **Enable Mission Command.**

The Army's objective is to facilitate the decision-making of our leaders and Soldiers with information to the point of need across the Joint Force down to the Soldier and across platforms. The FY16 budget request supports this priority by resourcing enhanced mission command capabilities and platform integration of network components through Operational Capability Sets, software applications for the Common Operating Environment, operations/intelligence network convergence efforts, and platform integration of network components in support of Operational Capability Sets.

☐ **Remain Prepared for Joint Combined Arms Maneuver.**

The Army's objective is to facilitate fleet capabilities to increase lethality and mobility while optimizing survivability by managing the full suite of capabilities to enable the most stressing joint war fights. The FY16 budget request continues to support the Armored Multi-Purpose Vehicle, Paladin Integrated Management program, Joint Light Tactical Vehicle, and critical Aviation programs.

Budget Priorities

The Army has identified critical programs that provide overmatch capabilities at the tactical and operational levels of combat operations. These critical programs are discussed below:

- ☐ **Family of Networked Tactical Radios** is the Army's future deployable mobile communications family of radio systems. It provides advanced joint tactical end-to-end networking data and voice communications to dismounted troops, ground, and aircraft platforms. FY16 funding supports the operational test assets for 240 Manpack radios, and the continued ramp up of production for 300 Rifleman

Radio Secret and Below. FY16 funding also supports the remaining portion of Project Management Administration costs, supports the purchase of generic ancillary components for continued platform integration efforts, and sustainment as the program readies for fielding Capability Sets 17 and 18.

- **Joint Battle Command-Platform (JBC-P)** is the next generation of Force XXI Battle Command Brigade and Below / Blue Force Tracking and is the foundation for achieving affordable information interoperability and superiority on current and future battlefields. JBC-P is the principal command and control/situational awareness system for the Army and Marine Corps at the brigade level and below. FY16 funding supports the procurement of 2,988 vehicle platform computer systems, 300 command post systems, satellite receivers, encryption devices, ancillary equipment, program management support, training, fielding, publications, support equipment, and post deployment software support.
- **Warfighter Information Network-Tactical (WIN-T)** provides broadband communications for the tactical Army. It extends an Internet Protocol based satellite and line-of-sight communications network throughout the tactical force supporting voice, data, and video. FY16 funding supports upgrade of 31 WIN-T Increment 1 units to enhance interoperability with units fielded with WIN-T Increment 2, procurement of 248 communications nodes for WIN-T Increment 2, and continues fielding and support for previously procured WIN-T Increment 2 Low Rate Initial Production (LRIP) equipment.
- **Distributed Common Ground System-Army (DCGS-A)** provides integrated ISR Processing, Exploitation and Dissemination of airborne and ground sensor platforms providing commanders, at all levels, access to the Defense Intelligence Information Enterprise and leverages the entire national, joint, tactical, and coalition ISR community. FY16 funding supports correction of any issues identified during the May 2015 Limited User Test, support for the Increment 2 Request for Proposal and milestone decisions, including plans to begin Increment 2 development, as well as modernize and procure commercial off the shelf software and hardware components for DCGS-A (fixed, mobile, and data centers), integrate hardware and software, and equip and train next deployers and high priority units.

- **Nett Warrior** is a dismounted Soldier worn mission command system that provides unprecedented command, control, and situational awareness capabilities supporting the dismounted combat leader. The design incorporates operational unit mission needs and leverages operational lessons learned, while maintaining power requirements in austere environments. FY16 funding supports fielding an additional 3,016 units.
- **Armored Multi-Purpose Vehicle (AMPV)** replaces the obsolete M113 family of vehicles within the Armored Brigade Combat Teams and provides required protection, mobility, and networking capability for the Army's critical enablers including mortars, medical evacuation, medical treatment, general purpose, and mission command vehicles. FY16 funding supports entry into the Engineering and Manufacturing Development (EMD) phase to integrate the Mission Equipment Package and technologies in development in Army programs and produce prototypes for use in testing.
- **Patriot** is a high demand / low density program, currently deployed in multiple theaters supporting operational and strategic requirements. Patriot provides critical, sustained, tactical ballistic missile defense capability to defeat current and advanced threats while protecting Soldiers, Sailors, Airmen, and Marines. FY16 funding supports procurement of 80 Missile Segment Enhancement missiles to increase Patriot's capability against the current threat, as well as emerging threats.
- **M109A7 Paladin Integrated Management (PIM)** replaces the current M109A6 Paladin and M992A2 Field Artillery Ammunition Supply Vehicle with a more robust platform incorporating Bradley common drive train and suspension components in a newly designed hull. FY16 funding supports the final EMD testing and LRIP of 30 PIM vehicle sets.
- **Joint Light Tactical Vehicles (JLTV)**, a Joint program with the U.S. Marine Corps, is the centerpiece of the Army's Tactical Wheeled Vehicle modernization strategy replacing 49,099 of the light wheeled vehicle fleet by 2041. This multi-mission vehicle will provide protected, sustained, and networked mobility for personnel and payloads across the full range of military operations. FY16 funding will support a LRIP decision in July 2015. A single vendor will be selected to

produce vehicles that provide the most capabilities at a $250,000 or less average unit manufacturing cost.

- **Maneuver Support Vessel-Light (MSV-L)** represents a modernization of current Army watercraft capabilities provided by the aging Vietnam War era Landing Craft. The MSV-L adds new capabilities intended to meet the Army's future tactical and operational movement and maneuver requirements. The MSV-L is intended to access austere entry points, degraded ports, and bare beaches without dependency on support ashore, in support of land maneuver support and/or maneuver sustainment operations. FY16 funding supports extending the service life of the Landing Craft Utility (LCU-2000), as well as to begin early plans to extend the service life of the Modular Warping Tug and Causeway Ferry until new procurement.
- **AH-64 Apache** is the Army's world-class heavy attack helicopter for the current and future force, assigned to Attack Helicopter Battalions and Armed Reconnaissance Squadrons. The AH-64E provides the capability to conduct simultaneously close combat, mobile strike, armed reconnaissance, security, and vertical maneuver missions across the full spectrum of warfare, can operate in day, night, obscured battlefield, or adverse weather conditions. FY16 funding supports procurement of 64 remanufactured AH-64E aircraft and associated modifications to the AH-64D fleet.
- **UH-60 Black Hawk** is the world's premier utility aircraft and the Army's largest helicopter fleet. The Black Hawk is vital in supporting lift and medical evacuation missions in the current and future force operational plans. It is critical to the homeland defense mission and a key component of the Army National Guard's forest fire, tornado, hurricane, and earthquake relief missions. FY16 funding supports procurement of 70 UH-60M and 24 HH-60M, purchases mission equipment packages, and upgrades the UH-60V, which will help to reduce life cycle costs while digitizing the last analog aircraft in the operational fleet.

Other Aviation Priorities

The Army will continue to incrementally modernize the existing fleet while investing in the next generation of rotary wing capabilities. These aviation programs and efforts are discussed below:

- **CH-47 Chinook** will provide the Army's heavy lift capability through 2060, making it the Army's first 100 year aircraft. FY16 funding supports procurement of a base quantity of 27 remanufactured aircraft and 12 new build aircraft, along with associated modifications to the CH-47 fleet. The **CH-47 Block II** is the first increment of a potential multi-block strategy designed to insert incremental technology upgrades into the Chinook fleet and to maintain the platform's relevance and affordability over time while meeting Warfighter requirements. The CH-47 Block II upgrade seeks to buy-back performance that eroded over time due to the addition of mission equipment packages since system fielding in 2007.
- **Improved Turbine Engine Program (ITEP)** will be a new 3,000 Shaft Horse Power (SHP) turbo shaft engine that will replace the T700 family of engines for the UH-60 Black Hawk and AH-64 Apache fleets, which comprise 75% of the total Army helicopter fleet. As increasing demands continue to add weight to the aircraft, the T700, originated in the 1970s as a 1600 SHP engine, no longer retains the significant power growth potential necessary to meet the required capabilities. ITEP provides significantly increased operational capability, fuel efficiency, range, and payload to meet Army mission requirements.
- **Joint Multi-Role (JMR) Technical Demonstrator (TD)** is intended to investigate and demonstrate selected vertical lift aircraft design and performance technologies. JMR is an Army S&T program to develop, expand, and demonstrate new capabilities in vertical lift technology and aircraft capabilities.
- **Future Vertical Lift (FVL)** is an Army lead joint procurement effort to set joint requirements, develop, and procure the next generation of vertical lift aircraft that will replace the current Department of Defense vertical lift fleet. The focus of FVL is based on three major tenets: (1) improve the performance; (2) improve the survivability; and (3) significantly reduce the operating cost. The FVL Family of

Systems capability desires 90 percent common components/parts to reduce overhead and logistical footprint, as well as enable mission flexibility.

- **Future Utility Aircraft (FUA)** will enable the Army to replace worn out or retired Operational Support Airlift (OSA) aircraft with a more technologically advanced aircraft better suited to support the needs of commanders in current and future operations. FUA will reduce the amount of resources required to train pilots and sustain the aircraft. The Fixed Wing Utility Aircraft will be a commercial off-the-shelf solution that will be Instrument Flight Rules capable and equipped with Civil and Military Communications, Navigation, Surveillance, and Survivability Systems that enable the aircraft to operate in Civil and Military environments throughout the world.

Other Major Programs in Fiscal Year 2016

The Army has carefully prioritized our efforts to ensure we maximize every dollar toward putting the best equipment in the hands of our Soldiers. The Army will continue S&T investment in combat vehicle technologies, ITEP, and JMR-TD to inform FVL efforts. We will also focus our modernization efforts on procurement of AMPV and incremental upgrades to the Abrams, Bradley, and Stryker families of vehicles.

The Army also maintains a valid requirement for the development of an Armed Aerial Scout (AAS), but currently lacks the fiscal resources to pursue a new procurement program. Apaches teamed with Unmanned Aerial Systems (UAS) will provide the AAS capability under current Army plans.

The Army is continuing the development of The Joint Air to Ground Missile (JAGM) which increases the lethality of the Army's attack aircraft by increasing the performance of our aircraft-launched precision munitions in degraded environments and against advanced threats. Investments in the Army's current air to ground missile, Hellfire, continue during JAGM development to ensure sufficient stockpiles are maintained and customers from outside the Army (other services and allied nations) can continue to have access to the best and newest missiles currently available.

The Army continues to invest in the MQ-1C Gray Eagle UAS with JAGM integration, increased survivability efforts, and achieving acceptance into the national airspace. In FY16, the Army added another company to U.S. Army Intelligence and Security Command (INSCOM) formations thereby increasing globally allocable ISR capabilities. The program continues to field to Army Divisions, U.S. Special Operations Command, and INSCOM with completion scheduled for FY18.

The Army's Network Integration Evaluations continue to provide valuable Soldier-driven performance evaluations and suitability assessments of network technologies which the Army continues to leverage as a means of focusing Tactical Network modernization efforts. The Army is committed to developing and fielding the Army Tactical Network as part of a modernized Army network that improves effectiveness, security, and efficiency while providing the same basic capabilities from home station to the deployed tactical unit.

Network dominance and defense is an integral part of our national security. The Army is focused on proactively providing increased capabilities to the Joint force. The evolving Cyber environment is forcing the Army to adapt to cyber threats by transforming processes, organizations, and operating practices to mitigate vulnerabilities. In terms of new and emerging initiatives, the U.S. Army Cyber Command at Fort Gordon, GA, and the Army acquisition community are pursuing ways to bring "big data" analytic capabilities to Army operations in order to improve our cyber defense capability. These efforts, as well as cyber S&T initiatives focused on the enabling technologies for future capabilities, will generate resourcing requirements which will compete against other modernization priorities.

Defense Industrial Base

As lower funding levels for the Army continue, we are concerned about the availability of needed skills and capabilities in the defense manufacturing and supplier base. Teaming and collaboration with our industrial base, early in the process, will help reduce risk. In crafting our equipment modernization strategy, we carefully assessed risks across all portfolios to ensure balanced development of new capabilities, incremental

upgrades to existing systems, and protection of ongoing production and manufacturing to sustain the industrial base.

The Army has initiated studies to independently assess the health and risk to key industrial base sectors. Based on the results to date, the Army is making investments in specific portfolios to mitigate risk. In the aviation portfolio, multi-year contracts for Black Hawk and Chinook helicopters provide stability and predictability to the industrial base while achieving significant cost savings for the Army. In the combat vehicle portfolio, new production of PIM and AMPV, as well as incremental upgrades to Abrams, Bradley, and Stryker help to ensure that a sufficient workload will sustain critical workforce skills and suppliers. The Army also continues to advocate for Foreign Military Sales (FMS), extend production in certain programs, and invest in key suppliers on a case-by-case basis.

The Army is equally concerned about the health of the organic industrial base, including our depots, arsenals, and ammunition plants. We are evaluating how to preserve needed skills and capabilities by modernizing facilities with new technology and plant equipment, promoting arsenal manufacturing capabilities across the Department of Defense, and conducting personnel training. The Army will maintain critical skills sets in our depots by identifying workload to preserve capabilities, exploring FMS opportunities, and encouraging depots and arsenals to partner with commercial firms and other Army and DoD organizations such as the Defense Logistics Agency to meet future requirements.

Closing Comments

We appreciate the generous support from Members of Congress for strengthening the Defense acquisition workforce, which is the critical component for the success of a well-equipped force. With more than 38,000 Army military and civilian acquisition professionals worldwide, this dedicated component of the Defense acquisition workforce is comprised of engineers, scientists, logisticians, contract specialists, testers, program managers, cost estimators, and many other acquisition career field specialties who effectively manage the Army RDA enterprise in a challenging budget environment.

Army equipment modernization enables the U.S. Army to remain the world's decisive land force. Soldiers and units operate as part of joint, inter-organizational, and multi-national teams that are tailorable and scalable to the mission. As we continue to examine how to achieve effective balance among force structure, modernization, and readiness, we must have stable, predictable, long-term funding to modernize our force to meet evolving threats and fully execute our mission.

The security challenges of tomorrow will be met with the equipment we develop, modernize, and procure today. Because adversaries will continue to invest in technology to counter or evade U.S. strengths and exploit vulnerabilities, resource reductions and insufficient force modernization place at risk the Army's ability to overmatch its opponents.

With the possible return of sequestration in FY16, Army equipment modernization faces significant risks. Those risks include fewer mitigation options, aging fleets, eroding overmatch, higher sustainment costs, longer timelines to regenerate battle lost equipment, and higher costs, which will leave our Soldiers less prepared for future conflicts.

Mr. Chairman, Members of the Subcommittee, we thank you again for your steadfast and strong support of the outstanding men and women of the United States Army, Army Civilians, and their Families. We look forward to your questions.

BRIGADIER GENERAL MICHAEL E. WILLIAMSON

BG Michael E. Williamson assumed his duties as Joint Program Executive Officer for the Joint Tactical Radio System in March 2011.

General Williamson was born in Tucson, Arizona. He was commissioned at the University of Maine as a Second Lieutenant in the Air Defense Artillery in 1983.

His assignments include service as the Automation Officer for the 32nd AADCOM in Darmstadt Germany. He then served as a Chaparral Platoon Leader, Vulcan Platoon Leader, Maintenance Officer and Executive Officer in C Battery, 108th Brigade, Hahn Air Force Base, Germany. After attending the Air Defense Artillery Advance Course, he served as the Chief, Forward Area Air Defense Weapons, Development Branch at Fort Bliss, Texas. He then commanded B Battery, 3/1 ADA (Hawk) in the 11th Brigade at Fort Bliss and also in the 31st ADA Brigade at Fort Hood, Texas. After completing command, he served as the Assistant S-3 in the 31st ADA Brigade.

His acquisition experience began as Sr. Military Software Analyst at NATO's military headquarters in Mons, Belgium. He then served as the Associate Director, Battle Command Battle Lab at Fort Leavenworth, Kansas. After attending Command and General Staff College, he served as the Chief of Information Technology, Acquisition Career Management, within the Office of the Assistant Secretary of the Army for Acquisition Logistics and Technology. He was then selected as a Congressional Fellow and served as a legislative assistant to a Member of Congress. After completing the fellowship, General Williamson served as the Product Manager for the Global Command and Control System-Army, and then as the Acquisition Military Assistant to the Secretary of the Army. He served as Commander of Software Engineering Center-Belvoir (SEC-B), He was then assigned as the Project Manager, Future Combat System (Brigade Combat Team) Network Systems' Integration within Program Manager, Future Combat System (Brigade Combat Team). He then served as the Director of Systems Integration, within the Office of the Assistant Secretary of the Army for Acquisition Logistics and Technology. Prior to his current assignment, General Williamson served as the Deputy Program Manager, Program Executive Office, Integration.

General Williamson's awards and decorations include the Legion of Merit with two Oak Leaf Clusters; the Meritorious Service Medal with 2 Oak Leaf Clusters; the Joint Service Commendation medal, the Army Commendation Medal with two Oak Leaf Clusters, the Joint Service Achievement Medal, the Army Achievement Medal with two Oak Leaf Clusters, the Army Superior Unit Award, the National Defense Service Medal with Bronze Star, the Global War on Terrorism Service Ribbon, the Army Service Ribbon, the Overseas Ribbon and the Army Staff Identification Badge.

General Williamson's education includes a Bachelor of Science from Husson College in Business Administration, a Masters of Science in Systems Management from the Naval Postgraduate School and a PhD in Business Administration from Madison University. He also has graduate certificates in Public Policy from the JFK School of Government, Harvard University and the Government Affairs Institute at Georgetown University. He is a graduate of the Army Command and General Staff College, a graduate of the Advanced Management Program at the Harvard Business School and was a Senior Service College Fellow at the University of Texas at Austin. He is Level III certified in Program Management and Communications and Computers.

LIEUTENANT GENERAL ANTHONY R. IERARDI
Deputy Chief of Staff, G-8
United States Army
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Lieutenant General Ierardi became the Deputy Chief of Staff, G-8 Headquarters Department of the Army on 12 December 2014. Prior to assumption of this position, he served at Fort Hood Texas as the III Corps Deputy Commanding General and Commanding General of the 1st Calvary Division, "America's First Team."

In previous assignments, LTG Ierardi served as the Director of Force Management, Office of the Deputy Chief of Staff, G-3/5/7; Director, Joint and Futures, Office of the Deputy Chief of Staff, G-8; Executive Officer for the Department of Defense Counter- IED Senior Integration Group; and as Deputy Commander for Program, Combined Security Transition Command-Afghanistan. He commanded Joint Task Force North at Fort Bliss, Texas and served as Director of Capabilities Development, U.S. Army Capabilities Integration Center, U.S. Army Training and Doctrine Command, at Fort Monroe, Virginia. He also served as the Chief of Staff of the 2d Infantry Division at Camp Red Cloud, Republic of Korea and as Commander of the 2d Infantry Division's First "Iron" Brigade at Camp Casey, Korea. While assigned at Fort Hood, Texas, he served as the Operations Officer (G-3) of the 1st Cavalry Division and Commander of the 1st Squadron, 7th Cavalry Regiment.

Earlier in his career, LTG Ierardi served as a Cavalry Troop Commander in the 2d Squadron, 2d Armored Cavalry Regiment in Bamberg, Germany and participated in Operation Desert Storm while assigned to the 2d Armored Cavalry Regiment.

LTG Ierardi trained and served as a Latin American Foreign Area Officer, first as a student attending the Mexican Army's Command and General Staff College (Escuela Superior de Guerra) in Mexico City, and later as the Aide-de-Camp to the Commander of the U.S. Southern Command.

LTG Ierardi's awards include the Defense Superior Service Medal, the Legion of Merit, the Bronze Star, the Defense Meritorious Service Medal, the Meritorious Service Medal, the Army Commendation Medal, and the Army Achievement Medal. LTG Ierardi holds a degree in Business Administration from Washington and Lee University, a Master of Arts Degree in Latin American Studies from Georgetown University and is also a graduate of both the U.S. Army Command and General Staff College and the U.S. Naval War College.

Lieutenant General Ierardi is married and has two children.

MAJOR GENERAL MICHAEL D. LUNDY
Commanding General
United States Army Aviation Center of Excellence

Major General Mike Lundy was commissioned as an Aviation Second Lieutenant in 1987 from McNeese State University. After completing Basic Rotary Wing Training and the OH-58D transition, he was assigned to TF 23, 3 ID in Giebelstadt, Germany as a Company Executive Officer and Platoon Leader. In 1990, his platoon was attached to 4/2 ACR and deployed to Operation Desert Shield and Desert Storm. Following Desert Storm, he was reassigned to CBTF, 3 ID in support of Operation Provide Comfort in Northern Iraq.

In 1991, MG Lundy attended the Armor Officer Advanced Course and Cavalry Leaders Course at Fort Knox. He was then assigned to 4-17 Cavalry at Fort Bragg, where he served as an Assistant S3, Squadron S4 and commanded A/4-17 Cavalry and N/4/2 ACR. During his troop command, he deployed to Haiti for Operation Support Democracy. In 1995, MG Lundy was reassigned to the Eagle Team, Operations Group, National Training Center at Fort Irwin. Following the Command and General Staff College in 1998, Lundy was assigned to 10th Mountain Division as the XO TF 1-10 ATKHB and deployed to Bosnia in support of SFOR6. He then served as the 10th Aviation Brigade S3 and Brigade XO. In November 2001, he deployed to Afghanistan as the Deputy CJ3 and Chief of Operations for CJTF Mountain in support of Operation Enduring Freedom I.

In June 2003, MG Lundy assumed command of 1st Battalion (Attack), 25th Aviation Regiment and deployed in support of Operation Iraqi Freedom II. Following battalion command in 2005, Lundy served as the Operations Group Senior Aviation Observer Controller at the Joint Readiness Training Center, and then attended the Army War College in 2006. Following the AWC, Lundy assumed command of the 25th Combat Aviation Brigade in January 2008 and deployed the brigade to Northern Iraq.

In October 2010, MG Lundy was reassigned as the 25th Infantry Division Deputy Commander (Rear), and then was reassigned as the Deputy Commanding General 1 AD at Fort Bliss in July 2011. From July 2012 to March 2014, MG Lundy served as the Deputy Commanding General Combined Arms Center–Training. MG Lundy is currently serving as the Commanding General, United States Army Aviation Center of Excellence and Fort Rucker, Alabama.

MG Lundy's awards and decorations include the Legion of Merit (2 OLC), Bronze Star Medal (2 OLC), Defense Meritorious Service Medal, Meritorious Service Medal (4 OLC), Air Medal (2 Valor Devices and the Numeral 4), Joint Service Commendation Medal, Army Commendation Medal (1 OLC), Army Achievement Medal (4 OLC), Humanitarian Service Medal, Joint Meritorious Unit Award, Valorous Unit Award, Army Superior Unit Award, Meritorious Unit Citation (1 OLC), Master Aviator Badge, Parachutist Badge, Combat Action Badge, and the Ranger Tab. MG Lundy is married to the former Paula Blanchette and they have two daughters, Kacie and Sydnie.

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

STATEMENT OF

VICE ADMIRAL PAUL GROSKLAGS
PRINCIPAL MILITARY DEPUTY, ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)

AND

BRIGADIER GENERAL JOSEPH SHRADER
COMMANDER, MARINE CORPS SYSTEMS COMMAND

AND

MR. WILLIAM TAYLOR
PROGRAM EXECUTIVE OFFICER, MARINE CORPS LAND SYSTEMS

BEFORE THE

TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

MARINE CORPS GROUND FORCES MODERNIZATION AND ROTORCRAFT
MODERNIZATION PROGRAMS

March 19, 2015

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

INTRODUCTION

Mr. Chairman, Ranking Member Sanchez, and distinguished members of the Subcommittee, we thank you for the opportunity to appear before you today to discuss the Marine Corps Ground Force Modernization and Rotorcraft Modernization programs. Our testimony will provide background and rationale for the Department's Fiscal Year 2016 budget request aligning to our strategic priorities and budgetary goals.

The United States is a maritime nation with global responsibilities. Our Navy and Marine Corps persistent presence and multi-mission capability represent U.S. power projection across the global commons. We move at will across the world's oceans, seas and littorals, and extend the effects of the sea-base deep inland. We enable global reach and access, regardless of changing circumstances, and will continue to be the nation's preeminent option for employing deterrence through global presence, sea control, mission flexibility and when necessary, interdiction. We are an agile strike and amphibious power projection force in readiness, and such agility requires that our Naval expeditionary forces remain strong.

The Marine Corps is the Nation's expeditionary force-in-readiness. By congressional mandate, it has a unique role and structure as a "…balanced force-in-readiness, air and ground." This mandate results in the requirement for the Marine Corps to maintain a high state of combat readiness to be "most ready, when the Nation is least ready."

Marines must be ready to respond anywhere in the world, at any time, with the full spectrum of expeditionary capabilities across a range of operations, to include, crisis response, humanitarian assistance, or armed conflict. Consequently, we man, train, and equip our force and prioritize resources for readiness. As one of the five pillars of readiness, equipment modernization is a critical factor in our ability to support our

capability requirements. But under current fiscal constraints, we have prioritized near-term readiness while assuming risk in other areas, including equipment modernization.

The Department is committed to delivering required warfighting capabilities to Marines in a timely and affordable manner. Continued funding shortfalls in our investments will force reliance on aging equipment and diminish our technical advantage over our adversaries. Not only does retooling existing legacy systems mean that innovation is delayed or impeded, but maintaining legacy systems is costly in its own right. Experience tells us that investing in new capabilities and technologies is a proven cornerstone for your Marines and Sailors to achieve mission success today and into an uncertain, but no less demanding future.

Additionally, as we face risks to our investments, we also see an adverse impact on the industrial base placing at risk our future modernization efforts. Working as a team, and with your support, we can prevail over these challenges on behalf of our service men and women and our Nation's readiness.

A fundamental strength we have working for us is the close partnership between Navy and Marine Corps. Naval integration is a critical factor in our mission performance. The Marine Corps also works closely with the Army, other Services, and industry to provide the most effective and affordable capabilities to your Marines and Sailors. The Marine Corps and the Army have worked together on programs such as the Joint Light Tactical Vehicle (JLTV), the Enhanced Combat Helmet and the Modular Scalable Vest.

The President's Budget for Fiscal Year 2016 allocates $2.152 billion to the Marine Corps' baseline ground force modernization budget. Aviation investments for the Marine Corps are included in the Navy's aviation budget.

Ground force modernization is focused on high-priority programs such as the Amphibious Combat Vehicle (ACV) 1.1, Amphibious Assault Vehicle (AAV) survivability upgrades, Ground/Air Task Oriented Radar (G/ATOR), and Joint Light Tactical Vehicle (JLTV). Rotorcraft programs include the MV-22 and the CH-53K. Together, these are required to modernize capabilities and provide the technology required to dominate our adversaries.

GROUND FORCE MODERNIZATION

Ground Combat and Tactical Vehicles (GCTV)

The overarching priority within the GCTV portfolio is the replacement of the legacy Amphibious Assault Vehicle (AAV) with modern armored personnel carriers through a combination of complementary systems. The ACV program is the Marine Corps highest ground modernization priority and will use an incremental approach that consists of two Phases: ACV Phase 1 Increment 1 (ACV 1.1) and ACV Phase 1 Increment 2 (ACV 1.2). Phase 1 Increment 1 will field a personnel carrier while Increment 2 will deliver improved personnel carrier capabilities, a command and control variant, and a recovery variant. Phase 2 will examine High Water Speed.

The second highest priority within the portfolio remains the replacement of a portion of the high mobility multi-purpose wheeled vehicle (HMMWV) fleet that is most at risk; those vehicles that perform a combat function and are typically exposed to enemy fires. In partnership with the Army, the Marine Corps has sequenced the JLTV procurement so as to ensure affordability of the entire GCTV portfolio while replacing one third of the legacy HMMWV fleet with modern tactical vehicles.

Amphibious Combat Vehicle (ACV) 1.1

The Fiscal Year 2016 President's Budget requests $219.1 million in RDT&E for ACV 1.1. The Marine Corps appreciates the support of the Congress and this Committee in the restructuring of the ACV program in the Fiscal Year 2015 defense authorization. We will release a Request for Proposal to industry in March/April 2015. Leveraging the stability of the Service's requirements and the mature technologies of non-developmental wheeled, armored combat vehicles, we have developed a program to field a capability for the Marines in six (6) years.

Leveraging demonstrated mature technologies, ACV 1.1 will be acquired as a modified non-developmental item and is approved to enter the acquisition cycle at Milestone B. We anticipate awarding Engineering and Manufacturing Development (EMD) contracts to two vendors in 1st Quarter Fiscal Year 2016 with a competitive down-select for production in Fiscal Year 2018. The Acquisition Objective (AO) for ACV 1.1 is 204 vehicles. This AO provides lift for two infantry battalions and is planned to achieve Initial Operational Capability (IOC) in Fiscal Year 2020. This aggressive schedule for ACV 1.1 requires full funding and the continued support of this Committee and Congress.

The Marine Corps is also investing in the exploration of a range of high water speed technology approaches to provide for an affordable, phased modernization of legacy capability to enable extended range littoral maneuver. These efforts will develop the knowledge necessary to reach an informed decision point in the mid-2020s on the feasibility, affordability, and options for developing a high water speed capability for maneuver from ship-to-shore.

Amphibious Assault Vehicle (AAV) Survivability Upgrade (SU)

The Fiscal Year 2016 President's Budget requests $48.5 million for RDT&E and $26.7 million for PMC for the AAV program. To restore much needed survivability and mobility to the current AAVs, approximately one third of that fleet will undergo a survivability upgrade. The AAV Survivability Upgrade (SU) improves AAV capability in order to support Marine Expeditionary Unit (MEU) deployments, and when globally sourced, provide the essential capacity necessary for the assault echelons of two Marine Expeditionary Brigades. The combination of a modern amphibious armored personnel carrier alongside the improved AAV generates a complementary set of capabilities to meet general support lift capability and capacity requirements of our Ground Combat Element.

Joint Light Tactical Vehicle (JLTV)

The Fiscal Year 2016 President's Budget requests $36.7 million in RDT&E and $79.4 million in PMC for the Marine Corps portion of the JLTV program. The Department remains firmly partnered with the U.S. Army in fielding a JLTV that meets requirements of both services while remaining affordable. The JLTV program strives to control ownership costs by maximizing commonality, increasing reliability over the legacy HMMWV fleet, improving fuel efficiency, and achieving additional reduced costs through effective competition in all phases of program execution. The program completed the EMD phase in November 2014. Later this year the program will down-select to one of three competing vendors and enter the production and deployment phase. Funding for major activities in this budget request includes test and evaluation, procurement of 109 USMC Low Rate Initial Production (LRIP) assets, associated government furnished equipment, training, and development of maintenance publications. The remaining acquisition objective of 5,500 will be procured over the

Future Year Defense Program. The Marine Corps expects to have completed their procurement by Fiscal Year 2021.

Ground Force Command and Control (C2)

The ability to coordinate and synchronize distributed Command and Control (C2) sensors and systems is critical to the success ashore of the MAGTF. Modernization priorities in this area are the Ground/Air Task Oriented Radar (G/ATOR) and the Common Aviation Command and Control System (CAC2S). These systems will provide modern-day, interoperable technologies that support real-time surveillance, detection and targeting, in addition to the common C2 suite required to enable the effective employment and situational awareness of the MAGTF.

Ground/Air Task Oriented Radar (G/ATOR)

The Fiscal Year 2016 President's Budget requests $80.1 million in RDT&E and $130.7 million in PMC for the G/ATOR program. G/ATOR is the Marine Corps short and medium range multi-role radar designed to detect aircraft, unmanned aerial systems, cruise missiles, air breathing targets, rockets, artillery and mortars. G/ATOR will replace five legacy radars and has the growth capability to provide air traffic control. G/ATOR Block 1 provides air defense and air surveillance capability, and achieved Milestone C in 2014. Block 2 is in the EMD phase and will provide counter-battery and target acquisition capability. RDT&E funding resources Block 2 development and refurbishment of one Engineering Development Model. Procurement funding resources LRIP of two Block 1 systems. This program is critical to replacing radars that have exceeded their expected life cycle and technological relevance and we appreciate the continued support of the committee in furthering the capability.

Common Aviation Command and Control System (CAC2S)

The Fiscal Year 2016 President's Budget requests $13.4 million in RDT&E and $35.1 million in PMC for CAC2S. CAC2S Increment 1 is a modernization effort to replace existing Marine Air Command and Control System (MACCS) equipment. Increment 1/Phase 1 successfully fielded a product baseline Processing and Display Subsystem (PDS) and Communications Subsystem (CS) during 4th Quarter Fiscal Year 2013. Increment 1/Phase 2, covers the integration of sensor capabilities with the PDS and addresses the remaining Air Combat Element (ACE) Battle Management and C2 requirements through integrating the Air Command and Control Subsystem.

Phase 2 completed a successful Milestone C in February 2015. Funding in this budget supports the assembly and Initial Operational Test and Evaluation (IOT&E) of the first four Limited Deployment Units and the required government furnished equipment. IOT&E is scheduled for Fiscal Year 2016. Phase 2 completion will result in the delivery of the full CAC2S Increment 1 capabilities and is planned to begin fielding in Fiscal Year 2017. The approved AO is 50 systems.

Family of Ballistic Protective Systems

The Marine Corps continuously works toward the improvement of personal protective equipment (PPE) for the warfighter. PPE includes body armor components, combat helmets, combat protective eyewear, and protective clothing. There are trade-offs between weight (which may create fatigue and restrict movement) and the level of protection to be achieved. Despite the challenges of technology and an austere fiscal climate, we continue to provide the warfighter with the best available personal protective equipment.

The Modular Scalable Protective System (MSPS) delivers an integrated system which provides the warfighter a "scalable" armor solution with load distribution capabilities. The development of a single system that scales across the Armor Protection Levels will reduce life cycle costs, operational footprint and overall weight, while providing greater mobility through integrated load carriage and flexibility. The Modular Scalable Vest (MSV), the developmental torso protective system of the MSPS, currently provides these capabilities in prototype form. In addition to the MSV, the Enhanced Combat Helmet is moving forward with production.

Reductions in funding, particularly RDT&E funding, may limit the advances of the overall MSPS program, and in particular, the timely development of the MSV capability.

Ground Equipment Modernization Programs at Risk

While we are able to invest in only the highest priority modernization efforts, the Marine Corps forecasts critical issues in several areas, including:

- Recapitalization of the Marine Corps 30 year old TRC-170 system, required to provide alternate communications networks in degraded spectrum contested environments.
- The Marine Corps ability to maintain Joint Interoperability with other Services through the Tactical Communications Modernization program.
- The Networking on the Move program, which leaves two thirds of our operating forces without the ability to conduct mobile networking in distributed environments.

ROTORCRAFT MODERNIZATION

Assault Support Aircraft (V-22/MV-22)

The Fiscal Year 2016 President's Budget requests $87.9 million in RDT&E,N for continued product improvements, including engineering development of a Navy variant of the MV-22; and $1.48 billion in APN for procurement and delivery of 19 MV-22s (Lot 20). Fiscal Year 2016 will be the fourth year of the 2nd V-22 Multi-Year Procurement (MYP) contract covering Fiscal Years 2013-2017. The funds requested in the Fiscal Year 2016 budget fully fund Lot 20 and procure long-lead items for Fiscal Year 2017 Lot 21 MV-22 aircraft. The APN request includes $126.1 million to support Operations and Safety Improvement Programs (OSIPs), including Correction of Deficiencies and readiness improvements. The 2016 request includes funding starting in Fiscal Year 2018 to procure a Navy V-22 variant in support of the Carrier Onboard Delivery mission.

MV-22 Osprey vertical flight capabilities, coupled with the speed, range, and endurance of fixed-wing transports, are enabling effective execution of missions that were previously unachievable. In 2014, a second Marine Corps Special Purpose MAGTF-Crisis Response unit stood up in CENTCOM, and the twelfth and final MV-22 for HMX-1 "Greenside" logistics and passenger transport was delivered for support of the Executive transport mission. As the V-22 fleet approaches the 300,000 flight hour milestone, it continues to be the safest Marine Corps vertical lift aircraft.

The second MYP, which began in Fiscal Year 2013, will procure at least 93 MV-22s over five years and result in savings of approximately $1 billion when compared to single year procurements. The stability of the MYP supports the Marine Corps' retirement of legacy aircraft, benefits the supplier base and facilitates cost reductions on the part of both the prime contractor and sub-tier suppliers.

Due to an extremely high operational tempo in 2014, the mission capability rates leveled-off and did not continue the year over year improvements seen since 2010. However, cost per flight hour continued to decrease, with a total reduction of approximately 30 percent since 2010. Fiscal Year 2016 OSIP provides a necessary and stable source of crucial modification funding as the Osprey program works to improve readiness and continue to reduce operating costs.

CH-53K Heavy Lift Replacement Program

The Fiscal Year 2016 President's Budget requests $632.1 million RDT&E,N to continue the EMD phase of the CH-53K program. Since entering into developmental test in December 2013, the Ground Test Vehicle (GTV) has completed bare head light-off and shakedown light-off has commenced. Over the last year, the GTV has accumulated over 180 test hours. The first flight vehicle, Engineering Development Model (EDM) 1, has completed its bare head light-off and preparation for bladed ground runs is underway. The program is currently on schedule to execute its first flight by the end of 2015. During Fiscal Year 2016, the program will continue to execute developmental test flights, deliver the final EDM, and continue assembly of System Demonstration Test Article aircraft, which will be production representative aircraft utilized for Operational Test.

Expeditionary heavy-lift capabilities will continue to be critical to successful land and sea-based operations in future anti-access, area-denial environments, enabling sea-basing and the joint operating concepts of force application and focused logistics. The CH-53K will provide land and sea based heavy-lift capabilities not resident in any of today's platforms; and contribute directly to the increased agility, lethality, and presence of joint task forces and MAGTFs. The CH-53K will transport 27,000 pounds of external cargo out to a range of 110 nautical miles, nearly tripling the CH-53E's external lift capability under similar environmental conditions, while fitting into the same shipboard footprint.

The CH-53K will also provide unparalleled lift capability under high-altitude and hot weather conditions, greatly expanding the commander's operational reach.

Compared to the CH-53E, maintenance and reliability enhancements of the CH-53K will improve aircraft availability and ensure cost effective operations. Additionally, survivability and force protection enhancements will dramatically increase protection for both aircrew and passengers.

The CH-53E aircraft currently in service continue to meet unprecedented operational demands, but are approaching 30 years of service and becoming ever more challenging to maintain. To keep the "Echo" viable until the "Kilo" enters service, the Fiscal Year 2016 President's Budget requests $46.9 million in APN for both near and mid-term enhancements. For both the USN MH-53E and USMC CH-53E helicopters, these modifications include Condition Based Maintenance software upgrades, Kapton wiring replacement installations, and improved Engine Nacelles. The Marine Corps' CH-53E fleet is continuing with the T-64 Engine Reliability Improvement Program, Critical Survivability Upgrade, Satellite Communications kit installations, and Smart Multi-Function Color Display procurements and installations.

ATTACK AND UTILITY AIRCRAFT

UH-1Y // AH-1Z

The Fiscal Year 2016 President's Budget requests $27.2 million in RDT&E,N for continued product improvements; and $856.2 million in APN for 28 H-1 upgrade aircraft: 12 UH-1Y and 16 AH-1Z. The program is a key modernization effort designed to resolve existing safety deficiencies and enhance operational effectiveness of the H-1 fleet. The 85 percent commonality between the UH-1Y and AH-1Z will significantly reduce life-cycle costs and the logistical footprint while increasing the maintainability

and deployability of both aircraft. The program will provide the Marine Corps with 349 H-1 aircraft through a combination of new production and a limited quantity of remanufactured aircraft.

The H-1 Upgrades Program is replacing the Marine Corps' UH-1N and AH-1W helicopters with state-of-the-art UH-1Y "Yankee" and AH-1Z "Zulu" aircraft. The new aircraft are fielded with integrated glass cockpits, world-class sensors, and advanced helmet-mounted sight and display systems. The future growth plan includes a digitally-aided, close air support system designed to integrate aircraft sensors and weapons systems with ground combat forces and other capable Department of Defense aircraft. Integration of low-cost weapons such as the Advanced Precision Kill Weapon System II, provides increased lethality with reducing collateral damage.

The UH-1Y aircraft achieved IOC in August 2008 and Full Rate Production (FRP) in September 2008. The "Yankee Forward" procurement strategy prioritized UH-1Y production in order to replace the under-powered UH-1N fleet as quickly as possible. The last UH-1N was retired from service as of December 2014. The AH-1Z received approval for FRP in November 2010 and achieved IOC in February 2011. As of February 2015, 148 aircraft (109 UH-1Ys and 39 AH-1Zs) have been delivered to the Fleet Marine Force. An additional 60 aircraft are on contract and in production.

EXECUTIVE SUPPORT AIRCRAFT

VH-3D/VH-60N Executive Helicopter Series

The VH-3D and VH-60N are safely performing the Executive Lift mission worldwide. As these aircraft continue to provide seamless vertical lift for the President of the United States, the Department is working closely with HMX-1 and industry to sustain these aircraft until a Presidential Helicopter Replacement platform is fielded. The Fiscal Year

2016 President's Budget requests an investment of $76.1 million of APN to continue programs that will ensure the in-service Presidential fleet remains safe and reliable. Ongoing efforts include the Cockpit Upgrade Program, engine upgrade program, Structural Enhancement Program, Obsolescence Management Program and a Communications Suite Upgrade (Wide Band Line of Sight) that provides survivable access to the strategic communications network. The technology updates for legacy platforms will be directly leveraged for the benefit of the ensuing replacement program (VH-92A).

VH-92A Presidential Helicopter Replacement Aircraft

The Fiscal Year 2016 President's Budget request includes $507.1 million of RDT&E,N to fund the VH-92 EMD contract and associated government activities. Significant progress has been made in the past year with completion of the Milestone B Review in March, award of the EMD contract to Sikorsky Aircraft Corporation in May, completion of the System Requirements Review in August and completion of the Integrated Baseline Review in November. The Sikorsky S-92A aircraft will be used to execute the acquisition strategy of integrating mature subsystems into an air vehicle that is currently in production. Initial contractor testing on an S-92A aircraft is planned to occur during 2015 and early 2016, and the Critical Design Review is planned for the 4th quarter of Fiscal Year 2016. The first of the planned operational inventory of 21 aircraft will begin fielding as early as 2020.

CONCLUSION

The Marine Corps continues to improve our essential ground and rotorcraft capabilities through a strategy that is stable and affordable. We recognize the need for continued vigilance in achievement of a proper balance between current readiness and the long-term imperatives of modernization and innovation. This balance is critical to ensuring the

Marine Corps and the individual Marine has the capability to fight and win future battles while being prepared to respond today as our Nation's force in readiness. Mr. Chairman, and distinguished committee members, on behalf of your Marines, we request your continued support for our modernization strategy.

Vice Admiral Paul A. Grosklags
Principal Military Deputy
Assistant Secretary of the Navy for Research, Development, and Acquisitions

Vice Admiral Paul Grosklags is a native of DeKalb, Illinois. After being designated a naval aviator in October 1983, he immediately reported to Training Squadron Three at North Whiting Field in Milton, Florida, as a T-34C flight instructor.

Grosklags served operational tours with Helicopter Antisubmarine Squadrons 34 and 42, where he flew the SH-2F and SH-60B, respectively. Grosklags made multiple deployments with the USS John Hancock (DD 981), USS Donald B. Beary (FF 1085), USS Comte de Grasse (DD 974), and USS Leyte Gulf (CG 55). He later served as both executive and commanding officer of Helicopter Training Squadron Eighteen 18.

Grosklags' acquisition tours include engineering test pilot and assignments as MH-60R assistant program manager for systems engineering, H-60 assistant program manager for test and evaluation, MH-60R deputy program manager, and ultimately as program manager for Multi-Mission Helicopters (PMA-299), during which time the MH-60R was successfully introduced to the fleet. Grosklags also served as operations officer and subsequently as deputy program executive officer for Air Anti-Submarine Warfare, Assault and Special Mission Programs (PEO(A)).

Grosklags has served flag tours as commander, Fleet Readiness Centers and Naval Air Systems Command (NAVAIR) assistant commander for Logistics and Industrial Operation, NAVAIR vice commander, and PEO(A). In July 2013, he assumed responsibilities as principal military deputy for the Assistant Secretary of the Navy (Research, Development & Acquisition).

Grosklags graduated from the U.S. Naval Academy in 1982, is a graduate of the U.S. Naval Test Pilot School Class 99, and holds a Master of Science degree in Aeronautical Engineering from the Naval Postgraduate School. He has more than 5,000 military flight hours in numerous types of rotary and fixed-wing aircraft. Grosklags is a proud but humble co-owner of the Green Bay Packers and works weekends providing free labor on his wife's fish farm.

Updated: 17 November 2014

Brigadier General Joseph Shrader
Commander, Marine Corps Systems Command

Brigadier General Joseph Shrader, a native of Princeton, West Virginia, enlisted in the Marine Corps in January 1981. He served for three years with 3rd Battalion, 5th Marines as an infantryman and was promoted to corporal. After his enlistment, he returned to West Virginia where he earned an associate degree in Mechanical Engineering Technology and a Bachelor of Science degree in Electrical Engineering Technology from Bluefield State College. He was commissioned a second lieutenant through the Platoon Leaders Course commissioning program in 1989.

Upon graduation from The Basic School, Brigadier General Shrader attended the Artillery Officer Basic Course in Fort Sill, Oklahoma, and then reported to 5th Battalion, 10th Marines (5/10). While assigned to 5/10, Brigadier General Shrader served as a Guns Platoon Commander, Battery Executive Officer and Battery Commander, and deployed to Southwest Asia during operations Desert Shield, Desert Storm and Provide Comfort.

Brigadier General Shrader reported in June 1993 to Marine Corps Recruit Depot, Parris Island, South Carolina, where he served as a recruit training company Series Commander, Company Executive Officer and Company Commander. He then attended the Field Artillery Advanced Officer Course in Fort Sill, and in August 1996, reported to the III Marine Expeditionary Force (III MEF), Okinawa, Japan. While there, he was promoted to Major and served as Assistant Operations Officer, 4th Marine Regiment, and Battalion Operations Officer and Battalion Executive Officer with 3rd Battalion, 12th Marines.

He then attended the Marine Corps Command and Staff College on Marine Corps Base Quantico, Virginia, where he earned a Master of Military Studies degree. In June 2001, he was transferred to Marine Corps Systems Command where he served as the Armor and Fire Support Targeting Team Lead. Upon promotion to Lieutenant Colonel, he was reassigned to serve as the Deputy Program Manager for the Expeditionary Fire Support System.

In July 2004, Brigadier General Shrader returned to III MEF where he served as 12th Marines Operations Officer and later that same year deployed to Sumatra, Indonesia, in support of Operation Unified Assistance. In May 2005, Brigadier General Shrader received orders to stand up 5th ANGLICO, III MEF. In early 2007, he deployed in support of Operation Iraqi Freedom. In October 2007, he relinquished command of 5th ANGLICO and was reassigned as the III MEF Force Fires Coordinator.

In August 2009, he was promoted to Colonel after graduating from the Industrial College of the Armed Forces at National Defense University in Washington, D.C. He was then designated primary military occupational specialty (8061) Acquisition Professional Officer and assigned to Marine Corps Systems Command. Over the next four years he served as Product Group Director for Combat Equipment and Support Systems, and Product Group Director and Program Manager for Armor and Fire Support Systems.

In May 2013, he transferred to the Office of the Deputy Assistant Secretary of the Navy for Expeditionary Programs and Logistics Management to serve as Chief of Staff. In July 2014, Brigadier General Shrader took the helm as Commander of Marine Corps Systems Command. In August 2014, he was frocked to Brigadier General.

William E. Taylor
Program Executive Officer
Land Systems Marine Corps

Mr. William E. Taylor currently serves as Program Executive Officer Land Systems Marine Corps (PEO LS), where he has been assigned since December 2008. He is the principal advisor to the Assistant Secretary of the Navy (Research Development & Acquisition) for the PEO portfolio of assigned major (ACAT I and II) Marine Corps Programs.

Mr. Taylor was appointed to the Senior Executive Service (SES) in December 2008.

Commissioned a second lieutenant in the United States Marine Corps in May 1979, he retired from active duty in September 2008 with the rank of Colonel after capping his 29-year career by establishing and serving as the first Program Executive Officer Land Systems.

While in uniform Mr. Taylor's extensive experience in acquisition management included assignments at every level within the Department of the Navy from program office IPT Leader to the staff of the Secretariat. His acquisition career is highlighted by distinguished service as NAVAIRSYSCOM's V-22 Joint Program Manager, leading the MV-22 Osprey Program from full-rate production to operational fielding. Prior to that, as H-46 Program Manager, he successfully forged a critical industry and government partnership, leading to the highly successful Engine Reliability Improvement Program. He also served in various capacities on the Assistant Secretary of the Navy for Research, Development & Acquisition staff, including a tour as the Marine Military Assistant.

A veteran Marine helicopter pilot with nearly 5000 flight hours, Mr. Taylor's operational experiences include combat operations in Beirut, Lebanon; missions in Cambodia in support of Joint Task Force Full Accounting; and presidential support as a Marine One Pilot assigned to Marine Helicopter Squadron One (HMX-1).

He holds a bachelor's degree from Rutgers University and a master's of science in defense systems acquisition management from the Naval Postgraduate School in Monterey, California.

Mr. Taylor's military decorations include the Defense Superior Service Medal in 2007, Legion of Merit with two gold stars in 2008, 2003 and 2002, Meritorious Service Medal in 1999, two Strike Flight Air Medals in 1983, Navy-Marine Corps Commendation Medal with gold star in 1987 and 1991 and Combat Action Ribbon in 1983.

Mr. Taylor is a member of the Senior Executive Association, the Marine Corps Association and the Marine Corps Aviation Association.

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

MARCH 19, 2015

RESPONSE TO QUESTIONS SUBMITTED BY MS. SANCHEZ

Generals WILLIAMSON, IERARDI, and LUNDY. The Aviation Restructure Initiative (ARI) will allow the Army to retain and modernize its most capable aircraft in all three components to meet future demands of the Combatant Commanders. Under current fiscal realities, the cost savings from ARI implementation enables accelerated modernization of the Army National Guard. Modernization of the H–60 Black Hawk fleet is a herculean effort to modernize 2,135 aircraft and consist of three programs: 1) UH–60A to UH–60L Recapitalization (RECAP), 2) New HH/UH–60M procurement, and 3) UH–60L to UH–60V RECAP. These efforts began in Fiscal Year 2007 (FY07) with the UH–60A to UH–60L RECAP at Corpus Christi Army Depot (CCAD), which is scheduled to transition to the UH–60L to UH–60V RECAP program in FY18. Also in FY07, the Sikorsky Aircraft Corporation began full rate production of the HH/UH–60M aircraft that is projected to produce 1,375 HH/UH–60M aircraft through approximately FY28. In FY18, CCAD will begin the UH–60L to UH–60V RECAP program to recapitalize and digitize 760 UH–60L aircraft through approximately FY34.

Accelerating additional UH–60A to UH–60L RECAP aircraft in FY16 is possible, but such efforts will increase the risk in successfully transitioning CCAD to the UH–60L to UH–60V RECAP program in FY18. Steady-state CCAD capacity is 36 aircraft a year; this rate level-loads all phases of production, maintains skilled labor, and retains lower-tier vendors. Maximum capacity is 48 aircraft a year. The current programmed production rate is approximately 40 aircraft a year. This rate level-loads all phases of production, maintains skilled labor force, retains subcomponent vendors, and supports a smooth production ramp for the UH–60L to UH–60V program. Production rates at the maximum capacity (48 aircraft) will create skilled labor and subcomponent vendor spikes preceding the transition to the UH–60L to UH–60V program. These spikes could result in loss of skilled labor and qualified subcomponent vendors due to excess capacity when CCAD transitions into initial low-rate UH–60L to UH–60V production. The labor and vendor losses could negatively impact the depot's ability to reach the planned full rate production of 48 aircraft a year beginning in FY20.

An additional eight UH–60M aircraft can be placed on the current Multi-Year Contract (#8 FY12–16). This will increase procurement of Army configured aircraft from 94 to 102 aircraft. The Army is currently in negotiations on the next Multi-Year Contract (#9 FY17–21) and the Army will submit the Multi-Year Contract proposal in the fall of 2015 for Congressional approval.

Upon completion of Army Aviation restructure and modernization, the Army National Guard will have an end state fleet of 960 UH–60 aircraft: 460 H–60M (includes both UH–60M assault and HH–60M Medical Evacuation (MEDEVAC) units) and 500 UH–60V (includes both UH–60V assault and UH–60V MEDEVAC units). [See page 15.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 19, 2015

QUESTIONS SUBMITTED BY MR. TURNER

Mr. TURNER. The Budget Committee's resolution has provided additional funding to the OCO request as a way to offset sequestration impacts. What are your thoughts on using the OCO request to offset sequestration? How would this help to mitigate the impacts on modernization programs?

Generals WILLIAMSON, IERARDI, and LUNDY. The Army supports the President's Budget request for Fiscal Year 2016 (FY16). The President's Budget provides the Army with the stability and the predictability to execute our programs efficiently and meet the requirements of the National Defense Strategy. Resourcing modernization through Overseas Contingency Operations (OCO) funding presents a significant number of challenges for us to utilize those dollars effectively and efficiently for investment in new technologies, incremental upgrades, and continued sustainment of proven capabilities. OCO does not enable our industry partners to plan efficiently or effectively because they cannot determine the Army's level of commitment in the budget. Long-term funding uncertainties are challenging the Army's ability to plan and execute programs and provide the right capabilities to our Soldiers.

The current Office of Management and Budget guidelines also limit modernization efforts to fund replacement of losses, replacement, or repair of equipment returning from theater, and purchase of specialized in-theater equipment. Programs that are currently operating within these narrowly defined windows have already requested the required OCO in FY16; these activities have not been submitted as part of the base budget request. For the Army to shift acquisition programs into OCO Research, Development and Acquisition (RDA), the authorities would need to expand to include additional activities.

Finally, funding Base RDA programs in FY16 with all or partial amounts of OCO RDA dollars will create limitations on funding authorities in the event of an FY17 Continuing Resolution. In addition, RDA programs marked in the Base budget and replaced with OCO incur additional inflexibility, as the Department will be unable to reprogram funds internally with Below Threshold Reprogramming actions.

Mr. TURNER. The FY16 budget request assumes the Army is allowed to transfer 96 National Guard Apache helicopters to the active component. Last year's NDAA allows the Army to transfer 48 helicopters with a waiver. What is the status of that waiver? Please speak to some of the operational and programmatic impacts you could face if the Army is only allowed to transfer 48 Apache helicopters in FY16?

Generals WILLIAMSON and LUNDY. In accordance with the FY15 NDAA, the Army is authorized to transfer up to 48 AH–64s Apaches from the Army National Guard (ARNG) to the Active Army between 1 October 2015 and 31 March 2016. This transfer was contingent on the Secretary of Defense certifying to Congress that the transfer of 48 AH–64s Apaches from the ARNG to the Army would not create unacceptable risk in that the ARNG is less able to serve as the combat reserve of the Army. The Secretary of Defense submitted the certification letter to Congress on 27 March 2015 for the transfer of 48 AH–64s.

The FY16 Aviation Restructure Initiative (ARI) transfer plan complies with FY15 NDAA. If the Army is limited to only 48 AH–64 Apaches transfers in FY16, the operational impact will include 10th Mountain Division at Fort Drum, New York, not receiving Apaches essential to build and train its Armed Reconnaissance Squadron (ARS) for operations in FY17. This would also result in an indefinite delay of the planned transfer of up to 1,500 Soldiers and family members to Fort Drum in support of the Army ARI. The Army would be forced to disrupt inductions into the AH–64E Apache remanufacturing line in Mesa, AZ or reduce readiness by removing additional Apaches from Active Army units. We would need to delay transfers of modernized UH–60L Blackhawks to the ARNG as backfills for transferred Apaches are curtailed, slowing National Guard Blackhawk modernization.

Prohibiting future transfers beyond the initial 48 AH–64s would: require the Army to spend $5.52B in additional procurement and $350M annually in operations and sustainment funding; disrupt or delay nearly all aviation modernization programs to include UH–60A Blackhawk upgrades in the National Guard; create up to a five-year readiness hole and insufficient ready forces to meet demands; and/or cause additional Active Army aviation reductions.

Mr. TURNER. I understand the Army is continuing to review the performance requirements for the Modular Handgun System and that has caused a delay in the schedule. What is the current status of the Modular Handgun System, and if the program continues to be delayed have you considered a product improvement program for the current M9 handgun?

General WILLIAMSON. The Army is planning on releasing the Modular Handgun System (MHS) full and open competition Request for Proposals later in Fiscal Year 2015. The Army has considered a dual path strategy similar to what was done during the Individual Carbine competition. A dual path strategy, which invests in upgrading the current system while searching for a replacement, requires significant investment in schedule and funding. The M9 Pistol is a 30 year old system. Handgun technology has advanced significantly and the cost of a new, more capable system is less than refurbishing the M9. Additionally, although the M9 Pistol meets the requirements for which it was developed, both the Army and the manufacturer agree that a modified M9 would still not meet the Army's Modular Handgun System requirements. In today's current fiscally constrained environment and considering that a modified M9 does not meet requirement, nor provide an opportunity for full and open competition, a dual path strategy for MHS is not supportable.

Mr. TURNER. Please provide some concrete examples of how major defense acquisition programs would be impacted in FY16? For example, what impact would this have on the schedules for the Army's Armored Multi-Purpose Vehicle program and the Joint Light Tactical Vehicle program? How would this impact Army Aviation modernization in FY16?

General WILLIAMSON. Assuming a 40 percent reduction applied across the board in modernization investments, AMPV RDTE funding would be reduced by $92.1M from $230.2M. For the most part, this reduction would impact the procurement of prototype hardware. Currently, approximately $105.5M is planned for prototype hardware procurement in FY16. In order to maintain design and development activities, the reduction would mean that procurement of most prototype hardware would be deferred to FY17. The Critical Design Review would likely remain in FY16, but the first prototype delivery would slip from 1QFY17 to 4QFY17. All subsequent milestones would slip by approximately nine months. This slip presupposes that funding in future years would not be similarly reduced.

Assuming a 40 percent reduction applied across the board in modernization investments, JLTV Other Procurement, Army funding would be reduced by $123.3M from $308.3M and R&D funding would be reduced by $13.0M from $32.5M. This reduction would delay low-rate initial production Live Fire and Operational testing by eight months and reduce the number of vehicles bought by 207-vehicles. The overall impact to the JLTV schedule would be delaying the program's Initial Operating Capability by a minimum of one year, which would result in an Acquisition Program Baseline breach.

The impacts listed above only reflect Army specific impacts. Simultaneous changes to the U.S. Marine Corps budget will have additional impacts to the program.

Assuming a 40 percent reduction applied across the board in modernization investments, the Aviation Restructuring Initiative would be severely disrupted. The Multiyear Contracts (MYCs) for CH–47 Chinook and UH–60 Black Hawk would be terminated and the planned MYC's for Black Hawk and AH–64 Apache in FY17 would be unexecutable. The AH–64 Apache program would breach Nunn-McCurdy thresholds. Major program milestones for the Common Infrared Countermeasure (CIRCM) system, UH–60V Black Hawk, and CH–47 Chinook Block II would slip at least a year or more. MQ–1C Gray Eagle, AH–64 Apache, UH–72 Lakota, and UH–60 Black Hawk fielding would be significantly delayed, adversely impacting support to current operations. The severe disruption of the aircraft industrial base would result in layoffs and the loss of many second and third tier suppliers.

Mr. TURNER. Regarding the Armored Multi-Purpose Vehicle program, I understand the report required by section 216 of the National Defense Authorization Act for Fiscal Year 2016 on the AMPV is now complete. General Williamson, please elaborate on the report's findings and conclusions. What was the report's conclusions regarding the feasibility of incorporating medical wheeled AMPV variants as part of the Armored Brigade Combat Team?

General WILLIAMSON. The Army conducted a comprehensive analysis of the M113 Family of Vehicles (FoV) outside of the Armored Brigade Combat Teams (ABCT). The FoV's within the ABCTs are assigned to operational units, known as Echelons Above Brigade (EAB), as well as medical vehicles.

The analysis determined that a portion of the EAB M113s have comparable requirements to M113 mission roles in the ABCT and other EAB M113s have vehicle requirements more comparable to ABCT combat vehicles (the M2 Bradley Fighting

Vehicle). Furthermore, wheeled medical vehicles are unsuitable for ABCTs due to the inability to maneuver with highly mobile combat vehicles.

Additionally, we conducted a thorough examination of the Army's M113 fleet in EABs and the ABCT medical variant M113 FoV. This analysis revealed size, weight, power, and cooling (SWaP–C) deficiencies were the primary capability gaps for mission command vehicles, while insufficient mobility and force protection/survivability are capability gaps in tactical level units (e.g., Sapper Company, Mobile Assault Company Assault Platoon).

Because the EAB M113 mission roles have a strong commonality with ABCT mission roles, they share common vehicle requirements with regard to mobility, force protection/survivability, SWaP–C, and reliability, availability, and maintainability. There are no existing medical vehicles that are suitable candidates as a medical evacuation or medical treatment vehicle within the ABCT formation based on performance results compared against the threshold AMPV capability development document requirements.

Mr. TURNER. I understand FY16 is the final year for procurement of the Excalibur precision guided artillery round, and that technically the Army will be short of its war stock requirement for Excalibur rounds. What is your plan to buy the additional Excalibur projectiles the Army requires?

General WILLIAMSON. At the end of FY16 the Army will have procured the 6,264 rounds that were required to be placed in inventory. However, the Army will end up being 566 rounds short of the 6,264 war reserve requirement due to rounds being fired in combat and some rounds proving unserviceable.

The Army Acquisition Executive signed an acquisition decision memorandum on 23 December 2014 authorizing the program to procure the war reserve shortfall if funding becomes available.

Mr. TURNER. Please discuss your current modernization programs for Army National Guard aviation, specifically, can you provide additional details for converting UH–60A Black Hawks to the UH–60L configuration?

General WILLIAMSON. A key component of the Army's UH–60 modernization is the UH–60A to UH–60L recapitalization program, which provides another 4,000 hours or approximately 10 years of economic useful life to the aircraft. Initiated in Fiscal Year 2007 (FY07), the program recapitalizes an existing UH–60A, while concurrently upgrading the aircraft to the UH–60L configuration. In FY13, the Army extended the UH–60A to UH–60L recapitalization program from its original end date in FY15 to late-FY18 at approximately 40 aircraft a year. Primarily, this extension is focused on modernizing and increasing readiness in the Army National Guard. By FY16, the UH–60A to UH–60L recapitalization is projected to modernize 273 total aircraft, with 223 or 82 percent of those in the Army National Guard.

Upon completion of Army Aviation restructure and modernization, the Army National Guard will have an end state fleet of 960 UH–60 aircraft: 460 H–60M (includes both UH–60M assault and HH–60M MEDEVAC units) and 500 UH–60V (includes both UH–60V assault and UH–60V Medical Evacuation units).

The Aviation Restructure Initiative (ARI) has allowed the Army to retain and modernize its most capable aircraft in all three components to meet future demands of the Combatant Commanders. Under current fiscal realities, the cost savings from ARI implementation enables accelerated modernization of the Army National Guard UH–60 fleet.

Mr. TURNER. The Budget Committee's resolution has provided additional funding to the OCO request as a way to offset sequestration impacts. What are your thoughts on using the OCO request to offset sequestration? How would this help to mitigate the impacts on modernization programs?

Admiral GROSKLAGS. Sequestration level funding would further exacerbate capability gaps; delay or forego the development and delivery of critical warfighting capabilities; further reduce strike weapons capability and capacity; and further reduce overall force readiness. Shifting base budget resources into Overseas Contingency Operations (OCO) risks undermining a mechanism meant to fund incremental costs of overseas conflicts and fails to provide a stable base budget upon which future years defense planning is based. It would be preferred to fund our programs in accordance with the PB16 submission. That would provide the stability and predictability that our programs require to execute efficiently and effectively. It also would provide our industry partners, who are key to our modernization efforts, with more certainty and less risk as they plan their execution and investment strategies.

Mr. TURNER. What is the current status of the CH–53K heavy lift helicopter development program? Is the program still on cost and schedule?

Admiral GROSKLAGS. The CH–53K is in the Engineering, Manufacturing and Development (EMD) phase. More specifically, the program is executing ground test of the complete aircraft configuration, and is planning first flight in late CY15. The

Ground Test Vehicle (GTV) has accumulated 186.5 hours. First flight aircraft (Engineering Development Model (EDM) 1) has successfully executed ground turns and continues preparations for first flight.

Root cause of the failed main gearbox quill rods discovered in December 2014 has been determined, and redesigned quill rods are currently being tested in the main gearbox. While this failure and subsequent investigation resulted in a temporary cessation of ground testing, the program has resumed ground testing and is on track for first flight this year and entry into Low Rate Initial Production (LRIP) in FY17, as is currently scheduled. The CH–53K program remains executable to the PB–16 budget request.

Mr. TURNER. Please provide an update on your current plans for the HMMWV Sustainment Modification Initiative.

General SHRADER. The High Mobility Multipurpose Wheeled Vehicle (HMMWV) Sustainment Modification Initiative (SMI) has been cancelled. Procuring the Joint Light Tactical Vehicle (JLTV) and using the first buy of about 5500 vehicles to replace the most at risk portion of our light vehicle fleet will allow us to provide our Marines that are most likely to come into contact with the enemy with the most up to date equipment. In these times of budge constraint, we must focus on modernization of our tactical vehicle fleet. The savings associated with cancelling the HMMWV SMI program will allow us to focus on the Amphibious Combat Vehicle (ACV) and JLTV. We hope to eventually replace the entire HMMWV inventory with JLTV.

Mr. TURNER. The Budget Committee's resolution has provided additional funding to the OCO request as a way to offset sequestration impacts. What are your thoughts on using the OCO request to offset sequestration? How would this help to mitigate the impacts on modernization programs?

General SHRADER and Mr. TAYLOR. Continual base-to-OCO transfers mask our true baseline costs, hindering long-term planning and risking capability and capacity to respond to crises around the world. OCO is temporary by definition, and the Marine Corps is charged by the 82nd Congress to be the Nation's permanent Force in Readiness.

Effective budgeting for baseline programs requires a stable stream of funding over the long term, but OCO, by its nature, can only be budgeted and requested in single-year increments. The current forced reliance on OCO removes the predictability necessary for effective budgeting and delays difficult but critical decisions regarding what requirements are both enduring and affordable. Ten years of OCO, plus the steady erosion of the baseline through years of efficiency cuts and multiple base-to-OCO transfers, have forced the Marine Corps to rely increasingly on OCO to fund our enduring needs.

Mr. TURNER. I understand the ACV 1.1 program plans to award two development contracts in fiscal year 2016 to two contractors to build 16 test vehicles each (32 total). Please discuss the rationale for procuring 32 test vehicles.

Mr. TAYLOR. The ACV 1.1 acquisition strategy is designed to maintain competition up to the Milestone C, Low Rate Initial Production decision currently planned for 2Q FY18. In close coordination with the test community, the program manager determined 16 vehicles per contractor is the appropriate number based on several factors including scope, locations and required duration to complete testing. This test strategy includes developmental, live fire, and reliability testing. Many of these tests will be conducted in parallel at various test locations ranging from Aberdeen to Yuma Test Center, as well as Camp Pendleton and Fort Greely, Alaska. Consideration was given to procuring more than 16 vehicles; however, the additional cost outweighed the projected benefits. The strategy includes conducting an operational assessment to ensure that the Marine Corps remains on schedule to deliver a much need capability to the operational forces by 2020. The breakdown of events for the 16 test vehicles per manufacturer is as follows:

- Verification of System Requirements. The verification of compliance with ACV system specifications will require the use of 11 vehicles in concurrent developmental testing at 6 different locations (e.g., land mobility testing at Aberdeen and Yuma Test Centers, water mobility testing at Camp Pendleton, and Survivability testing at White Sands Missile Range) in the Engineering and Manufacturing Development (EMD) period. Additionally, these vehicles will also be used in Reliability Growth Testing and to verify compliance with EMD exit criteria for reliability in preparation for LRIP.
- Live Fire Testing. Planned live-fire tests at the component and system level during EMD will require 2 test vehicles to ensure readiness for subsequent Full Up System Level testing on LRIP vehicles.
- Training. Marine training will require the use of 3 of the test vehicles in EMD. This training will be used to develop New Equipment Training (NET) proce-

dures, train Operating Force Marines prior to operational testing, and develop Tactics, Techniques, and Procedures prior to the required EMD Operational Assessment (OA). Developed NET procedures will also support subsequent vehicle fielding of ACV 1.1.

Mr. TURNER. If we return to funding levels required by the Budget Control Act, could the Marine Corps realistically afford to procure the JLTV and the ACV, Increment 1.1? What trade-offs would you have to make in modernization if we return to BCA funding levels?

Mr. TAYLOR. No we will not be able to procure both the Joint Light Tactical Vehicle (JLTV) and Amphibious Combat Vehicle (ACV) 1.1 if we are forced to Budget Control Act numbers. In fact, the ACV program will have to be delayed indefinitely, recapitalization of legacy programs will fall further behind, and sustainment costs of legacy equipment will rise. Even incremental year-to-year tradeoffs will not permit the required modernization.

Additionally, JTLV procurement will be delayed and Marines will continue to rely upon the HMMWV for light tactical mobility. This will mean using a vehicle with 170 Mean Miles Between Operation Mission Failure (MMBOMF) that is also less protected and less capable than the JLTV, which has an MMBOMF requirement of 2,400 miles.

QUESTIONS SUBMITTED BY MR. WILSON

Mr. WILSON. How important is the AMPV program to the Army and the Department of Defense?

What has been put under contract thus far, and what is the current AMPV acquisition timeline?

Army leadership has described the AMPV as the Army's highest combat vehicle priority. What is the capability gap that drives this decision?

Several of the defense-related Committees have directed the Army and OSD to provide further information on AMPV program; have any of these Reports been delivered to the Congress?

One of the tenants of the AMPV program has been that no currently fielded vehicle has the survivability, mobility and other capabilities which the Army requires in the AMPV. Is this still the case?

General WILLIAMSON. The AMPV program is a high priority developmental effort with in the Army combat vehicle portfolio. The AMPV Engineering and Manufacturing Development contract with Low Rate Initial Production options was awarded on 23 December 2014. The LRIP options of up to 289 vehicles will begin delivering production vehicles following a Milestone C decision currently planned for Fiscal Year 2019 (FY19). A separate Full Rate Production contract will be awarded in FY21 with the first unit equipped in FY21 and full operational capability in FY23. In addition, the M113's mission is to provide mission command, fire support, medical, and general support throughout the Armor Brigade Combat Team's (ABCT's) battlespace. The M113 became operationally irrelevant as they lack the protection, survivability, and power growth necessary to fight within the ABCTs. The AMPV will fill the capability gap left by the now irrelevant M113.

The HASC directed the Army to report on its plan to eventually replace all M113s within Echelons Above Brigade (EAB) formations and assess the feasibility of incorporating wheeled medical variants within the ABCT. The Army submitted the report to Congress on 27 February 2015. The HAC–D directed the Office of the Secretary of Defense Cost Assessment and Program Evaluation (CAPE) to report on existing wheeled and tracked combat vehicles used for medical purposes and compare the results to the Army's current plan to develop the AMPV to include an independent Army Surgeon General assessment on the CAPE criteria. The report was submitted on 6 April 2015. The SAC–D directed the Army to conduct an Analysis of Alternatives (AoA) for the AMPV EAB requirement in FY15. The AoA will be complete on the third quarter FY16. Based on the AMPV AoA and congressionally directed studies, the Army has confirmed that there are no currently fielded vehicles that meet the survivability, mobility, and other capabilities required for the AMPV.

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