



September 2015

DEFENSE INFRASTRUCTURE

In-Kind Construction and Renovation Projects Initiated by DOD during Fiscal Year 2013

Accessible Version

GAO Highlights

Highlights of [GAO-15-649](#), a report to congressional committees

Why GAO Did This Study

DOD uses in-kind payments domestically and overseas in its real-estate transactions as an alternative to appropriated funds to help manage a global real-property portfolio that includes more than 555,000 facilities worldwide. In-kind payments refer to DOD receiving construction and renovation services rather than cash as payment for DOD providing goods, services, real property, or an interest in real property.

The National Defense Authorization Act for Fiscal Year 2013 includes a provision for GAO to review the use of in-kind projects. This report identifies (1) the in-kind payment projects that DOD reported it initiated during fiscal year 2013, and discusses the potential advantages and disadvantages of accepting in-kind payments instead of cash for domestic real-estate transactions; and (2) the extent to which the military services have developed and implemented guidance and procedures to value domestic in-kind payments to ensure the receipt of fair-market value. The Act also provided for a listing of facilities constructed or renovated with the use of in-kind payments, and additional information, which GAO provides in appendixes to this report. To conduct this work, GAO collected in-kind project data from the military services, reviewed DOD and military service policy and project documentation, and interviewed military officials.

GAO is not making recommendations in this report. DOD provided technical comments on the findings, which GAO has incorporated where appropriate.

View [GAO-15-649](#). For more information, contact Brian J. Lepore at (202) 512-4523 or leporeb@gao.gov.

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What GAO Found

The Department of Defense (DOD) reported to GAO that 137 in-kind projects involving construction or renovation, valued at about \$1.8 billion, were initiated in Korea, Japan, Germany and the United States during fiscal year 2013. In-kind payments involve non-cash options, such as renovating or constructing a facility. The table below summarizes the number and value (estimated costs to be incurred) of the projects by country and highlights the most frequently reported purpose for which the projects were used.

Number, Value, and Purpose of In-Kind Construction and Renovation Projects Initiated by DOD during Fiscal Year 2013

Location	Number of projects	Reported estimated value (then-year U.S. dollars)	Most frequently reported purpose for the project [Note A]
Korea	31	\$1,574,237,730 [Note A]	Operations and training (14 projects)
Japan	74	\$264,050,000 [Note A]	Utility and ground improvements (23 projects)
Germany	3	\$20,722,423	Housing and community (2 projects)
United States	29	\$18,628,469	Utility and ground improvements (10 projects)
DOD total	137	\$1,877,638,622 [Note A]	Operations and training (33 projects) and utility and ground improvements (33 projects)

Source: GAO summary of Department of Defense (DOD) data. | GAO-15-649

Note A: Subtotals for Korea and Japan and totals for DOD are of undetermined reliability because supporting documentation was not readily available in English, or, according to DOD officials, the costs incurred by the Governments of Korea and Japan were not required to be disclosed to the United States.

The military services' real-estate and real-property management officials discussed four potential advantages to accepting in-kind payments rather than cash payments in domestic real-estate transactions, and identified one potential disadvantage. The reported advantages included generally obtaining facilities more quickly than through the appropriations process and installations receiving 100 percent of the value of negotiated payments received from a real-property interest as opposed to cash payments where only 50 percent of the value is guaranteed to be provided back to the installation. However, some services have implemented policy changes such as returning 100 percent of the value of the real-property interest back to the installation—up to \$1 million when accepting cash payments. One reported disadvantage was in-kind payments may require additional administrative work and oversight compared to cash payments.

GAO's review of service policies governing real-estate transactions identified that all services have issued guidance requiring that the cumulative value of in-kind projects reflect the fair-market value of the real-property interest in real-estate transactions. Each of the Services reported similar broad procedures for valuing in-kind payment projects and GAO's review of the documentation for the projects initiated in fiscal year 2013 confirmed that the installations were following the described procedures.

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Abbreviations

DOD Department of Defense

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September 9, 2015

Congressional Committees

The Department of Defense (DOD) accepts in-kind payments domestically and overseas in its real-estate transactions as an alternative to appropriated funds to help manage a global real-property portfolio that includes more than 555,000 facilities worldwide with a replacement value DOD estimates at nearly \$850 billion. In-kind construction and renovation projects, which DOD has allowed for more than 20 years, for purposes of this report, are defined as projects resulting from certain host-nation support programs or from transactions in which DOD provides goods, services, real property, or an interest in real property (including, but not limited to, a leasehold or easement) in exchange for compensation, and in which any part of that compensation is provided in the form of construction or renovation services. This definition of “in-kind construction and renovation projects” is broader than the concept of “in-kind payments” for residual value¹ or projects received in lieu of cash compensation as part of a domestic agreement with a third party because the definition includes host-nation support for installation facilities overseas. Voluntary contributions made by a host nation for the purpose of defraying costs to station, maintain, and train U.S. military forces in its country do not constitute a payment or, in the absence of binding international agreements, obligate a host nation to make payments to the United States. Host-nation support provided in the form of direct

¹Residual value” is the negotiated monetary or nonmonetary compensation host nations provide to DOD following the return of DOD-funded facilities or other capital improvements to a host nation.

construction rather than a cash contribution is viewed by DOD as one of three basic types of in-kind construction.²

At domestic locations, in-kind payment projects help installations to complete renovation and construction projects that, according to agency officials, usually do not compete well in the internal budget process and consequently are not likely to be included in DOD's budget request. At overseas locations, host nations may provide a facility or construction or renovation services to help offset the U.S. costs of stationing military forces overseas. For any overseas in-kind construction or renovation projects, the selection is subject to relevant international agreements, statutory authorities, and DOD policy. Certain international agreements include efforts to relocate U.S. forces and consolidate infrastructure being used by DOD. The Secretaries of the Army, Navy, and Air Force have statutory authority under sections 2667 and 2668 of Title 10 of the United States Code to lease or issue an easement on real property under their control or jurisdiction within the United States in exchange for in-kind construction or renovation projects, subject to certain restrictions. In-kind payment projects received for both leases and easements may include alteration, repair or improvements to existing facilities or construction of new facilities.

In previous reviews, GAO and the DOD Inspector General reported internal control weaknesses related to in-kind payment projects accepted by DOD³. In our 2011 review, we found that DOD's enhanced-use

²DOD officials describe three basic types of in-kind construction: (1) host-nation support provided in the form of direct construction rather than a cash contribution (e.g., in Japan and the Republic of Korea), (2) construction provided by a host nation as compensation for the residual value of U.S.-funded improvements returned to that host nation (e.g., payment in-kind in Germany), and (3) fair market value consideration for U.S. property leased to a person/entity provided in the form of direct construction rather than cash (such as consideration authorized by 10 U.S.C. § 2667) (e.g., domestic in-kind). Given these three types of in-kind construction, DOD officials stated their view that only the last two fit their definition of in-kind payments. According to these officials a payment is something one party provides to another party in response to receiving something. Therefore in DOD's view, any international agreements in which a host nation agrees to voluntarily offset U.S. stationing costs should not be misconstrued as a "payment" because there is no quid pro quo exchange of like goods or services.

³GAO, *Defense Infrastructure: The Enhanced Use Lease Program Requires Management Attention*, [GAO-11-574](#) (Washington, D.C.: June 30, 2011), and DOD, Office of Inspector General, *DOD Can Improve its Accounting for Residual Value from the Sale of U.S. Facilities in Europe*, DODIG-2012-082 (Alexandria, Va.: May 4, 2012).

lease⁴ program, which utilizes in-kind payment projects, did not have procedures to regularly monitor and analyze program administration costs and two of the services did not have clear guidance describing how the fair-market value of the lease interest should be determined. We recommended that the services develop procedures to regularly monitor and analyze program costs to help ensure program costs are in line with program benefits. Likewise, we recommended that the Army and the Air Force review and clarify guidance describing how the fair-market value of the real property interest should be determined and how the receipt of fair-market value can best be ensured. DOD concurred with our recommendations and the services have developed new procedures and issued new guidance to address them.

Section 2805 of the Fiscal Year 2013 National Defense Authorization Act included a provision for us to report on construction or renovation of DOD's facilities using in-kind payment projects that were begun during the preceding two years, with annual updates to follow. In April 2014, we issued the first report that described in-kind payment projects initiated in fiscal years 2011 and 2012. This report identifies (1) the in-kind payment projects that DOD reported it initiated during fiscal year 2013, and discusses the potential advantages and disadvantages of accepting in-kind payment projects instead of cash for domestic real-estate transactions and (2) the extent to which the military services have developed and implemented guidance and procedures to value domestic in-kind payment projects to ensure the receipt of fair-market value. The act also provided that we report a listing of facilities constructed or renovated with the use of in-kind payment projects, the value in U.S. dollars of the construction or renovation project, the source of the in-kind payment project, the agreement pursuant to which the in-kind payment project was initiated, and a description of the purpose and need for the construction or renovation project. The listing of facilities appears in appendixes to this report.

⁴There is no standard definition of "enhanced-use lease," but the services generally distinguish an enhanced-use lease from a typical lease on the basis of scope, process, term, and payment. For example, an enhanced-use lease generally involves larger amounts of property, generally undergoes a more detailed evaluation and review before approval and greater oversight after approval, and often is executed for longer periods of time (such as 25 to 50 years).

To identify the in-kind payment projects that DOD reported it initiated during fiscal year 2013, we compiled information that DOD provided on in-kind construction and renovation projects for fiscal year 2013, their value in U.S. dollars, the source of the in-kind payment project, the agreement or statutory authority, and their purpose and need from the departments of the Army, Navy (which includes the Marine Corps), and Air Force and their components. We corroborated the project data that each DOD component submitted by requesting that the component provide the supporting documentation where the data were obtained; however, supporting documentation for some projects was not readily available. For these projects, we asked DOD to describe, to the extent possible, the source or calculation method for the estimated value of the in-kind payment project, initiation date and the real-property system classification code. By taking these steps, we determined that the reported data for the payment projects located in the United States and Germany were generally sufficiently reliable for the purposes of this report. However, limited supporting documentation was readily available in English for various in-kind payment projects in Japan and Korea and, according to DOD officials, the specific costs incurred by the Governments of Korea and Japan for many projects was not required to be disclosed to the United States. As a result, we were unable to determine the reliability of much of the reported project data for Korea and Japan. The report notes those instances where we were unable to determine the reliability of the reported data for payment projects located in these two countries. To describe the potential advantages and disadvantages of accepting in-kind payment projects instead of cash in exchange for interests in domestic real-property transactions, we interviewed officials from the services' real-property management offices to discuss the factors they consider in determining whether to accept cash or in-kind payment projects, the rationale for preferring one type of payment (cash or in-kind) over another, and the advantages and disadvantages in terms of administration and costs of one type over another.

To identify the extent to which the military services have developed and implemented guidance and procedures to value domestic in-kind payment projects to ensure the receipt of fair-market value, we compared the military services' guidance governing real-estate transactions to DOD's guidance for establishing receipt of fair-market value of its real-estate interest to ensure the service's guidance captured this requirement. We then reviewed the military services' established policies where available and the procedures on determining the value of in-kind payment projects to determine if their procedures would ensure receipt of fair-market value.

Furthermore, we obtained and analyzed the in-kind payment project agreements and supporting documentation, such as the lease exhibits, site and task work orders, and the real-estate appraisal for the 29 domestic in-kind payment projects initiated during fiscal year 2013, to identify how the services determined the actual value of these specific in-kind payment projects to ensure fair-market value would be achieved. Further details on our scope and methodology can be found in appendix I.

We conducted this performance audit from August 2014 to September 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The departments of the Army, Navy, and Air Force have a variety of statutory authorities that allow them to accept payments in the form of in-kind renovation or construction of facilities. For example, in fiscal year 2013, DOD used authority provided by sections 2667 and 2668 of Title 10 of the United States Code to lease or issue easements relating to domestic real property under their control or jurisdiction in exchange for payment in the form of in-kind construction or renovation projects. A description of these authorities is provided in table 1.

Table 1: Statutory Authorities Used in Fiscal Year 2013 for Domestic Construction and Renovation In-Kind Payment Projects

Statute	Description of statutory authority
10 U.S.C. § 2667	Provides authority to Secretaries of the military departments to lease available, non-excess land or facilities under the control of the respective departments that is not currently needed for public use.
10 U.S.C. § 2668	Provides authority to Secretaries of the military departments for issuing easements for rights-of-way over, in, and upon public lands permanently withdrawn or reserved for the use of that department that will not be against the public interest.

Source: GAO summary of U.S. Code. | GAO-15-649

For leases, the services are required under section 2667 of Title 10 to receive payments in an amount that is not less than the fair-market value of the property interest, as determined by the military department Secretary. Concerning cash payments received in exchange for leases and easements, section 2667 provides that, generally, money rentals must be deposited into a special account in the U.S. Treasury and must

be appropriated before they can be used. Once appropriated, section 2667 provides that at least 50 percent of the funds shall be available for use only at the installation where the leased property is located.

Overseas in-kind payment projects are subject to specific bilateral agreements and statutory authorities. Bilateral agreements include efforts to relocate U.S. forces and consolidate infrastructure being used by DOD. There are also other agreements between the United States and host nations to defray some of the costs of stationing U.S. forces overseas, and to support installations that will continue to be used by the United States—known as enduring installations—through the use of host-nation resources.

According to DOD real-property management officials, installation personnel are generally responsible for selecting domestic in-kind payment projects based on the needs of the installation and its chain of command. Each installation has a list of unfunded construction and renovation projects that were not included in the military services' budget submissions to the Office of the Secretary of Defense. The military services generally allow each installation to decide which projects from these lists should be considered for in-kind payment projects. The responsibility for managing in-kind payment projects is generally shared between installation personnel and the services' respective real-property management offices or agencies. Within the Navy, the Secretary of the Navy has delegated certain real-property management responsibilities to Naval Facilities Engineering Command. Specifically, Naval Facilities Engineering Command, subject to certain requirements, is authorized to grant, execute, amend, administer, and terminate all instruments granting the use of Navy-controlled real property, to include real-estate transactions using in-kind payment projects. Within the Air Force, the Secretary of the Air Force has delegated certain real-property management responsibilities to the Air Force Civil Engineer Center. The Air Force Civil Engineer Center is responsible for acquiring, disposing of, and managing all Air Force-controlled real property. Within the Army, the Chief of Engineers is the principal advisor to the Secretary of the Army for policy formulation related to real property. According to Army officials, the Secretary of the Army generally has delegated responsibilities to the Army Corps of Engineers for execution of a variety of real-estate transactions, including transactions that include in-kind payments.

DOD Reported Initiating 137 In-Kind Payment Projects in Fiscal Year 2013, and Cited Advantages and a Disadvantage from Receiving In-Kind Payment Projects versus Cash Payments

DOD Reported that the Military Services Initiated 137 In-Kind Construction and Renovation Payment Projects in Fiscal Year 2013 with an Estimated Value of at Least \$1.8 Billion

DOD reported that the military services initiated 137 in-kind payment projects in Asia, Germany and the United States during fiscal year 2013 with an estimated value of at least \$1.8 billion. In Asia, DOD reported initiating 105 in-kind construction and renovation projects with a total value that DOD estimated to be at least \$1.6 billion. Of the 105 projects in Asia, 31 are in Korea with an estimated value of \$1.57 billion and 74 are in Japan—32 of which have an estimated value of \$264 million.⁵ In Germany, DOD reported initiating 3 in-kind payment projects with a total value that DOD estimated to be almost \$20.7 million. For domestic locations, DOD reported initiating 29 in-kind construction and renovation projects with a total value that DOD estimated to be \$18.6 million. Of the 29 domestic projects, the Navy initiated 22 and the Air Force initiated 7. The Army and Marine Corps did not initiate any domestic in-kind payment projects in fiscal year 2013. Table 2 summarizes the number and value of in-kind payment projects by location and also highlights the most frequently reported purpose for which the projects were used.

⁵DOD did not provide value estimates for 42 of 74 projects in Japan because the specific costs incurred by the Government of Japan are not required to be disclosed, according to the provisions of bilateral agreements between the United States and the Government of Japan.

Table 2: Number, Value, and Purpose of In-Kind Construction and Renovation Projects Initiated by DOD during Fiscal Year 2013

Location	Number of projects	Total reported estimated value (U.S. dollars) [Note A]	Most frequently reported purpose for the project
Korea	31	\$1,574,237,730 [Note B]	Operations and training (14 projects) [Note B]
Japan	74	264,050,000 [Note B]	Utility and ground improvements (23 projects) [Note B]
Germany	3	20,722,423	Housing and community (2 projects)
United States	29	18,628,469	Utility and ground improvements (10 projects)
DOD total	137	\$1,877,638,62 [Note B]	Operations and training (33 projects) and utility and ground improvements (33 projects) [Note B]

Source: GAO summary of Department of Defense (DOD) data. | GAO-15-649

Note A: Value estimates for projects in Japan and Korea, when available, are expressed by DOD officials in then-year U.S. dollars.

Note B : Subtotals for Korea and Japan and totals for DOD are of undetermined reliability because supporting documentation was not readily available in English for some projects and the costs incurred for other projects by the Governments of Korea and Japan, according to DOD officials, were not required to be disclosed to the United States.

Appendixes II through V provide more detailed information for each in-kind payment project initiated by DOD in fiscal year 2013.

Military Services' Real-Property Management Officials Reported Advantages and One Disadvantage in Accepting In-Kind Payment Projects in Exchange for Interests in Domestic Real-Property Transactions

The military services' real-property management officials reported as many as four advantages to accepting in-kind payment projects rather than cash payments in domestic real-estate transactions, and officials from the three services reported one disadvantage.⁶

Reported Advantages

Installations can generally obtain facilities more quickly. According to officials of the Army Corps of Engineers, Air Force Civil Engineer Center, and Naval Facilities Engineering Command, in-kind payment projects can be advantageous because the value received does not need to be re-appropriated and can be immediately available to the installation. While congressional notification is required if the estimated annual fair-market value of a lease or easement exceeds \$750,000, the law does not require appropriation of the funding for in-kind payment projects, so the benefits may be realized sooner. For example, in 2008 at Nellis Air Force Base, Nevada, the Air Force entered into an agreement with the city of North Las Vegas to allow construction of a wastewater treatment plant on 41 acres of land leased from Nellis. As part of its payment to the base, the city agreed to fund the construction of a new \$27 million fitness center. According to Air Force Civil Engineer Center officials, the base had a longstanding requirement for an updated fitness center but was unable to secure funding for it. Once the agreement was signed, the city immediately began construction and the base was able to open the new fitness center in 2012. By contrast, if an installation receives cash payments, section 2667 requires the immediate deposit of all cash into a special account in the U.S. Treasury where it is subject to the appropriation process before the installation can use it. Officials stated that it can take up to a year between the deposit of the cash payments and the funds being provided to the installation.

⁶Although we collected data on all overseas and domestic in-kind payment projects initiated in fiscal year 2013, because of the unique character of construction programs funded by host nations, we limited our discussion of advantages and disadvantages to domestic projects.

The originating installation is more likely to receive 100 percent of the negotiated payments for the real property interest. According to Army Corps of Engineers, Air Force Civil Engineer Center and Naval Facilities Engineering Command officials, although the receipt of in-kind payment projects is at the discretion of the respective military department Secretary, the military department secretaries generally allow the installations where the real-property is located to receive 100 percent of any negotiated in-kind payments resulting from real property agreements. Conversely, section 2667 states that, subject to appropriations, installations are guaranteed to receive only 50 percent of any deposited cash payments, and can receive the other 50 percent only at the discretion of the respective military department secretary. In-kind payments are not governed by similar restrictions, and, as such, are more likely to result into the installation receiving 100 percent of the value generated by its real estate transactions.

Installations may have the opportunity to potentially receive infrastructure improvements worth more than the fair-market value of the property interest. Air Force Civil Engineer Center and Naval Facilities Engineering Command officials stated that the nature of a potential developer's business or expertise and economies of scale may allow the developer to provide in-kind payment projects worth more than the fair-market value of the property interest by obtaining construction materials or labor at a below-market cost. For example, in 2004 the Navy entered into an agreement with a real-estate development firm to redevelop the Moanalua Shopping Center at the Pearl Harbor Naval Complex, Pearl Harbor, Hawaii. As part of the agreement, the Navy conveyed the existing shopping center to the developer as well as development rights for up to another 15,000 square feet of new commercial market space. As payment to the Navy, the developer was required to demolish over 40,000 square feet of existing space and to develop 40,000 square feet of new administrative space to be used as a Navy community support services center. A 2004 Navy analysis valued these demolition and construction projects at about \$21 million—which was about \$8 million more than the appraised market value of the property conveyed by the Navy.

Installation officials generally have more flexibility in real-estate transactions. According to officials of the Air Force Civil Engineer Center, in-kind payment projects offer installation officials greater flexibility in executing real-estate transactions, especially in cases where a developer does not have cash readily available at the time the real-estate transaction is executed. Also, allowing in-kind payment projects can

increase the potential pool of developers, the officials stated. For example, in-kind payment projects may be the only way to secure adequate value from non-profit or charitable organizations that may not have adequate cash resources but have the ability to provide goods and services.

Reported Disadvantage

These same military service officials reported that one common disadvantage to accepting in-kind payment projects rather than cash payments is the amount of additional administrative work and oversight needed to execute the in-kind agreements. Army Corps of Engineers, Air Force Civil Engineer Center, and Naval Facilities Engineering Command officials identified three scenarios in which in-kind payment projects likely will require additional work and oversight.

- *Additional work and oversight to ensure that the transaction complies with statutory requirements.* Several statutes govern the receipt of in-kind payment projects, so installation personnel conduct reviews to ensure that the transactions follow appropriate financial and administrative procedures as required by law.
- *Additional work and oversight to ensure that the developer is complying with the terms of the transaction.* For example, installation personnel work to properly monitor construction and renovation progress to ensure that the developer is adequately providing any agreed-upon services over the terms of the agreement.
- *Additional work and oversight to ensure that in-kind payment projects are properly valued over time.* Some transactions involving in-kind payment projects, such as enhanced-use leases, can last as long as 50 years and the in-kind payment projects may continue over these 50 years. As a result, installation personnel will be responsible for the extra work to value in-kind payment projects during the 50-year lease. By contrast, cash value is known and requires no extra work to value.

To address the disadvantage of accepting in-kind versus cash payments, some of the military services have implemented policy changes for accepting cash. For example, the Army has issued guidance stating that cash payments are preferred over in-kind payment projects.⁷ According to the Army memorandum, leases typically involve only cash payments

⁷Army Memorandum: *Leasing Real Property on Army Installations* (October 2012).

because procedures to properly value and assure receipt of in-kind payment projects over a lease's terms can be administratively burdensome. This memorandum was issued partly in response to our 2011 work that found problems with the adequacy of those procedures.⁸ Army officials stated that in-kind payment projects may still be accepted, however, if installation officials determine that accepting them is in the best interest of the installation and they document the basis for that determination. Approaching the disadvantage from a different angle, the Air Force issued guidance that requires the return of 100 percent of the net proceeds from cash payments—up to \$1 million—to the originating installation.⁹ This policy negates the advantage in-kind payment projects have in assuring that the originating installation receives 100 percent of the negotiated value of the in-kind payment projects for the real-property interest since the originating installation receives the full amount of the cash payment up to \$1 million. According to Air Force officials, the policy was implemented to not only eliminate some of the administrative burden of accepting in-kind payment projects but also to reward installations for finding ways to reduce infrastructure costs by identifying alternative funding sources to military construction appropriations.

⁸In our previous work ([GAO-11-574](#)) and an accompanying Appropriations Law Decision (B-321387, Mar. 30, 2011), we found and reported at least one instance where a DOD enhanced-use lease did not comply with several statutory provisions, including section 2667 of Title 10 of the United States Code and the Anti-Deficiency Act. Specifically, GAO identified, among other concerns, an escrow account under the Army's control into which the developer deposited cash as "in-kind payment projects" at Picatinny Arsenal, New Jersey. In addition, in that previous report, we found several instances of other leases that included terms and conditions similar to those that were found in the out-of-compliance lease.

⁹*Air Force Policy Memorandum Establishing Distribution of Lease Consideration* (May 2012).

Military Services Have Issued Guidance Regarding the Receipt of Fair-Market Value and Follow Similar Procedures for Valuing Domestic In-Kind Payment Projects to Ensure Receipt of Fair-Market Value

Our review of various service policies governing real-estate transactions identified that all three services have issued guidance requiring that the cumulative value of in-kind payment projects reflect the fair-market value of the real-property interest in real-estate transactions and follow similar procedures to value domestic in-kind payment projects to ensure the receipt of fair-market value. Based, in part, on prior GAO recommendations,¹⁰ each of the services has issued guidance to require the determination of fair-market value for real-property assets included in real-estate transactions and have provided instructions on how to determine the fair-market value. For example, to determine the fair-market value of the real-property interest, the Army, Air Force and Navy use certified real-estate appraisers to determine the full market value of their real-property interests and require that the appraisals be conducted in accordance with the Uniform Standards of Professional Appraisal Practice¹¹ prior to the finalization of any real-estate transaction. However, our review of service-level guidance governing real-estate transactions did not identify any specific steps to follow for valuing in-kind payment projects. Officials from the offices of the Army Corps of Engineers, Air Force Civil Engineer Center, and Naval Facilities Engineering Command confirmed that no specific guidance is available, but described similar broad procedures and documentation requirements that they used for determining the value of their in-kind payment projects. Officials indicated that installation public-works personnel, with the aid as needed of the respective service's regional real-property management office, generally were responsible for determining the value of the in-kind payment projects. In some cases, installation personnel prepare formal requirements documents, such as a DOD form 1391¹² or some other form of a statement of work, or independent government cost estimate to document the value of the in-kind work to be performed. In other cases, installation personnel review and validate a contractor's cost estimates for valuing certain projects instead of obtaining an independent cost

¹⁰In our previous work ([GAO-11-574](#)), we recommended that the Army and the Air Force review and clarify guidance describing how the fair-market value of the real-property interest should be determined and how the receipt of fair-market value can best be ensured.

¹¹The Appraisal Foundation, *Uniform Standards of Professional Appraisal Practice: 2014-2015 Edition* (Feb.1, 2013).

¹²The DD Form 1391 is a document used by DOD to submit requirements and justifications in support of funding requests for military construction to Congress.

estimate. Once the cost estimate is developed, installation public-works personnel, with the aid as needed of the respective service's regional real-property management office, use the cost estimate to negotiate with the lessee for the completion of the work. If the developer and installation officials agree to the value of the work and that the value of the work is within the range of fair-market value of the real-estate interest, the parties execute the agreement to document the services to be performed as an in-kind payment project in lieu of cash.

Table 3 describes the 29 domestic projects and lists which type of procedures the service used to document the value of the in-kind payment projects. To confirm that the installations used the cost-estimating methods described for valuing in-kind payment projects by service officials, we collected and reviewed the documentation available that the Air Force and Navy used to value the domestic in-kind payment projects initiated during fiscal year 2013.¹³ All 29 projects had documentation available showing how the cost estimates were established and that the services had processes in place to value in-kind payment projects.

Table 3: Documentation Used by the Air Force and Navy to Value Domestic In-Kind Construction or Renovation Projects Initiated in Fiscal Year 2013

Service	Installation	In-kind payment project description	Means of documenting value of in-kind payment project			
			Scope of work	DD Form 1391 [Note A]	Other type of government cost estimate	Other
Air Force	Eglin Air Force Base	Replace fire alarm control panels, detectors, sensors and alarms			✓	
Air Force	Eglin Air Force Base	Modify intersection of May Road and Eglin Boulevard		✓		Air Force form 332 Base Civil Engineer Work Request [Note B]
Air Force	Eglin Air Force Base	Replace windows in Building 129				Air Force form 332 Base Civil Engineer Work Request [Note B]

¹³The Army and Marine Corps did not initiate any domestic in-kind payment projects in fiscal year 2013.

Service	Installation	In-kind payment project description	Means of documenting value of in-kind payment project			
			Scope of work	DD Form 1391 [Note A]	Other type of government cost estimate	Other
Air Force	Eglin Air Force Base	Renovate existing office space and bathrooms to standards required by policy for drug testing		✓		
Air Force	Eglin Air Force Base	Replace fire alarm control panels and add detectors		✓		
Air Force	Eglin Air Force Base	Replace approach light structures and lights on runway		✓		Air Force form 332 Base Civil Engineer Work Request [Note B]
Air Force	Eglin Air Force Base	Install corrosion protection for 17 elevated water tanks		✓		
Navy	Naval Base Ventura County	Install cable reinforcing for the gates per security requirements	✓			✓
Navy	Naval Base Ventura County	Replace one and install one new heritage street light in the Bard Mansion parking lot area	✓			✓
Navy	Naval Air Station Key West	Construct four switchgear enclosures, and repair several degraded electrical components at switchgear locations, on the Navy's Mole Pier		✓		
Navy	Naval Air Station Jacksonville	A 30 by 60-foot marina pavilion structure and two passenger terminal awnings				Service review and approval letter of contractor cost estimate
Navy	Naval Air Station Jacksonville	Materials for a 30 by 60-foot marina pavilion structure				Service review and approval letter of contractor cost estimate
Navy	Joint Expeditionary Base Little Creek and Fort Story	Install new street signs at multiple locations	✓			✓
Navy	Allegheny Ballistics Laboratory	Implement plant-wide infrastructure which will then support a paperless manufacturing execution system				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Upgrade air conditioning system at Allegheny Ballistics Laboratory				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install roof overlay on the existing roof of building 368				Service review and approval letter of contractor cost estimate

			Means of documenting value of in-kind payment project			
Service	Installation	In-kind payment project description	Scope of work	DD Form 1391 [Note A]	Other type of government cost estimate	Other
Navy	Allegheny Ballistics Laboratory	Replace existing roof systems of buildings 373 and 167 with an Ethylene Propylene Diene Monomer roof system with rigid insulation				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install two new 300- ton chillers in building 417				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install a paint-cure oven and booth at building 420				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install two chillers in building 449				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install air hoist controls in plant one				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Upgrade building control systems and network automation engines				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Establish additive manufacturing-direct digital laser				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Refurbish 5-gallon mixer and install in building 397				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Move the model shop from building 363 to building 610 to establish the prototype development center as part of the guidance and sensor systems laboratory				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Upgrade maintenance garage in building 7				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Upgrade the bay 4 air facility				Service review and approval letter of contractor cost estimate

Service	Installation	In-kind payment project description	Means of documenting value of in-kind payment project			
			Scope of work	DD Form 1391 [Note A]	Other type of government cost estimate	Other
Navy	Allegheny Ballistics Laboratory	Upgrade the steam plant				Service review and approval letter of contractor cost estimate
Navy	Allegheny Ballistics Laboratory	Install new water tank				Service review and approval letter of contractor cost estimate

Source: GAO review of Department of Defense (DOD) documents and data. | GAO-15-649

Note A: The DD Form 1391 is a document used by DOD to submit requirements and justifications in support of funding requests for military construction to Congress.

Note B: Air Force Form 332 is a document used to request work that needs to be done on an installation.

Agency Comments

We are not making any recommendations in this report. We provided DOD with a draft of this report for review. DOD provided technical comments on our findings, which we have incorporated where appropriate.

We are sending copies of this report to appropriate congressional committees and to the Secretary of Defense; the Secretaries of the Army, Navy, and Air Force; and the Director of the Office of Management and Budget. In addition, this report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions concerning this report, please contact me at (202) 512- 4523 or leporeb@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VI.



Brian J. Lepore, Director
Defense Capabilities and Management

List of Committees

The Honorable John McCain
Chairman
The Honorable Jack Reed
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Mark Kirk
Chairman
The Honorable Jon Tester
Ranking Member
Subcommittee on Military Construction, Veterans Affairs, and Related
Agencies
Committee on Appropriations
United States Senate

The Honorable William "Mac" Thornberry
Chairman
The Honorable Adam Smith
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable Charles Dent
Chairman
The Honorable Sanford Bishop, Jr.
Ranking Member
Subcommittee on Military Construction, Veterans Affairs, and Related
Agencies
Committee on Appropriations
House of Representatives

Appendix I: Scope and Methodology

To identify the in-kind payment projects that DOD reported it initiated during fiscal year 2013, we requested information and compiled data on in-kind construction and renovation projects for fiscal year 2013, their estimated value in U.S. dollars, the source of the in-kind payment project, the agreement or statutory authority, and their purpose and need from DOD components—U.S. Pacific Command; U.S. European Command; the Departments of the Army, Navy (including the Marine Corps), and Air Force. To determine whether a project was an in-kind payment project, we defined “in-kind construction and renovation projects” in this report as those resulting from certain host-nation support programs or from transactions (whether domestic or overseas) in which DOD provides goods, services, real property, or an interest in real property (including, but not limited to, a leasehold or easement) in exchange for compensation, and in which any part of that compensation is provided in the form of construction or renovation services. This definition of “in-kind construction and renovation projects,” which was also used in our 2014 report, is broader than the concept of in-kind “payments” for residual value or received in-lieu-of cash compensation as part of a domestic agreement with a third party because the definition includes host-nation support for installation facilities overseas. Voluntary contributions made by a host nation for the purpose of defraying costs to station, maintain, and train U.S. military forces in its country do not constitute a payment or obligate a host nation to make payments to the United States. We excluded from our definition of “in-kind construction or renovation projects” gifts, sustainment projects (e.g., regularly scheduled maintenance and inspections), and cash sales or rent used to finance construction or renovation. To determine that a project was initiated in 2013, we also re-used our 2014 report’s definition for “initiated” as that point at which the party responsible for completing the construction or renovation project received an official notice that allowed them to proceed with the project. To summarize the purposes of the projects, we used the real-property system classification code reported by DOD for each project as part of their data submission to us.¹ The first digit of the code represents the facility class, and we used the facility class to represent

¹DOD’s Real Property Categorization System provides a DOD-wide scheme of categorizing DOD’s real-property types and functions and serves as the framework for identifying, categorizing, and analyzing DOD’s inventory of land and facilities around the world. The scheme is comprised of a five-tier structure represented by numerical codes, with one-digit codes being the most general and five- or six-digit codes representing the most specific types of facilities. See DOD Instruction 4165.03, *DOD Real Property Categorization* (Aug. 24, 2012, Incorporating Change Feb. 5, 2015).

the purpose of the projects.² We corroborated the project data that each DOD component submitted by requesting that the component provide the supporting documentation where the data was obtained. We attempted to obtain supporting documentation for all the data elements for all of the domestic and overseas projects. We were able to obtain corroborating documentation for all of the domestic projects and the projects in Germany. The Office of the Assistant Secretary of Defense for Energy, Installations and Environment also reviewed the information the DOD components provided to GAO on in-kind construction and renovation projects for fiscal year 2013 for consistency and to ensure that the data were for projects that we considered “in-kind payment projects.” Lastly, after we compiled the project data, we provided each component with an additional opportunity to review and confirm the data. By taking these steps, we determined that the reported project data for the domestic projects and the projects in Germany were generally sufficiently reliable for the purposes of this report. However, numerous projects in Korea and Japan were executed under bilateral agreements or as part of voluntary host nation programs where the host nation manages the programming and execution processes and supporting documentation for these projects was not readily available in English or the specific project costs incurred by the Governments of Korea and Japan were, according to DOD officials, not required to be disclosed to the United States. In the absence of supporting documentation, we asked DOD to describe, to the extent possible, the source or calculation method for the estimated value of the project cost, initiation date and the real-property system classification code. However, DOD officials had a limited explanation of the source of some of this basic project information because of international agreements and host-nation requested relocation projects that, according to DOD officials, do not require disclosure of specific costs by the host nation. For instance, DOD officials reported that for the 74 in-kind payment projects in Japan, they did not know the specific basis used by Japanese officials for calculating the value for 32 of the projects in Japan and did not have any information on the value for another 42 projects. The report notes instances where we were unable to determine the reliability of reported data for various projects in Japan and Korea

²DOD's facility classes and their appropriate one-digit code are: 1-operation and training; 2-maintenance and production; 3-research, development, test, and evaluation; 4-supply; 5-hospital and medical; 6-administrative; 7-housing and community; 8-utility and ground improvements; and 9-land. See DOD Instruction 4165.03, *DOD Real Property Categorization*, (Aug. 24, 2012, Incorporating Change Feb. 5, 2015).

Appendixes II through V provide a listing and detailed information for each in-kind payment project initiated by DOD in fiscal year 2013.

To describe the potential advantages and disadvantages of accepting in-kind payments instead of cash for domestic real-estate transactions, we reviewed the services' policies and procedures regarding the types of payments (cash or in-kind payment project) to be included in real-estate transactions and Army and Air Force guidance that informs when cash or in-kind payment projects are advantageous or not advisable. We also interviewed officials from the Army Corps of Engineers, Air Force Civil Engineering Center, and Naval Facilities Engineering Command to discuss the factors they consider in determining whether to accept cash or in-kind payment projects, the rationale for preferring one type of payment (cash or in-kind payment project) over another, and the advantages and disadvantages in terms of administration and costs of executing cash versus in-kind payment projects.

To identify the extent to which the military services have developed and implemented guidance and procedures to value in-kind payment projects to ensure the receipt of fair-market value for domestic projects, we compared the military services' guidance governing real-estate transactions to DOD's guidance for leasing and obtaining fair-market value of its real-estate interest.³ We then reviewed the military services' established policies and procedures where available to determine if their procedures would ensure receipt of fair-market value. Furthermore, we obtained and reviewed the in-kind payment project agreements and supporting documentation, such as the lease exhibits, site and task work orders, and the real-estate appraisal for the 29 domestic in-kind payment projects initiated during fiscal year 2013 to review whether the military services were following the established procedures they described for valuing these specific in-kind payment projects. In addition to the previously mentioned DOD offices, we also interviewed officials from the Office of the Assistant Secretary of Defense for Energy, Installations and Environment, Army Office Assistant Chief of Staff for Installation

³See DOD Instruction 4165.70: *Real Property Management* (April 2005); Secretary of the Army memorandum: *Leasing Real Property on Army Installations* (October 2012); Secretary of the Air Force memorandum: *Estimating Fair Market Value (FMV) for Air Force Real Property Transactions* (May 2012); and Secretary of the Navy Instruction 11011.47C: *Acquisition, Management, and Disposal of Real Property and Real Property Interests by the Department of the Navy* (August 2013).

Management, Office of Assistant Secretary of the Air Force (Installations, Environment and Logistics), and Office of the Assistant Secretary of the Navy (Energy, Installations and Environment) to determine the procedures and documentation requirements used by the services to value in-kind payment projects.

We conducted this performance audit from August 2014 to September 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: DOD Construction and Renovation Projects Initiated in Korea in Fiscal Year 2013 Using In-Kind Payments

DOD reported that the military services initiated 31 in-kind payment projects involving construction or renovation in Korea in fiscal year 2013 with a value of about \$1.6 billion. The projects support various DOD purposes throughout the Republic of Korea, but mostly for construction of new facilities at United States Army Garrison Humphreys. Most of the projects (23 of 31) initiated in Korea were either for improvements to or the construction of operations and training facilities (14 projects) or for housing and community facilities (9 projects). Table 4 provides a summary of the intended purposes and value of in-kind payment projects initiated in Korea in fiscal year 2013. We found that the reported values for 26 of the 31 projects were of undetermined reliability because of a lack of documentation.

Table 4: Purposes and Values of In-Kind Construction and Renovation Projects Initiated in Korea during Fiscal Year 2013

Number of projects	Reported estimated value (U.S. dollars) [Note A]	Purpose
14	\$813,460,811 [Note B]	Operation and training
9	419,173,319 [Note B]	Housing and community
5	272,573,297 [Note B]	Maintenance and production
1	35,290,303 [Note B]	Supply
1	25,240,000	Hospital and medical
1	8,500,000	Administrative
0	0	Land
0	0	Research, development, test, and evaluation
0	0	Utility and ground improvements
Total	31	\$1,574,237,730 [Note B]

Source: GAO summary of Department of Defense (DOD) data. | GAO-15-649

Note A: Values for projects in Korea are based on estimated costs to be incurred by the Republic of Korea in Korean currency, called the won, and expressed by DOD officials in then-year U.S. dollars.

Note B: The reported subtotals and total for the value for 26 of the 31 projects in Korea are of undetermined reliability because supporting documentation was not readily available in English for some projects and the costs incurred for other projects by the Government of Korea were not required to be disclosed to the United States according to DOD officials.

Table 5 provides specific information on the military service responsible for the project, location, purpose, type of agreement, source of in-kind payment project, and estimated value for the 31 in-kind payment projects involving construction or renovation initiated in Korea during fiscal year 2013.

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Table 5: DOD Construction and Renovation Projects Initiated in Korea in Fiscal Year 2013 Using In-Kind Payments

Estimated values in U.S. dollars

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
1. Army	Army Garrison Humphreys [Note E]	Project title: Construct Communication Center [Note E] Purpose: Operation and training [Note E] Description: Provide a communications center containing administrative office and server space to support the relocation of Army operations to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$190,610,385 [Note E]
2.	Army Garrison Humphreys [Note E]	Project title: Construct Troop Housing and Zoeckler Station Area Distribution Node [Note E] Purpose: Operation and training [Note E] Description: Provide a main communication node or area distribution node facility and an area distribution node facility (signal buildings) with supporting parking for maintenance or service vehicles [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$9,844,313 [Note E]
3.	Army Garrison Humphreys [Note E]	Project title: Construct Televideo Center [Note E] Purpose: Operation and training [Note E] Description: Provide a facility to house American Force Network, Korea headquarters and operations center, Family Morale Welfare & Recreation, Cable TV, Korea Business Office, and Morale Welfare & Recreation cable television facility [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$23,968,502 [Note E]
4.	Army Garrison Humphreys [Note E]	Project title: Construct Spartan Site, A [Note E] Purpose: Operation and training [Note E] Description: Provide a data center to move current operations away from congested environment [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$27,046,331 [Note E]
5.	Army Garrison Humphreys [Note E]	Project title: Construct U.S. Korea Command Operations Center [Note E] Purpose: Operation and training [Note E] Description: Provide a blast resistant sensitive compartmented information facility to support the relocation of United States Forces Korea command structure to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$317,300,000 [Note E]

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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
6.	Army Garrison Humphreys [Note E]	Project title: Outside Plant Cabling [Note E] Purpose: Operation and training [Note E] Description: Install copper and fiber cabling to support the expanded communications requirement of the expanded Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$8,497,818 [Note E]
7.	Army Garrison Humphreys [Note E]	Project title: Construct Child Development Center [Note E] Purpose: Housing and community [Note E] Description: Provide a child development center with adjacent outdoor play area for 195 to 225 school-age (6 to 10 years) children [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$8,298,953 [Note E]
8.	Army Garrison Humphreys [Note E]	Project title: Construct Middle School and Elementary School [Note E] Purpose: Housing and community [Note E] Description: Provide 875-student elementary school and 1,100-student middle school [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$115,941,303 [Note E]
9.	Army Garrison Humphreys [Note E]	Project title: Construct 8th Army Installation Management Command headquarters [Note E] Purpose: Operation and training [Note E] Description: Provide an administrative facility for 8th U.S. Army, Army Audit Agency, and Installation Management Command-Pacific staff for relocation to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$63,444,946 [Note E]
10.	Army Garrison Humphreys [Note E]	Project title: Construct U.S. Korea Command Headquarters [Note E] Purpose: Operation and training [Note E] Description: Provide a major command headquarters and public service facility with associated parking and a parade ground with viewing stand to support the relocation to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$74,093,525 [Note E]
11.	Army Garrison Humphreys [Note E]	Project title: Construct Consolidated 8th Army Major Subordinate Command Headquarters [Note E] Purpose: Supply [Note E] Description: Provide a facility to house one brigade with 3 battalions, troop physical fitness center and non-organizational parking	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$35,290,303

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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
12.	Army Garrison Humphreys	Project title: Construct Medical Brigade Headquarters and Parking Facility Purpose: Operation and training [Note E] Description: Provide a brigade headquarters and 800-vehicle parking structure supporting the relocation of the medical command relocation to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction	\$27,493,134 [Note E]
13.	Army Garrison Humphreys	Project title: Construct Midtown Medical Facilities Purpose: Hospital and medical [Note E] Description: Provide troop medical clinic and troop dental clinic in one facility and a veterinary clinic with parking to support the relocation to Army Garrison Humphreys [Note E]	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$25,240,000 [Note E]
14.	Army Garrison Humphreys	Project title: Construct Soldier Troop Area Support Purpose: Housing and community [Note E] Description: Construct a shoppette, community activities center, branch post office, multipurpose facility, 2 chapels, athletic field complex and pavilion	Land Partnership Plan [Note F]	Host-nation funded construction	\$43,954,535 [Note E]
15.	Army Garrison Humphreys	Project title: Construct Railhead Facility Purpose: Operation and training [Note E] Description: Provide railhead staging area for loading and unloading up to 30 rail cars and a scale house and staging area to support movement of heavy equipment into and out of Army Garrison Humphreys	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$11,553,611 [Note E]
16.	Army Garrison Humphreys	Project title: Construct One-Stop Processing Area Purpose: Housing and community [Note E] Description: Provide a one-stop processing center for personnel in-processing and administrative support [Note E]	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$30,764,622 [Note E]
17.	Army Garrison Humphreys	Project title: Construct Simulation Center Purpose: Operation and training [Note E] Description: Provide a facility with parking	Land Partnership Plan [Note F]	Host-nation funded construction	\$34,739,404 [Note E]
18.	Army Garrison Humphreys	Project title: Construct non-commissioned officer academy and transient unaccompanied personnel housing Purpose: Housing and community Description: Provide an instruction and administration facility with barracks and parking	Land Partnership Plan [Note F]	Host-nation funded construction	\$24,895,760

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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
19.	Army Garrison Humphreys	Project title: Construct Wash Facility and Drivers Training Course Purpose: Operation and training [Note E] Description: Provide six-bay wash platform and eight-battle position, all-weather tank and Bradley crew proficiency course and standard wheeled vehicle driver's course	Land Partnership Plan [Note F]	Host-nation funded construction	\$17,367,782 [Note E]
20.	Army Garrison Humphreys	Project title: Renovate Main Post Club Purpose: Housing and community [Note E] Description: Renovate bowling center for expansion of existing club to create the new main post club and provide 3,400 square meters of parking [Note E]	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$6,195,000
21.	Army Garrison Humphreys	Project title: Construct Barracks Purpose: Housing and community [Note E] Description: Provide five standard-design, 302-person eight-story unaccompanied enlisted personnel housing (1+1E standard)	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$105,632,110 [Note E]
22.	Army Garrison Humphreys	Project title: Construct Hospital Barracks and Dining Facility Purpose: Housing and community [Note E] Description: Provide three standard-design, 302-person eight-story unaccompanied enlisted personnel housing (1+1E standard) and dining facility.	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$78,991,036
23.	Army Garrison Humphreys	Project title: Construct 8th Army Vehicle Maintenance Facilities I Purpose: Maintenance and production [Note E] Description: Provide three medium tactical-equipment maintenance facilities with company operations facilities and tracked vehicle parking	Yongsan Relocation Plan [Note D]	Host-nation funded construction	\$80,574,550 [Note E]
24.	Army Garrison Humphreys	Project title: Construct Heavy Brigade Combat Team Vehicle Maintenance Facility II Purpose: Maintenance and production Description: Provide vehicle maintenance facility and supporting facilities to rotational armored brigade combat team	Land Partnership Plan [Note F]	Host-nation funded construction	\$22,824,446
25.	Army Garrison Humphreys	Project title: Construct Heavy Brigade Combat Team Vehicle Maintenance Facility III Purpose: Maintenance and production Description: Provide a tactical equipment maintenance facility with company operations facility and tracked vehicle parking	Land Partnership Plan [Note F]	Host-nation funded construction	\$24,204,628 [Note E]

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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
26.	Army Garrison Humphreys	Project title: Construct Heavy Brigade Combat Team Vehicle Maintenance Facilities IV Purpose: Maintenance and production Description: Provide a large tactical equipment maintenance facility with company operations facilities and tracked vehicle parking	Land Partnership Plan [Note F]	Host-nation funded construction	\$60,682,577 [Note E]
27.	Army Garrison Humphreys	Project title: Construct 8th Army Vehicle Maintenance Facilities II Purpose: Maintenance and production [Note E] Description: Provide three medium tactical equipment maintenance facilities with company operations facilities and tracked vehicle parking	Yongsan Relocation Program [Note D]	Host-nation funded construction	\$84,287,096 [Note E]
28.	Special Warfare Center, Icheon [Note E]	Project title: Special Operations Command-Korea Relocation [Note E] Purpose: Operation and training [Note E] Description: Provide a facility for Special Operations Command Korea to relocate Detachment 39 from Songpa to Icheon [Note E]	Special Warfare Command Relocation [Notes E, G]	Host-nation funded construction [Note E]	\$6,624,000 [Note E]
29.	Navy Camp Mujuk [Note E]	Project title: Construct Barracks for Navy Detachment [Note E] Purpose: Housing and community [Note E] Description: Provide a new two-story bachelor quarters with reinforced concrete exterior bearing walls, concrete floor slabs and foundations, and metal roofing [Note E]	Republic of Korea Funded Construction [Notes E, G]	Host-nation funded construction [Note E]	\$4,500,000 [Note E]
30.	Camp Mujuk [Note E]	Project title: Renovate Navy Warehouse [Note E] Purpose: Operation and training [Note E] Description: Renovate warehouse to provide adequate working space for the Helicopter Mine Countermeasures Squadron 14 when they relocate from Pohang to Camp Mujuk [Note E]	Logistics Cost Sharing [Notes E, H]	Host-nation funded construction [Note E]	\$876,060 [Note E]
31.	Busan Republic of Korea Fleet Base [Note E]	Project title: Commander, Naval Forces—Korea Headquarters [Note E] Purpose: Administrative [Note E] Description: Construct a new two-story permanent building for Commander Naval Forces—Korea headquarters facility [Note E]	Yongsan Relocation Plan [Notes D, E]	Host-nation funded construction [Note E]	\$8,500,000 [Note E]

Source: GAO analysis of DOD information. | GAO-15-649

Note A: Purpose categories were assigned by the Office of the Secretary of Defense based on facility classes listed in DOD Instruction 4165.03, DOD Real Property Categorization (Aug. 24, 2012, Incorporating Change Feb. 5, 2015) with approval of categories assigned by U.S. Pacific Command and U.S. Forces-Korea.

Note B: Republic of Korea-Funded Construction and Logistics Cost Sharing projects in the Republic of Korea are resourced with host-nation support obtained under the Agreement Between the United States of America and the Republic of Korea Concerning Special Measures Relating to Article V of

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the Agreement Under Article IV of the Mutual Defense Treaty Between The Republic of Korea and the United States of America Regarding Facilities and Areas and the Status of United States Armed Forces in the Republic of Korea (Jan. 15, 2009), and associated implementation arrangements for the Special Measures Agreement related to Republic of Korea-funded construction of In-Kind Projects under the Calendar Year 2009-2013 Implementation Arrangement.

Note C: Estimated values were provided by DOD in then-year dollars. These estimates were provided by U.S. officials in Korea after converting figures provided by Republic of Korea officials for each project to U.S. dollars.

Note D: See Memorandum of Agreement between the Government of the Republic of Korea and the Government of the United States of America Regarding the Agreed Recommendation for Implementation of the Agreement between the Republic of Korea and the United States of America on the Relocation of United States Forces from the Seoul Metropolitan Area (Oct. 26, 2004) (known as the Yongsan Relocation Plan).

Note E: Supporting contract documentation for host-nation funded in-kind construction contracts were not available in English or specific costs incurred by the Government of the Republic of Korea, according to DOD officials, are not required to be disclosed by the Republic of Korea, and, as a result, we unable determine the reliability of the reported project data.

Note F: See Agreement between the United States of America and the Republic of Korea amending the agreement between the United States of America and the Republic of Korea for the Land Partnership Plan of March 29, 2002 (Oct. 26, 2004).

Note G: See Article I of the Special Measures Agreement stating that the Republic of Korea shall bear, for the duration of this agreement a part of the expenditures associated with the stationing of the United States Armed Forces in Korea. This contribution of the Republic of Korea includes Republic of Korea-funded construction.

Note H: See Articles I and II of the Special Measures Agreement related to Republic of Korea-funded construction of In-Kind Projects under the Calendar Year 2009-2013 Implementation Arrangement stating that the Republic of Korea shall bear, for the duration of this agreement a part of the expenditures associated with the stationing of the United States Armed Forces in Korea. This contribution of the Republic of Korea includes Logistics Cost Sharing.

Appendix III: DOD Construction and Renovation Projects Initiated in Japan in Fiscal Year 2013 Using In-Kind Payments

DOD reported that the military services initiated 74 in-kind payment projects involving construction or renovation in Japan in fiscal year 2013, 32 of which were valued at \$264 million. The projects supported various purposes for the U.S. military's presence in the country. A majority of the projects initiated in Japan (39 of 74) were for improvements to or construction of utility and ground improvement infrastructure (23 projects) or for operations and training facilities (16 projects). Table 6 provides a summary of the intended purposes, value, and number of in-kind payment projects initiated in Japan in fiscal year 2013. We found that the reported estimated values for the in-kind payment projects in Japan were of undetermined reliability because of a lack of documentation.

Table 6: Purposes and Values of In-Kind Construction and Renovation Projects Initiated in Japan during Fiscal Year 2013

Number of projects	Reported estimated value (U.S. dollars) [Note A]	Purpose
23	\$46,577,000 [Note B]	Utility and ground improvements
16	43,421,000 [Note B]	Operations and training
12	2,982,000 [Note B]	Housing and community
12	72,390,000 [Note B]	Maintenance and production
8	95,090,000 [Note B]	Supply
2	3,590,000 [Note B]	Administrative
1	Not reported [Note B]	Hospital and medical
0	0	Land
0	0	Research, development, test, and evaluation
Total	74	\$264,050,000 [Note B]

Source: GAO summary of Department of Defense (DOD) data. | GAO-15-649

Note A: The program estimates of value were provided by U.S. officials in then-year U.S. dollars without input from Japanese officials based on comparable projects.

Note B: DOD did not provide estimates for 42 of 74 projects in Japan because the specific costs incurred by the Government of Japan are not required to be disclosed, according to the provisions of bilateral agreements with the government of Japan. Therefore, estimates given with a dollar value do not include costs for all projects in this category, and are therefore minimum values. Actual total values are unknown. The reported subtotals and total for the remaining 32 projects in Japan are of undetermined reliability because of a lack of documentation.

Table 7 provides specific information on the military service responsible for the project, location, purpose, type of agreement, source of in-kind payment project, and estimated value for the 74 in-kind payment projects involving construction or renovation initiated in Japan during fiscal year 2013.

**Appendix III: DOD Construction and
Renovation Projects Initiated in Japan in Fiscal
Year 2013 Using In-Kind Payments**

Table 7: DOD Construction and Renovation Projects Initiated in Japan in Fiscal Year 2013 Using In-Kind Payments

Estimated value in U.S. dollars

	Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project	Reported estimated value [Note C]
1.	Air Force	Kadena Air Base	Project number: AF430 Purpose: Utility and ground improvements Description: Reconstruct sewer line	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$22,030,000 [Note E]
2.	Air Force	Kadena Air Base	Project number: AF526 Purpose: Supply Description: Construct aircraft part storage	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$26,840,000 [Note E]
3.	Air Force	Kadena Air Base	Project title: AF659 Purpose: Supply Description: Construct base supply complex	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$60,460,000 [Note E]
4.	Air Force	Misawa Air Base	Project number: AF706 Purpose: Supply [Note E] Description: Construct supply and equipment storage	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$4,440,000 [Note E]
5.	Air Force	Misawa Air Base	Project number: AF727 Purpose: Operations and training Description: Reconstruct taxiway	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$11,120,000 [Note E]
6.	Air Force	Yokota Air Base	Project number: AF1201 Purpose: Utility and ground improvements [Note E] Description: Install solar panels, windows, and heat pump water heater	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,000,000 [Note E]
7.	Army	Camp Zama	Project number: AR1207 Purpose: Utility and ground improvements Description: Install high-efficiency lighting	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$781,000 [Note E]
8.	Army	Camp Zama	Project number: AR1210 Purpose: Utility and ground improvements Description: Install energy efficient solar generation unit, windows, and hot water supply system	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,320,000 [Note E]

**Appendix III: DOD Construction and
Renovation Projects Initiated in Japan in Fiscal
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9.	Army	Camp Zama	Project number: AR1204 Purpose: Utilities and ground improvements Description: Install light emitting diode streetlights	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$5,720,000 [Note E]
10.	Army	Camp Zama [Note E]	Project number: AR0002-T [Note E] Purpose: Utility and ground improvements [Note E] Description: Construct new boundary fence Chapel Hill housing [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
11.	Army	Kawakami Ammunition Depot	Project number: AR1102 Purpose: Operations and training [Note E] Description: Construct noise control wall	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,051,000 [Note E]
12.	Army	Sagami General Depot	Project number: AR1208 Purpose: Utility and ground improvements Description: Install high-efficiency lighting	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$110,000 [Note E]
13.	Army	Sagami General Depot	Project number: AR1206 Purpose: Utility and ground improvements Description: Install light emitting diode streetlights	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,155,000 [Note E]
14.	Army	Sagami General Depot	Project number: AR403 Purpose: Administrative Description: Construct administration and technical research building	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$3,300,000 [Note E]
15.	Army	Sagami General Depot [Note E]	Project number: AR0017-T [Note E] Purpose: Supply [Note E] Description: Construct hardstand areas [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
16.	Army	Sagami General Depot [Note E]	Project number: AR0019-T [Note E] Purpose: Utility and ground improvements [Note E] Description: Boundary joint use area [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
17.	Army	Sagami General Depot [Note E]	Project number: AR0021-T [Note E] Purpose: Supply [Note E] Description: Establish joint use area [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
18.	Army	Sagami General Depot [Note E]	Project number: AR0026-T [Note E] Purpose: Supply [Note E] Description: Develop contingency area [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported

**Appendix III: DOD Construction and
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19.	Army	Sagami General Depot [Note E]	Project number: AR0030-T [Note E] Purpose: Utility and ground improvements [Note E] Description: Develop boundary release area [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
20.	Army	Yokohama	Project number: AR1209 Purpose: Utility and ground improvements Description: Install high-efficiency lighting	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$220,000 [Note E]
21.	Marine Corps	Camp Courtney	Project number: MC1104 Purpose: Housing and community Description: Install photovoltaic panels	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$950,000 [Note E]
22.	Marine Corps	Camp Courtney	Project number: MC1105 Purpose: Housing and community Description: Install solar water heater	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$300,000 [Note E]
23.	Marine Corps	Camp Courtney	Project Number: MC1106 Purpose: Utility and ground improvements Description: Install light emitting diode streetlights	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$100,000 [Note E]
24.	Marine Corps	Camp Fuji	Project number: MC0021 Purpose: Supply Description: Construct hazardous materials control center	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$3,350,000 [Note E]
25.	Marine Corps	Camp Hansen [Note E]	Project number: MC733 [Note E] Purpose: Operation and training [Note E] Description: Slope repair work [Note E]	Special Action Committee on Okinawa [Notes E, G]	Host-nation funded construction [Note E]	Not reported
26.	Marine Corps	Camp Schwab [Note E]	Project number: MC0506-T [Note E] Purpose: Housing and community [Note E] Description: Construct visitor center [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
27.	Marine Corps	Camp Schwab [Note E]	Project number: MC0561-T [Note E] Purpose: Operation and training [Note E] Description: Construct training facility	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
28.	Marine Corps	Camp Schwab [Note E]	Project number: MC0562-T [Note E] Purpose: Operation and training [Note E] Description: Construct rappelling tower [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
29.	Marine Corps	Camp Schwab [Note E]	Project number: MC0569-T [Note E] Purpose: Operation and training [Note E] Description: Construct obstacle course [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported

**Appendix III: DOD Construction and
Renovation Projects Initiated in Japan in Fiscal
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30.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC199T [Note E] Purpose: Operation and training [Note E] Description: Install remote switch at Torii Pines housing area [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
31.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC201-T [Note E] Purpose: Housing and community [Note E] Description: Construct commissary [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
32.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC203-T [Note E] Purpose: Housing and community [Note E] Description: Construct transient bachelors quarters [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
33.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC240-T [Note E] Purpose: Housing and community [Note E] Description: Construct Torii Pines housing phase 1 [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
34.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC246-T [Note E] Purpose: Utility and ground improvements [Note E] Description: Construct main base substation [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
35.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC254-T [Note E] Purpose: Housing and community [Note E] Description: Construct flight line dining facility [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
36.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC264-T [Note E] Purpose: Utilities and ground improvements [Note E] Description: Upgrade electrical utilities [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
37.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC265-T [Note E] Purpose: Operation and training [Note E] Description: Upgrade communication utilities [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
38.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC267-T [Note E] Purpose: Utility and ground improvements [Note E] Description: Upgrade sewer utilities [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
39.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC268-T [Note E] Purpose: Utilities and ground improvements [Note E] Description: Upgrade storm water utilities [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported

**Appendix III: DOD Construction and
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40.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC271-T [Note E] Purpose: Utilities and ground improvements [Note E] Description: Construct weather van pad [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
41.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC273-T [Note E] Purpose: Operation and training [Note E] Description: S6 expansion [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
42.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC275-T [Note E] Purpose: Housing and community [Note E] Description: Install Armed Forces Network antenna [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
43.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC305-T [Note E] Purpose: Operation and training [Note E] Description: Construct liquid oxygen storage [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
44.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC0439 Purpose: Operation and training Description: Seawall rehabilitation	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$2,500,000 [Note E]
45.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC0602-T [Note E] Purpose: Housing and community [Note E] Description: Construct command assembly hall [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
46.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC152-T [Note E] Purpose: Operation and training [Note E] Description: Construct aircraft wash pad [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
47.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC155-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct soundproof aircraft acoustical enclosure [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
48.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC156-T [Note E] Purpose: Supply [Note E] Description: Construct general storage and shed [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
49.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC165-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct Carrier Air Wing-5 maintenance hangar 1 [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
50.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC166-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct Carrier Air Wing-5 maintenance hangar 2 [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported

**Appendix III: DOD Construction and
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51.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC167-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct Carrier Air Wing-5 maintenance hangar 3 [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
52.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC168-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct corrosion-control wash pad [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
53.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC169-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct Carrier Air Wing-5 aircraft acoustical enclosure [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
54.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC170-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct maintenance hangar [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
55.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC171-T [Note E] Purpose: Maintenance and production [Note E] Description: Construction supply and storage complex [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
56.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC172-T [Note E] Purpose: Maintenance and production [Note E] Description: Construct corrosion-control hangar [Note E]	Defense Policy Review Initiative [Notes E, G]	Host-nation funded construction [Note E]	Not reported
57.	Marine Corps	Iwakuni Air Base [Note E]	Project number: MC173-T [Note E] Purpose: Operation and training [Note E] Description: Construct parking apron [Note E]	Defense Policy Review Initiative [Notes E, F]	Host-nation funded construction [Note E]	Not reported
58.	Marine Corps	Northern Training Area Okinawa [Note E]	Project number: MC770 [Note E] Purpose: Operation and training [Note E] Description: Construct helicopter landing pads phase 2 [Note E]	Special Action Committee on Okinawa [Notes E, G]	Host-nation funded construction [Note E]	Not reported
59.	Marine Corps	Northern Training Area Okinawa	Project number: MC1102 Purpose: Administrative Description: Install solar water heater	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$290,000 [Note E]
60.	Marine Corps	Northern Training Area Okinawa	Project number: MC1103 Purpose: Housing and community Description: Install high-efficiency lighting	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$900,000 [Note E]

**Appendix III: DOD Construction and
Renovation Projects Initiated in Japan in Fiscal
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61.	Navy	Camp Foster [Note E]	Project number: NA843 [Note E] Purpose: Housing and community [Note E] Description: Construct bachelor officer quarters [Note E]	Special Action Committee on Okinawa [Notes E, G]	Host-nation funded construction [Note E]	Not reported
62.	Navy	Camp Foster [Note E]	Project number: NA867e Purpose: Hospital and medical [Note E] Description: Construct blood storage facility [Note E]	Special Action Committee on Okinawa [Notes E, G]	Host-nation funded construction [Note E]	Not reported
63.	Navy	Camp Shields	Project number: NA1111 Purpose: Utility and ground improvements Description: Install photovoltaic panels	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$3,205,000 [Note E]
64.	Navy	Kadena Air Base	Project number: NA072 Purpose: Maintenance and production Description: Construct aircraft support facility	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$4,560,000 [Note E]
65.	Navy	Kadena Air Base	Project number: NA283 Purpose: Operation and training Description: Construct aviation support center	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$19,500,000 [Note E]
66.	Navy	Kadena Air Base [Note E]	Project number: NA859 [Note E] Purpose: Maintenance and production [Note E] Description: Construct maintenance hangar type 2 [Note E]	Special Action Committee on Okinawa [Notes E, G]	Host-nation funded construction [Note E]	Not reported
67.	Navy	Sasebo Navy Base	Project number: NA1109 Purpose: Utility and ground improvements Description: Install energy efficient solar generation unit and hot water supply system for townhouses	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$998,000 [Note E]
68.	Navy	Sasebo Navy Base	Project number: NA1107 Purpose: Utility and ground improvements Description: Install energy efficient solar generation unit, windows, and hot water supply system for townhouses	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,098,000 [Note E]
69.	Navy	Sasebo Navy Base	Project number: NA1108 Purpose: Housing and community Description: Install solar water heating system	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$832,000 [Note E]
70.	Navy	Sasebo Navy Base	Project number: NA412 Purpose: Maintenance and production Description: Construct ship support complex	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$67,830,000 [Note E]

**Appendix III: DOD Construction and
Renovation Projects Initiated in Japan in Fiscal
Year 2013 Using In-Kind Payments**

71.	Navy	Sasebo Navy Base	Project number: NA425 Purpose: Operation and training Description: Construct telephone exchange	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$9,250,000 [Note E]
72.	Navy	White Beach Navy Facility	Project number: NA1112 Purpose: Utility and ground improvements Description: Install photovoltaic panels	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$6,600,000 [Note E]
73.	Navy	Yokosuka Navy Base	Project number: NA1104 Purpose: Utility and ground improvements [Note E] Description: Install energy efficient solar generation unit, windows, and hot water supply system for townhouses	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,113,000 [Note E]
74.	Navy	Yokosuka Navy Base	Project number: NA1106 Purpose: Utility and ground improvements Description: Install light emitting diode street lighting	Japan Facilities Improvement Program [Note D]	Host-nation funded construction	\$1,127,000 [Note E]

Source: GAO analysis of DOD information. | GAO-15-649

Note A: Purpose categories were assigned by the Office of the Secretary of Defense based on facility classes listed in DOD Instruction 4165.03, DOD Real Property Categorization (Aug. 24, 2012, Incorporating change Feb. 5., 2015) with approval of U.S. Pacific Command and U.S. Forces Japan.

Note B: All facility projects are provided to the United States of America under Article VI of the Treaty of Mutual Cooperation and Security between the United States and Japan (Jan. 19, 1960). In-kind projects initiated in Fiscal Year 2013 were begun either as part of the bilaterally agreed upon force structure initiatives known as the Defense Policy Review Initiative (DPR) and the Special Action Committee on Okinawa (SACO), or under a long-standing host-nation support program called the Facilities Improvement Program.

Note C: Supporting contract documentation for host-nation funded in-kind construction contracts were not available in English or specific costs incurred by the Government of Japan are not required to be disclosed by Japan, and, as a result, we were unable to determine the reliability of the reported project data.

Note D: See U.S.-Japan Security Consultative Committee Document, Host Nation Support (June 21, 2011). This document indicated that Facilities Improvement Program funding in the current Special Measures Agreement period will be no less than 20.6 billion yen per year. The Japan Facilities Improvement Program is a Government of Japan initiative, which started in 1979 to ease the financial burden of stationing U.S. forces in Japan. The program is intended to improve the facilities of U.S. forces and enhance quality of life in Japan for U.S. military personnel.

Note E: Supporting documentation for these data elements were not available in English or were not required to be disclosed by the Government of Japan, and, as a result, we were unable to determine the reliability of the reported project data.

Note F: See U.S.-Japan Security Consultative Committee Document, *United States-Japan Roadmap for Realignment Implementation* (May 1, 2006), which finalized key implementation details of a proposed realignment of U.S. Forces in Japan.

Note G: The Special Action Committee on Okinawa (SACO) was established in November 1995 by the governments of Japan and the United States. The two governments launched the SACO process to develop recommendations on ways to realign, consolidate, and reduce U.S. facilities and areas, and adjust operational procedures of U.S. forces in Okinawa.

Appendix IV: DOD Construction and Renovation Projects Initiated in Germany in Fiscal Year 2013 Using In-Kind Payments

DOD reported that the Army initiated 3 in-kind construction and renovation projects in Germany with a value of over \$20 million. The in-kind payment projects in Germany were initiated as compensation from the government of Germany to the United States for improvements the United States made to facilities that were being returned to the government of Germany. Table 8 provides specific information on the military service responsible for the project, location, purpose, type of agreement, source of in-kind payment project, and estimated value for the three in-kind payment projects involving construction or renovation initiated by the Army in Germany during fiscal year 2013.

Table 8: DOD Construction and Renovation Projects Initiated in Germany in Fiscal Year 2013 Using In-Kind Payments

Estimated values in U.S. dollars

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project [Note D]	Reported estimated value [Note C]
Army	Army Garrison Bavaria	Project Title: Townhouse units Purpose: Housing and community Description: Construct junior non-commissioned officer family housing units	Agreement between U.S. contracting officer and German Construction Administration	Residual value payment	\$15,743,603
	Army Garrison Weisbaden	Project Title: Site preparation for new post exchange and commissary Purpose: Housing and community or administrative Description: Provide site preparation for the construction of a bank and United Service Organization and recruiter's office in the Army and Air Force Exchange Shopping Center to include interior finishes, heating, ventilation, and air conditioning, fire protection, utility connections, pavement, and information systems.	Agreement between Army and Air Force Exchange Services and German Construction Administration	Residual value payment	\$1,353,838

**Appendix IV: DOD Construction and
Renovation Projects Initiated in Germany in
Fiscal Year 2013 Using In-Kind Payments**

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program [Note B]	Source of in-kind payment project [Note D]	Reported estimated value [Note C]
	U.S. Army Garrison Rheinland-Pfalz	Project Title: Fuel tank purge facility Purpose: Maintenance and production Description: Construct new enclosed structure with two high bays for fuel tanker purging operation with small administrative area and concrete facility access.	Agreement between U.S. contracting officer and German Construction Administration	Residual value payment	\$3,624,982
Total					\$20,722,423

Source: GAO analysis of DOD information. | GAO-15-649

Note A: Purpose categories were assigned by the Office of the Secretary of Defense based on facility classes listed in DOD Instruction 4165.03, DOD Real Property Categorization (Aug. 24, 2012, Incorporating Change Feb. 5, 2015) and confirmed with the U.S. European Command.

Note B: See the National Defense Authorization Act for Fiscal Year 1991, Pub. L. No. 101-510, § 2921, as amended (10 U.S.C. § 2687 note), which indicates that it is the sense of Congress that the Secretary of Defense should take steps to ensure that the United States receives consideration equal to the fair-market value of the improvements it made to facilities that will be returned to host countries. This provision includes the option for DOD to recover non-monetary payment in-kind in lieu of monetary compensation.

Note C: Estimated values were provided by DOD in then-year dollars. These estimates were provided by U.S. officials in Germany after converting figures provided by German officials for each project to U.S. dollars.

Note D: "Residual value" is the negotiated monetary or non-monetary compensation that host nations provide to DOD following the return of DOD-funded facilities or other capital improvements to a host nation.

Appendix V: DOD Construction and Renovation Projects Initiated in the United States in Fiscal Year 2013 Using In-Kind Payments

For the projects underway at U.S. locations, DOD reported that the military services initiated 29 in-kind construction and renovation projects with a total value estimated by DOD of \$18.6 million. The Navy had the most in-kind payment projects (22), and all resulted from the lease of DOD property at Navy bases in Virginia, California, Florida, and West Virginia. A majority of the Navy projects (12) were for either improvements to or construction of research, development, test, and evaluation facilities (6 projects) or maintenance and production facilities (6 projects). The Air Force initiated seven in-kind payment projects, all resulting from either granting an easement or leasing DOD property at Eglin Air Force Base. All of the Air Force projects were for either improvements to or construction of administrative facilities or utility and ground infrastructure. The Army and Marine Corps did not initiate any domestic in-kind payment projects in fiscal year 2013. Table 9 provides a summary of the intended purposes and value of in-kind payment projects initiated in the United States in fiscal year 2013.

Table 9: Purposes and Values of In-Kind Construction and Renovation Projects Initiated in the United States during Fiscal Year 2013

Military department	Number of projects	Reported estimated value (U.S. dollars)	Purpose
Navy	6	\$2,723,799	Maintenance and production
	6	3,989,041	Research, development, test, and evaluation
	6	5,538,041	Utility and ground improvements
	2	62,151	Housing and community
	2	1,031,685	Operations and training
	0	0	Administrative
	0	0	Hospital and medical
	0	0	Land
	0	0	Supply
	Navy total	22	\$13,345,146
Air Force	4	\$2,997,343	Utility and ground improvements
	1	295,902	Administrative
	1	293,291	Maintenance and production
	1	1,696,787	Operations and training
	0	0	Hospital and medical

Appendix V: DOD Construction and Renovation Projects Initiated in the United States in Fiscal Year 2013 Using In-Kind Payments

Military department	Number of projects	Reported estimated value (U.S. dollars)	Purpose
	0	0	Housing and community
	0	0	Land
	0	0	Research, development, test, and evaluation
	0	0	Supply
Air Force total	7	\$5,283,323	
DOD total	29	\$18,628,469	

Source: GAO summary of Department of Defense (DOD) data. | GAO-15-649

Table 10 provides specific information on the military service responsible for the project, location, purpose, agreement, type of agreement, and estimated value for the 29 in-kind payment projects involving construction or renovation initiated in the United States during fiscal year 2013.

Table 10: DOD Construction and Renovation Projects Initiated in the United States in Fiscal Year 2013 Using In-Kind Payments

Estimated values in U.S. dollars

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program	Type of agreement	Reported estimated value [Note B]
1. Air Force	Florida	Project title: Eglin Air Force Base upgrade fire alarm building 351 Purpose: Utility and ground improvements Description: Replace fire alarm control panels, detectors, sensors and alarms	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$862,511
2.	Florida	Project title: Eglin Air Force Base road traffic improvements Purpose: Utility and ground improvements Description: Modify intersection of May Road and Eglin Boulevard	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$1,144,715
3.	Florida	Project title: Eglin Air Force Base replace windows in building 129 Purpose: Maintenance and production Description: Replace old windows with more energy efficient windows	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$293,291
4.	Florida	Project title: Eglin Air Force Base renovate restrooms in building 2398 Purpose: Administrative Description: Renovate existing office space and bathrooms to standards required by policy for drug testing	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$295,902

**Appendix V: DOD Construction and
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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program	Type of agreement	Reported estimated value [Note B]	
5.	Florida	Project title: Eglin Air Force Base repair fire deficiencies in building 350 Purpose: Utility and ground improvements Description: Replace fire alarm control panels and add detectors	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$708,683	
6.	Florida	Project title: Eglin Air Force Base approach light structures runway Purpose: Operation and training Description: Replace approach light structures and lights on runway	Mid-Bay Bridge Easement Agreement #: AFMC-EG-2-09-001	Easement [Notes C, D]	\$1,696,787	
7.	Florida	Project title: Eglin Air Force Base cathodic protection Purpose: Utility and ground improvements Description: Install corrosion protection for 17 elevated water tanks	Okaloosa County Enhanced-use lease Agreement #: AFMC-EG-1-06-001	Enhanced-use lease [Notes C, E]	\$281,434	
8.	Navy	California	Project title: Naval Base Ventura County gate cable installation Purpose: Utility and ground improvements Description: Install cable reinforcing for the gates per security requirements	Global Auto Processing Services Lease Agreement #: N62473-07-RP-00046	Enhanced-use lease [Notes C, E]	\$307,382
9.	California	Project title: Naval Base Ventura County parking lot lighting at Bard Mansion Purpose: Utility and ground improvements Description: Replace one and install one new heritage street light in the Bard Mansion parking lot area.	Global Auto Processing Services Lease Agreement #: N62473-07-RP-00046	Enhanced-use lease [Notes C, E]	\$50,341	
10.	Florida	Project title: Naval Air Station Key West Mole Pier switchgear enclosure construction Purpose: Utilities and ground improvements Description: Construct four switchgear enclosures, and repair several degraded electrical components at switchgear locations on the Navy's Mole Pier	City of Key West Lease Agreement #: N62467-03-RP-00077	Enhanced-use lease [Notes C, E]	\$2,250,000	
11.	Florida	Project title: Naval Air Station Jacksonville marina pavilion construction and air passenger terminal awnings repair Purpose: Housing and community Description: A 30' x 60' marina pavilion structure of two passenger terminal awnings	Crown Castle Lease Agreement #: N62467-02-RP-00035	Outlease [Notes C, E]	\$35,796	

**Appendix V: DOD Construction and
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Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program	Type of agreement	Reported estimated value [Note B]
12.	Florida	Project title: Naval Air Station Jacksonville marina pavilion construction Purpose: Housing and community Description: Materials for a 30' x 60' marina pavilion structure	Crown Castle Lease Agreement #: N62467-02-RP-00035	Outlease [Notes C, E]	\$26,355
13.	Virginia	Project title: Joint Expeditionary Base Little Creek and Fort Story street sign replacement Purpose: Operation and training Description: Install new street signs at multiple locations	Global Signal Acquisitions Lease Agreement #: N62470-12-RP-00002	Lease [Notes C, F]	\$76,139
14.	West Virginia	Project title: Allegheny Ballistics Laboratory plant 1 infrastructure modernization Purpose: Utility and ground improvements Description: Implement plant-wide infrastructure which will then support a paperless manufacturing execution system	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$990,000
15.	West Virginia	Project title: Allegheny Ballistics Laboratory building 360 central air conditioning Purpose: Research, development, test and evaluation Description: Upgrade air conditioning system at Allegheny Ballistics Laboratory	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$420,186
16.	West Virginia	Project title: Allegheny Ballistics Laboratory building 368 roof overlay Purpose: Maintenance and production Description: Install roof overlay on the existing roof of building 368	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$274,000
17.	West Virginia	Project title: Allegheny Ballistics Laboratory roof replacement on buildings 373 and 167 Purpose: Maintenance and production Description: Replace existing roof systems of buildings 373 and 167 with a synthetic rubber roof system with rigid insulation	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$269,167
18.	West Virginia	Project title: Allegheny Ballistics Laboratory chiller building 417 Purpose: Research, development, test, and evaluation Description: Install two new 300-ton chillers in building 417	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$507,097

**Appendix V: DOD Construction and
Renovation Projects Initiated in the United
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Payments**

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program	Type of agreement	Reported estimated value [Note B]
19.	West Virginia	Project title: Allegheny Ballistics Laboratory building 420 paint cure oven and booth Purpose: Maintenance and production Description: Install a paint cure oven and booth at building 420	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$538,132
20.	West Virginia	Project title: Allegheny Ballistics Laboratory building 449 chiller replacement Purpose: Research, development, test, and evaluation Description: Install two chillers in building 449	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$210,368
21.	West Virginia	Project title: Allegheny Ballistics Laboratory plant one air hoist controls Purpose: Maintenance and production Description: Install air hoist controls in plant one	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$560,000
22.	West Virginia	Project title: Allegheny Ballistics Laboratory plant system upgrade Purpose: Operation and training Description: Upgrade building control systems and network automation engines	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$955,546
23.	West Virginia	Project title: Allegheny Ballistics Laboratory direct digital manufacturing upgrade Purpose: Research, development, test, and evaluation Description: Establish additive manufacturing-direct digital laser	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$950,000
24.	West Virginia	Project title: Allegheny Ballistics Laboratory building 397 5-gallon mixer upgrade Purpose: Maintenance and production Description: Refurbish 5-gallon mixer and install in building 397	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$995,000
25.	West Virginia	Project title: Allegheny Ballistics Laboratory building 610 lab development center upgrade Purpose: Research, development, test and evaluation Description: Move the model shop from building 363 to building 610 to establish the prototype development center as part of the guidance and sensor systems laboratory	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$922,500

Appendix V: DOD Construction and Renovation Projects Initiated in the United States in Fiscal Year 2013 Using In-Kind Payments

Component	Location	Project title or number, purpose, and description [Note A]	Agreement or program	Type of agreement	Reported estimated value [Note B]
26.	West Virginia	Project title: Allegheny Ballistics Laboratory building 7 upgrades Purpose: Maintenance and production Description: Upgrade maintenance garage in building 7	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$87,500
27.	West Virginia	Project title: Allegheny Ballistics Laboratory bay 4 upgrade Purpose: Research, development, test, evaluation Description: Upgrade the bay 4 air facility	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$978,890
28.	West Virginia	Project title: Allegheny Ballistics Laboratory construction management Purpose: Utility and ground improvements Description: Upgrade the steam plant	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$968,116
29.	West Virginia	Project title: Allegheny Ballistics Laboratory upper hilltop water tank Purpose: Utility and ground improvements Description: Install new water tank	Alliant Techsystems Lease Agreement #: N40085-11-RP-00171	Lease [Notes C, F]	\$972,631

Source: GAO analysis of DOD information. | GAO 15-649

Note A: Purpose categories were assigned by the Office of the Secretary of Defense based on facility classes listed in DOD Instruction 4165.03, DOD Real Property Categorization, (Aug. 24, 2012, Incorporating Change Feb. 5, 2015).

Note B: Estimated values were provided by DOD in then-year dollars.

Note C: Statutory authorities for these agreements include, among others: 10 U.S.C. § 2667 (leases and enhanced-use leases) and 10 U.S.C. § 2668 (easements).

Note D: Easements grant a right to use or pass over parcels of land in specific ways; for example to install or run utility lines across an installation, or to build roads, streets, or railroad tracks.

Note E: Enhanced-use leases generally are leases that are more complex and longer term than basic leases and can provide for some form of in-kind consideration. For example, an enhanced-use lease might provide for a 50-year lease of military land to a private developer that would be expected to construct office or other commercial buildings on the land and then rent the facilities to private sector tenants for profit.

Note F: Leases grant a non-federal entity exclusive possession of real property for a specified term in return for rent or other consideration. For example, an installation may grant a lease for a credit union to build a branch office.

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

GAO staff members who made key contributions to this report were Laura Durland, Assistant Director; Bonita Anderson; Shawn Arbogast; Pat Donahue; Dave Keefer; Richard Powelson; and Michael Willems.

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