

The Army's Costs to Eliminate Its Deferred Maintenance Backlog and to Renovate and Modernize Its Buildings

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Focus of the Report

How much would it cost to improve the condition of buildings in use on Army bases in the United States?

The Congressional Budget Office analyzed two types of costs:

- Those related to deferred maintenance, and
- Those related to renovation (restoration) and modernization of buildings to better match them to the needs of the units using them.

The report focused on buildings that the active Army is responsible for maintaining.

Key Findings of the Report

- Completely eliminating the deferred maintenance backlog would cost about \$19 billion in 2020 dollars.
- Renovating and modernizing the buildings within their current footprint to fully provide users with the capability to fulfill their missions would cost an additional \$34 billion. The cost includes the assumption that the Army would obtain efficiencies by carrying out renovation and modernization projects concurrently.

CBO's Approach to the Analysis

- CBO relied on data provided by the Army and did not conduct its own independent assessment of the conditions of Army buildings.
 - CBO used the Real Property Information Model database, version 10.0.
 - The collection of that information is mandated by the Congress for all services in 10 U.S.C. § 2721 and is implemented through the Department of Defense's (DoD's) *Financial Management Regulation* and DoD Instruction 4165.14.

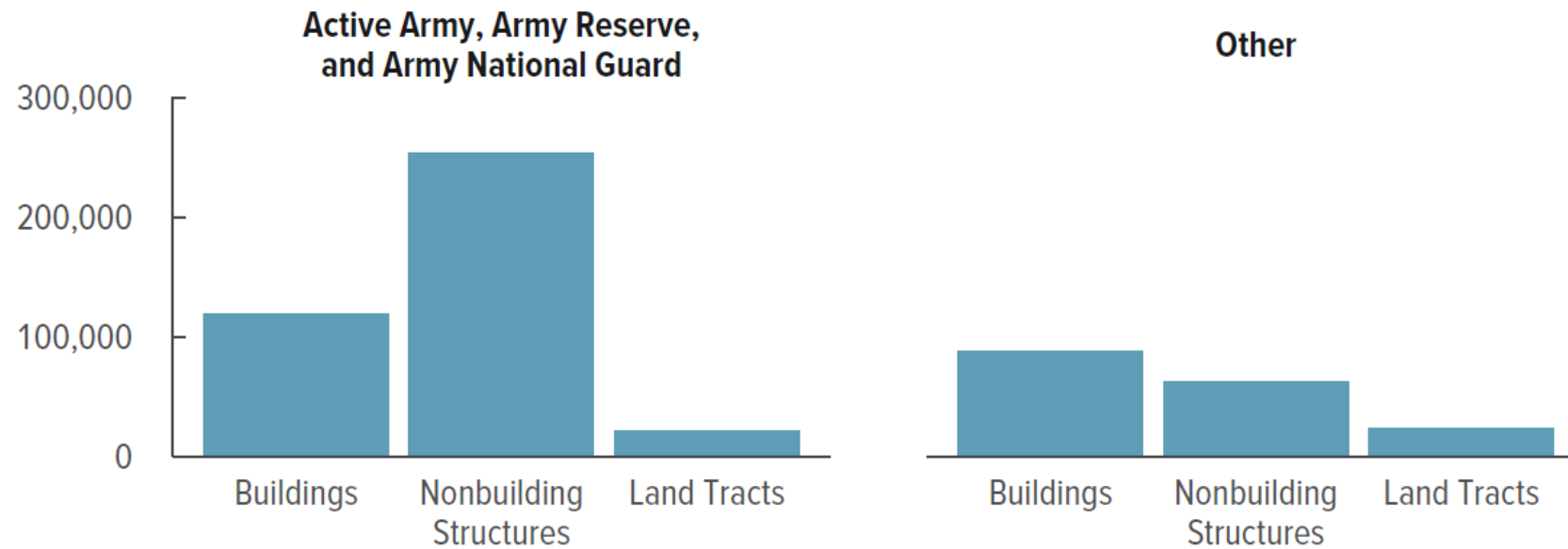
- CBO plans to analyze the facilities of the other services in the order in which they provided data to the agency.
 - CBO is currently analyzing the Navy's facilities.
 - Subsequent analyses will focus on the facilities of the Air Force and the Marine Corps.



The Department of the Army's Real Property

Real Properties on Army Bases, by Organization Responsible for Maintenance and Type, September 2020

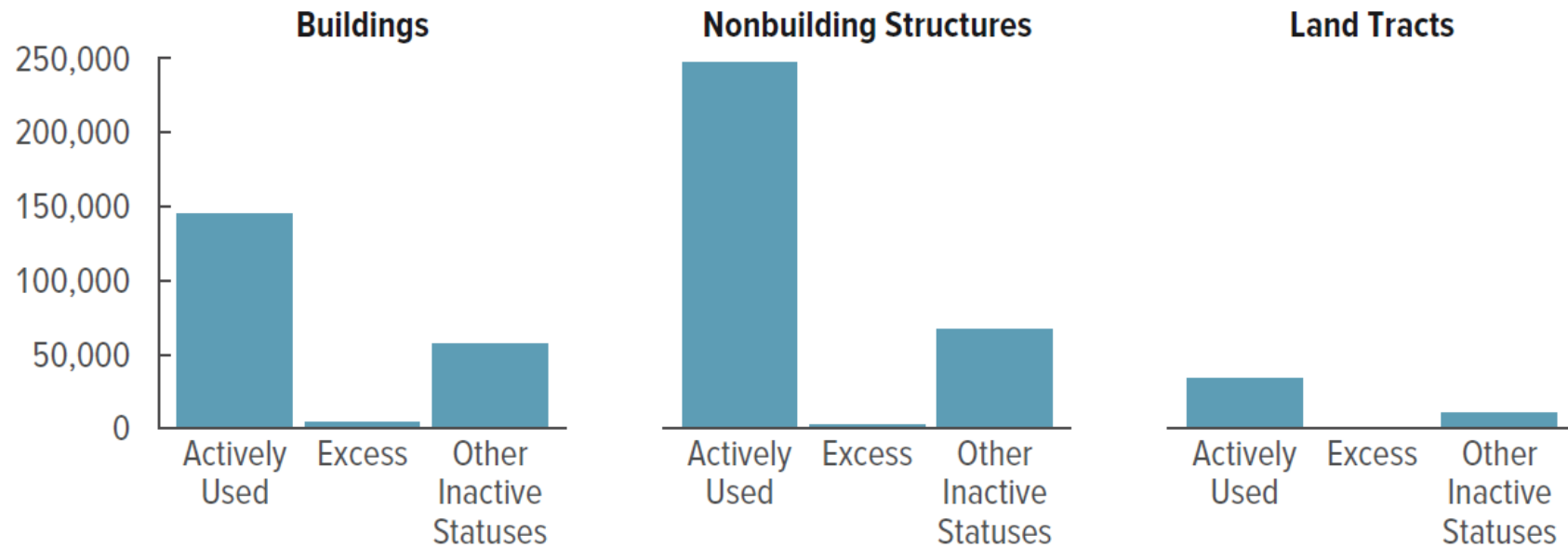
Number of Real Properties



The active Army and its reserve components are responsible for maintaining most real property on Army bases, but other organizations have a role as well.

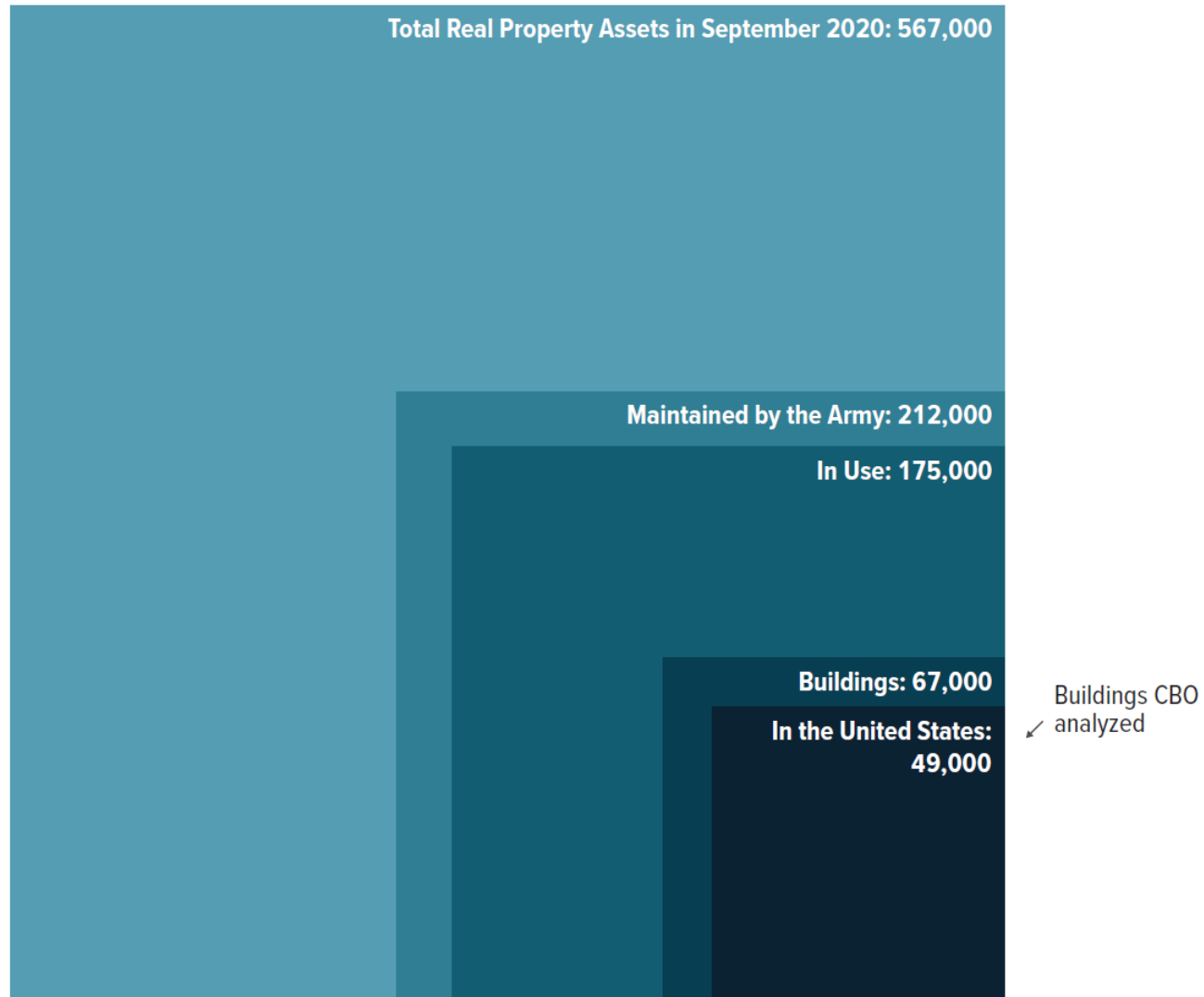
Real Properties on Army Bases, by Type and Operational Status, September 2020

Number of Real Properties



Most properties on Army bases are actively used.

Army Buildings Considered in CBO's Analysis

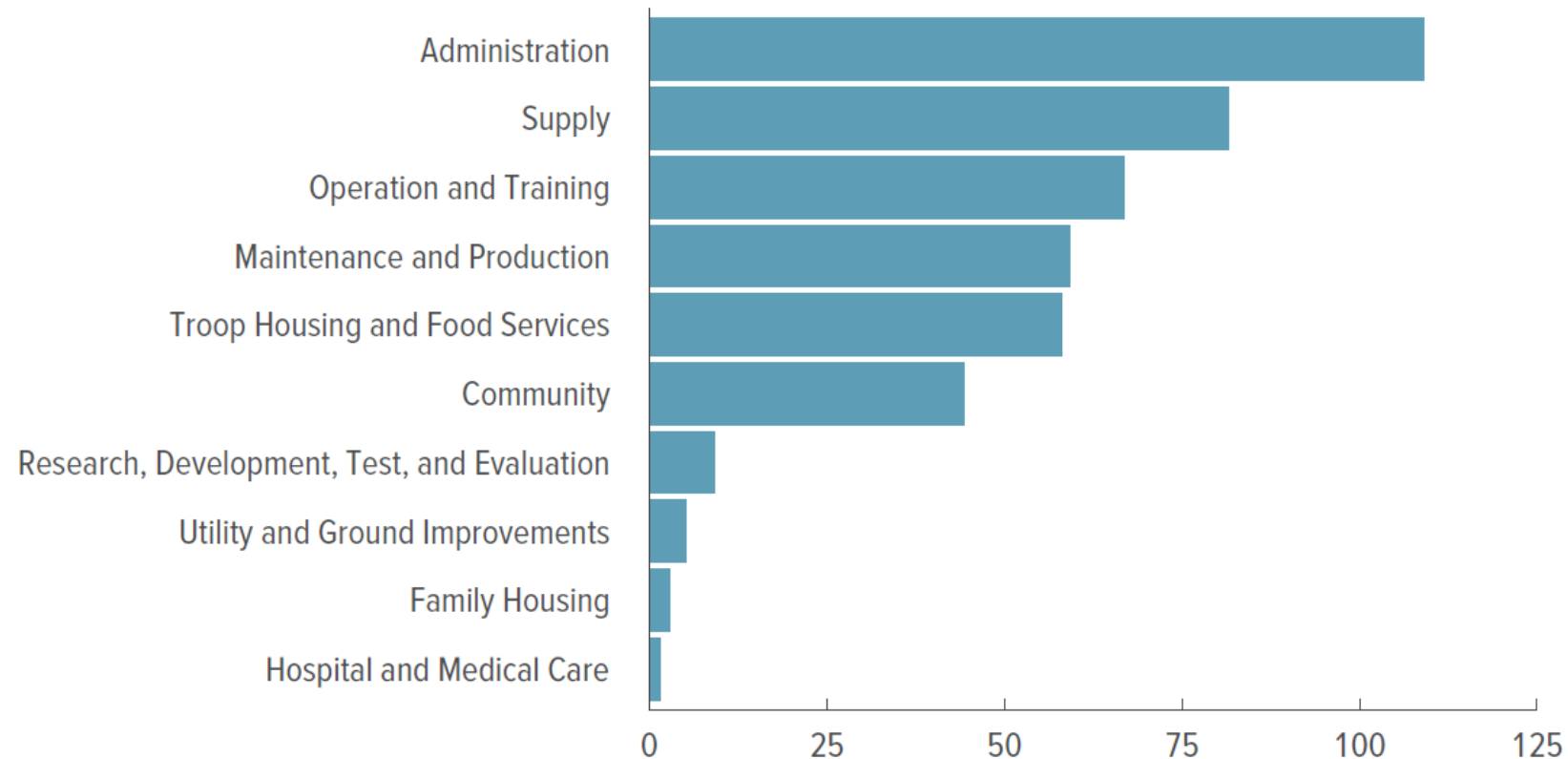


Of the 567,000 real properties located on Army bases worldwide in 2020, CBO focused on 49,000, or nearly 9 percent. Those buildings were in use in the United States and were maintained by the Army's active component.



Total Space Occupied by the Army Buildings Considered in CBO's Analysis, by Function

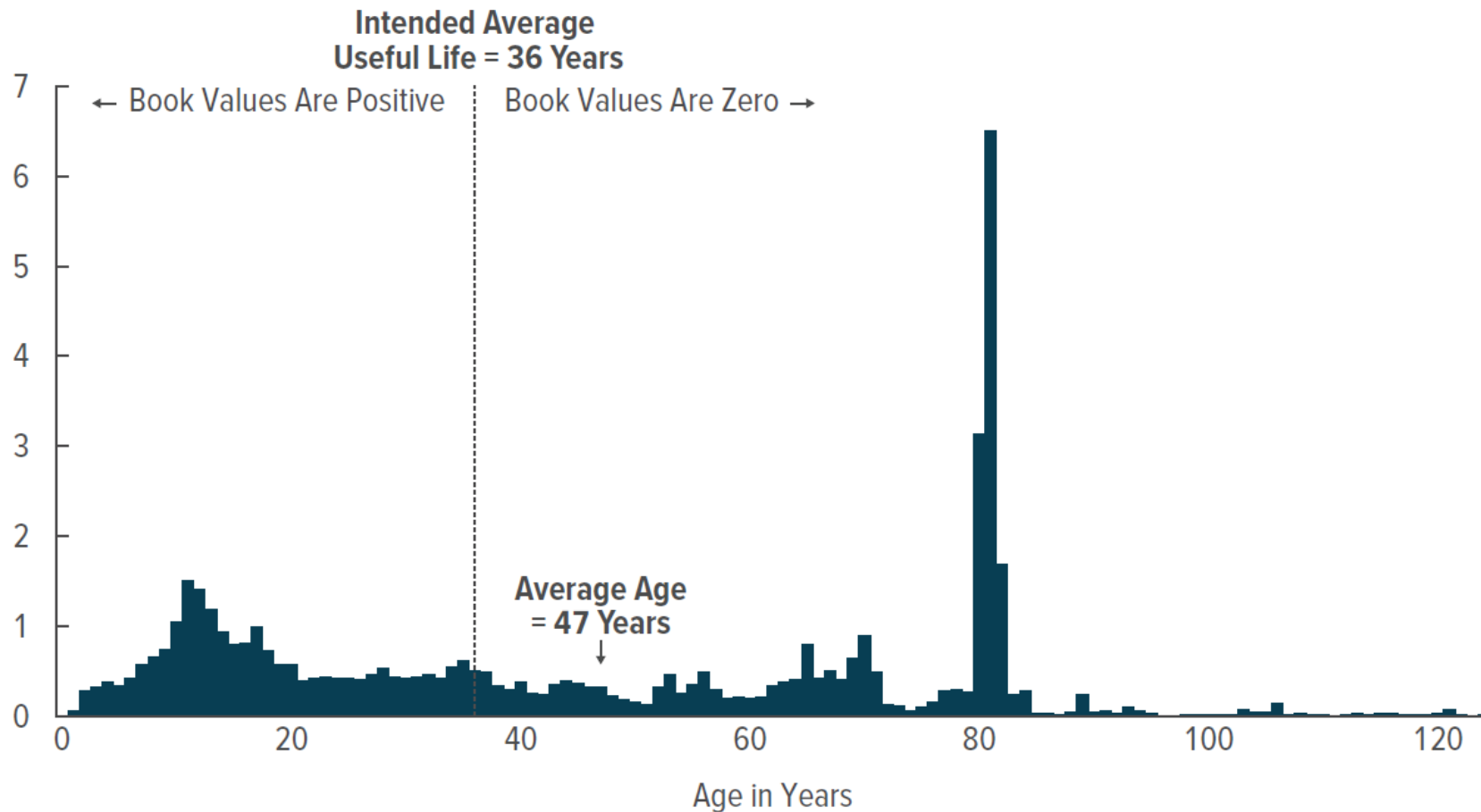
Millions of Square Feet



Buildings used for administration, supply, and operation and training accounted for over half of the space in the buildings that CBO analyzed.

Age of the Army Buildings Considered in CBO's Analysis, September 2020

Thousands of Buildings



On average, the buildings CBO analyzed were in use 10 years longer than the Army had intended.

Analysis of Basic Measures of Performance

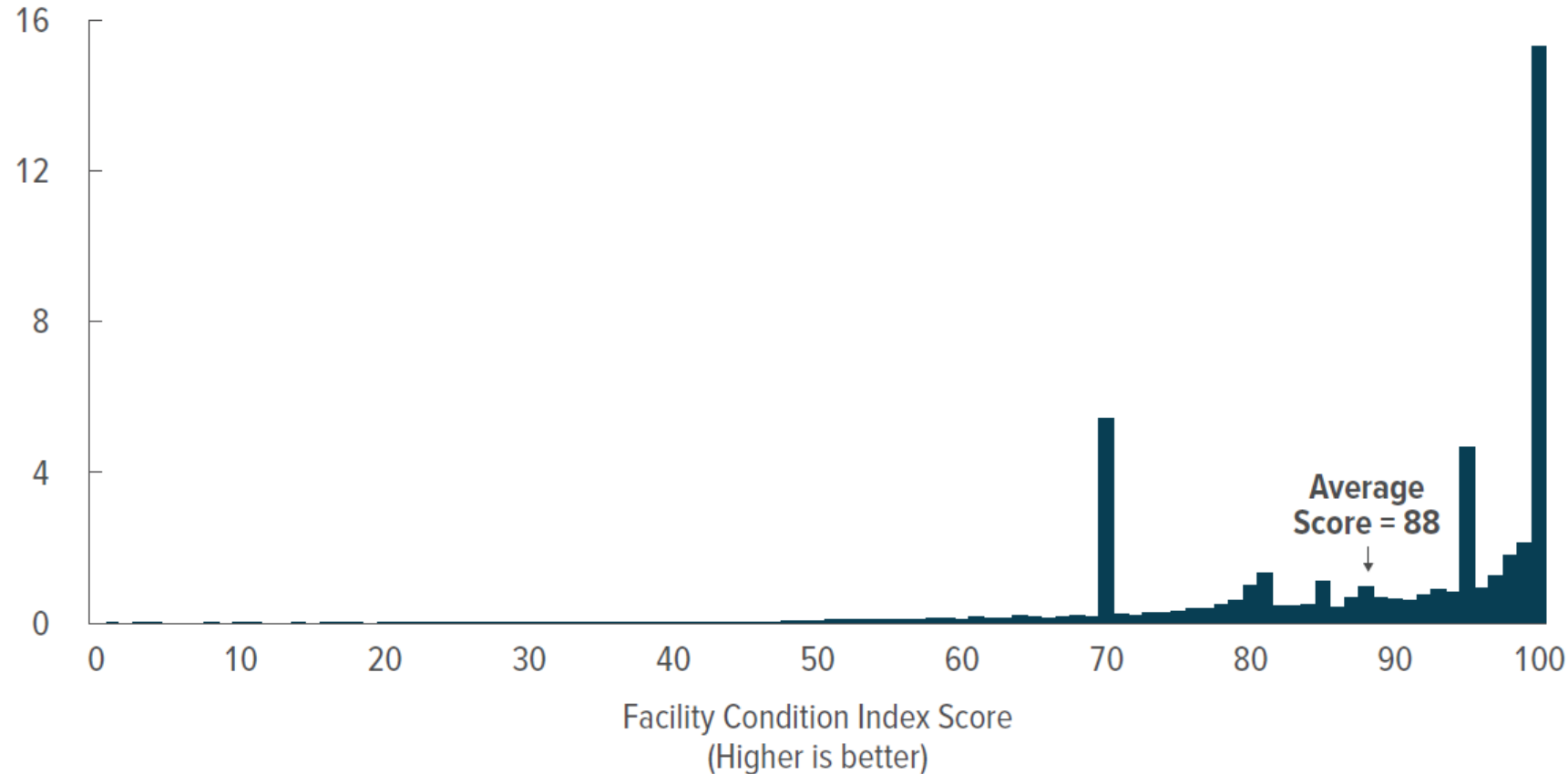
Measures of Performance Analyzed

- Facility Condition Index Score
 - Measures a real property's physical condition
 - Compares the estimated cost of an asset's current deferred maintenance and repair with that asset's replacement value
 - Expressed as a percentage ranging from zero (worst condition) to 100 (best condition)

- Functional-Capability Assessment Score
 - Measures how well a real property supports users' missions
 - Reflects a property's capability to perform its function given its current size, configuration, condition, and siting
 - Assigns one of the Army's four category scores to indicate the extent of renovation and modernization costs that would make the property fully capable of supporting its current function

Facility Condition Index Scores of the Army Buildings Considered in CBO's Analysis

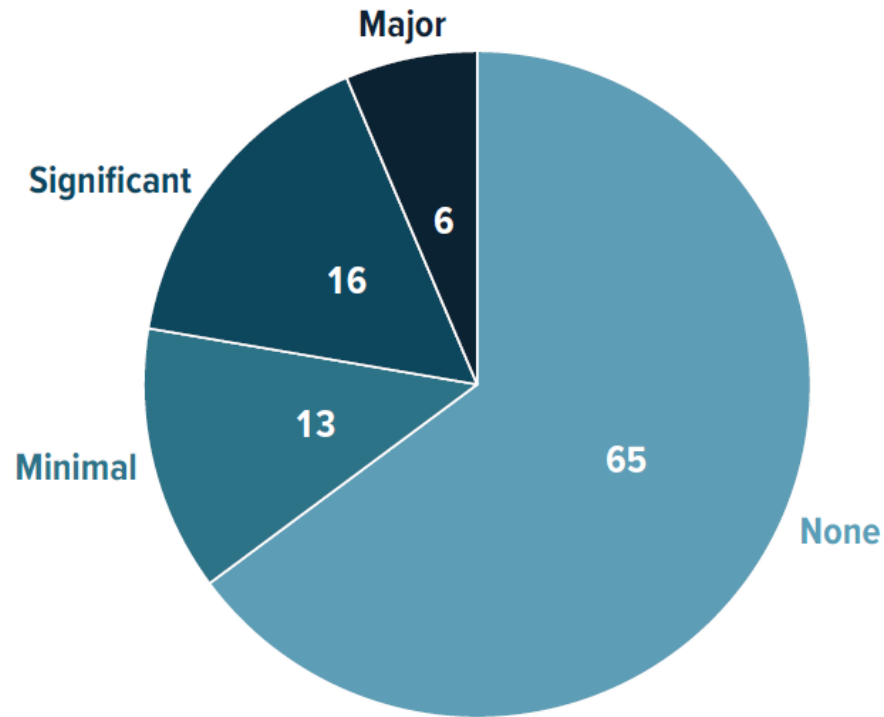
Thousands of Buildings



Most of the buildings in the data set that CBO analyzed were in good physical condition.

Functional-Capability Assessment Scores of the Army Buildings Considered in CBO's Analysis

Percent

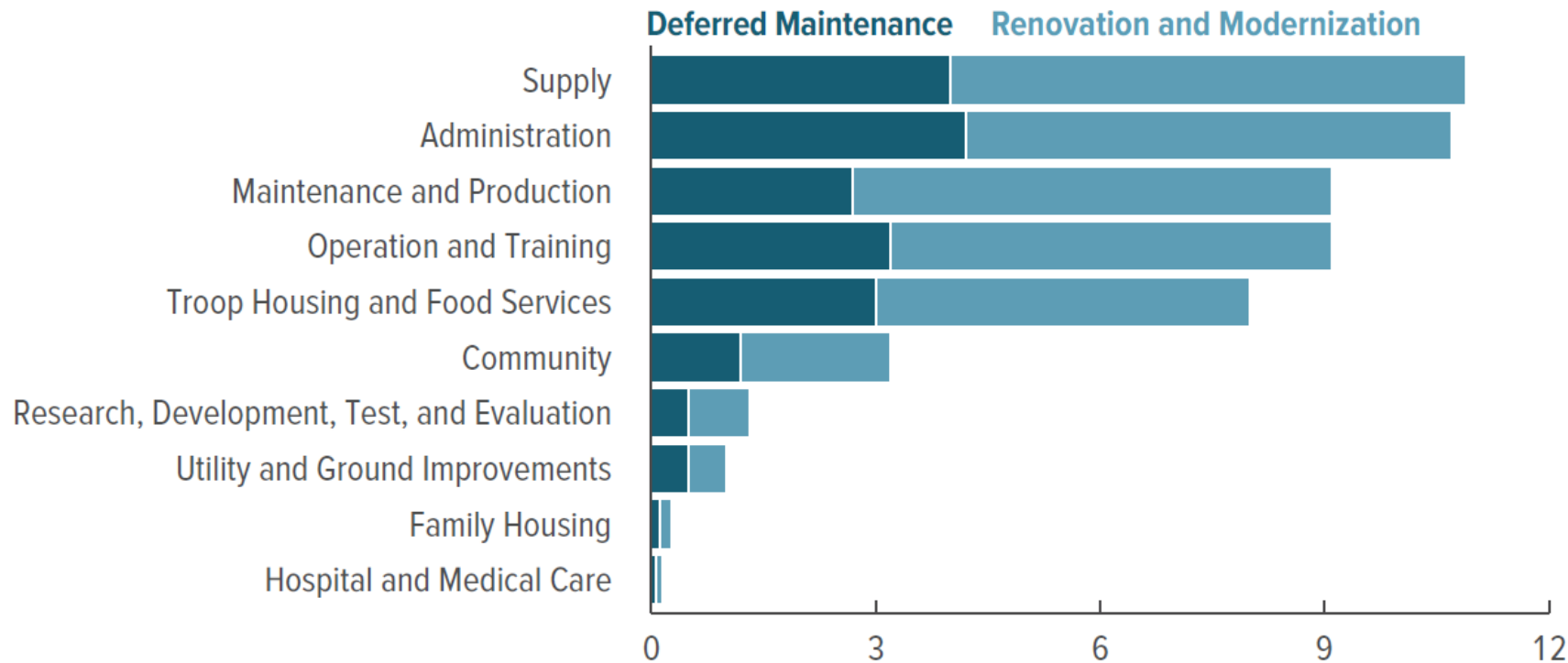


Most of the Army's buildings do not require any renovation or modernization to support the functions for which they are being used.

Costs of Eliminating the Deferred Maintenance Backlog and of Renovating and Modernizing the Army's Buildings

Combined Costs to Eliminate the Deferred Maintenance Backlog and to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Function

Billions of 2020 Dollars

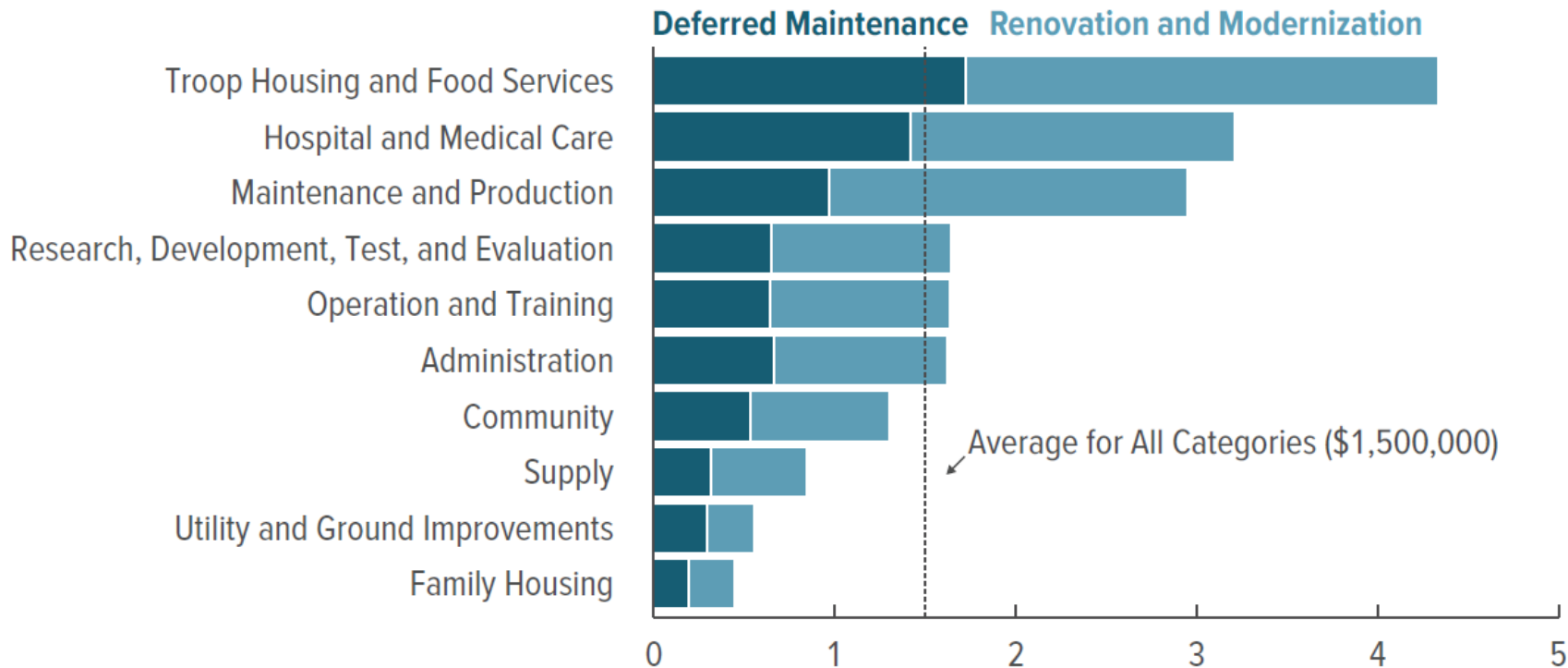


Buildings in the five largest categories accounted for about \$48 billion, or 91 percent, of the \$54 billion combined cost to eliminate the deferred maintenance backlog and to renovate and modernize Army buildings.



Combined Costs per Building to Eliminate the Deferred Maintenance Backlog and to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Function

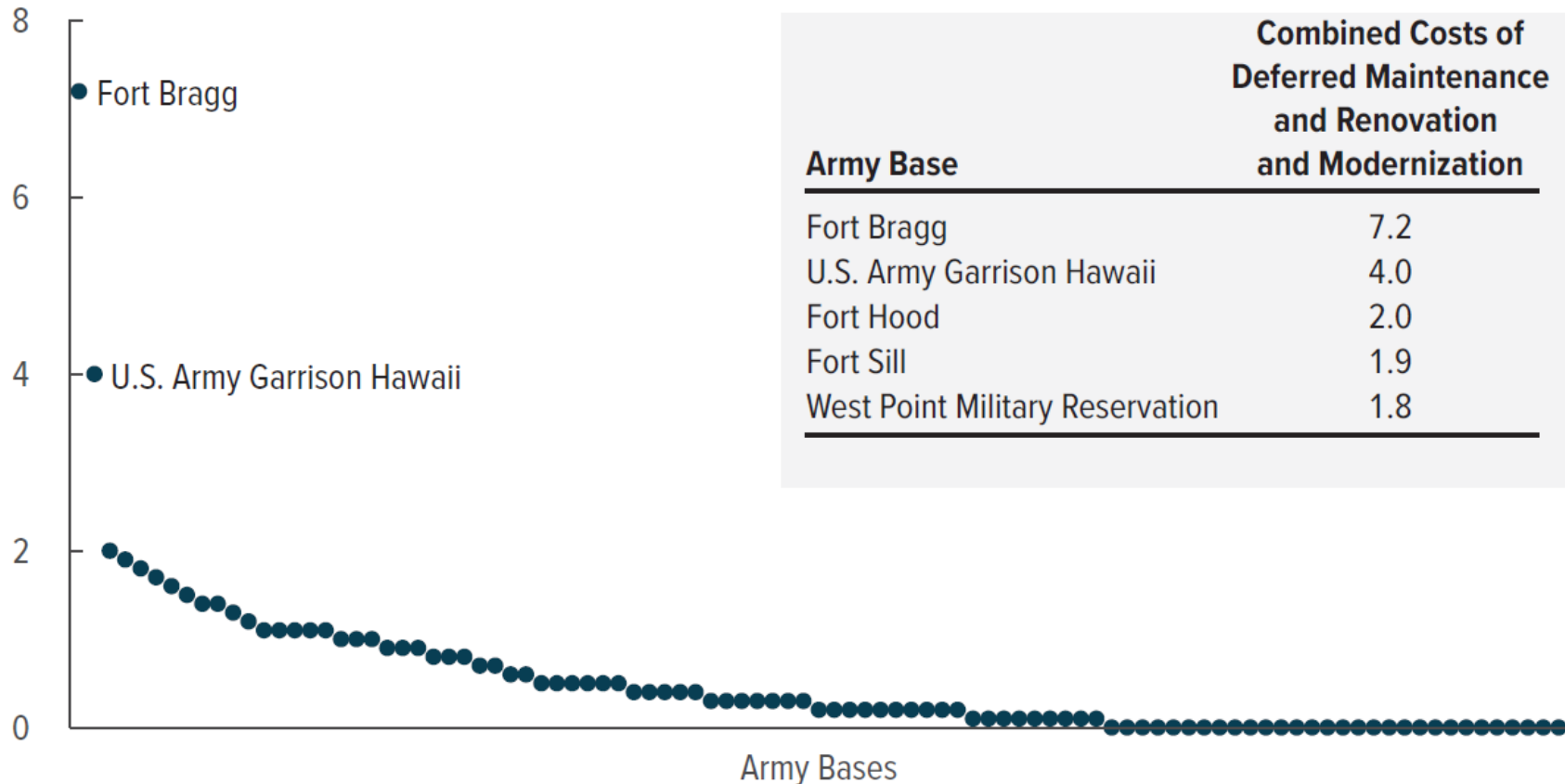
Millions of 2020 Dollars



Buildings in the three largest categories had costs per building for combined deferred maintenance and renovation and modernization that were significantly larger than the corresponding average costs per building for all buildings.

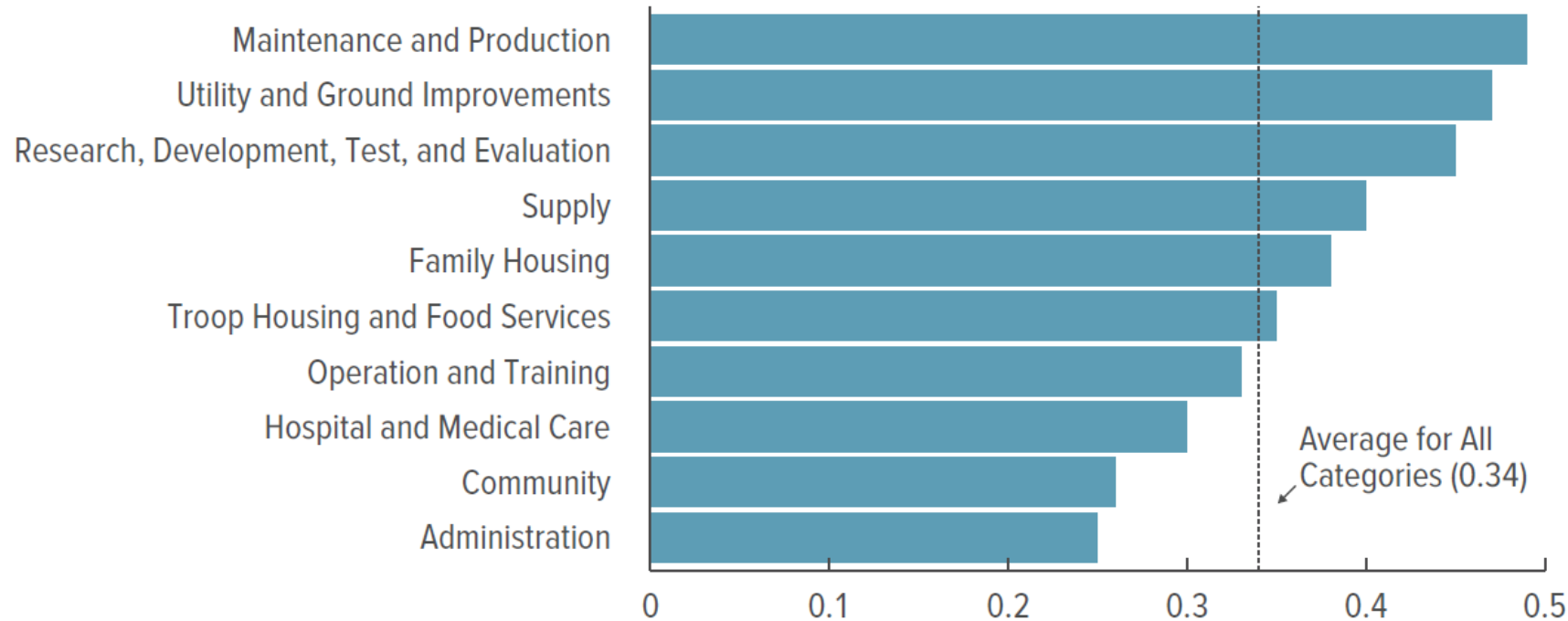
Combined Costs to Eliminate the Deferred Maintenance Backlog and to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Base

Billions of 2020 Dollars



Total combined costs for deferred maintenance and renovation and modernization were significantly larger for buildings located on Fort Bragg and U.S. Army Garrison Hawaii than for buildings on other bases.

Ratio of Combined Costs of Deferred Maintenance and Renovation and Modernization to Replacement Value per Building for the Army Buildings Considered in CBO's Analysis, by Function



At almost one-half, the ratio of the combined costs of deferred maintenance and renovation and modernization to the replacement value per building was highest for buildings used for maintenance and production functions.

Additional Information

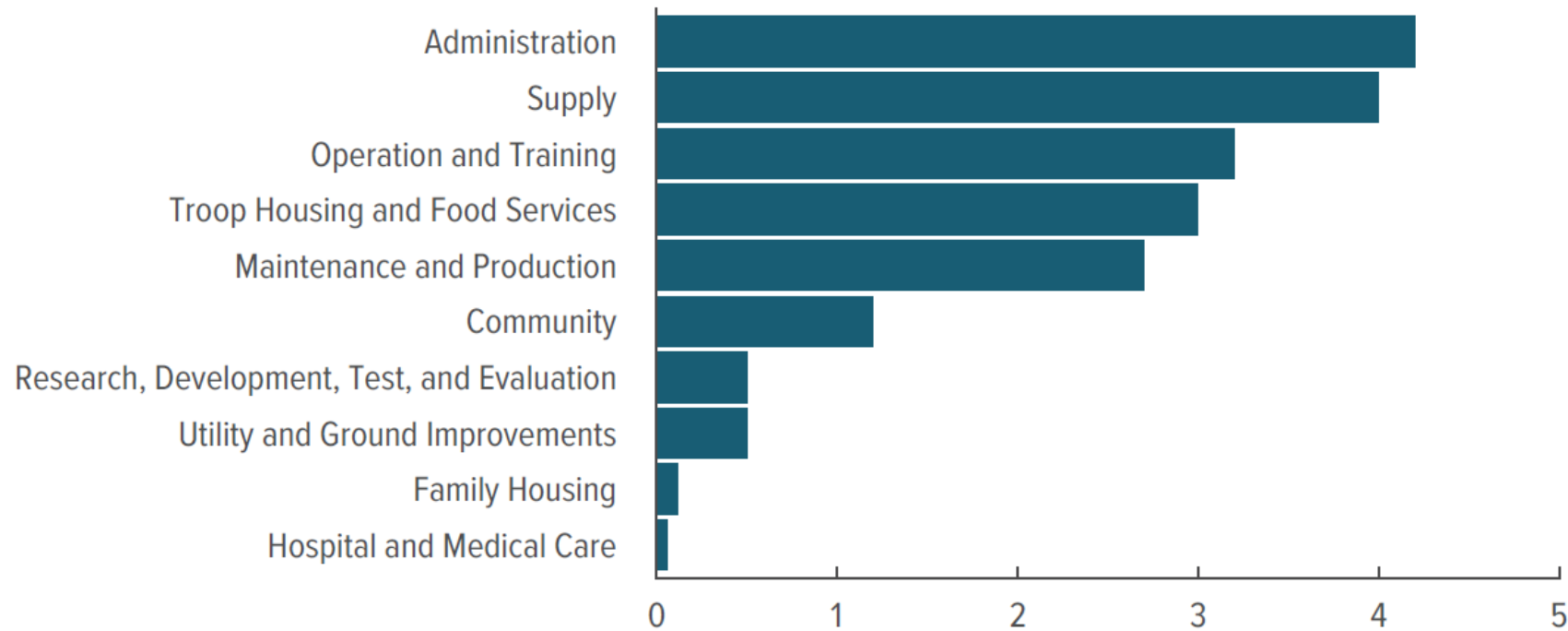
Characteristics of the Army Buildings Considered in CBO's Analysis

Replacement Value (Cumulative)	\$169 billion
Book Value (Cumulative)	\$33.5 billion
Area (Cumulative)	438 million square feet
Intended Useful Life (Average)	36 years
Age (Average)	47 years
Share of Buildings Exceeding Their Intended Useful Life (Average)	41 percent (20,000 of 49,000)
Utilization Rate (Average)	95 percent

The replacement value of the buildings CBO analyzed was roughly five times their book value (that is, their original cost minus accumulated depreciation), reflecting their age and longer term of use, on average, than was originally planned.

Costs to Eliminate the Deferred Maintenance Backlog for the Army Buildings Considered in CBO's Analysis, by Function

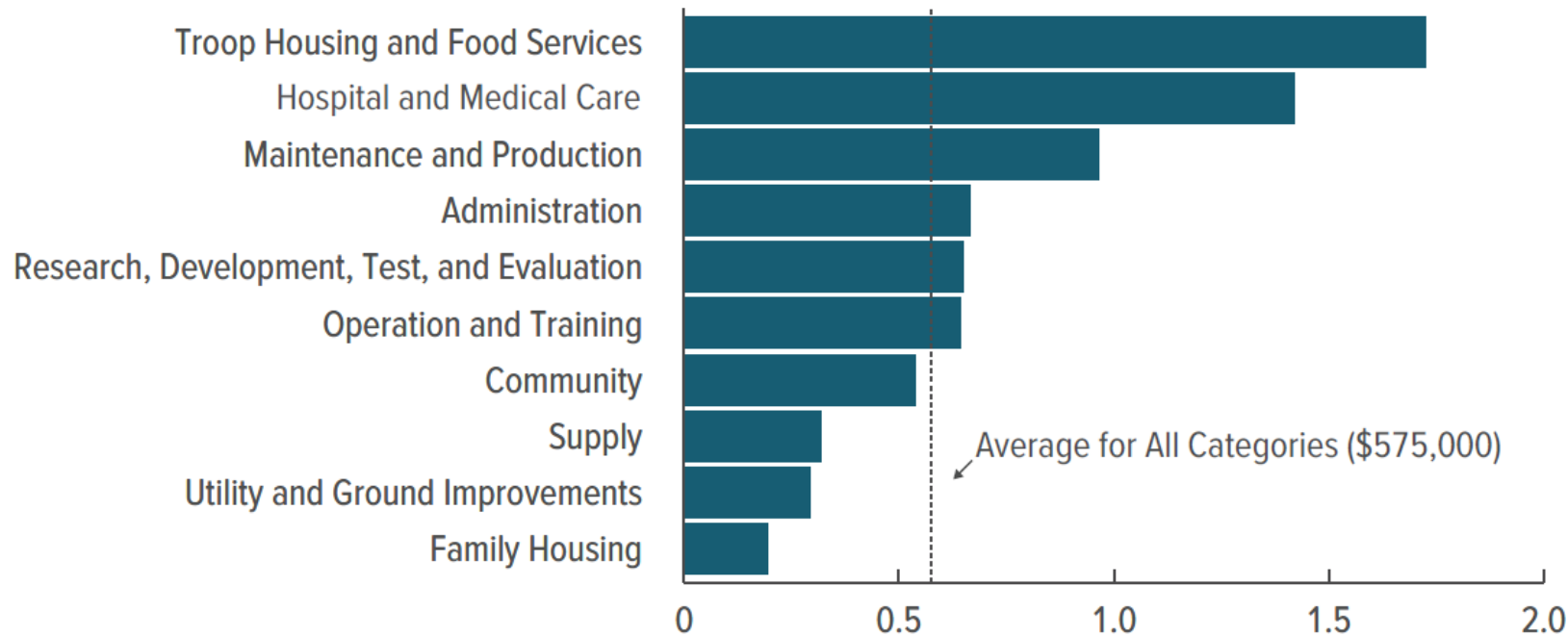
Billions of 2020 Dollars



Buildings in the largest five categories accounted for \$17 billion, or 89 percent, of the estimated \$19 billion cost to eliminate the deferred maintenance backlog.

Costs per Building to Eliminate the Deferred Maintenance Backlog for the Army Buildings Considered in CBO's Analysis, by Function

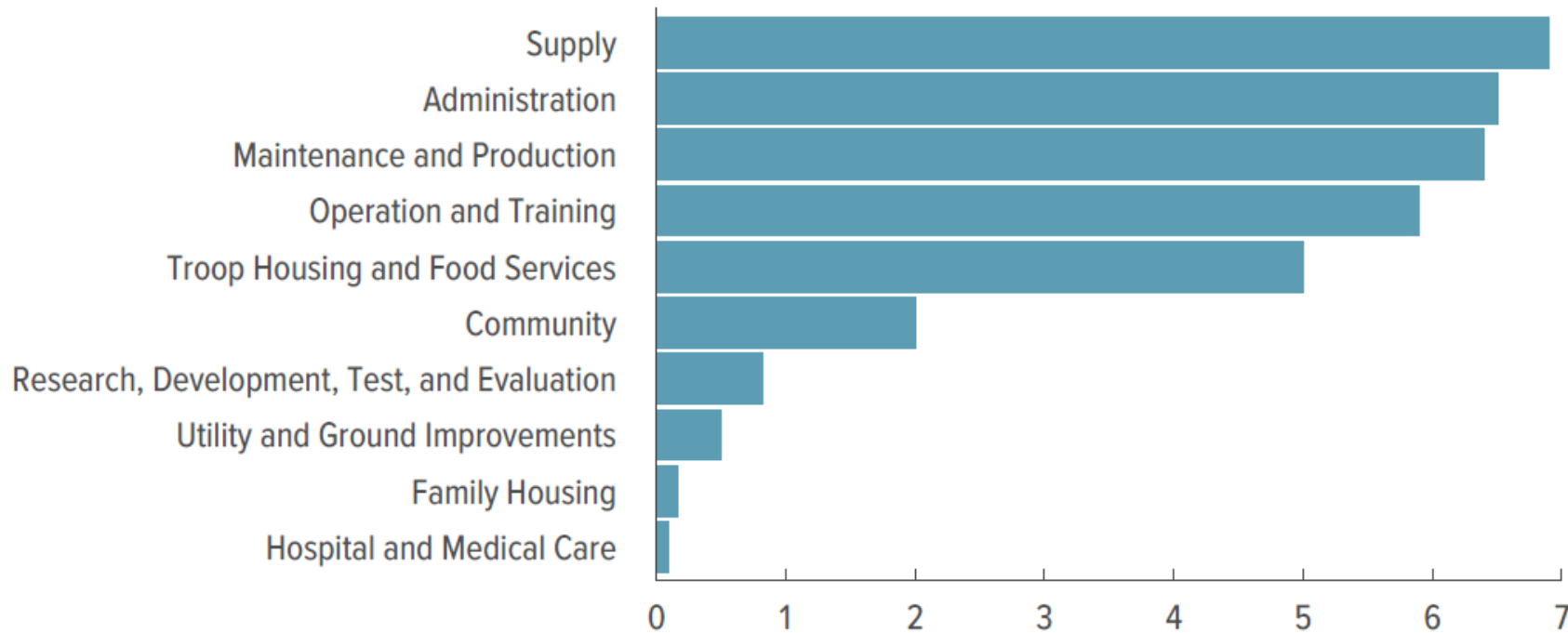
Millions of 2020 Dollars



Buildings in the largest three categories had deferred maintenance costs per building that were significantly larger than those for all buildings.

Costs to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Function

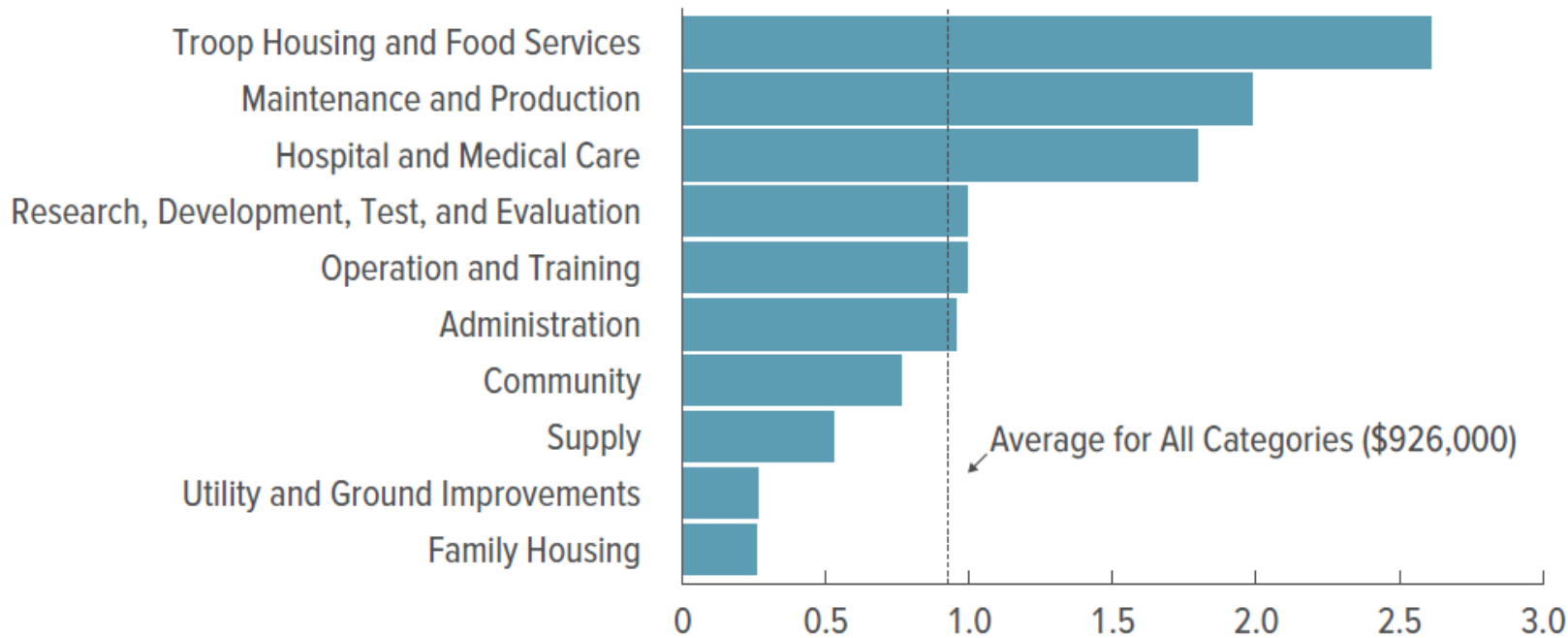
Billions of 2020 Dollars



Buildings in the five largest categories accounted for about \$31 billion, or 91 percent, of the \$34 billion cost to renovate and modernize Army buildings to fully match users' goals.

Costs per Building to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Function

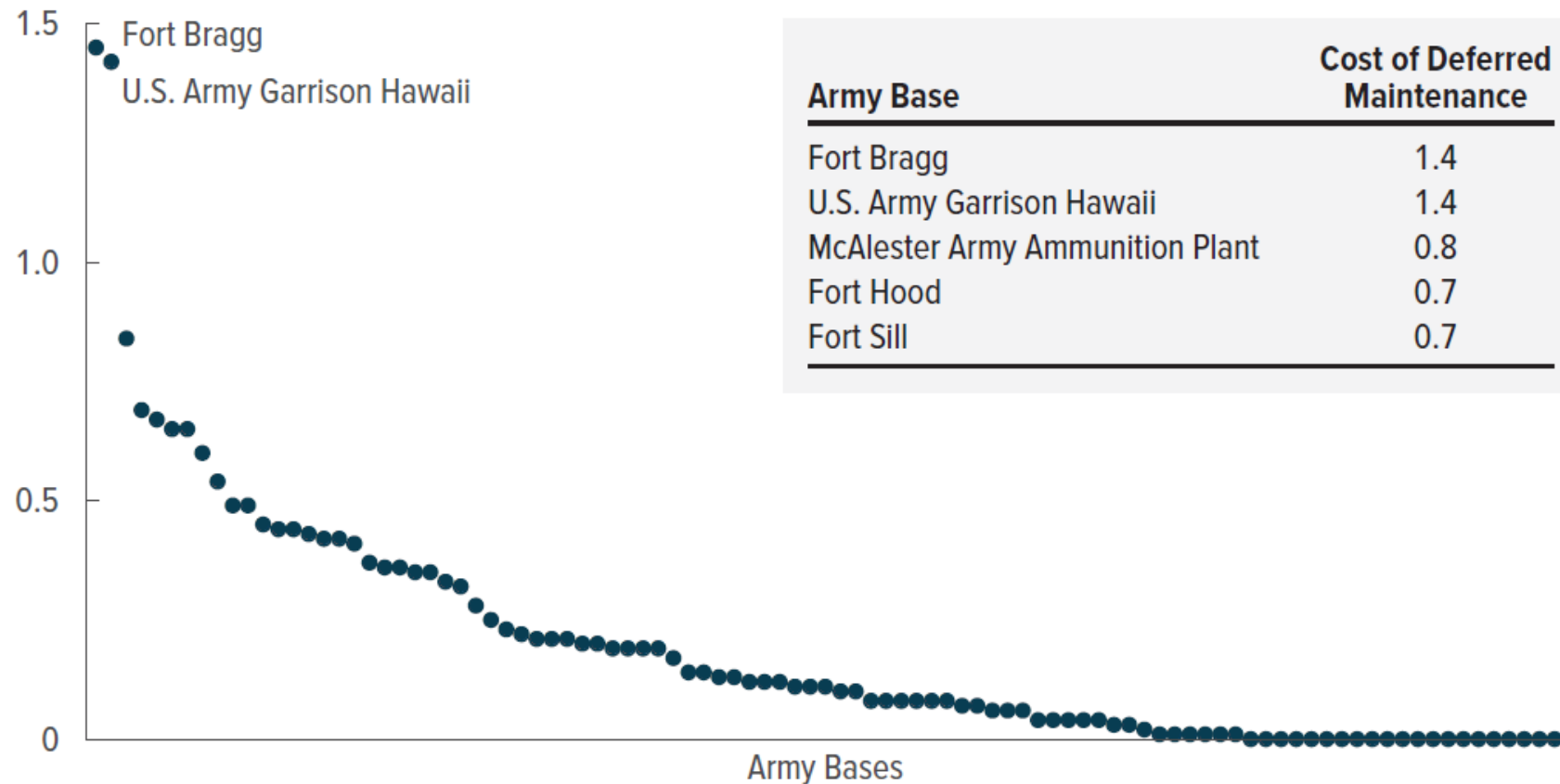
Millions of 2020 Dollars



Buildings in the largest three categories had renovation and modernization costs per building that were significantly larger than the average renovation and modernization costs per building for all buildings.

Costs to Eliminate the Deferred Maintenance Backlog for the Army Buildings Considered in CBO's Analysis, by Base

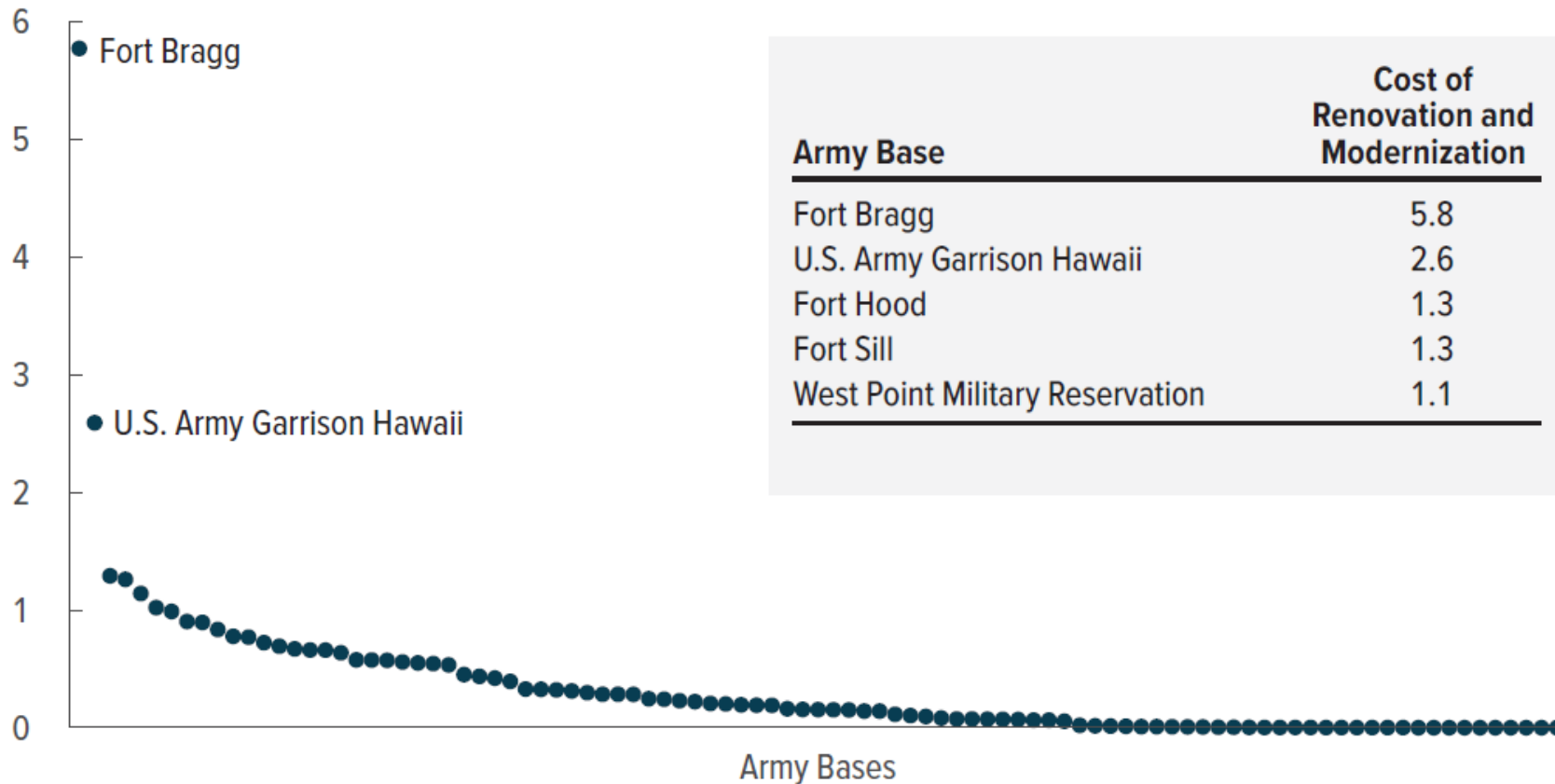
Billions of 2020 Dollars



Fort Bragg and U.S. Army Garrison Hawaii had significantly higher deferred maintenance costs than other Army bases. Both bases had much more building space than average, but the condition of the buildings at U.S. Army Garrison Hawaii was worse than average.

Costs to Renovate and Modernize the Army Buildings Considered in CBO's Analysis, by Base

Billions of 2020 Dollars



Total renovation and modernization costs were significantly larger for buildings located on Fort Bragg and U.S. Army Garrison Hawaii than for buildings on other bases.