

135819

United States General Accounting Office

GAO

Report to the Secretary of the Army

May 1988

# ARMY HOUSING

## Programming of Housing in Europe Exceeds Requirements



135819

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National Security and  
International Affairs Division

B-222176

May 18, 1988

The Honorable John O. Marsh, Jr.  
The Secretary of the Army

Dear Mr. Secretary:

We reviewed family and unaccompanied personnel housing projects planned for in the Army's fiscal year 1987 budget for the United States Army, Europe (USAREUR). We also reviewed the 5-year acquisition plans for installations that had housing projects included in the fiscal year 1987 budget. We conducted this review because our past work showed that the Army's justifications for new projects had not always supported new construction requirements. In reviewing projects planned for in the fiscal year 1987 budget, we examined the process by which the Army determines its housing needs.

This letter summarizes the results of our audit, which are discussed more fully in appendixes I and II. Our objectives, scope, and methodology are discussed in appendix III.

We found that USAREUR has overstated its housing requirements because of errors in the housing surveys, which are done by each Army installation to determine current housing conditions and to project future family housing requirements. The errors we found included overstatement of long-term personnel strengths, inaccurate marriage factor computations, and understatement of suitable community housing assets. In addition, we found that non-command sponsored families<sup>1</sup> not eligible for government housing were included in housing requirements.

Because of these errors, USAREUR requested additional family housing that was not needed. For example, the family housing survey the Army prepared for the Frankfurt community showed a housing deficit of over 1,500 units. As a result, for fiscal year 1987, the Frankfurt military community programmed 72 new apartments (converted attics) and 90 additional lease allocations (authority-to-lease quarters) it does not need. Our analysis of Army data showed that there was a surplus of over 400 units in the Frankfurt community at that time. In addition, 200 family housing units (funded in 1984 but not yet under construction)

<sup>1</sup>Non-command sponsored families are families that accompany service members who, because of the service member's tour status, are not authorized to accompany the service member to his or her duty station overseas and therefore must pay for their own housing costs.

programmed for the Frankfurt community were cancelled by USAREUR because of our analysis.

Our analysis of family housing requirements for the Hanau, Nuernberg, and Mainz military communities showed housing surpluses totaling over 1,300 units. However, because of errors in the survey, the Army estimated a housing deficit of over 1,000 units. The Army's estimate resulted in the programming of over 600 new housing units that were unneeded.

We also found that USAREUR may not be maximizing private rentals as required by DOD instructions. However, based on our inquiries about private rentals, USAREUR issued a directive reiterating DOD policy to utilize private rentals where possible.

The data the Army used to determine unaccompanied personnel housing requirements also contained errors and, as a result, overstated the requirements. As a result of our review, the Frankfurt, Nuernberg, and Mainz military communities have all either cancelled housing projects or postponed them. The cost of these projects totals at least \$24.3 million. Of this total, \$3.8 million was for funded projects, \$13.4 million was for tentatively planned projects, and \$7.1 million was for programmed projects.

Beginning in January 1987, USAREUR established a new process for estimating family housing requirements. We did not examine this process but believe that, until the errors in the data base used by USAREUR to calculate its housing requirements are corrected, continued programming at 100 percent<sup>2</sup> of the net requirement will result in overprogramming of its housing needs.

We recommend that you take the following actions:

- Require an independent review of the documentation for military family and unaccompanied personnel housing requirements in Europe to ensure accuracy and compliance with Department of Defense (DOD) instructions. Until such a review is initiated, direct USAREUR to program its housing at less than 100 percent of anticipated needs.

<sup>2</sup>On August 29, 1986, the Deputy Assistant Secretary of Defense (Installations) granted USAREUR a waiver to program at 100 percent of its net family housing requirement. Department of Defense and Army regulations normally require overseas locations to program at 80 percent of their net housing requirements.

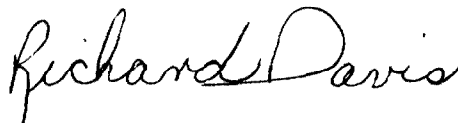
- Modify the family housing instructions for overseas locations to exclude non-command sponsored families from family housing requirement calculations.

In commenting on a draft of this report, DOD said that, while it did not fully agree with our findings concerning overestimates of housing requirements, it concurred with our recommendations and has already directed its major commands to omit non-command sponsored families from family housing requirements, directed USAREUR to program at less than 100 percent, and requested that the Army Audit Agency and Engineer Inspector General review unaccompanied personnel and family housing requirements. DOD's comments are in appendix IV.

As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report. A written statement must also be submitted to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Chairmen of the above Committees and of the House and Senate Committees on Armed Services; the Secretary of Defense; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

Sincerely yours,



Richard A. Davis  
Senior Associate Director

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**Abbreviations**

USAREUR United States Army, Europe  
DOD Department of Defense

# Programming of Family Housing Exceeds Requirements

## Background

The Department of Defense (DOD) is committed to providing adequate housing to military families. DOD Instruction 4165.45, dated January 19, 1972, states that DOD's policy is to rely on the local private housing market as the primary source of family housing. However, if private housing is insufficient or unsuitable, additional military housing may be constructed or leased to meet valid requirements.

The family housing requirements survey administered by the Army is used to determine current housing conditions and projected family housing requirements. The results of the survey are used as the initial basis for determining family housing needs.

The family housing requirements survey, which consists of questionnaire responses from a random sample of military families and supplemental information, is used to project military housing surpluses or deficits. Using questionnaire results, the Army compiles a profile of the current housing situation. On the questionnaire, respondents are asked how many dependents they have, whether their families are currently living with them, and whether their families are living in military or civilian housing. Respondents are also asked to state whether their housing is within a 60-minute commute of their duty station, to assess the suitability of their current housing, and to specify any reasons for unsuitability.

In conjunction with the questionnaire, the Army also develops supplemental information to better define the housing situation. For example, to determine future housing requirements, the Army projects future personnel strengths by rank and the number of military personnel who will be entitled to Basic Allowance for Quarters. In addition, the Army estimates the number of vacant and firmly planned community rental units available to military personnel.

Based on this information, the Army calculates the housing deficit or surplus. The Army multiplies the projected long-term personnel strength by a marriage factor, an estimate of the number of married personnel, to determine the gross family housing requirement. The gross family housing requirement is then reduced by the number of voluntarily separated personnel<sup>1</sup> and compared with the number of suitable housing assets to estimate the housing deficit or surplus.

<sup>1</sup>Voluntarily separated personnel are defined as married persons who do not bring their families with them even though adequate housing is available. Personnel in this category are not counted among those requiring family housing.



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**Appendix I  
Programming of Family Housing  
Exceeds Requirements**

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Family and unaccompanied personnel housing requirements should correlate with personnel strength. In other words, the total permanent party (troop) strength minus the family housing requirement should equal the unaccompanied housing requirement. During our review we examined the Army's estimates for the Frankfurt, Hanau, Nuernberg, and Mainz military communities. We found that, because of errors in the housing requirements surveys, the Army overstated housing requirements.

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**Frankfurt Military  
Community**

We identified errors in the Frankfurt military community's family housing requirements survey (as of September 30, 1985), which was used to justify fiscal year 1987 housing projects. The Frankfurt military community had been programmed to receive 200 family units funded in fiscal year 1984 but not yet under contract. Also, as a result of the survey the Frankfurt military community had programmed 72 new attic conversion units and 90 additional lease allocations for fiscal year 1987. Based on our review of the Frankfurt program, the 200 family units funded in fiscal year 1984 have been cancelled, the 72 attic conversions have been deferred to fiscal year 1990, and the lease allocations decreased to 22.

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**Long-Term Personnel  
Strength Projections  
Overstated**

The Frankfurt military community's survey overstated the long-term personnel strength. During our review of the survey, we requested that V Corps stationing officials (headquarters for Frankfurt) verify the long-term personnel strength projection. Although the survey showed a long-term personnel strength of 10,629, V Corps stationing officials stated that the long-term personnel strength projection should be 8,873, lower than Frankfurt's figure by 1,756. This lower figure reduces the housing requirement.

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**Marriage Factor  
Computation Inaccurate**

The marriage factor, a percentage derived from historical data, is multiplied by total troop strength to estimate how many service members are married and thus eligible for government-furnished family housing. The Frankfurt military community's survey overstated the marriage factor. While the survey showed a projected marriage factor for enlisted personnel of 69.3 percent, V Corps housing officials who reviewed the data calculated the figure as 64.0 percent. When this adjusted enlisted marriage factor was added to the marriage factors for officers and "other"

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**Appendix I  
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enlisted personnel (E-1 to E-3 graded service members), the overall marriage factor was reduced from 59.9 percent to 56.2 percent. This new factor reduces the housing requirement.

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**Non-Command Sponsored  
Families Included in the  
Survey**

We found that non-command sponsored families, which are not eligible for government quarters, had been included in the family housing requirement estimate. We estimated that there were about 444 non-command sponsored families included in the housing requirements computation as of September 30, 1985. Frankfurt Housing Referral Office records showed 555 non-command sponsored families, but the Frankfurt Housing Manager suggested that we use 80 percent of 555, or 444, to allow for inaccuracies in the data. Because these families are not eligible for government-provided housing, they should not have been included in the estimate.

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**Suitable Housing Assets  
Understated**

The Frankfurt military community's survey understated the number of available suitable housing units. This resulted in overstating the number of new housing units needed. Although the survey showed 4,177 suitable housing units, we found the number of suitable units to be 4,480, or 303 more. The 4,480 suitable units include 775 private rentals occupied by eligible families, 2,970 government-owned units, 453 government-leased units as of September 30, 1985, and 282 additional units that were to be leased by November 12, 1986.

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**Correcting Errors Reduced  
Housing Requirements**

Our review of the factors included in the family housing survey showed that the survey errors increased the estimated family housing requirement for the Frankfurt military community. The extent to which these errors increased the estimated housing requirement is shown in table I.1.

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**Appendix I  
Programming of Family Housing  
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**Table I.1: Comparison Between the Frankfurt Survey and GAO's Analysis**

<b>Element</b>	<b>Frankfurt survey</b>	<b>GAO analysis</b>
Permanent party strength	10,629	8,873
Marriage factor	x 59.9%	x 56.2%
Gross housing requirement	6,364	4,988
Voluntarily separated personnel	- 632	- 497 <sup>a</sup>
Net housing requirement	5,732	4,491
Non-command sponsored personnel	0	-444
Actual housing requirement	5,732	4,047
Suitable assets	-4,177	-4,480
Housing deficit	1,555	•
Housing surplus	•	433

<sup>a</sup>This figure was estimated by V Corps using the lower figures for permanent party strength and the marriage factor.

**Hanau Military Community**

We identified errors in the Hanau military community's family housing requirement survey (as of September 30, 1985), which was used to justify 33 new attic conversion units programmed for fiscal year 1987 that were not needed. The Army has now deferred the planned conversions until fiscal year 1990.

**Non-Command Sponsored Families Erroneously Included in the Survey**

We found that about 477 non-command sponsored families had been included in the housing survey, thereby overstating family housing requirements.

**Suitable Housing Assets Understated**

The survey understated the number of available suitable housing units. Although the survey indicated that 3,692 suitable housing units were available, we found that there were actually 4,094 units, or an additional 402 units. The 4,094 suitable units included 1,748 private rental assets occupied by eligible families, 1,542 government-owned assets, 738 current government-leased assets, and 66 units to be contracted by September 30, 1986.

**Changes Affect Housing Requirement**

The above changes affected the family housing requirement for the Hanau military community, as shown in table I.2.

**Appendix I  
Programming of Family Housing  
Exceeds Requirements**

**Table I.2: Comparison Between the Hanau Survey and GAO's Analysis**

<b>Element</b>	<b>Hanau survey</b>	<b>GAO analysis</b>
Permanent party strength	8,890	8,851
Marriage factor	x 49.2%	x 49.2%
Gross housing requirement	4,372	4,355
Voluntarily separated personnel	- 754	- 754
Net housing requirement	3,618	3,601
Non-command sponsored personnel	0	- 477
Actual housing requirement	3,618	3,124
Suitable assets	-3,692	-4,094
Housing deficit	•	•
Housing surplus	74	970

**Nuernberg Military Community**

The Nuernberg military community conducted two family housing requirements surveys—one survey for the Nuernberg area and a second survey for the Erlangen area, which is a subcommunity of Nuernberg. However, according to Nuernberg housing officials, the Nuernberg and Erlangen areas should be treated as one area. For that reason, we analyzed a consolidation of the Nuernberg/Erlangen family housing requirements surveys as of September 30, 1985.

We identified errors in the Nuernberg military community's family housing requirements survey, which resulted in overstating new housing requirements. The community had been programmed to receive 140 family housing units, 65 new attic conversions, and 331 lease allocations for fiscal year 1987. Our analysis showed that there was a surplus of family housing available and that the planned new units were not needed. The Army has cancelled 106 of the 140 programmed units but has contracted for the construction of 34 new family housing units. Planned attic conversions have been reduced to 48 and deferred until fiscal year 1990.

**Long-Term Personnel Strength Projections Overstated**

The Nuernberg military community's surveys overstated the long-term troop strength projections. Although the consolidated Nuernberg/Erlangen family housing requirements surveys indicated a permanent (troop) strength of 14,372, a VII Corps stationing official estimated the actual permanent party strength to be 13,833, a difference of 539 troops.

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**Errors in Marriage Factor  
Computation**

The Nuernberg military community's surveys contained errors in the marriage factor, thereby overstating the housing requirement. During verification of the marriage factor calculations for the Nuernberg and Erlangen family housing requirements surveys, we found that (1) a mathematical error had resulted in the overstatement of the gross housing requirement by 306 housing units and (2) an apparently inflated marriage factor for "other" enlisted personnel had overstated the requirement by an additional 381 units.

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**Non-Command Sponsored  
Families Erroneously  
Included in the Survey**

Nuernberg's personnel records showed that about 1,066 non-command sponsored families ineligible for government quarters were living on the economy as of September 30, 1985, and had been included in the requirements for family housing.

The Nuernberg military community did not agree that there were this many non-command sponsored families and made an analysis of military personnel drawing Basic Allowance for Quarters at the with-dependents rate as of September 30, 1986. This analysis indicated that there were 985 non-command sponsored families living in private rentals. We adjusted our analysis based on this information.

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**Suitable Housing Assets  
Overstated**

The Nuernberg military community's surveys overstated the number of suitable housing units. Although the surveys showed 5,950 suitable housing units, we found the number of suitable housing assets to be 5,240, or 710 fewer. The 5,240 suitable housing units included 2,332 private rental assets occupied by eligible families, 2,040 government-owned assets, 748 government-leased assets as of September 30, 1985, and 120 government-leased assets to be contracted by September 30, 1986.

Although private rentals are not considered by the Army to be available in the Erlangen area, the Nuernberg Housing Manager stated that private rentals were available in the Nuernberg area.

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**Consolidation Produces  
Changes in Requirements**

The consolidation of the Nuernberg and the Erlangen family housing surveys changed the family housing requirements. Also, errors we found in some factors affected the housing requirement. The extent to which these changes affected the housing requirement is shown in table I.3.

**Appendix I  
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**Table I.3: Comparison Between the  
Nuernberg/Erlangen Surveys and GAO's  
Analysis**

<b>Element</b>	<b>Nuernberg survey</b>	<b>GAO analysis</b>
Permanent party strength	14,372	13,833
Marriage factor	x 54.13%	x 49.35%
Gross housing requirement	7,780	7,093
Voluntarily separated personnel	-1,193	-1,193
Net housing requirement	6,587	5,900
Non-command sponsored personnel	0	- 985
Actual housing requirement	6,587	4,915
Suitable assets	-5,950	-5,240
Housing deficit	637	•
Housing surplus	•	325

## Mainz Military Community

We identified errors in the Mainz military community's family housing requirements survey, which resulted in overstating new housing requirements. Further, during a previous review we conducted between August 1985 and January 1986, we evaluated the possibility of sharing housing assets among the Mainz and Wiesbaden military communities. At that time, the Mainz military community was programmed to receive 186 family housing units in the fiscal year 1985 program.

The 186 family housing units appeared to be justified then based on programming for 100 percent of anticipated needs; however, during that review we concluded that the housing projects programmed for fiscal years 1987 (20 units) and 1989 (100 units) were not needed. We also questioned the need for planned leased housing units. USAREUR continued its plan to build the 186 family housing units and stated that it would evaluate the need for additional leased housing units in the Mainz and Wiesbaden military communities. Based on our current review we do not believe that Mainz needs additional lease allocations.

The Army has now deleted the 20 units planned for fiscal year 1987 and the 100 units planned for fiscal year 1989 and has reduced the need for additional leases. However, upon completion of the new 186 units there will be a large surplus of available family housing units. To eliminate the surplus, the Mainz military community plans to give up more than 200 private rentals from its inventory.

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**Long-Term Personnel  
Strength Projections  
Overstated**

The Mainz survey overstated long-term personnel strength. During our review of the survey, we requested that V Corps stationing officials verify the long-term personnel strength. Although the Mainz survey projected the personnel strength at 6,234 troops, V Corps stationing officials informed us that new data indicated that troop strength was 5,426—a difference of 808.

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**Non-Command Sponsored  
Families Erroneously  
Included**

We found that there were 200 non-command sponsored personnel living in private rental units as of September 30, 1985, who had been included in the community family housing requirement. However, we found that there were only 82 non-command sponsored families reported as living in private rentals as of September 30, 1986. Non-command sponsored families are not eligible for government sponsored housing and should not be counted among those requiring housing.

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**Suitable Housing Assets  
Understated**

The Mainz survey understated the projected number of suitable housing assets. Although the Mainz survey showed 2,164 suitable units, we found that housing office records actually listed a total of 2,254 suitable housing units, or 90 more. The 2,254 suitable housing units include 884 private rentals, 1,055 government-owned units, 288 government-leased assets, and 27 new government-leased units to be contracted by 1991. These do not include the 186 new family housing units being constructed at Mainz.

The 884 suitable private rentals shown on housing office records included approximately 153 housing units considered by the Mainz military community to be unsuitable. For example, Mainz classified approximately 76 units as unsuitable because they were not located within the Mainz or Wiesbaden school bus routes. However, this standard is not included in DOD's criteria for suitable housing units. The other 77 units were classified as unsuitable because of cost or size. However, a Mainz housing official stated that these units are not unsuitable but rather are mismatched with their current tenants.

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**Changes Affect Housing  
Requirements**

After we substituted the new figures for long-term personnel strength, non-command sponsored families, and suitable housing assets, the analysis of family housing requirements shows a surplus of 50 housing units instead of the 509-unit deficit reported. These changes are shown in table I.4.

**Appendix I  
Programming of Family Housing  
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**Table 1.4: Comparison Between the Mainz Survey and GAO's Analysis**

<b>Element</b>	<b>Mainz survey</b>	<b>GAO analysis</b>
Permanent party strength	6,234	5,426
Marriage factor	x 48.1%	x 48.1%
Gross housing requirement	2,997	2,610
Voluntarily separated personnel	- 324	- 324
Net housing requirement	2,673	2,286
Non-command sponsored personnel	- 0	- 82
Actual housing requirement	2,673	2,204
Suitable assets	-2,164	-2,254
Housing deficit	509	•
Housing surplus	•	50

**Housing Survey Replaced**

As of January 30, 1987, USAREUR replaced the Family Housing Requirement Survey with the Army Housing Justification Process. We did not review this new methodology, but we believe that, unless accurate data to determine actual housing requirements is developed during the new process, USAREUR will continue to experience the same and/or similar problems as under the process we reviewed.

**Use of Private Rentals Not Maximized**

In addition to errors in the various surveys, we found that USAREUR may not be maximizing its use of private rentals as required by DOD Instruction 4165.45. For example, we found at the Frankfurt military community that minimal efforts had been made to identify new private rentals. We also found that Frankfurt was understating the number of available suitable housing units by eliminating units for consideration because of the financial capability or size of the current occupant's family. When the unit is declared unsuitable, the family occupying it is counted among those requiring housing. The unit is not counted as an asset, even though it might be suitable for a different family.

As a result of our review, USAREUR issued a directive reiterating DOD policy that private rentals will be used, when possible, to eliminate family housing deficits and that an unlimited percentage of families may live in private rentals. However, at the same time, USAREUR requested the Department of the Army's permission to reduce the current 1-hour commuting criterion to 30 minutes. Although permission had not been granted at the completion of our review, if it is granted the number of private rentals available to a military community will be reduced.



## DOD Comments

In commenting on a draft of this report, DOD generally agreed with most of our findings and agreed with all of our recommendations. It stated that corrective actions have been or will be taken on our recommendations.

Although DOD agreed to our recommendations, it noted that the housing survey procedures in use during our review had been revised. We were aware of the new process; however, since the new process relies heavily on the same data elements as the old process, it is essential that they be as accurate as possible.

DOD only partially concurred with our finding that long-term personnel strengths had been overstated at the locations we visited. It believed that these strength-level projections were sufficiently accurate for programming purposes. It further stated that, because projections vary during the planning cycle, the justification process is repeated until the project is executed.

Although DOD believes that its strength projections were sufficiently accurate for planning purposes, the projections we evaluated were parts of justifications for approval to build houses that may not be needed. In our opinion, the projections should have been more accurate because better data was available.

DOD also only partially concurred that marriage factor computations were inaccurate. It stated that the GAO snapshots of the marriage factors at the four communities we visited were taken at random times and would naturally differ from the Army's computation.

We evaluated the various factors, computations, and supporting documentation for the family housing requirements survey as of September 30, 1985. Since we used the same methodology, cutoff date, and available data for calculating the marriage factor as DOD used, our calculations should have agreed. However, because of DOD's miscalculations, the factors were different.

# Data on Unaccompanied Personnel Housing Also Distorted

The data used to determine unaccompanied personnel housing requirements contained errors similar to those in the family housing requirement surveys. We found errors in the calculation of long-term personnel strength, the number of adequate government housing units, and the number of available private rentals. The corrected data we obtained did not fully support unaccompanied personnel housing projects planned for the Frankfurt, Nuernberg, and Mainz communities. After we brought this to the attention of housing officials, they either cancelled or postponed projects.

Specifically, we found that:

- The Frankfurt military community was programmed to receive a barracks project at Camp Eschborn in the fiscal year 1986 program. The project, costing about \$3.8 million, was cancelled after we brought the overstatement of long-term personnel strength to the housing officials' attention. Furthermore, additional barracks projects tentatively planned for the Frankfurt military community have also been cancelled, thereby potentially saving an additional \$13.4 million.
- The Nuernberg military community was programmed to receive barracks projects at Ferris Barracks in the fiscal year 1987 and 1988 programs. The housing requirements did not accurately reflect the number of private rentals occupied by voluntarily separated personnel and single military personnel. Agreeing that adjustments were needed, the Nuernberg military community postponed the fiscal year 1988 barracks project until 1991.
- The Mainz military community was programmed to receive a barracks project at Finthen in the fiscal year 1989 program. The error we found in the Mainz housing requirements survey regarding the long-term strength projection resulted in an overstatement of requirements. On the basis of this information, the barracks project, costing about \$7.1 million, will be cancelled.

USAREUR can improve the management of its unaccompanied personnel housing program by verifying that supporting documentation for new unaccompanied personnel housing projects is accurate. The actions DOD stated that it will take in response to our recommendations should help to improve housing requirement estimates.

## DOD Comments

DOD agreed with our position that the requirements for unaccompanied personnel housing contained distortions similar to those found in the family housing survey. DOD stated that the new housing justification

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**Appendix II  
Data on Unaccompanied Personnel Housing  
Also Distorted**

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process will provide a more precise picture of the capability of the civilian community to support military housing requirements.

# Objectives, Scope, and Methodology

USAREUR has programmed a large number of new family and unaccompanied housing units in Europe. Our specific review objectives were to evaluate the need for these family housing projects by analyzing critical survey procedures and factors used to determine requirements. These included (1) projected personnel strengths, (2) marriage factors, (3) number of voluntarily separated personnel, (4) number of non-command sponsored families, and (5) number of suitable housing assets. We also evaluated the need for USAREUR's unaccompanied personnel housing projects by analyzing the procedures used to justify the projects, as well as critical factors used to determine requirements. Since the headquarters command of each installation is responsible for verifying and correcting survey information reported by the installation, we contacted the headquarters of each installation we visited to determine whether the headquarters agreed with the information reported on a September 30, 1985, survey of the installations. When the information differed, we used information provided by the headquarters.

We selected projects and communities for evaluation by reviewing all of USAREUR's fiscal year 1987 family housing projects and prior projects for which contracts had not yet been awarded. In selecting family housing projects for detailed review, we considered whether the military communities were also programmed to obtain unaccompanied personnel housing projects. Audit work was conducted in the following communities:

- Frankfurt military community, Frankfurt, West Germany;
- Hanau military community, Hanau, West Germany;
- Nuernberg military community, Furth, West Germany; and
- Mainz military community, Mainz, West Germany.

At USAREUR and at each military community, we reviewed the family housing requirements surveys as of September 30, 1985, as well as supporting documentation. We also interviewed USAREUR, V Corps, and military community housing officials regarding the surveys and the development of community family housing acquisition plans.

Our review was conducted in accordance with generally accepted government auditing standards.

# Comments From the Department of Defense



ASSISTANT SECRETARY OF DEFENSE  
WASHINGTON, D.C. 20301-8000

PRODUCTION AND  
LOGISTICS  
(I/QFA)

12 JAN 1988

Mr. Henry W. Connor  
Senior Associate Director  
National Security and International  
Affairs Division  
United States General Accounting Office  
Washington, DC 20548

Dear Mr. Connor:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) Draft Report, "ARMY HOUSING: Army Housing Programmed in Europe in Excess of Requirements," dated October 27, 1987 (GAO Code 393178), OSD Case 7188.

The DoD generally concurs with the draft report. It should be noted, however, that the housing survey procedures, which the GAO identified as causing distortions in the determination of family housing requirements, were revised prior to the issuing of the draft report.

In addition, the DoD cannot validate the GAO cited cost savings of \$26.3 million attributed to cancellation of unaccompanied personnel housing projects. Only \$3.85 million, for an authorized and funded project at Camp Eschborn in the FY 1986 Military Construction Program, represents actual savings. The remainder of the savings are notional, in that the projects were never included in a program submitted to the Congress. Many projects are generated at the base level, but few can stand the close scrutiny and prioritization process that is required for a Service Military Construction Program.

Detailed DoD comments on the GAO findings are provided in the enclosure. The Department appreciates the opportunity to comment on this report.

Sincerely,

Jack Katzen  
Deputy Assistant Secretary of Defense  
(Systems)

Enclosure

GAO DRAFT REPORT - DATED OCTOBER 27, 1987  
(GAO CODE 393178) OSD CASE 7188

"MILITARY HOUSING: ARMY HOUSING PROGRAMMED IN EUROPE IN EXCESS  
OF REQUIREMENTS"

DOD RESPONSE TO THE GAO REPORT

\* \* \* \* \*

FINDINGS

**FINDING A: Frankfurt Military Community.** The GAO explained that the family housing requirements survey is the process used to determine current housing conditions and projected family housing requirements. The GAO found that the Frankfurt Military Community programmed 72 new attic conversion units and 90 additional lease allocations, which are not needed. (The GAO noted that the Frankfurt Military Community had been programmed to receive 200 family units in FY 1988, and the United States Army, Europe (USAREUR) subsequently cancelled these plans.) The GAO identified several questionable areas in the Frankfurt Military Community Family Housing Requirements survey, as of September 30, 1985, which resulted in the overstatement, as follows:

- long-term personnel strength projections were overstated by 1,756;
- the marriage factor computation (a percentage derived from historical data and applied to total troop strength to estimate how many Service members are married and thus eligible for Government-furnished family housing) was overstated -- while the survey showed a gross housing requirement of 6,363, after adjustments, the gross housing requirement was reduced by 1,376;
- 444 non-command sponsored families, who were ineligible for Government quarters, were erroneously included in the housing requirements computation; and
- the suitable housing assets were understated by 303 housing units.

The GAO concluded that there is a housing surplus of 433 versus a housing deficit of 1,555 in Frankfurt. (pp. 6-10/GAO Draft Report)

**DOD POSITION:** The following comments pertain to the questionable areas in the survey process identified by the GAO. Long term personnel strength overstated. Partially concur. A review of long term personnel strengths conducted by the Army revealed that the strength level projections for the Frankfurt, Hanau, Nuernberg, and Mainz communities were sufficiently accurate for programming purposes. However, projected strengths vary during each planning cycle. For this reason the justification process is repeated every

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year until the project is executed. The current Army long term personnel strength development system publishes the stationing plan twice a year, but includes only continental US (CONUS) commands. Overseas long term personnel strength projections are performed by the overseas major command (MACOM). There is a management problem of disseminating these projections to the installations. The Army has a two phase plan to correct this problem. The first is to modernize the CONUS system to a modern interactive processing system. The second phase is to incorporate the overseas projections with the CONUS projections in a new computer system. Target completion date is the end of FY 1990. Once this is accomplished, there will only be one authorized stationing plan for the Army. This will eliminate the use of old/incorrect stationing data when installations start the justification process.

Marriage factor computations inaccurate. Partially concur. Army guidance concerning calculation of marriage factors is very specific. The methodology used by the Army consists of an average of the current year and the past two years marriage factor percentages. (Example: An average of the marriage factors for FY 1985, FY 1986, and FY 1987 would be used in the FY 1987 Family Housing Justification Process.) The marriage factor calculation is extremely volatile and, as troop units arrive and depart a community, the factor will change quickly. The GAO snapshot of the marriage factors at the four communities sited was at a random time and would naturally differ from the Army "as of" date of September 30, 1985. To draw any meaningful comparison, the GAO would have to revalidate the marriage factors for each community on the date of its audit from the records of the housing office.

Non-command sponsored families included in the requirements calculation process even though such families are ineligible for Government housing. Concur. It is Army policy for non-command sponsored soldiers with families to be identified in the Army Housing Justification Process (AHJP) voluntarily separated category. However, guidance for this policy is not clear and is being corrected in the revision to AR 210-50 and the AHJP letter of instruction. A message to Army MACOMs and installations providing specific guidance was sent May 5, 1987. It is possible that the GAO may have double counted non-command sponsored soldiers with families under the voluntary separated and non-command sponsored categories identified in their report. In addition, instructions for determining military market penetration of the civilian community will have to be revised to ensure that non-command sponsored personnel are not counted in the rate of penetration. Non-command sponsored personnel compete for housing as do command sponsored and civilian personnel. Current instructions erroneously count non-command sponsored personnel in the market penetration rate. This error, in effect, overstated the community's ability to provide suitable housing for command sponsored personnel.

Suitable existing housing assets understated. Concur. The Army recognizes the difficulty of identifying the ability of the local civilian community to provide housing for the military. Accordingly, it has developed a comprehensive Segmented Housing Market Analysis (SHMA) process to help installations perform this task. The SHMA process uses existing housing referral programs and the expertise of housing personnel to document the community's ability to meet military housing needs. The SHMA supplements the new Office of the Assistant Secretary of Defense (OASD) revision to the housing justification process. The Army implemented both the SHMA and the new OASD justification process in FY 1987. The new processes will greatly reduce requirements identification errors, which have occurred in the past.

Frankfurt Military Community. Partially concur. The Frankfurt Military Community programmed 72 new units in FY 1987 by converting attics to apartments. The Army has deferred until FY 1990, the planned conversions of 72 attics to apartments. The Army also plans to convert 54 attics to apartments in FY 1988, and convert 36 attics to apartments in FY 1991. Frankfurt programmed for 90 additional lease allocations in FY 1987. The number of additional lease allocations for FY 1987 has been decreased to 22. Frankfurt is programming for 230 additional lease allocations during FY 1988. The Army will not, however, proceed with new construction or additional leasing until the requirements have been thoroughly revalidated and justified.

FINDING B: Hanau Military Community. The GAO found that the Hanau Military Community programmed 33 new attic conversion units, which are not needed. Because of distortions in the housing survey, the GAO found that, as of September 30, 1985, there were about 477 non-command sponsored families, who are ineligible for Government quarters, included in the housing survey. In addition, the GAO found that the Hanau Military Community survey understated the number of suitable housing units by 402 units. The GAO observed that the Hanau Military Community survey appeared accurate (1) in projecting its long-term personnel strength and (2) in computing the marriage factor. Nevertheless, the GAO concluded that, based on its analysis, there was still a housing surplus of 970 units versus 74 units, as shown by the Hanau survey process. (pp. 10-12/GAO Draft Report)

DOD POSITION: Partially concur. For a discussion of the computation of the marriage factor and computation of long term personnel strength see the DoD response to Finding A. The Hanau Military Community programmed 33 new attic conversion units during FY 1987. The Army has, however, deferred the planned conversion until FY 1990.

FINDING C: Nuernberg Military Community. The GAO found that Nuernberg programmed 140 new Government-owned units, 65 new attic conversion units and 331 additional lease allocations, which are not needed, based on Nuernberg Housing Office Records. The GAO found this occurred because of questionable areas in the Nuernberg

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Military Community Family Housing Requirements survey.  
Specifically, the GAO found, as follows:

- the long-term personnel strength projections were overstated by 539;
- there were errors in the marriage factor computation, resulting in a difference of 687 in the gross housing requirement;
- there were about 985 non-command sponsored families, who are ineligible for Government quarters, erroneously included; and
- suitable housing assets were overstated by the 710 housing units.

The GAO concluded there is a housing surplus of 325 versus a deficit of 637, as shown by the Nuernberg survey. (pp. 13-15/GAO Draft Report)

DOD POSITION: Partially concur. For a discussion of the projection of long term personnel strength, computation of the marriage factor, inclusion of non-command sponsored families and assets overstatement see the DoD response to Finding A. The Nuernberg Military Community programmed 140 new Government-owned units, 65 new attic conversion units, and 331 additional lease allocations. Of the 140 new Government-owned units planned for FY 1987, 106 scheduled for Erlangen were canceled by the Army. Construction of the balance of 34 units programmed for Herzo Base has been awarded to a contractor. The 65 new attic conversion units programmed for FY 1987, have been reduced to 48 units and deferred to FY 1990.

FINDING D: Mainz Military Community. The GAO found that the Mainz Military Community many not need 186 Government-owned units, which are currently being constructed. (The GAO noted that in the future, Mainz will be giving up over 200 private rentals to eliminate this surplus.) The GAO identified the following questionable areas in the Mainz Military Community Family housing requirement survey:

- long-term personnel strength projections were overstated by 808;
- as of September 30, 1985, there were 200 non-command sponsored personnel living in private rental units, who should not be considered part of the community family housing requirements;
- there were, however, only 82 non-command sponsored families reported as living in private rentals as of September 30, 1986; and

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- the projected number of suitable housing assets were understated by 90 units (not including the 186 new family housing units being constructed).

The GAO concluded that, based on its analysis, there is a housing surplus of 50 units versus a housing deficit of 509 units, as shown by the Mainz Housing Survey. (pp. 16-18/GAO Draft Report)

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DOD POSITION: Partially concur. For a discussion of the projection of long term personnel strength, the inclusion of non-command sponsored families in computations, and suitable housing unit projections see the DoD response to Finding A. The Army deleted the projects at Mainz for construction of 20 units in FY 1987, 100 units in FY 1989, and reduced the need to acquire additional leases. The Army also deferred the planned conversion of 96 attics to apartments at Wiesbaden in FY 1987. At the present time, the Army does not have any projects for new construction, leasing, or attic conversions at Mainz in the out years.

FINDING E: Housing Survey Replaced. The GAO reported that, as of January 30, 1987, the USAREUR replaced the Family Housing Requirement Survey with the Army Housing Justification Process. The GAO noted, therefore, that the previous study method will no longer be used by Army installations/communities. While it did not review the new methodology, the GAO concluded that, unless more accurate data is developed using this new process, the USAREUR will continue to experience the same and/or similar problems experienced under the survey process. (p. 19/GAO Draft Report)

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DOD POSITION: Concur. The Army has implemented its new Housing Justification Process, which is a step-by-step procedure that identifies all of the parts of the justification and where to find the data. The data used is current as of the date the report is prepared, unlike the old system, which used data almost a year old. The new process also creates an audit trail of the data used in the justification process. This will greatly improve the accuracy of the data used.

FINDING F: Use of Private Rentals Not Maximized. The GAO found that the USAREUR may not be maximizing its use of private rentals, as required by DoD Instruction 4165.45. As an example, the GAO cited that at the Frankfurt Military Community there was minimal effort to identify new private rentals. In addition, the GAO noted that Frankfurt was underestimating the number of available suitable housing units by eliminating units for consideration because of the financial capability or size of the current occupant family. The GAO observed that by declaring the units unsuitable, the family occupying it becomes a housing requirement. The GAO further observed that, as a result of this practice, the unit is not counted as an asset, even though it may be suitable for a different family. The GAO reported the USAREUR issued a directive reiterating that it is DoD policy that private rentals will be used, when possible, to eliminate a family housing deficit and that there is no limit on the percentage of families that may live in private rentals. The GAO

found, however, that at the same time, the USAREUR requested the Department of the Army permission to reduce the 1 hour/30 mile commuting criterion to 30 minutes. While permission had not been granted by the time it completed its field work, the GAO concluded that if permission is granted, it will effectively reduce the universe of private rentals available to a military community and increase the family housing requirement in Europe. (pp. 19-20/GAO Draft Report)

DOD POSITION: Concur. The Army recognizes the difficulty of identifying the ability of the local civilian community to provide housing for the military. Accordingly, it has developed a comprehensive SHMA process to help installations perform this task. The SHMA process uses existing housing referral programs and the expertise of housing personnel to document the community's ability to meet military housing needs. The SHMA supplements the new DoD revision to the housing justification process. The Army implemented both the SHMA and the new DoD justification process in FY 1987. The new processes will greatly reduce requirements identification errors which have occurred in the past. It is important to make the distinction between "adequate" and "suitable housing." Adequacy standards are published in Army regulations. Suitability standards apply the adequacy standards to the particular family being housed, i.e., it is not suitable to house a four bedroom requirement in an adequate two bedroom house. That is why the SHMA segments the housing demand by bedroom number and affordability criteria and matches this demand with an equal or higher requirement. Further, it should be noted that requests for exception to DoD policy (on commuting distance or any other factor which affects the housing market) are handled on a case-by-case basis. Such requests are generally not approved by Army Headquarters unless there is an overriding military necessity affecting mission capability.

FINDING G: USAREUR Comments. The GAO noted that USAREUR officials concurred with the observation that the data base used in some housing requirement analyses was inaccurate, inconsistent, or incomplete. According to the GAO, however, USAREUR officials claimed that the new survey process eliminates most of the flaws in the old process. The GAO also noted that the Community Demographic Profile, used to project personnel strengths, had been updated and will be kept current. The GAO further noted that, according to USAREUR officials, the data used in preparing each military community's new survey would be validated by September 1987, and no construction or leasing project will be started until supported by this validation. The GAO continued to conclude, however, that unless the data is verified, the USAREUR will experience the same problems encountered under the old process. The GAO observed that USAREUR officials indicated they prefer military controlled housing over private rentals. In addition, with respect to the 1-hour/30 minute criterion, USAREUR officials stated that, among other things, a 30-minute criterion would help each military community meet its readiness requirements. (pp. 20-21/GAO Draft Report)

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DOD POSITION: Concur. The new AHJP process is designed to eliminate the flaws in the old process. The Community Demographic Profile, used to project personnel strengths, has been updated and will be kept current. In addition, the data used in preparing each military community's new survey was validated during September 1987, and no construction or leasing projects were started until supported by this validation.

FINDING H: Data On Unaccompanied Personnel Housing Also Distorted. The GAO found that the data used to determine unaccompanied personnel housing requirements contained distortions similar to the family housing survey. Specifically, the GAO found distortions in the calculation of long-term personnel strength, the amount of existing adequate Government housing, and the number of available private rentals. The GAO further found that the corrected data did not fully support unaccompanied personnel housing projects planned for the Frankfurt, Nuernberg, and Mainz communities.

- the Frankfurt Military Community was programmed to receive a barracks project at Camp Eschborn in the FY 1986 program. According to the GAO, the project, costing about \$3.8 million, was cancelled after it brought the overstatement of long-term personnel strength to the attention of the housing officials. Furthermore, the GAO reported that additional barracks projects tentatively planned for the Frankfurt Military Community, will also be cancelled, thereby saving an additional \$15.4 million.
- the Nuernberg Military Community was programmed to receive barracks projects at Ferris Barracks in the Fiscal Year 1987 and 1988 programs. According to the GAO, the housing requirements did not accurately reflect the number of private rentals occupied by voluntarily separated personnel and single military personnel. Agreeing that adjustments were needed, the GAO reported that the Nuernberg Military Community reduced the scope and postponed the FY 1988 barracks project until FY 1991.
- the Mainz Military Community was programmed to receive a barracks project at Finthen in the FY 1989 program. According to the GAO, based on distortion, it identified in the Mainz housing Requirements Survey regarding the long-term strength projection, the barracks project, costing about \$7.1 million, will be cancelled.

The GAO concluded that the USAREUR can improve the management of its unaccompanied personnel housing program by reviewing the verifying supporting documentation for new unaccompanied personnel housing projects. (pp. 23-24/GAO Draft Report)

DOD POSITION: Concur. The same problem exists for both family and unaccompanied personnel housing (UPH). The new justification process incorporates the justification for both UPH and family housing ensuring that personnel strengths are not overstated and

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that available community assets are allocated properly to meet the needs of both programs. The SHMA system enables the installation/community housing personnel to identify more adequate community housing assets for service members. The system limits double counting of community assets when they are applied against the family and UPH requirements process, thus, giving a more precise picture of the capability of the civilian community to support military housing requirements. Of the UPH projects identified by the GAO all but Frankfurt were canceled by the Army during normal justification process review.

RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of the Army direct procedures be instituted calling for an independent review of military community family and unaccompanied personnel housing documentation in Europe, to ensure accuracy and compliance with DoD instructions. (p. 4/GAO Draft Report)

DOD POSITION: Concur. In May 1986, the Office of the Secretary of the Army directed the Army Audit Agency to conduct a review of UPH requirements justifications. On October 20, 1987, the Army Engineer Inspector General initiated a review of US Army Corps of Engineer (USACE) support to the installation for housing justification documentation.

RECOMMENDATION 2: The GAO recommended that the Secretary of the Army direct the USAREUR to program its housing at less than 100 percent of anticipated needs, until an independent review of military community family and unaccompanied personnel housing documentation is initiated. (p. 4/GAO Draft Report)

DOD POSITION: Concur. The Army will immediately direct USAREUR to program its housing at less than 100 percent of anticipated needs, until the independent review of military community family and unaccompanied personnel housing documentation is completed.

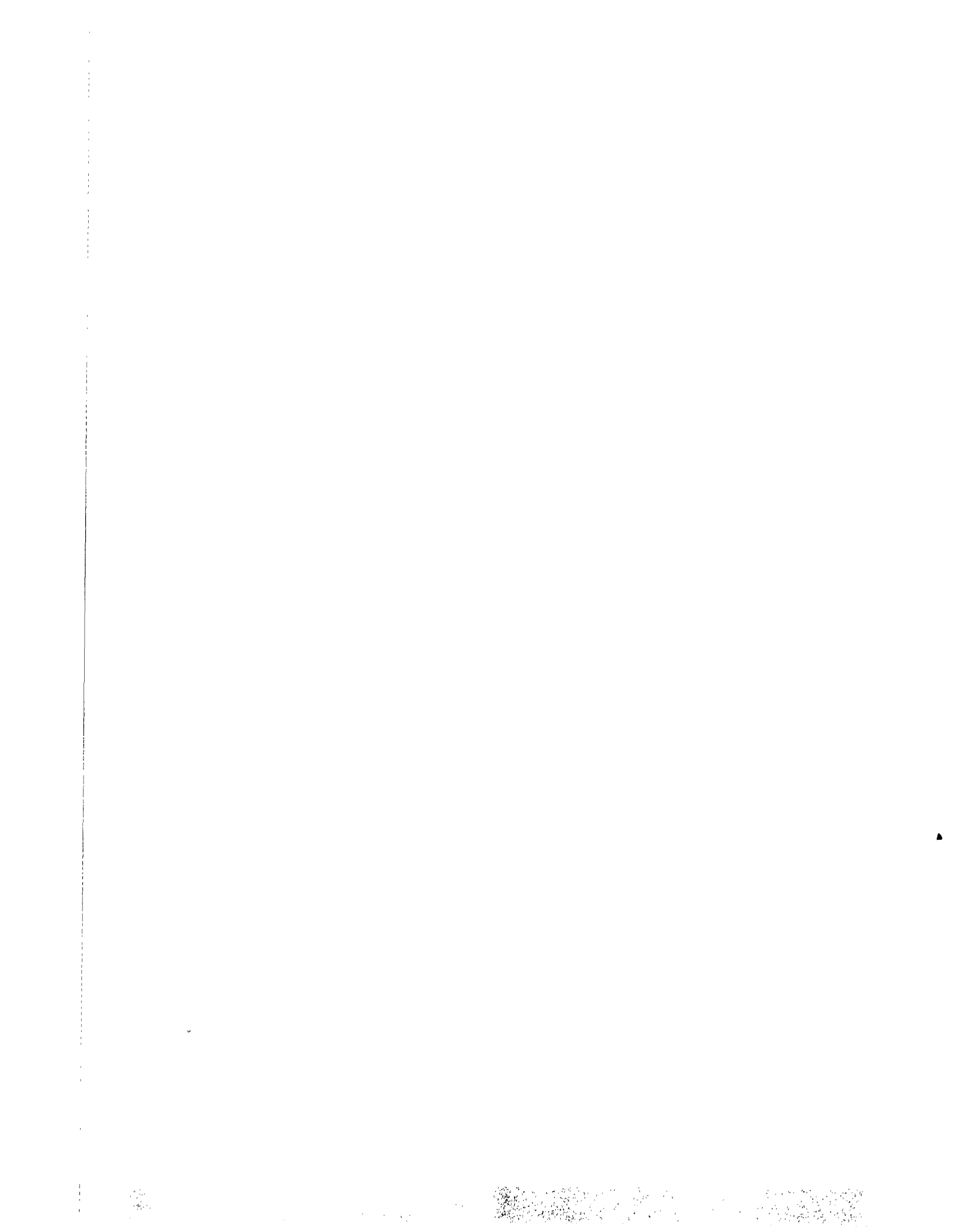
RECOMMENDATION 3: The GAO recommended that the Secretary of the Army include, in the family housing instructions for overseas locations, the fact non-command sponsored families should not be included in the family housing requirement. (p. 4/GAO Draft Report)

DOD POSITION: Concur. In a message dated May 5, 1987, the Army notified its MACOMs and installations that non-command sponsored families were not to be included in the family housing requirement.

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