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*REPORT OF THE  
COMPTROLLER GENERAL  
OF THE UNITED STATES*

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The Air Force Should Use Both  
Contract And In-House Services  
For Maintaining Military Family  
Housing At Dover Air Force Base

Three-year potential savings of \$126,320 are available to the Air Force at Dover Air Force Base by contracting for maintenance of 1,256 old homes and by in-house maintenance of 300 new homes, in lieu of contracting for all 1,556 homes.

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COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-184715

*clrk*  
The Honorable William V. Roth, Jr.  
United States Senate

Dear Senator Roth:

In response to your request (see exhibit C), we reviewed the Air Force's cost comparison of contract versus in-house maintenance of 1,556 military family housing units at Dover Air Force Base, Delaware. Our review covered all costs computed by the Air Force, not just those challenged by the local employees' union. *36*  
*124*

The cost difference between contract and in-house maintenance for all housing is nominal. A third alternative, however--combining some contracting with in-house operations--should save the Federal Government about \$126,000 over a 3-year period. Accordingly, we are recommending that Dover Air Force Base adopt this alternative.

Our review also showed that Air Force guidance for making cost comparisons is not entirely consistent with Office of Management and Budget Circular A-76, which provides criteria for Government agencies to use in choosing between in-house and contractor resources for products or services. We are recommending that the Secretary of the Air Force revise his regulations to conform to the Government-wide criteria in Circular A-76.

The results of our review are presented in more detail in appendix I. Although we did not obtain written comments, we did discuss our findings with officials at Dover Air Force Base.

As you agreed, we are sending copies of this report to the Chairmen of the House and Senate Committees on Appropriations and Government Operations, the Secretary of Defense, the Secretary of the Air Force, and the Director of the Office of Management and Budget.

Sincerely yours,

*Thomas B. Steels*  
Comptroller General  
of the United States

**APPENDIX**

DETAILED REPORTPOLICIES FOR ACQUIRING COMMERCIAL  
OR INDUSTRIAL PRODUCTS OR SERVICES  
FOR GOVERNMENT USE

The Office of Management and Budget, in Circular A-76, established the national policy that the Government shall rely on the private enterprise system to acquire commercial or industrial products or services. Circular A-76 provides criteria for Government agencies to use in choosing between in-house and contractor resources for products or services. Both the Department of Defense and the Air Force have implemented this national policy.

Basically, the policy authorizes using in-house resources when:

- Commercial procurement would disrupt or materially delay a program.
- In-house services are required for direct combat support to train military personnel or to maintain or strengthen mobilization readiness.
- Commercial procurement would cost the Government more.

Generally, contract services are to be used when in-house skills are unavailable or commercial procurements are less costly.

To insure that services are obtained economically, cost comparisons are required when starting an in-house activity and periodically when continuing in-house operations. Generally, a new in-house activity will not be approved unless a cost comparison projects savings of at least 10 percent. No specific standard, however, is prescribed for deciding whether savings are sufficient to justify continuing an existing Government activity, such as military family housing maintenance. Each activity should be evaluated according to circumstances.

Circular A-76 specifically provides that the costs of obtaining products or services from Government sources include:

"\* \* \* all costs which would be incurred if a product or service were provided by the Government and which would not be incurred if the product or service were obtained from a commercial source. The objectives

should be to compute, as realistically as possible, the incremental or additional cost that would be incurred by the Government under the alternatives under consideration. In making such determinations it is important that recognition be given to the full amount of additional or incremental direct and indirect cost to be incurred in providing the products or services required." (Underscoring supplied.)

The purpose of recognizing the full direct and indirect costs is to compare the actual cost change that would occur and choose the plan that costs less.

### BACKGROUND

The Air Force's 436th Military Airlift Wing is located at Dover Air Force Base, Delaware. The 436th Wing is part of the Military Airlift Command (MAC), whose mission is to provide strategic worldwide airlift of personnel and cargo.

Dover has various sizes and types of housing units available for its military personnel and their families. Military family housing is in two different areas: 1,256 homes adjacent to the base and 300 newly constructed homes about 3 miles away.

At Dover, the Civil Engineering Squadron's family housing maintenance and heating systems sections maintain base facilities and military homes. The maintenance section does all the recurring work necessary to preserve a home. The heating systems section maintains and repairs interior and exterior heating systems, doing preventative maintenance and seasonal overhauls of heating equipment, boilers, and furnaces.

### Basis for Air Force decision to maintain homes by contract services

In January 1975, MAC directed Dover Air Force Base to determine which method of maintaining military family housing--contract, in-house, or a combination of the two--would cost the Government least. Cost studies together with specifications and bid solicitations were to be prepared separately for the 1,256 existing homes, the 300 new homes, and the total of 1,556 homes. Although the initial contract was to cover 1 year starting January 1, 1976, the cost studies were to cover 3 years to coincide with the triennial review requirements established by Department of Defense and Air Force directives.

Before January 1975, Dover requested additional manpower positions from MAC to maintain the 300 new homes. MAC replied that authorizations for positions were unlikely and told Dover to begin developing specifications to serve as a basis for a cost comparison.

The bids were opened in June 1975. Based on a low bid of \$288,000, the Air Force cost comparison showed 3-year savings of \$625,705 by contracting to maintain the 1,556 homes.

Before awarding the contract, Dover requested Defense Contract Administration Services to perform a preaward survey to determine the low bidder's technical and financial capability. In July 1975, the survey concluded that the low bidder should not be awarded the contract because of unsatisfactory plant facilities and equipment, labor resources, and performance record and inability to meet the required schedule.

Dover also requested the Small Business Administration, which has statutory authority to certify the competency of a small business, to issue a certificate of competency on the low bidder. In September 1975, the Small Business Administration declined to issue such a certificate. Consequently, Dover disqualified the low bidder.

The Air Force then recognized the next lowest bid of \$487,465. Its revised cost comparison showed 3-year savings of \$38,263 by contracting maintenance for the 1,556 homes. A preaward survey was made and on September 23, 1975, the bidder was found qualified.

Because we were auditing the cost comparison made by the base, the award was deferred from October 1975 as planned to January 1976 and startup was deferred from January 1976 to April 1976. The qualified low bidder accepted the revised dates.

#### EVALUATION OF COST COMPARISON

We believe that contracting for maintenance of all military family housing would result in nominal savings to the Federal Government. However, greater savings are available if the Air Force combines contract and in-house maintenance operations. This alternative is discussed in greater detail beginning on page 8.

Our cost comparison showed that savings of \$53,137, or 3.2 percent, over a 3-year period were likely if maintenance was contracted--\$14,874 more than the savings computed by

the Air Force. (See exhibit A.) Our analysis was based, for the most part, on Air Force guidelines that consider all recurring costs such as contract price and in-house personnel wages as constant over a 3-year period, making no adjustments for inflation or wage increases. Even if inflation and wage increases were projected over 3 years, our analysis showed that contract services would still save money.

We adjusted certain costs computed by the Air Force. For example, we increased contract administration costs by \$3,747 and decreased transportation costs (for mileage traversed between housing units) by \$7,452 for contract maintenance. For in-house operations, we added \$26,439 for State taxes foregone and deleted \$32,417 in other indirect costs. The \$14,874 overall difference in savings arose because the Air Force did not adhere to all the requirements of Circular A-76 and in some cases used inaccurate cost figures. The differences in major cost elements are described below.

#### Personnel services

The Air Force converted the costs of military personnel involved in the in-house operation to civilian pay costs. Its civilian personnel cost projection of \$1,556,175 was based on 39 employees and computed at pay rates established in Air Force regulations--for example, wage board (blue collar) employees at step 3 of their pay grade.

Our analysis was also based on 39 employees--5 military and 34 civilians. Air Force personnel said military positions will not be converted to civilian positions if maintenance is retained in-house. Accordingly, we applied known pay rates to military and civilian personnel of the family housing maintenance and heating systems sections, as called for in Circular A-76. Where pay rates were unknown, we used Air Force standard rates or rates anticipated by the Dover civilian personnel office. On this basis, we computed 3-year costs of \$123,438 and \$1,395,174 for military and civilian personnel, respectively. Our total for personnel costs is \$1,518,612.

Minor variances for manning irregular work shifts increased our cost estimates nominally. Nonetheless, our overall estimates were \$37,563 less, because the actual pay rate for most employees was less than the standard rate used in the Air Force comparison.

Other indirect costs

The Air Force computed \$32,417 for other indirect costs according to an Air Force regulation which requires adding 2 percent to estimated costs such as (1) civilian personnel services, (2) material, supplies, and utilities, and (3) maintenance and repair of communication equipment. This represents the estimated cost of various central administrative services above the installation level (Air Force Command or Headquarters) if contract services are not used for maintaining the 1,556 homes.

Circular A-76 requires indirect costs to be included in a cost comparison only if actual costs will change. In this instance, Air Force personnel could not identify specific changes in administrative services above the installation level. In our opinion, such changes are unlikely for an action affecting only 39 employees. Accordingly, we excluded indirect costs from our calculations.

State taxes foregone

The Air Force did not consider State taxes foregone in its cost comparison. When the Government performs a function in-house, State and local governments lose tax revenues they would receive if a taxpaying business performed the function. Such tax revenues are considered an in-house cost on the rationale that some other Federal support would be required to compensate State and local governments for lost revenues.

Our analysis included an estimate of \$26,439 in taxes that Delaware would lose if the maintenance function were retained in-house. Our estimate was based on personal and business income taxes the low bidder would pay to the State at 1975 tax rates. (Delaware has no local income tax.)

Depreciation and  
interest on equipment

In maintaining the homes, squadron personnel use vehicles equipped with two-way radios. The Air Force computed depreciation costs for vehicles and radios and interest expense for new or additional equipment which would be required by the Government if contract services were not used.

Circular A-76 prescribes that if reliance on a commercial source will make Government-owned equipment available for other Federal use or for disposal as surplus, the depreciation on such equipment should be included as a cost of the in-house activity. The rationale is that if the activity were contracted the equipment could be used elsewhere or sold, whereas by continuing the activity in-house such opportunities are lost.

Our examination of depreciation disclosed that the Air Force included costs that were incorrect or not representative of current market value. Errors involved (1) excluding certain in-house equipment, (2) using 1975 catalog prices as market value for certain used equipment, and (3) using incorrect purchase prices to compute current market value.

In computing interest, the Air Force used 9 years as the useful life for two vehicles, whereas Air Force transportation directives specify a 6-year estimate.

One-time costs for severance pay and retirement benefits

The Air Force computed severance pay based on the separation of 14 civilians in family housing maintenance who were ineligible for retirement benefits. One employee who was scheduled for another position on the base should have been excluded from the severance pay computation. This, together with an incorrect pay rate for one employee and an incorrect service computation date for another accounts for a cost difference of \$530.

Dover Air Force Base showed severance pay of \$62,978 as a one-time cost chargeable to the first year of a contract operation. We believe the Air Force's estimate represents the maximum cost which would be paid to separated employees.

Severance pay will likely be less than estimated if the function is contracted out, because maintenance personnel will be eligible for positions now held by other employees with less Government service who are entitled to less severance pay. Also, experience has shown that reductions in employment can be handled through attrition and judicious hiring practices.

This cost cannot be accurately estimated until a change has actually taken place; therefore, we show severance pay separately at \$62,450.

The Air Force did not consider retirement costs or savings in its computation. Generally, three situations affect the civil service retirement fund when an ongoing Government activity changes to contract services: (1) employees accept normal retirement when they could continue working for the Government, (2) employees ineligible for normal retirement accept involuntary retirement, and (3) employees ineligible for normal or involuntary retirement withdraw their contributions from the fund or accept a retirement annuity beginning at age 62.

We included as a separate item potential savings of \$138,710 to the retirement fund under a contractor operation. Our estimate is based on Civil Service Commission experience which has shown that eligible employees tend to retire and those ineligible tend to permanently leave Government service. Generally, the fund gains when an employee who does not qualify for involuntary retirement is terminated and withdraws his contribution, thereby releasing the Government from its liability to pay future benefits. On the other hand, there is usually a loss to the fund when an employee is forced to retire involuntarily. If the ratio of older, longer employed maintenance personnel at Dover had been higher, there could easily have been a loss rather than a savings.

As with severance pay, we show retirement separately because the future course of events which would affect the benefits eventually paid to a separated employee is unknown. If both severance pay and retirement savings are considered, the one-time savings by converting to contract operations could amount to \$76,260.

#### ANALYSIS OF AVAILABLE METHODS OF MAINTAINING FAMILY HOUSING

Savings are available to the Air Force by combining contract services and in-house operations. Accordingly, the Air Force should reevaluate its decision to contract for the total maintenance function.

As previously noted, MAC directed Dover Air Force Base to prepare separate cost comparisons and bid solicitations for the 1,256 existing homes, the 300 new homes, and the total of 1,556 homes to determine the most economical method--contract, in-house, or a combination thereof.

Our analysis of the various alternatives showed 3-year savings of \$126,320 available by contracting for existing homes and by in-house maintenance for new homes rather than contracting for maintenance of all homes. (See exhibit B.)

Air Force comparisons indicated savings of \$156,836 by a combination of contract and in-service operations. However, Air Force officials said that after the original low bidder was disqualified, they did not consider splitting the function, mainly because MAC intended to either contract or retain the total function, even though it had requested separate comparisons.

Our estimate of the cost of maintaining the 1,256 homes by contract operations was \$66,259 less than that computed by the Air Force, mainly because we showed severance pay as

a separate one-time cost. (See p. 7.) Further, our estimate of the in-house cost of maintaining the 300 new homes was \$30,192 greater because of (1) higher pay rates for employees with more Government service (who would likely be retained) as opposed to average pay rates, as instructed by Air Force regulations, (2) an upward adjustment of depreciation costs for service vehicles, and (3) the addition of State taxes lost.

AMERICAN FEDERATION OF GOVERNMENT  
EMPLOYEES' COMPARATIVE COST DATA

We reviewed the \$54,000 2-year savings computed by the employees' organization and noted that the savings were based on an overstatement of certain contract costs and an understatement of in-house costs for civilian personnel services. Examples follow.

In computing contract administration cost, the employees' organization included the cost of at least three employees more than needed to monitor and administer the contract. In addition, the salaries of inspectors were given at a higher pay grade than that set by the Civil Service Commission. For example, salaries computed by the union were based on GS-7 positions whereas Civil Service Commission regulations indicate GS-6 positions are applicable for the inspection of small residential dwellings.

The union's contract cost computation included severance pay of \$172,940 based on 2-year projections of reductions in force, reassignment rights of employees affected by such reductions, and general Air Force manpower reduction trends. We estimate that the cost is \$62,450 at most and will likely be less, because of reassignment rights and the use of attrition and judicious hiring practices.

Further, the union's in-house estimate is based on a requirement of 29 personnel. This estimate excluded personnel needed to (1) repair and maintain the heating systems and (2) receive requests for service calls. Officials of both the maintenance and heating systems sections indicated that the work could not be done with fewer workers than the number used in the Air Force study.

The union pointed out several erroneous calculations in the Air Force comparison. These miscalculations, however, were minor.

CONCLUSIONS

The difference in cost between contracting out and retaining the total maintenance function in-house is nominal.

However, the third alternative--combining contract and in-house operations--offers the most economical method of maintaining military family housing at Dover Air Force Base.

Further, the Air Force needs to revise its procedures for computing cost comparisons to conform with Circular A-76. Retirement costs or savings should be included in the comparisons. Moreover, procedures for converting military to civilian pay, use of standard pay rates for in-house personnel costs, and application of a predetermined factor for other indirect costs deviate from Circular A-76. This circular calls for determining, as realistically as possible, incremental or additional costs that would be incurred for the alternative under consideration. We believe that conforming present procedures with the circular would result in more realistic costs upon which to base economic decisions.

#### RECOMMENDATIONS

We recommend that the Secretary of the Air Force revise Air Force procedures for preparing comparative cost analyses to conform with provisions of Circular A-76 dealing with

- personnel retirement costs,
- military personnel costs and actual rather than standard personnel pay rates, and
- additional indirect costs actually incurred.

Further, in view of the savings we and the Air Force found to be available by contracting for maintenance of 1,256 homes and using in-house personnel for maintenance of 300 new homes, we recommend that the Secretary of the Air Force adopt this combination of methods rather than contract maintenance for all the homes.

**EXHIBITS**

MILITARY FAMILY HOUSING MAINTENANCE FOR 1,556 HOMES

COST COMPARISON FOR 3-YEAR OPERATION

<u>Cost elements</u>	<u>Air Force computation</u>	<u>Our estimate</u>	<u>Our estimate of one-time savings or costs (-)</u>
<b>Contract operations:</b>			
Lowest qualified bidder	\$1,462,395	\$1,462,395	-
Transportation	15,972	8,520	-
Contract administration	135,606	139,353	-
Severance pay for Government employees	62,978	-	-\$62,450
Savings to civil service retirement system	-	-	<u>138,710</u>
	<u>\$1,676,951</u>	<u>\$1,610,268</u>	
<b>In-house operations:</b>			
Military personnel services	\$ -	\$ 123,438	
Civilian personnel services	1,556,175	1,395,174	
Insurance	4,863	4,752	
Depreciation and interest on equipment	30,294	22,137	
Other indirect costs	32,417	-	
State taxes foregone	-	26,439	
Other costs--material, supplies, Federal income taxes foregone	91,465	91,465	
	<u>\$1,715,214</u>	<u>\$1,663,405</u>	
Savings by contract operations	<u>\$ 38,263</u>	<u>\$ 53,137</u>	
Percent of costs saved	2.2	3.2	
One-time savings by converting to contract operations			<u>\$ 76,260</u>

EXHIBIT A

EXHIBIT A

COST COMPARISON OF METHODS AVAILABLE TO MAINTAIN

MILITARY FAMILY HOUSING FOR 3 YEARS

<u>Maintenance methods</u>	<u>Homes maintained</u>	<u>Air Force computation</u>	<u>Our estimate</u>	<u>Our estimate of one-time savings or costs (-)</u>
Contract operations (see exhibit A)	1,556	<u>\$1,676,951</u>	<u>\$1,610,268</u>	<u>\$ 76,260</u>
Combination of contract and in-house:				
Contract operations:				
Lowest qualified bidder		1,157,367	1,157,367	-
Transportation		13,608	6,480	-
Contract administration		101,706	105,453	-
Severance pay for Govern- ment employees		62,978	-	-56,008
Savings to civil service retirement system		-	-	<u>211,294</u>
	1,256	<u>1,335,659</u>	<u>1,269,300</u>	<u>155,286</u>
In-house operations:				
Civilian personnel services		153,738	162,066	
Depreciation		3,240	9,211	
Other indirect costs		3,368	-	
State taxes foregone		-	19,440	
Other costs--material, supplies, etc.		<u>24,110</u>	<u>23,931</u>	
	300	<u>184,456</u>	<u>214,648</u>	
Total	<u>1,556</u>	<u>1,520,115</u>	<u>1,483,948</u>	
Savings available by combining contract and in-house operations		<u>\$ 156,836</u>	<u>\$ 126,320</u>	
One-time savings by combining operations				<u>\$ 79,026</u>

## United States Senate

WASHINGTON, D.C. 20510

August 7, 1975

B-184715

The Honorable Elmer B. Staats  
Comptroller General of the United States  
General Accounting Office  
441 G Street  
Washington, D. C. 20548

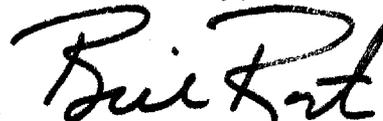
Dear Mr. Staats:

I would like the General Accounting Office to review Air Force figures on the comparative costs of contracting out as opposed to using government employees for maintenance work on 1556 new family housing units at Dover Air Force Base, Delaware. This review would be similar to others done by the GAO.

Enclosed is a copy of comparative cost data provided to me by the local employees' union challenging the Air Force figures. These data suggest that there are some serious miscalculations (even in basic addition) in the Air Force estimates as well as understatements of supervisory costs of overseeing the contract work and of severance pay for replaced employees. Moreover, the union maintains that the Air Force based its calculations of the cost of using government employees on the basis of an assigned manning of 39 as opposed to 29 positions. In conclusion, the union figures indicate the taxpayers will save about \$30,000 in the first year and \$25,000 in the second year by doing the maintenance work in-house.

While I am not in a position to judge the merit of the union figures, they certainly demonstrate the need for a careful GAO review. This review should provide the basis for making a definitive judgment as to which alternative provides the best service at the cheapest cost to the taxpayer.

Sincerely,



William V. Roth, Jr.  
United States Senate

WVR/gh  
Enclosure

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