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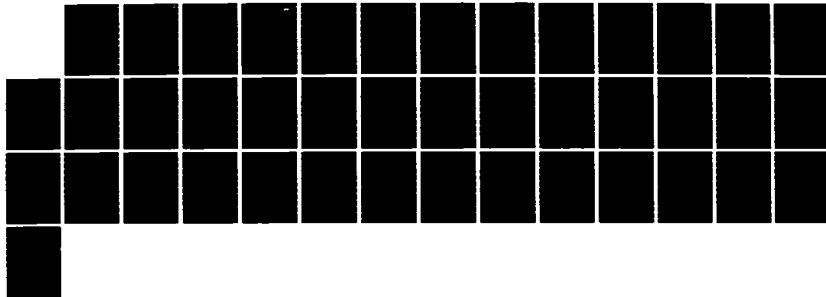
SMARTER CONTRACTING FOR INSTALLATION SERVICES(U)  
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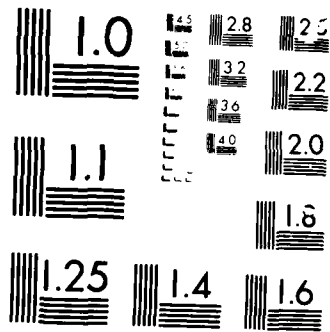
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SMARTER CONTRACTING  
FOR INSTALLATION  
SUPPORT SERVICES

AD-A169 221

May 1986

Douglas K. Ault  
John B. Handy

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## Executive Summary

### SMARTER CONTRACTING FOR INSTALLATION SUPPORT SERVICES

A significant portion of the Department of Defense's funding for contracted services is spent on installation support. For most installation support services, there is a well-established preference toward the use of firm fixed-price contracts for single functions (i.e., individual services). Use of such alternatives as cost-plus, award-fee, or multifunction (i.e., multiple services) contracts is rarely considered. Many installation personnel operate under Military Department policies restricting use of alternative contract types or believe that alternative contract types are unfair to in-house organizations in commercial activities competitions or could detrimentally affect small business participation.

We assessed the utility of three types of contracts for installation support services: firm fixed-price, and, as alternatives, fixed-price-plus-award-fee ( a hybrid type), and cost-plus-award-fee contracts. No single contract type is ideal for all installation support services; it must be selected on the basis of specific installation needs. Accordingly, firm fixed-price contracts should be used for basic services that can be easily specified before award and are subject to minimal change after award. Cost-plus contracts should be used when the requirements cannot be adequately specified or when mission and/or contingency requirements are expected to change. An award fee should be used with either fixed-price or cost-plus contracts whenever quality service above minimum levels is desired. We recommend that the Assistant Secretary of Defense (Acquisition and Logistics)(ASD(A&L)) instruct the Military Departments to increase use of the two alternative contract types and to remove the self-imposed restrictions inhibiting their use.

Improvements in installation support services can be realized also through the use of multifunction contracts and longer-term contracting (i.e., in excess of 5 years). Multifunction contracts can provide greater flexibility by allowing contractors to transfer resources among functions, resulting in more responsive service and significant savings in overhead and administrative costs. Longer-term contracts furnish a strong incentive to the contractor, increasing the likelihood of better service and long-term savings. We recommend that the ASD(A&L) demonstrate the value of such contracts in the Model Installations Program.

Adopting our recommendations should not adversely affect either the Commercial Activities or Small Business programs. To further guarantee better contractor service, improvements must also be made in the procedures for selecting and monitoring contractors. Source selection can be significantly improved by using competitive Request for Proposals (RFP) procedures, which can place strong emphasis on firms' qualifications to provide installation services, rather than the Invitation for Bids (IFB) procedures, which necessarily place major emphasis on cost. We recommend that the Military Departments increase their use of RFPs for installation support services.

Surveillance of installation support contracts needs improvement to guarantee the quality of service provided by the contractor. We recommend that the ASD(A&L) develop more effective surveillance planning guidelines, and that the Military Departments ensure that surveillance plans are written before contract award. They also should train surveillance personnel to write adequate plans.

Finally, we recommend full implementation and enforcement of contractor quality control plans. These plans should be assessed during proposal evaluation and later as the basis for performance evaluation.

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A. TYPES OF CONTRACTS	

## 1. THE STATUS QUO IN INSTALLATION SUPPORT SERVICES

A large portion of the funding that the Department of Defense (DoD) spends annually for services provided under contract with private companies is for support services at DoD installations, services such as graphics, audiovisual work, transportation, refuse collection, janitorial services, grounds maintenance, and food services, to name a few. Most contracted installation support services are provided under firm-fixed-price, single-function contracts, since installation personnel have a strong preference toward the use of that type of contract. That preference is reinforced by:

- Service policies and restrictions
- A desire to win A-76 competitions<sup>1</sup>
- Concern that multifunction contracting is detrimental to the use of small businesses.

Both the Navy and the Air Force have designated firm-fixed-price contracts as the preferred contract vehicle. Contracting personnel generally believe that they have to use firm-fixed-price contracts to comply with the intent of existing statutes dealing with competition in Government acquisition and to keep from "giving away the store." This perception is one of the strongest reasons for the strong preference toward firm-fixed-price contracts.

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<sup>1</sup>In brief, A-76 competitions are those required by the Office of Management and Budget (OMB) Circular A-76, "Performance of Commercial Activities," August 3, 1983, in which the in-house Government group performing a specific function (graphics or grounds maintenance, for example) must bid against private companies for the continued performance of that function; if the contractor's bid is more than 10 percent below that of the in-house group, the contract is awarded to the private company.



The desire to win A-76 competitions also perpetuates the preference for firm-fixed-price contracts. An accompanying perception is that it is easier for the Government to win single-function competitions (e.g., graphics). Thus, in practice, the fixed-price bias often becomes a single-function bias. Many installation personnel feel that the only way to ensure a fair cost comparison between Government groups and contractors is to solicit quotations for performance of a service under a firm-fixed-price, single-function contract. While the Government believes that such contracts provide equity between contractors and in-house groups, industry spokesmen feel that the Government uses firm-fixed-price bids as a method for preventing in-house commercial activities from being contracted out. In fact, a manual published by the U.S. Army Corps of Engineers indicates that if the Government uses firm-fixed-price contracts, it should be able to keep functions in-house. With so many Government commercial activities at DoD installations facing competition under A-76, it is easy to see why this attitude helps to reinforce the fixed-price bias.

The preference for single-function is reinforced by a concern for small business. Many people in Government fear that multifunction contracts (e.g., transportation, grounds maintenance, and refuse collection) will become so big that small businesses cannot compete effectively because of such things as limitations in bonding capacity. Therefore, they feel that commercial activities must be contracted as single functions to protect small business interests.

Those three reasons interact to create an environment in which firm-fixed-price, single-function contracts are often routinely employed with little consideration of available alternatives. This predilection creates problems because no single contract type is right for every situation, and in fact, firm-fixed-price service contracts have a number of inherent problems (as discussed in Chapter 2). Contracting personnel recognize those problems and in some cases have

experimented with alternative contract types. However, they are often stifled because of the Military Department biases and restrictions.

In this study, we investigated the basic issues of contract type and contract scope (single-function or multifunction) and devoted special attention to concerns about A-76 competition and small business participation, and found several viable alternatives to the standard firm-fixed-price contracts. The strengths and weaknesses associated with each of these contract types are discussed in Chapter 2 along with improvements that can be realized by the use of multifunction contracts and better source selection, contract surveillance, and quality control. We also found that none of the alternatives examined created problems for A-76 competition or for small business participation. Small business participation is treated in more detail in Chapter 3. Our conclusions are presented in Chapter 4 along with recommendations for actions to improve contracting for installation support.

## 2. STRATEGIES FOR IMPROVING INSTALLATION SUPPORT SERVICES

In this chapter, we first describe various contract types in more detail and focus on their strengths, weaknesses, and applicability. The description does not cover all possible contract types; we have limited it to those types most useful for installation support services. Contracting type has a significant effect on both cost and performance. In general, firm-fixed-price contracts are preferred when the specifications are exact and the level of performance is not critical; fixed-price-plus-award-fee (more commonly termed fixed-price-award-fee) contracts should be used when the specifications are exact and a high level of performance is desired; and cost-plus-award-fee contracts are most effective when the requirements cannot be specified exactly and a high level of performance is required.

In the second section of this chapter, we describe improvements in other areas of installation support contracting. We deal with multifunction and single-function contracts, source selection, contract surveillance, and quality control.

### ALTERNATIVE CONTRACT TYPES

Table 2-1 presents a listing of the contract types considered in this study, their appropriate uses, and their strengths and weaknesses. The full range of available contract types is shown in Appendix A.

#### Firm-Fixed-Price

The firm-fixed-price (FFP) contract is the most common contract format in use for installation support services and it is familiar to most installation managers. Thus, the features of the FFP contract provide a good baseline for comparison with alternative types.

**TABLE 2-1. CONTRACT TYPES FOR INSTALLATION  
SUPPORT SERVICES**

<b>FIRM FIXED-PRICE (FFP)</b>	<b>FIXED-PRICE-AWARD-FEE (FPAF)</b>	<b>COST-PLUS-AWARD-FEE (CPAF)</b>
<p><b><u>DESCRIPTION:</u></b></p> <p>Government pays price which is not subject to any adjustment regardless of contractor's cost experience.</p> <p>Places maximum risk on contractor.</p> <p>Contractor has greatest incentive to control costs.</p> <p>Minimum administrative burden on parties.</p> <p>Preferred contract type.</p> <p><b>Level of Effort:</b> Payment is based on effort expended rather than results achieved. Contractor provides specified effort over a stated period for fixed price.</p>	<p><b><u>DESCRIPTION:</u></b></p> <p>Government pays price that is not subject to any adjustment regardless of contractor's cost experience.</p> <p>Contractor earns base fee that does not vary with performance and all or part of an award fee based on subjective evaluation by the government of contractor's performance.</p> <p>Contractor has motive to control costs and provide high level of service.</p> <p>Amount of award is unilaterally determined by the Government and is not subject to the Disputes Clause.</p> <p>Evaluation of performance and corresponding partial payment of fee made at stated intervals.</p>	<p><b><u>DESCRIPTION:</u></b></p> <p>Government pays allowable cost, base fee, and award fee.</p> <p>Contractor earns a base fee which does not vary with performance and all or part of an award fee based on subjective evaluation by Government of contractor's performance.</p> <p>Amount of the award fee is unilaterally determined by the Government and is not subject to Disputes Clause.</p> <p>Evaluation of performance and corresponding partial payment of fee made at stated intervals.</p>
<p><b><u>ELEMENTS:</u></b></p> <p>Price</p>	<p><b><u>ELEMENTS:</u></b></p> <p>Price Base Fee Award Fee</p>	<p><b><u>ELEMENTS:</u></b></p> <p>Estimated Cost Base Fee Award Fee</p>

**TABLE 2-1. CONTRACT TYPES FOR INSTALLATION  
SUPPORT SERVICES (CONTINUED)**

<b>FIRM FIXED-PRICE (FFP)</b>	<b>FIXED-PRICE-AWARD-FEE (FPAF)</b>	<b>COST-PLUS-AWARD-FEE (CPAF)</b>
<p><b><u>APPLICATION:</u></b></p> <p>When fair and reasonable prices can be established at outset.</p> <p>Particularly suitable for standard or modified commercial items or military items for which sound prices can be developed.</p> <p><b>Level of Effort:</b> R&amp;D investigation or study.</p>	<p><b><u>APPLICATION:</u></b></p> <p>When fair and reasonable prices can be established at outset.</p> <p>For services for which achievement must be evaluated subjectively.</p>	<p><b><u>APPLICATION:</u></b></p> <p>Level of effort contracts for services where achievement must be evaluated subjectively.</p> <p>Where finite performance objectives cannot be established in advance to measure actual performance.</p> <p>Award fee may be used in conjunction with other types of contracts.</p>
<p><b><u>LIMITATIONS:</u></b></p> <p><b>Level of Effort:</b> Used only when work cannot be clearly defined but effort desired can be agreed upon.</p>	<p><b><u>LIMITATIONS:</u></b></p> <p>Base fee shall not exceed 3% of fixed price (often waived).</p> <p>Maximum fee limits same as CPFF.</p> <p>Negotiated procurements only; adequate contractor cost accounting system.</p>	<p><b><u>LIMITATIONS:</u></b></p> <p>Base fee shall not exceed 3% of estimated cost.</p> <p>Maximum fee limits same as CPFF.</p> <p>Weighted guidelines (for determining profit objective) shall not be applied.</p> <p>Shall not be used in lieu of CPFF or CPIF when objective measurement is feasible.</p>

Firm-fixed-price contracts are those under which a contractor proposes to provide a specific level service for a specified period of time at a fixed price that includes direct labor and material costs, overhead, general and administrative, and other indirect costs and a fixed fee.

Firm-fixed-price contracts have several advantages. First, with such a contract, the costs to the Government are fixed, which places the major part of the risk on the contractor. This type of contract is preferable from the Government's point of view since it has a low risk and planning, budgeting, and administration are much easier. Second, firm-fixed-price bids are the easiest to use for cost comparison purposes in an A-76 competition under the commercial activities program since the bottom line bid can be readily compared with the Government in-house estimate. Third, an FFP contract gives the contractor the greatest incentive to control costs, a characteristic that has both positive and negative aspects. On the positive side, it tends to give the Government low bottom line costs, which is desirable and acceptable for procurement of many items. However, with installation support services, contractors can most readily control cost by sacrificing the quality of services because of the difficulty in monitoring service quality.

Firm-fixed-price contracts also have two other inherent problems:

- The desired service level is often difficult to specify with precision
- The contractor's flexibility to respond to changes is limited.

As noted in Table 2-1, the FFP should be used "whenever fair and reasonable prices can be established at the outset." In procurement of goods, it is easy to specify what is desired and thus the establishment of a price is fairly straightforward. For installation services, on the other hand, it is much more difficult to specify the desired work, especially for large multifunction tasks. This difficulty often leads to pricing problems, either underbidding or overbidding, although the former is more prevalent than the latter. Underbidding can severely complicate the problem of controlling costs in providing a service. Furthermore, if a change in the contract becomes necessary because of failures in the specification or because the mission changes, it can be quite costly since it then takes on the nature of a sole-source negotiation.

In summary, firm-fixed-price contracts have some significant advantages to the Government, as shown in Table 2-2. However, those advantages are outweighed in many cases by the disadvantages, also listed in Table 2-2. In general, firm-fixed-price contracts should be awarded only for simple functions that are easily identified and minimally subject to change. In the absence of any of these conditions, another contract type should be considered.

TABLE 2-2. FIRM-FIXED-PRICE CONTRACTS

ADVANTAGES	DISADVANTAGES	APPLICATION
<ul style="list-style-type: none"> <li>- Low risk to Government</li> <li>- Planning, budgeting, administration are easier</li> <li>- Easier to use in A-76 competitions</li> <li>- Provides high incentive to control costs</li> </ul>	<ul style="list-style-type: none"> <li>- Requires exact specifications of level of services</li> <li>- Limits contractor's flexibility for providing services</li> <li>- Contractor's costs can be controlled only by sacrificing quality of services</li> </ul>	<ul style="list-style-type: none"> <li>- Simple functions</li> <li>- Specifications are exact</li> <li>- Changes are expected to be minimal</li> </ul>

Fixed-Price-Award-Fee

The Fixed-Price-Award-Fee (FPAF) contract is one in which the contractor proposes to perform a specific level of service for a specified time period at a fixed price that includes all cost elements except fee. The maximum fee percentage is specified in the contract, and the amount received by the contractor is determined unilaterally by the Government on judgmental assessments of performance periodically over the term of the contract. The award fee is not subject to conventional Disputes Clause procedures. This type of contract is sanctioned by the Federal Acquisition Regulations (FAR) as a combination of available contract types.

It has many of the same advantages as the firm-fixed-price contract and uses the award fee to motivate the contractor to provide quality service.

The FPAF contract format is fairly new and has been recently tested at several installations for support services. In practice, the award fee does indeed stimulate better contractor performance by creating a more responsive attitude on the part of the contractor.<sup>1</sup> The promise of a possible award fee not only changes the contractor's outlook it also changes the relationship between the Government and the contractor, making it much less adversarial. The periodic award fee evaluations serve as "report cards"<sup>2</sup> and let both sides know whether the service is satisfactory. Communication and cooperation between the Government and the contractor are greatly improved, and quality becomes an equal concern with cost.

While the FPAF approach has many advantages over the regular firm-fixed-price contract, it also embodies some of the disadvantages of such contracts. Although concerns about the quality of service may be mitigated through the use of an award fee, the fixed-price format still requires a detailed and exact statement of required services. The contractor's flexibility to respond to major changes is still limited, and negotiations for changes are still costly. In addition, the improved quality afforded by the award fee comes at a cost to the Government; the contractor's direct and indirect costs will probably be higher for the higher level of service. Since the award fee is based on direct and indirect costs, it will also increase and the cost to the Government will be higher. Furthermore, the procedural requirements for the award fee evaluation lead to increased administrative costs.

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<sup>1</sup>Raymond G. Hunt, "Contractor Responses to Award Fee Contracts," NCMA Journal, Winter '82.

<sup>2</sup>Raymond G. Hunt, *op. cit.*



In our assessment, we also found that many Government personnel have difficulty adjusting to award fee situations. At one installation we visited, the award fees were held artificially low because of preexisting biases of the Award Fee Board; in that case, the low award fee actually served as a disincentive to the contractor. In another case, the award fee became almost "automatic," which weakened the motivational aspects of this contract type.

In general, we found that the award fee is not a simple mechanism. It can be a powerful tool for improving performance, but it must be handled properly and costs will be higher than those under a firm-fixed-price contract. Use of the FPAF format in a commercial activities A-76 cost comparison also calls for "special handling," as discussed in the following section.

Table 2-3 summarizes the advantages, disadvantages, and applicability of the fixed-price-award-fee alternatives. In summary, FPAF contracts should be awarded for functions that are easily identified and minimally subject to change and for which a high level of performance is desirable.

#### Cost-Plus-Award-Fee

Cost-reimbursement contracts are those under which the Government pays all allowable direct and indirect costs. The fee ranges from 0 to 15 percent depending on the type of cost-reimbursement contract: incentive fee, award fee, fixed fee, or cost sharing. The cost-reimbursement family of contracts has a long history of usage within DoD. As noted in Table 2-1, several specific types have been used successfully in many different situations. Despite these successes, a bias still exists against that type of contract; many feel that it places too much risk on the Government and too little on the contractor. Similarly, there is a perception that cost-plus contracts give the contractor a "blank check" that will result in unacceptable cost escalation. In this section, we address those fears and put them in perspective with reference to the benefits to the Government.

TABLE 2-3. FIXED-PRICE-AWARD-FEE CONTRACTS

ADVANTAGES	DISADVANTAGES	APPLICATION
<ul style="list-style-type: none"> <li>- Low risk to Government</li> <li>- Improved relationship between contractor and Government</li> <li>- Stimulates better performance</li> <li>- Provides incentive to control costs</li> </ul>	<ul style="list-style-type: none"> <li>- Requires exact specification of level of services</li> <li>- Limits contractor's flexibility for providing services</li> <li>- Requires special handling for A-76 competitions</li> <li>- Requires Award Fee Board without preexisting biases for or against FPAF contracts</li> </ul>	<ul style="list-style-type: none"> <li>- Easily identified functions</li> <li>- Specifications are exact</li> <li>- Changes expected to be minimal</li> <li>- High level of performance desired</li> </ul>

While cost-plus contracts do place more risk on the Government than fixed-price contracts, that assumption of risk is warranted in some cases. The cost-plus arrangement provides the flexibility that is often needed when requirements are difficult to quantify exactly (as with many installation support services) and when missions and contingency requirements change. It also avoids the necessity for the Government to enter into sole-source negotiations for changes. Thus, the assumption of a higher degree of risk by the Government seems warranted.

Cost and cost control are the other major concerns with cost-reimbursement type contracts. We have found no evidence that cost-reimbursement contracts for installation services are always more expensive, and mechanisms such as award and incentive fees always allow for adequate control of cost growth. In general, the common criticisms leveled at cost-reimbursement contracts only rarely hold true. This does not imply that adequate precautions are unnecessary; the very

nature of the contract requires careful attention for the protection of both parties. However, when properly handled, cost-plus contracts can be effective and efficient contracting vehicles, as is demonstrated in the following, more detailed look at cost-plus-award-fee contracts.

The award fee aspect of cost-plus-award-fee (CPAF) contracts is similar to that of FPAF contracts. For CPAF contracts, the contractor proposes to perform a service for a specified price, which may include a base fee of 3 percent or less. The Government assumes responsibility for all allowable costs and periodically awards an additional fee based on a renegotiated maximum fee. As with the FPAF, the award fee is based on contractor performance, is determined unilaterally by the Government, and is not subject to the Disputes Clause procedures.

Cost-plus-award-fee service contracts are currently in use at numerous Army installations, and we found that installation managers are very satisfied with the results. As noted in Table 2-1, the CPAF contract is most applicable for "level of effort contracts for services where achievement must be evaluated subjectively." Installation support services clearly fall within these parameters since acceptable service levels are subjective. One of the reasons installation commanders like this contract type is because they have a perception of increased control, i.e., they determine what is acceptable.

As discussed previously, writing "finite performance objectives" for this type of work is extremely difficult, and that is another justification for using CPAF. The work statement for such contracts is much easier to write and can be more clearly performance-oriented. Other benefits that accrue from this contract type are increased flexibility in the services provided and the opportunity to adjust to changes in scale. An ongoing LMI study of the impacts of contracting for mobilization support found that CPAF contracts are significantly superior to fixed-price contracts

in providing a vehicle for rapid surge capabilities.<sup>3</sup> This contract format also lends itself well to large multifunction contracts that can have significant advantages over small single-function contracts. Additionally, the award-fee feature helps ensure good contractor responsiveness.

Cost-plus-award-fee contracts, however, also have potential pitfalls. We have already cited cost control as an area that must be closely watched. We found no evidence that CPAF contracts are automatically more expensive than fixed-price contracts. In fact, we found a case at Ft. Eustis, VA, in which a function was performed at a lower price as part of a multifunction CPAF contract than it had been with a single-function, fixed-price contract. However, CPAF contract costs may tend to escalate unless there is a mechanism for control. For that reason, cost control is included as one of the evaluation criteria within the award-fee structure in most cases in which CPAF contracts are being used. Because of the need to verify contractor cost accounting, requirements for CPAF contracts are fairly sophisticated and can present problems for both the Government and the contractor. Usually, such problems can be minimized through proper training and through implementation of automated cost accounting systems; cost verification should not be an overriding concern.

The last potential problem with CPAF contracts relates to their use in conjunction with A-76 commercial activity cost competitions. Government personnel perceive an unfairness in letting a contractor compete with a CPAF contract; they feel that it decreases the chance of an in-house group winning the contract. However, since both the in-house group and the contractor bid on the same

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<sup>3</sup>"Mobilization Readiness of Installation Support Contractors," David D. Metcalf, Logistics Management Institute, Task ML537.

target or estimated work level, the only real difference is in the way the award fee is factored in. The rules of the Office of Federal Procurement Policy (OFPP) state that the base fee will be added to the contractor's bid for cost comparison purposes; however, base fees are often eliminated in CPAF contracts, which means that none of the fee is counted in the cost comparison. While this appears to be an inequity, we do not find it to be a critical factor. In most cases, the award fee, which is limited to a very small percentage of total cost, would not be enough to alter the cost comparison decision. Added to this is the fact that a contractor must underbid the Government in-house group by at least 10 percent to win. Taken together, it appears that the comparison is generally fair to both sides. If the Government remains concerned about the cost comparison, action should be taken to establish a reasonable and equitable base fee.<sup>4</sup> Bidding a job on a firm-fixed-price basis just to guarantee a fair cost comparison (or to improve the in-house group's chances of winning) can cause major problems in performance if the contractor wins a function that was not or could not be adequately scoped for fixed price. We strongly recommend against letting these types of external factors influence decisions on contract type.

Table 2-4 summarizes the advantages and disadvantages of CPAF contracts and lists the key decision factors in choosing that contract type; it is these factors that should determine the proper contract type. In summary, the CPAF contract should be used when requirements are difficult to quantify exactly and when mission and contingency requirements are expected to change.

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<sup>4</sup>We saw several cases in which the Government counted a set percentage, such as 50 percent, of the fee; while this may be reasonable, it is not allowable under current procedures. DoD may need to request changes to the OFPP regulations for such comparisons.

TABLE 2-4. COST-PLUS-AWARD-FEE CONTRACTS

ADVANTAGES	DISADVANTAGES	APPLICATION
<ul style="list-style-type: none"> <li>- Services do not need to be precisely quantified</li> <li>- Avoids need for sole-source negotiations for changes</li> <li>- Provides for cost control as component of performance to merit award</li> <li>- Economies of scale can be realized</li> </ul>	<ul style="list-style-type: none"> <li>- Risk is higher than for fixed-price contracts</li> <li>- Cost must be closely monitored</li> <li>- Verification of contractor cost accounting is often complex</li> <li>- Minor (but not overriding) inequities exist in A-76 cost comparisons</li> </ul>	<ul style="list-style-type: none"> <li>- Functions not readily identifiable</li> <li>- Specifications are inexact</li> <li>- Changes in scope expected</li> <li>- High level of performance desired</li> </ul>

Hybrid Contracts

“Hybrid” is a term used by many in the service contracting arena to describe contracts that combine elements of two (or more) different contract types. We found these contracts being used primarily in situations in which a straight fixed-price contract was not practical. For example, at the Public Works Center, Great Lakes, IL, we saw contracts in the maintenance area in which most of the work was bid under a fixed-price contract, while specific sections were bid as unit cost or level of effort. This technique is a good method for avoiding the problems of specifying everything as fixed price and can also be used to provide for contingencies. It can be used in an A-76 competition as long as the Government’s bid is prepared the same way.

Another example of a hybrid-type contract that has not yet been used in installation support contracts is one with a hybrid fee structure. In such a contract, award and incentive fees are combined, with the award fee being subjective and

based on quality of service and the incentive fee being structured and based on cost control. Many people in both Government and industry see this CPAF/IF structure as an excellent contract type for providing quality services for installation support while controlling costs.

#### OTHER IMPROVEMENTS

In the course of this investigation, we noted several other areas in which improvements in installation support contracting are needed. Some of those improvements relate to using alternative contract types. Most, however, relate to problems that installation contract personnel have been aware of over a long period of time. Improvements in these areas, coupled with a greater freedom in use of alternative contract types, should result in a significant increase in performance in installation support services at equal or lower costs.

##### Multifunction Contracts

The potential benefits of multifunction contracts arise from economies of scale. When several functions are combined under one contract, both contractor overhead and Government administration costs can be reduced. Army installations using CPAF multifunction contracts also claimed improved flexibility and responsiveness because one contractor could shift staff resources as needed to meet contingencies. Army personnel at Ft. Gordon, GA, stated that a single contractor could also be much more easily included as an integral member of the installation support team.

Multifunction contracts have come under close scrutiny because of concerns for small business, but as is shown subsequently in Chapter 3, small business participation need not suffer. Government personnel perceive single-function contracts to be easier to win in-house and often reject multifunction contracting for that reason alone. As previously noted, that is a poor reason to reject alternative approaches. In the use of multifunction contracting, one caution must be

observed: functions must be contracted in a package that is logical and that provides adequate bid competition.

### Longer-Term Contracts

In a study of service contracting in the private sector, the Air Force Logistics Management Center (AFLMC) found that one of the most powerful motivators for service contractors is the promise of a continuing business relationship over an extended period of time. Contractors that provide dependable service at a reasonable cost are preferred by corporate customers to other contractors whose reputations for quality are not known. Customers reserve the right to resolicit for a service if they become dissatisfied with either quality or cost, so the contractor makes every attempt to satisfy on both accounts. AFLMC's surveys of private sector corporations indicated that "the guarantee of future business can be a strong incentive for good performance." Unfortunately, AFLMC decided after legal review that further consideration of long-term contracts was *not possible in* Air Force service contracting because of "funding uncertainties and fluctuating service requirements" and the fact that the U.S. Air Force would have to include a Governmental escape clause that would "tend to water down the effect of a follow-on guarantee."

In visits to various military activities, we discussed long-term contractual relationships with contracting officers. All felt that terms of more than 5 years in duration were not possible under current law, and several felt that the only way a contract could be noncompetitively renewed beyond 5 years would be in a true sole-source situation. We were unable to find any activity in DoD that had used or is now using long-term service contracts for installation support services.

NASA has a different interpretation. At the Kennedy Space Center (KSC), nearly all support work is accomplished under three large consolidated service contracts: the Shuttle Processing Contract, Base Operating Contract, and



the Cargo Handling Contract. These contracts have a 3-year base period, a 3-year priced option period, and three 3-year unpriced option periods for a total contract term of 15 years. The Johnson Spaceflight Center in Houston is soon to award a similar 15-year Base Operating Contract. NASA is convinced that it is receiving the best value possible by extending its service contract terms and insists that it is doing so within the constraints of the FAR. Officials point out that the base operating contractor at KSC has made significant capital investments, in one case even constructing a building, to improve its productivity (and keep down costs for itself and NASA) over the next several years. The contractor is taking a risk in doing so, but the guarantee of continued business over a long period of time (assuming performance stays high and prices remain within NASA's standards) reduces the extent of the risk to acceptable levels.

NASA's experiences have demonstrated both that long-term service contracts can be awarded by Government agencies and that Government contractors respond to long-term contracts with the same enthusiasm that is prevalent in the private sector. It is likely that the same would be true for DoD.

#### Source Selection Procedures

Selecting a good, capable contractor is extremely important to the success of any contracting effort, and yet Government contracting procedures often leave this selection to chance, basing selection solely on the lowest bid. Until recently, such a procedure, known as Invitation for Bid, was the preferred method for source selection and other procedures were used only for special exceptions. The Competition in Contracting Act of 1984 now allows for use of competitive proposals under procedures known as Request For Proposals. Under the RFP procedure, competitive proposals are evaluated on the basis of cost and other factors such as the technical ability of the contractor to perform.

The use of RFPs for installation support service contracts provides an opportunity to ensure that a contractor can perform the work before an award is made. Obviously, this is advantageous to the Government because the RFP system reveals many potential performance problems. The procedure is also advantageous to the contractors because they have an opportunity to clarify any ambiguities and to correct or adjust their bids. The problems inherent in preparing clear and exact work statements for service contracts make thorough source selection and evaluation essential.

Because these procedures take a significant amount of time, many overworked contracting officers feel they are too busy to use RFP procedures. At one installation, a janitorial services contract was awarded under IFB procedures because the contracting officer was too busy. Four months into the contract, the low-bid winner had to be terminated for nonperformance and a new contract package prepared. The contracting officer readily admitted that the time invested in evaluating a proposal would have saved a great deal more time later in the contract not to mention the problems experienced by the disruption of installation services. This incident demonstrates the distinct advantage of using RFP instead of IFB. Every service contract, no matter how mundane it appears, has technical aspects that should be evaluated. The RFP source selection procedures can ensure better service by allowing evaluation of both cost and technical ability to perform.

#### Surveillance of Contractor Quality

One of the most difficult aspects of Government service contract administration is determining whether the services called for were performed and if they were, whether they were performed adequately. In OFPP Pamphlet 4, a standardized method is provided for quality assurance on service contracts. Unfortunately, contract administrators have found the suggested method difficult to use and extremely labor intensive. Deductions for poor performance are often

difficult to quantify and are even harder to substantiate if a grievance is filed by the contractor.

The Naval Facilities Engineering Command (NAVFAC) has devoted considerable effort to improving its surveillance plans and techniques. One of its field activities uses a simple, easily implemented, yet enforceable surveillance scheme that has resulted in improved contractor performance. The surveillance technique is based on random sampling and statistical inference. Contract clauses define the services to be provided as well as an acceptable quality threshold for each type of service. Government quality assurance (QA) personnel inspect a predetermined number of "jobs" based on a computed random sample that provides a statistically significant representation of the entire population of jobs the contractor has performed. If the QA inspector finds the total number of discrepancies to be below the contractual critical point threshold, a deduction is made for each discrepancy based on a prenegotiated unit cost or engineered performance standard. If the number exceeds the threshold, the entire population of jobs is considered deficient and the percentage of deficient samples is extrapolated to infer that the entire population is equally deficient.

NAVFAC has found its procedure to be enforceable, fair, and understandable. Contractors have responded to it well, and Navy QA personnel have found it to be substantially better than the techniques used previously.

Poor contractors can benefit from poor Government surveillance methods, and good contractors can suffer from them. Most surveillance methods we saw in use at the field level were clumsy, ineffective, and frustrating to QA inspectors. The NAVFAC plan was straightforward (a microcomputer was used to perform the only complicated tasks -- computation of sample size and random number generation), easy to use, and understandable to the inspectors. We found the NAVFAC

inspectors to be far more enthusiastic than their peers elsewhere, with a more responsible attitude towards contract enforcement.

#### Full Implementation of Contractor Quality Control

Another mechanism for ensuring quality performance in installation support is contractor quality control (CQC). Unfortunately, it is seldom used to its fullest extent. All service contracts include a CQC clause that requires the contractor to develop a quality control plan and to establish a staff organization for its implementation. In many cases, however, the plan is submitted as a mere formality and is never fully implemented.

Both Government and contractor personnel feel that quality could be improved through fuller implementation of the CQC provisions. A representative of Pan Am World Service, Inc., pointed out that the Government pays for CQC whether it is utilized or not and suggested that Government surveillance could be reduced, at a significant savings, if the contractors were required to live up to the requirements of their CQC plans. While CQC should be required with all contract types, the provisions of award-fee contracts can give it added emphasis by making it one of the evaluation criteria for the award fee. Similarly, the CQC plan and organization should be evaluated during technical review of proposals as part of the source selection procedures.

### 3. SMALL BUSINESS PARTICIPATION

Many contracts for installation support services are awarded to small businesses through small business set-asides or 8A (minority-controlled firms) negotiated contracts. Most contracts with small businesses are for single functions that are labor intensive and nontechnical. The most common installation support contracts are for grounds maintenance, food service, refuse collection, and janitorial services. Managers of the small business program are concerned that small business participation may suffer if DoD moves away from standard, fixed-price, single-function contracts. Most of their concern is focused on the issue of multifunction versus single-function contracts. They believe that multifunction contracts go beyond the technical and managerial abilities of small businesses and that the costs of those contracts exceed the bonding capacity of most small businesses. They are also concerned about the ability of small business contractors to bid and/or manage the more "exotic" contract types such as cost-plus-award-fee contracts. While consideration of small business participation in installation support services is important, we found that neither contract type nor scope have any significant impact on overall small business participation, i.e., prime contracting and subcontracting participation. In fact, certain initiatives in both areas could actually improve the total participation of small business concerns.

#### ALTERNATIVE CONTRACT TYPES

Some installation contracting personnel indicated that small businesses might not understand the intricacies of the more complicated contract types and would find it difficult to prepare accurate bids. That issue becomes almost a moot point with the use of a two-step source selection procedure. This procedure, by requiring submittal of a technical proposal first, would give Government contracting representatives an

opportunity to detect and correct any misunderstandings the small businesses might have.

Another expressed concern was that small businesses might not have sophisticated enough accounting systems to handle cost-plus contracts. Investigation seems to indicate that such a problem would occur only in very isolated instances. As one contracting officer pointed out, if a contractor is that unsophisticated in his accounting ability, he will likely have problems in payroll and associated areas and would probably be disqualified from consideration for other reasons.

#### MULTIFUNCTION CONTRACTS

Concern about the impact of multifunction contracts is not justified. If such contracts were very large, small businesses might lack the technical capability and/or bonding capacity to bid on them. However, overall small business participation need not decline. Subpart 19.7 of the FAR provides for small business participation through subcontracting. If the requirements for small business subcontracting are aggressively pursued in the prime contract, adequate small business participation can be ensured. In fact, we found that large business prime contractors are often very successful in meeting small business goals. For example, Northrup Services, the prime contractor at Ft. Eustis, VA, awards 93 percent of its subcontracts to small businesses..

Small businesses can also reap important benefits from their status as subcontractors. One major benefit is the alleviation of cash flow problems. If a small business is a prime contractor with the Government, problems with cash flow can be quite serious because of the time involved in processing payments through the Government bureaucracy. On the other hand, as a subcontractor, the small business is assured of prompt payment while the prime contractor carries the float. Other benefits to small business subcontractors include the availability of management

expertise and support from the prime contractor. Many small businesses need this type of support, but when they are prime contractors, they cannot receive it from the Government. Opportunities for small businesses in service areas outside of the traditional low-skill, labor-intensive functions can be expanded by a large prime contractor that is willing to instruct and support a small business subcontractor. Thus, it appears that both the quality and quantity of small business participation can be improved through encouraging small business subcontracting.<sup>1</sup>

#### OPPORTUNITIES FOR IMPROVING SMALL BUSINESS PARTICIPATION

Despite the favorable findings on small business subcontracting, there is still resistance within the Government to the idea. This resistance is primarily based on two issues:

- Concern over FAR requirements for competition in subcontracting
- Problems with reporting procedures for subcontracting.

Many Government and industry personnel are concerned that the FAR requirement that subcontracts be competed would limit the prime contractor's ability to award subcontracts to small business. However, this concern results from an overly conservative interpretation of the FAR. In practice, it does not seem to be a significant problem, as evidenced, for example, by the Ft. Eustis experience cited previously.

The FAR requirements for competition in subcontracting are discussed in Subpart 44.2 under Consent to Subcontracts. That subpart states that the contracting officer responsible for consent should review the subcontract and consider such things as price competition; it recommends "careful and thorough consideration . . . when subcontracts are proposed for award on a noncompetitive

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<sup>1</sup>These findings are based on observation and interviews with Government and industry representatives, including small business concerns.

basis at prices that appear unreasonable." The two major factors of concern are price competition and price reasonableness. As long as these two criteria are met, no difficulty will be encountered in small business subcontracting. The same subpart of the FAR also states that where price competition is not adequate, its absence must be properly justified. It also requires the contracting officer to ensure that the proposed subcontract complies with small business subcontracting requirements. Thus, it would appear that the desire to award to small business could be an adequate justification for lack of price competition if such a case arose, provided that the cost is reasonable. In other words, the desire for price competition does not override and should not be considered independently of the need to aggressively push for small business participation in subcontracting arrangements.

Problems with reporting procedures for small business subcontracting have also caused some resistance. Under the current reporting system, installation contracting offices do not receive "credit" for small business subcontracts. Since all contracting offices are evaluated on the basis of their small business support, most find it more prudent to continue issuing small single-function contracts to ensure reaching their small business goals. This stumbling block could be easily removed by giving equal emphasis to prime contracting and subcontracting participation in the reporting system.

Small business participation can also be improved through more aggressive support of the small business subcontracting requirements. A spokesman for RCA Service Co. indicated that if the Government would "get serious about the issue" and require an aggressive subcontracting plan, industry would "fall in line." In order for this more aggressive policy to work at the field level, the following steps must be taken.

- Contracting officers must understand that, for prime contractors, price competition in subcontracting should not take precedence over small business requirements.



- Two-step competitive proposal procedures should be used and goals should be established to ensure the adequacy of small business subcontracting plans; these goals should be included in evaluation and award procedures.
- Reporting procedures for small business programs should give equal weight to prime contracting and subcontracting participation.

If these steps are taken, overall small business participation should improve regardless of the type and size of contracts used for installation support.

## 4. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of this report deal with three essential elements for a successful installation support contract.

- A competent contractor
- An effective contract document
- Proper contract administration.

We found that proper source selection and adequate incentives (such as award fees and/or long-term contracts) can go a long way toward ensuring that an installation gets a good contractor. An effective contract document results from thoughtful planning and includes the use of the right contract type and grouping of functions into a reasonable and manageable package. Proper contract administration requires adequate training of contract personnel and strong QA and QC programs.

Installation personnel are capable, but they need the support of higher echelons and the freedom to apply their knowledge and skills in individual situations. That is what smarter contracting means -- letting the people in the field do the right thing to provide better support services for their installations.

In this chapter, we review our findings, present conclusions on improving installation support services, and recommend specific actions that should be taken by the Office of the Secretary of Defense (OSD) and the Military Departments.

### ALTERNATIVE CONTRACT TYPES

Most contracted installation support services are provided under firm-fixed-price contracts. We have described several alternative contract types and pointed out the apparent strengths and weaknesses of each. No single contract type is ideal

for installation support services; each situation is different, and the contract type must be tailored to meet the specifics of each situation. We recommend that:

- Firm-fixed-price contracts be used only for simple functions that are easily specified and subject to minimal change
- Fixed-price-award-fee contracts be used for functions that are easily specified and subject to minimal change and for which a high level of performance is desired
- Cost-plus-award-fee contracts be used when the requirements are difficult to specify exactly and when mission and contingency requirements are expected to change.

Table 2-1 summarizes the factors that must be taken into account in selecting a contract type. The recurring theme is that each contracting action must be planned according to the relevant factors for the individual installation. In many cases, the firm-fixed-price format is the best choice; however, we caution against the bias that seems to exist against other alternatives. Those other contract types can successfully provide quality service at reasonable prices.

We strongly recommend that the ASD(A&L) direct the Military Departments to use alternative contract types as a means for improving installation support services. Specifically, we recommend that OASD(A&L) and the Military Departments continue to sponsor tests and evaluations of alternative and innovative contract types.

The Military Departments should also take action to remove the many self-imposed restrictions that limit the use of alternative contract types. Since many of these "restrictions" are merely implied or perceived, a large part of the effort must focus on educating installation personnel and increasing their awareness. Managers and contracting officers need to know that the regulations permit considerable latitude in choosing contract type, and they need to be trained in the proper procedures for using such alternative approaches as cost-plus and award-fee contracts. This skill will be especially important for ensuring fairness in A-76

competitions. By encouraging the use of alternative contract types, OSD will be opening the door for more effective installation support contracting.

#### OTHER INITIATIVES FOR IMPROVING INSTALLATION SUPPORT SERVICES

Although this study focused primarily on the types of contracts available for use in providing installation support services, five other areas in which improvements could be made were noted.

- Multifunction contracting
- Longer-term contracting
- Source selection
- Surveillance of contractor quality
- Full implementation of contractor quality control.

Multifunction contracts are being used successfully by DoD and other Federal agencies. Installations have found them much easier to administer and control than numerous, small, single-function contracts. Responsiveness and flexibility are also improved because the contractor can shift resources to meet changing requirements. An ongoing LMI study found that this ability to shift resources is especially important at installations with significant mobilization requirements.<sup>1</sup> Some installations claim significant savings on multifunction contracts because overhead and administrative costs are not duplicated as they would be for individual single-function contracts. While this claim seems reasonable, the savings are difficult to quantify except in isolated cases. Nevertheless, multifunction contracts are an alternative that has merit and can be quite attractive when used in conjunction with cost-plus-award-fee contracts. In multifunction contracts, adequate small business participation can be attained through prime contractor subcontracting.

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<sup>1</sup>"Mobilization Readiness of Installation Support Contractors," David D. Metcalf, Logistics Management Institute, Task ML537.

Longer-term contracts are another initiative for improving the quality of installation support services. A contractor that can effectively extend the work over several option years is likely to make the extra effort to provide quality service. Longer-term contracts may also encourage the contractor to invest in labor-saving equipment that can improve service and effectiveness. In this area, DoD lags other Federal agencies. For example, NASA has aggressively pursued longer-term contracts and has won approval for 10-, 12-, and 15-year contracts. We recommend that OSD seek approval for longer-term contracts and establish test cases in order to validate the impact on cost and quality.

Improved source selection is another area for enhancing installation support services. Strong source selection procedures can eliminate many performance problems by ensuring that contracts are awarded to qualified firms. In the past, the requirements to use formal advertising (IFBs) made source selection on any basis *other than official price* almost impossible. However, the Competition in Contracting Act allows the use of competitive proposals (RFPs), and this new freedom permits evaluation and award to contractors on the basis of their technical abilities. With these competitive procedures, both cost and quality goals can be attained. We recommend that the Military Departments increase the use of competitive RFPs for solicitations for installation support services. To fully implement this policy, contracting personnel will need additional training. This investment in training and any additional time required to evaluate proposals will pay dividends by forestalling later problems.

Even with a good contractor, surveillance is essential to ensure good performance. This is another area in which significant improvements can be made. The current problems in this area are:

- A shortage of properly trained QAEs
- Inadequate surveillance plans.

These two problems are related in that poorly trained QAEs are unlikely to write good surveillance plans. So again, personnel training is a key issue; it will not, however, solve all the problems. An Army report<sup>2</sup> noted that surveillance plans do not receive adequate attention during the contract preparation phase and are, in fact, often written after contract award. In addition, published guidelines such as OFPP Pamphlet 4 are difficult to use and are too much like cookbooks. OASD(A&L) and the Military Departments must ensure that surveillance plans are properly developed and must encourage efforts to develop simpler guidelines.

The fifth initiative, full implementation of contractor quality control, goes hand in hand with the need for better surveillance. It is likely that many QA problems will disappear if the requirements of the contractor quality control plan are properly enforced. All service contracts require CQC but in many cases, the plan is never fully implemented. We recommend that the ASD(A&L) and the Military Departments require full implementation of the CQC provisions. Specifically, we recommend that the CQC plan be evaluated as part of the technical proposal before award and that contractor performance in this area be evaluated when award fees are used.

#### SMALL BUSINESS PARTICIPATION

As a final step in our assessment, we evaluated the possible impacts of our recommendations on small business participation and found no indication that it will be diminished by any of the alternatives. In fact, overall small business participation can be improved in most cases through increased emphasis on subcontracting. We recommend that the ASD(A&L) take more aggressive action on

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<sup>2</sup>Department of the Army Inspector General Report on the Army Commercial Activities Program, September 1984.

small business subcontracting and modify the small business reporting procedures to give equal weight to prime contracting and subcontracting participation.

APPENDIX A

TYPES OF CONTRACTS



TABLE A-1. TYPES OF CONTRACTS

		FIXED-PRICE FAMILY INCREASING CONTRACTOR COST RESPONSIBILITY				COST-REIMBURSEMENT FAMILY DECREASING CONTRACTOR COST RESPONSIBILITY					
		FIRM FIXED-PRICE (FFP)	FIXED-PRICE WITH ECONOMIC PRICE ADJUSTMENT (FP-EPA)	FIXED-PRICE INCENTIVE (FPI)	PRICE REDETERMINATION	COST-PLUS-INCENTIVE-FEE (CPIF)	COST-PLUS-AWARD-FEE (CPAF)	COST-PLUS-FIXED-FEE (CPFF)	COST AND COST SHARING	TIME/MATERIAL LABOR	
DESCRIPTION		Government pays price which is not subject to any adjustment regardless of contractor's cost experience	The price paid by the government may be revised upward or downward if certain contingencies occur	Firm Target: Government pays price that is sum of final negotiated cost and final profit. Final profit determined by comparing final negotiated cost to target cost and adjusting target profit (AW formula) (share ratio). Final price cannot exceed ceiling price	Prospective: Government pays fixed price for goods or services for a given period, but price is subject to revision at stated times during performance of contract Retrospective: Government pays price, subject to ceiling, that is negotiated after contract performance	Government pays allowable cost and incentive fee Incentive fee determined by comparing actual cost to target cost and adjusting target fee (AW fee adjustment formula) (share ratio) Adjustment in fee is limited by minimum and maximum fees negotiated Performance incentives should be incorporated if development is feasible and government performance objectives have been determined	Government pays allowable cost, base fee, and award fee Contractor earns a base fee which does not vary with performance and all or part of an award fee based on subjective evaluation by government of contractor's performance Amount of the award fee is unilaterally determined by the government and is not subject to Disputes Clause Evaluation of performance and corresponding partial payment of fee made at stated intervals	Government pays allowable cost and fixed fee Fixed fee does not vary with actual costs Fixed fee may be adjusted for changes in work to be performed Minimum incentive for contractors to control costs Completion Form: requires contractor to deliver end product (preferred form) Term Form: requires specified level of effort over stated period of time	Cost: Government pays allowable cost no fee Cost Sharing: Government pays only a portion of allowable cost as mutually agreed to by the parties. Contractor absorbs portion of the cost with expectation of gaining other benefits from the effort	Government fixed hour supplies with contractor provided at contractor's expense Labor-Material only in the material by contractor	
		Places maximum risk on contractor Contractor has greatest incentive to control costs Minimum administrative burden on parties Preferred contract type	Provides for price adjustment to protect parties against significant economic fluctuation or changes in contractor's established prices EPA provisions can be based on established, published prices, actual costs or cost index Adjustments based on established costs restricted to industry-wide contingencies Adjustment based on labor or material costs limited to contingencies beyond contractor's control	Successive Targets: All predetermined product on point. Firm target cost is negotiated and firm target profit is determined. AW adjustment formula then either an FFP or FP-EPA can be negotiated							
		Level of Effort: Payment is based on effort expended rather than results achieved Contractor provides specific effort over a stated period for fixed price									
ELEMENTS		Price	Price EPA Clause	Firm Target Target Cost Target Profit Ceiling Price Sharing Formula  Successive Targets Initial Target Cost Initial Target Profit Ceiling Price Target Profit Adjustment Formula	Prospective Price Ceiling (Optional) Retrospective Ceiling Price	Target Cost Target Fee Sharing Formula Minimum Fee Maximum Fee	Estimated Cost Base Fee Award Fee	Estimated Cost Fixed Fee	Estimated cost	Hourly rate Ceiling Price	
		When fair and reasonable prices can be established at outset	When contingencies resulting from unstable market or labor conditions can be identified and covered by a separate price adjustment clause	Where assumption of a degree of cost responsibility by contractors will provide incentive for effective cost control Can combine with incentives on performance and schedule	Prospective: Quantity production or services when a fair and reasonable price can be negotiated for initial period but not entire contract period Retrospective: When fair and reasonable FFP cannot be negotiated and low value or short period of performance renders other types impracticable	Development and test where a profit incentive is likely to provide motivation for more effective management	Level of effort on contracts for services where achievement must be evaluated subjectively Where finite performance objectives can not be established in advance to measure actual performance Award fee may be used in conjunction with other types of contracts	Research Preliminary exploration or study Development and test where CPIF not practical	Cost: Non profit in institutions/organizations and facilities contracts Cost Sharing: R&D efforts with either profit or non profit contractors	Engineering design, repair, or overhaul Emergency	
		Particularly suitable for standard or modified commercial terms or many terms for which sound prices can be developed Level of Effort: R&D investigation or study									
LIMITATIONS		Level of Effort: Use only when work can be performed at agreed upon price		Adequate cost or pricing data must be available to establish targets, sole purpose cannot be to shift cost responsibility to government, requires simultaneous agreement on elements of pricing structure  Negotiated Procurements Only Adequate Contractor Cost Accounting System	Prospective: FFP not feasible, pricing periods conform to contractor's accounting system, and assurance that price redetermination will be taken promptly Retrospective: Reasonable assurance that price redetermination will be taken promptly and requires MCA approval	Fee limits same as CPFF	Base Fee shall not exceed 3% of estimated cost Maximum Fee limits same as CPFF Weighted guidelines for determining profit objective shall not be applied Shall not be used in lieu of CPFF or CPIF when objective measurement is feasible	Fee shall not exceed 15% of estimated cost for R&D or 10% of estimated cost for production contracts Price of A/E contract shall not exceed 6% of estimated cost of the public work or utility project  Negotiated Procurements Only Adequate Contractor Cost Accounting System	Cost Sharing: Not applicable for effort specified by government or which has only minor relevance to commercial activities of the contractor	Determine other type is suitable	

T FAMILY EASING		OTHER TYPES SPECIAL USES		
COST-PLUS-FIXED-FEE (CPFF)	COST AND COST SHARING	TIME AND MATERIALS LABOR HOURS	LETTER CONTRACT	INDEFINITE DELIVERY
Government pays allowable cost and fixed fee	Cost Government pays allowable cost; no fee	Government pays fixed hourly rate for supplies or services with contractor furnished material provided at cost  Labor-Hours: differs only in that no material is supplied by contractor	Preliminary contractual instrument which authorizes immediate commencement of effort  Method of payment corresponds to type of contract contemplated when defined	Definite Quantity: Provides for definite quantity of specified supplies or services for a fixed period with deliveries at designated locations upon order  Requirements: Provides for furnishing all actual requirements of specified supplies or services during a specified period as ordered by designated activities  Indefinite Quantity: Provides for furnishing indefinite quantity of specified supplies or services during a specified time but government must order a stated minimum quantity
Fixed fee does not vary with actual costs	Cost Sharing: Government pays only a portion of allowable cost as mutually agreed to by the parties. Contractor absorbs portion of the cost with expectation of gaining other benefits from the effort			
Fixed fee may be added for changes in work to be performed				
Maximum incentive contractors to control costs				
Completion Form requires contractor to use and produce standard form				
Form requires fixed level of effort over stated period of time				
Estimated Cost and Fee	Estimated cost	Hourly labor rate Ceiling Price		Firm Fixed Price Fixed Price with EPA, or Price Redetermination
Research Primary exploration or study	Cost: Non-profit institutions, organizations and facilities contracts	Engineering and design services, repair, maintenance, or overhaul, emergency situations	When interests of national defense demand that work commence immediately and insufficient time available to negotiate a definitive contract	Definite Quantity: Where definite quantity of supplies or services required during a specified period are readily available  Requirements: When impossible to determine in advance the precise quantities needed during a definite period of time  Indefinite Quantity: Same as requirements but government is only committed to minimum quantity
Equipment and test CPFF not practical	Cost Sharing: R&D efforts with either profit or non-profit contractors			
shall not exceed 8% of estimated cost & D or 10% of related cost for action contracts	Cost Sharing: Not applicable for effort specified by government or which has only minor relevance to commercial activities of the contractor	Determination that no other type of contract is suitable	Written determination that no other type suitable  Price Ceiling required if award based on price competition  Must be defined within 180 days or prior to completion of 40% of work  Maximum government liability cannot exceed 50% of estimated cost	
For A-E contract not exceed 6% of related cost of the work or utility of				
Negotiated Procurements Only State Contractor Cost Accounting System		Negotiated Procurements Only		

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