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**REPORT TO THE SUBCOMMITTEE
ON ECONOMY IN GOVERNMENT
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES**

RELEASED

**Sole-Source Contract Awards For
Assembly Of Radio Communication
Systems, AN/GRC-142**

B-165004

Department of the Army

B-165004

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

089762 **089762**

FILE COPY - COMP. GEN.

OCT. 6, 1970



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

B-165004

Dear Mr. Chairman:

This is our report on sole-source contract awards by the Army Electronics Command to General Dynamics Corporation's Electronics Division for assembly of radio communication systems, AN/GRC-142. The review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being furnished to the Secretary of Defense; the Secretary of the Army; the President, General Dynamics Corporation; the Headquarters Office, Defense Contract Audit Agency; and the Regional Director, Boston Region, Defense Contract Audit Agency. We plan to make no further distribution of this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

A handwritten signature in cursive script that reads "James B. Peets".

Comptroller General
of the United States

The Honorable William Proxmire, Chairman
Subcommittee on Economy in Government
Joint Economic Committee
Congress of the United States

D I G E S T

WHY THE REVIEW WAS MADE

On April 18, 1969, the General Accounting Office (GAO) reported to the Subcommittee on Economy in Government, Joint Economic Committee, on the procurement of radio communication (teletypewriter) systems by the Army in June 1968. GAO promised to examine earlier contracts for the assembly of the systems, awarded on a sole-source basis, and to evaluate the Army's decision not to seek competition.

FINDINGS AND CONCLUSIONS

The U.S. Army Electronics Command made the sole-source awards to the General Dynamics Corporation's Electronics Division during the period June 1966 to June 1968.

GAO found that:

- The Electronics Command had awarded two noncompetitive contracts for assembly of 1,445 radio communication systems at a tentative price of about \$18 million, subject to redetermination at completion, although there were several qualified sources, there was a procurement package suitable for competitive negotiations, and, in GAO's opinion, there was sufficient time to solicit competition. (See p. 7.)
- The price may be redetermined at about \$10,200 a unit, or about \$6,100 greater than a unit price subsequently obtained on an advertised procurement. The \$6,100 multiplied by 1,445 units is about \$8.8 million. Had the 1,445 units been purchased on a competitive basis, a good portion of the estimated \$8.8 million might have been saved. (See p. 8.)
- Production drawings for formal advertising were not available before the first sole-source award. However, a fully tested procurement model was available for qualified producers to inspect for competitive bidding on a negotiated basis. (See p. 8.)
- Other capable companies, one of which had been approved as the planned emergency producer, were not requested to bid. (See p. 9.)

--The contracting officer justified separate sole-source procurements three times in 11 months under the public exigency exception to formal advertising on the basis that General Dynamics was the only contractor that could meet delivery requirements. (See p. 11.)

GAO believes that other companies should have been solicited to compete for the procurements during the period June 1966 to June 1968 and that reasonable efforts should have been made to determine whether any of them could deliver on time.

One way to stimulate competition is to keep all potential contractors--especially the planned emergency producer--informed about the progress the Government is making in the development of a system to facilitate prompt responses to solicitations. Keeping one contractor informed to the exclusion of others gives that contractor an undue advantage and stifles competition. Also, the Government becomes locked in to the contractor that was favored with the information and a sole-source procurement at increased costs can result.

RECOMMENDATIONS OR SUGGESTIONS

GAO proposed in a draft of this report that the Secretary of Defense ensure that procurements are made on a competitive basis when:

- there are several qualified sources,
- there is a procurement package suitable for competitive negotiations, and
- there is sufficient time for competition.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Deputy Assistant Secretary of Defense (Installations and Logistics) concurred in the proposal but, because of the urgent requirements that existed, believes that this was not a situation where competitive procurement could have been made earlier than 1968.

GAO believes, however, that, if urgency was the overriding reason, the sets could have been assembled by a depot which proposed an earlier delivery date than the one by General Dynamics. (See p. 17.) Otherwise, GAO believes that the systems could have been purchased by competitive negotiation. It seems reasonable to GAO that, since the latest experimental models were designed and constructed in-house at the Electronics Command, more than one potential contractor could have been kept informed of the in-house technical developments. (See p. 19.) In GAO's opinion the familiarized contractors may have been able to compete on a timely basis in terms of delivery as well as price. (See p. 18.)

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CHAPTER 1

INTRODUCTION

The General Accounting Office has reviewed contracts awarded on a sole-source basis to the General Dynamics Corporation's Electronics Division during the period June 1966 to June 1968 by the U.S. Army Electronics Command for the assembly of radio communication systems identified as radio teletypewriter sets, AN/GRC-142. The purpose of the review was to examine into the circumstances under which these contracts were awarded on a sole-source basis and to determine whether these procurements could have been made competitively. This review is an expansion of a review on which we previously reported to Senator William Proxmire, Chairman, Subcommittee on Economy in Government, Joint Economic Committee, in April 1969, in response to his request for a review of procurements of the systems in June 1968. The scope of our review appears on page 22.

The Electronics Command, a subordinate command of the Army Materiel Command, is responsible for research, design, development, test, and supply management of electronic equipment.

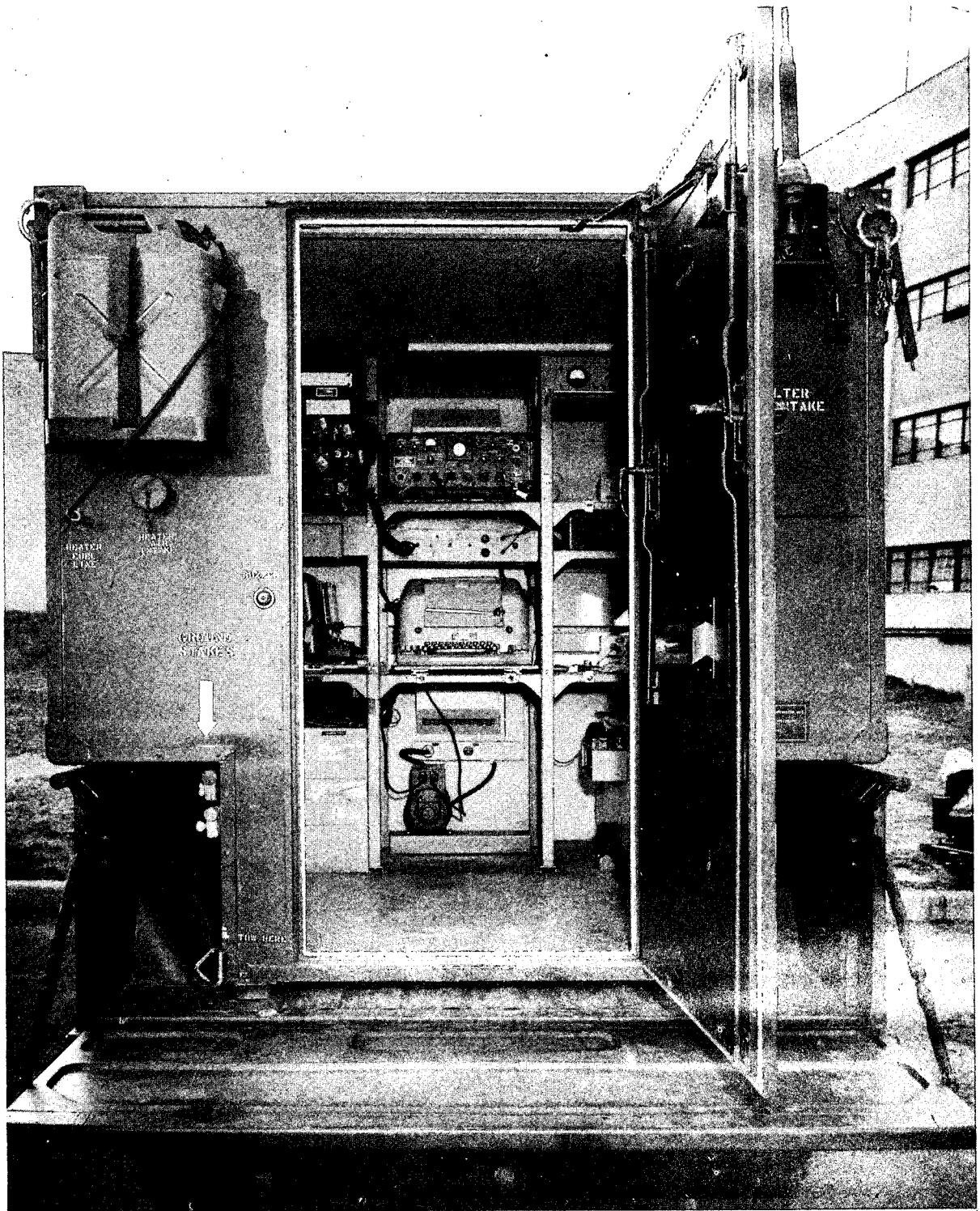
The AN/GRC-142 set is a tactical, single sideband radio communication system assembled in a shelter and mounted on a 3/4-ton truck for transport. (See pp. 5 and 6.) It has the capability either to transmit or receive teletype messages.

The contractor was required under production (assembly) contracts to prepare the interiors of shelters and to assemble in the shelter the major communication components. The shelter and such components were Government-furnished. This preparation generally consists of installing brackets, shelves, electrical wiring, and related components. (See pp. 5 and 6 and apps. I and II.)

In 1963 a contract for the assembly of one experimental model was awarded to General Dynamics at a price of \$99,806. After the military potential of this model was tested, changes were found necessary. The Army decided in

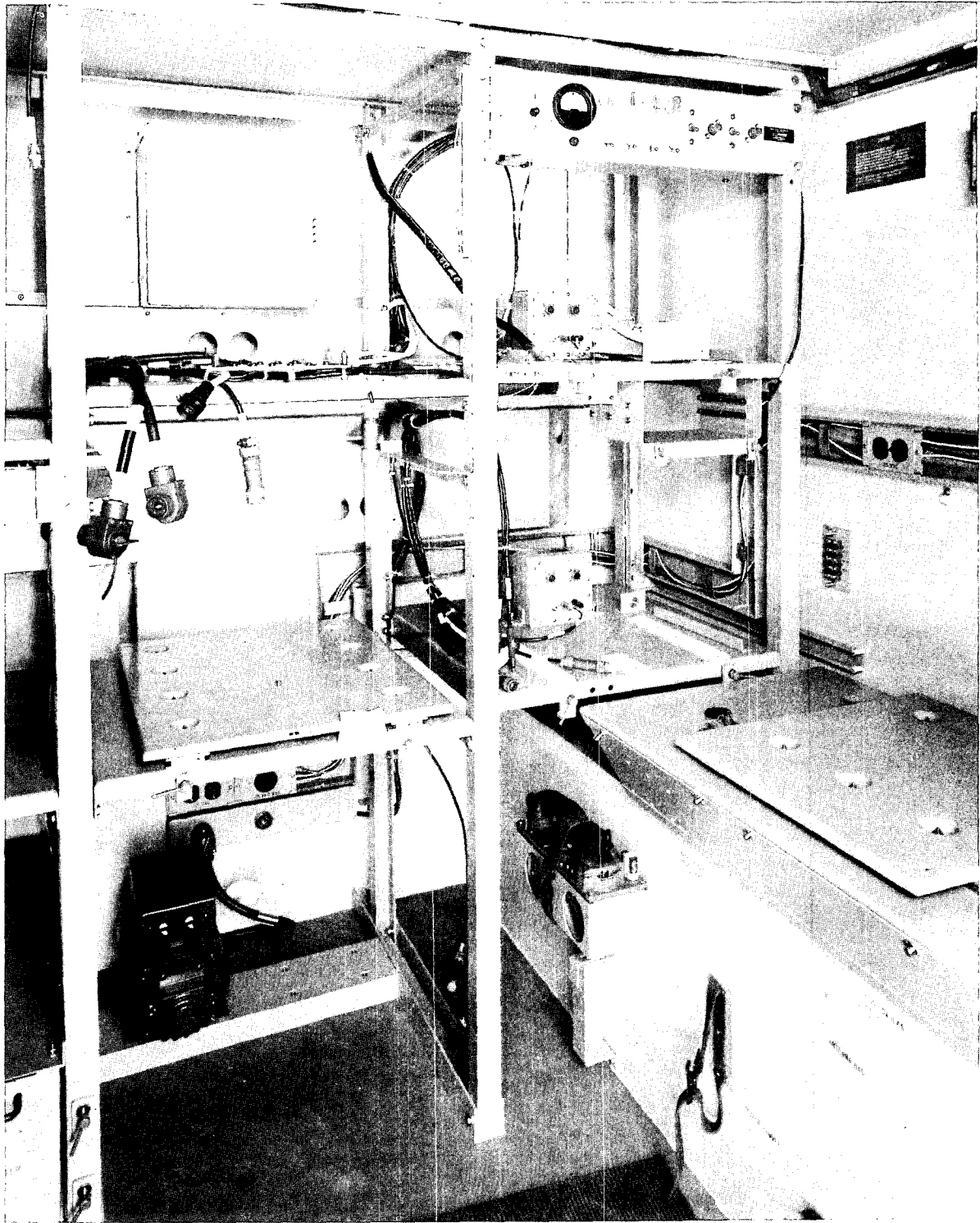
December 1963 to authorize Electronics Command laboratories to design and construct two engineering development models under an in-house project.

During the period January through July 1965, a third engineering development model was designed and constructed in-house. By November 1965 the Army Materiel Command had determined that a competitive procurement package was available, and it was planning a competitive procurement of the system. A quantity of 280 units was to be purchased in fiscal year 1966, and a quantity of 1,520 units was to be purchased in fiscal years 1967 and 1968. The Army Materiel Command approved the system as a Standard A item in December 1965. Standard A designates a preferred, fully effective, and acceptable item which may be procured in accordance with approved procurement programs. This third engineering model was designated as the official procurement model.



Source: U.S. Army Electronics Command

RADIO TELETYPEWRITER SET AN/GRC-142



Source: General Dynamics Corporation's Electronics Division

INTERIOR VIEW OF AN/GRC-142 ILLUSTRATING WORK PERFORMED BY
CONTRACTOR PRIOR TO ASSEMBLING MAJOR GOVERNMENT-FURNISHED COMPONENTS

CHAPTER 2

COMPETITION NOT OBTAINED

The Electronics Command awarded two contracts to General Dynamics on a sole-source basis for the assembly of 1,445 radio communication systems during the period June 1966 through June 1968 although there were other qualified sources, there was a procurement package suitable for competitive negotiations, and, in our opinion, there was sufficient time to solicit competition. Procurements under these contracts were made at various dates at prices ranging from \$8,400 to \$17,064 a unit. (See app. III.) The average price amounted to \$12,592 a unit. This is a target price and is subject to final negotiation at completion on the basis of contract cost of performance, and the contractor is to share to the extent of 30 percent in any cost underrun and 15 percent in any cost overrun.

After competition was introduced by means of an advertised procurement in June 1968, the unit price for assembling 706 units was reduced to \$3,410 by General Dynamics, the low bidder. The price of the next lowest bidder was \$3,985. Prices of five other bidders ranged from \$4,248 to \$6,920.

The negotiated contract target unit prices included (1) packaging costs and (2) costs of equipment which, under the advertised contract, were provided by the Government. To put both the negotiated and advertised prices on a comparable basis, the cost of these two items is added in the following tabulation (as estimated by General Dynamics) to the unit price of the advertised contract.

Unit price on the advertised contract	\$3,410
Equipment furnished by the Government under the advertised contract but furnished by the contractor under the negotiated contracts	415
Packaging priced separately on the advertised but not on the negotiated contracts	<u>229</u>
Total	<u>\$4,054</u>

Although the target prices are still to be finally negotiated, we subtracted the Government's share of a cost underrun, discussed on page 12, to arrive at an estimated average unit price of \$10,169, which price is \$6,115 greater than the above \$4,054 unit price. The \$6,115 multiplied by 1,445 units is \$8,836,175, a good portion of which, we believe, might have been saved had competitive negotiation been introduced prior to June 1966.

The difference in the prices which currently exists is consistent with our experience which has shown that lower prices are usually obtained with the introduction of competition. Although production drawings for formal advertising were not available prior to the first sole-source award, a fully tested procurement model was available for inspection by capable producers desiring to compete on a negotiated basis.

AVAILABILITY OF PROCUREMENT PACKAGE,
OTHER SOURCES, AND TIME TO NEGOTIATE

On February 11, 1966, the Electronics Command approved the procurement of the system by competitive negotiation utilizing a procurement package consisting of (1) a tested procurement model to be displayed for inspection by prospective bidders and then loaned to the successful bidder as a model for assembly, (2) performance specifications, (3) specification changes to the model, and (4) a procurement parts list.

At this time the Electronics Command was in possession of an unsolicited proposal from Ling-Temco-Vought, Inc., submitted in August 1965 after that company had learned of an urgent need for the systems. The company offered to supply interim sets under four different alternative approaches, including one predicated on having all equipment furnished by the Government. In May 1966 the Command rejected the unsolicited proposal with an explanation that:

"The current procurement and production plans for Radio Teletypewriter Set AN/GRC-142 are not compatible with the introduction of a new producer at this time."

Ling-Temco-Vought was not invited to revise its August proposal in the light of the procurement model designated as official in December 1965 nor was a proposal solicited from the company on the basis of the procurement package after it became available.

Bendix Radio Division of Bendix Corporation became the approved planned emergency producer for the radio teletypewriter set on March 24, 1966. Bendix had also been the planned emergency producer for a predecessor set. Bendix, however, was not solicited for the procurement of the systems. Electronics Command records showed that Radio Corporation of America and AVCO Corporation had also expressed interest in bidding on the systems. Although all of these are qualified companies, they were not solicited.

In the subsequent period up to the award of the first production contract to General Dynamics in June 1966, consideration was given to procuring the assembly of the systems from the Tobyhanna Army Depot. Although it was believed that neither the depot nor commercial sources could complete delivery by June 30, 1967, of the initial requirement which had been increased to 445 units, the project manager felt that assembly by the depot would result in a slippage of 3 months beyond this date compared to a slippage of 9 months or longer if a contract were let to industry. Also, Tobyhanna had offered to assemble the systems for \$8,000 a unit which, compared to General Dynamics' quotation of \$18,000 to \$20,000 a unit, indicated a potential saving of about \$4.5 million.

On May 4, 1966, the Army Materiel Command disapproved the proposed assembly by the depot on the basis that it was inconsistent with the Army's general policy that the Government not compete with industry. If the Command's interpretation of the Army's policy is correct, that policy appears to be contrary to the provisions of Bureau of the Budget Circular No. A-76 dated March 3, 1966, which provides that the Government may do the work in-house where substantial savings will result. We believe that the Army should have given consideration to procuring the equipment from the Tobyhanna Depot as well as from other qualified sources.

Army Materiel Command officials on May 31, 1966, directed that the Electronics Command proceed with a sole-source letter contract award to General Dynamics by the end of June 1966. Prior to the award of the contract, it was found that only 280 units could be funded in fiscal year 1966. These additional considerations by the Electronics Command, the project manager, and the Army Materiel Command during the period March to May 1966 delayed the placing of the first contract for the systems.

SOLE-SOURCE PROCUREMENTS

The sole-source award for the first contract was justified under authority of section 2304(a)(2) of Title 10, United States Code--the public exigency exception to formal advertising--by the contracting officer on the basis of a number of reasons, two of which were:

- The systems were required for high-priority deliveries from February through May 1967.
- General Dynamics, the current and past producer of several major components, was the only contractor with known capability to closely meet the required delivery schedule.

Letter contract DA-36-039-AMC-10418(E) was awarded on June 29, 1966, for services and materials to assemble 293 units including 13 added for the Military Assistance Program. The contract was definitized on a fixed-price-incentive basis on March 31, 1967, at a tentative unit price of \$17,064, totaling about \$5 million. (See app. III.) The contract provided that production drawings be furnished by General Dynamics at a cost of \$148,000. The company drafted the drawings by physical examination and measurement of the official procurement model. The final set of production drawings was delivered in November 1967.

The Electronics Command determined that a second contract was necessary to satisfy an additional urgent requirement for 325 units. On October 28, 1966, the contracting officer determined that public exigency would not permit the delay in delivery incident to advertising and justified the sole-source procurement because General Dynamics was still considered to be the only contractor that could meet the delivery requirements for this urgently needed item. On December 9, 1966, 325 units were purchased on a sole-source basis by a modification to letter contract DAAB05-67-C-0137.

The contracting officer, on May 10, 1967, made still another determination that public exigency justified the procurement of an additional 769 units from the same sole source. This quantity was added to the second contract by

another modification. A target unit price of \$11,530 was established for the assembly of 1,094 units when contract -0137 was definitized on June 24, 1967, on a fixed-price-incentive basis. With the procurement of other smaller quantities of 30 and 28 units, an aggregate quantity of 1,152 units at a total target price of about \$13 million (see app. III) had been purchased on a sole-source basis under the second contract.

According to General Dynamics, it experienced a cost underrun of about \$5 million as of May 23, 1969, on the two fixed-price-incentive contracts.¹ Under the incentive provisions of the contracts, both the company and the Government will share in the underrun; the contractor's share of 30 percent will be about \$1.5 million, and the Government's 70 percent share will be about \$3.5 million. We were unable to estimate what the final negotiated unit price would be because, in addition to the 1,445 units, the two contracts included such other line items as mountings and repair parts to which the cost underrun had not yet been allocated.

The Defense Contract Audit Agency advised us that, after General Dynamics' anticipated submission of final price proposals for both contracts, final prices would be negotiated. As of June 8, 1970, General Dynamics had not submitted such final proposals.

ADVERTISED CONTRACT

On December 14, 1967, the Electronics Command determined that a sufficient procurement package was available for procurement on an advertised basis. This determination was made after General Dynamics delivered the production drawings.

On May 3, 1968, the Command issued an invitation for bid to 37 contractors for a quantity of 1,186 units. The invitation required that contractors submit bids based on a

¹On April 8, 1970, in commenting on our draft report (see app. V), General Dynamics said that it was anticipated that final prices would be less than target prices but did not indicate the extent of the cost underrun.

competitive procurement package consisting of Government specifications, production drawings, and a procurement model. Seven bids were received. The Command awarded a multiyear contract, DAAB05-68-C-0035, on June 24, 1968, to General Dynamics on the basis of the lowest responsive bid of \$3,410 a system. The prices of the other bidders were \$3,985, \$4,248, \$5,012, \$5,294, \$6,025, and \$6,920.

This contract provided for the systems to be ordered through fiscal year 1971. As of September 15, 1969, a total quantity of 706 had been ordered at a cost of \$2,407,460. (See app. III.)

CHAPTER 3

CONTRACTOR AND AGENCY COMMENTS AND OUR EVALUATION

In its comments on our draft report, General Dynamics stated that its records indicated that a suitable procurement package consisting of drawings, specifications, and equipment lists was not available until November 1967. (See app. V.) We believe that the contractor has reference to the procurement package suitable for procurement on an advertised basis since Army records indicate that a procurement package suitable for competitive negotiations was available in November 1965.

General Dynamics stated also that, if its contract prices were plotted on an improvement curve, there appeared to be little basis to assume that substantial savings could have been achieved if the earlier contract quantities had been purchased under different methods. It seems reasonable to expect some cost reductions and, in turn, reductions in price as experience is gained in performing the work and after the early startup and tooling costs have been recovered.

It is difficult to realistically measure the degree of improvement by General Dynamics in the light of the initial sole-source target price of \$17,064, compared with Tobyhanna's proposed price of \$8,000. The measure of improvement after 2 years of experience is particularly questionable in view of the second low bid of \$3,985 by a contractor without experience in producing the teletypewriters. General Dynamics' low bid of \$3,410 and the other bids give some indication of what companies might have bid if they had been solicited earlier and further confirms our experience that lower prices are usually obtained after the introduction of competition. We believe that, if the forces of competition had been applied when the earlier procurements were made, substantial savings could have been realized.

In our draft report we proposed that the Secretary of Defense ensure that procurements are made on a competitive basis when there are several qualified sources, there is a procurement package suitable for competitive negotiations,

and there is sufficient time for competition. The Deputy Assistant Secretary of Defense (Installations and Logistics) concurred in our proposal. He indicated that it is the policy of the Department of Defense, as well as a statutory requirement, that the maximum practicable competition be obtained in the procurement of defense supplies and services. He stated, however, that, considering the urgency of the requirements, the Department could not agree in this instance that price competition for production could have been introduced earlier than it actually was. (See app. IV.)

Following is our evaluation of his comments.

COMPETITION PRIOR TO 1968

The Deputy Assistant Secretary of Defense stated that competitive procurement could not have been made earlier than 1968.

Upon an Army determination in November 1965 that a competitive procurement package was available, it seems appropriate that not only General Dynamics but other interested sources should have been given an opportunity to familiarize themselves with the procurement package. Also, we believe that the Army should have disclosed to all potential suppliers that a quantity of 280 units was to be purchased in fiscal year 1966 and 1,520 units was to be purchased in fiscal years 1967 and 1968.

Even though the Army Materiel Command did not decide until May 31, 1966, to designate General Dynamics as the sole source for the assembly of 293 units, talks were held prior to March 24, 1966, with General Dynamics with a view toward a sole-source contract. Although a competitive procurement package was available, we found no evidence in the agency files that talks based on this package were held at any point in time prior to May 31, 1966, with other sources including the only planned emergency producer at that time.

Bendix Radio Division of Bendix Corporation had been the planned emergency producer for the radio teletypewriter set which preceded the AN/GRC-142 set. As of March 24, 1966, Bendix became the only approved planned emergency producer for the AN/GRC-142. Later, General Dynamics was similarly

approved as of September 15, 1966. The Armed Services Procurement Regulation provides that, in the procurement of items for which there are planned emergency producers, such producers be solicited.

We believe that one of the ways to stimulate competition would be to keep all potential contractors informed about the progress the Government is making in the development of a system, especially the planned emergency producer. This facilitates a prompt response to solicitations. Keeping one contractor informed to the exclusion of others, gives that contractor an undue advantage and stifles competition. Also, the Government becomes locked in to the contractor that was favored with the information and a sole-source procurement at increased costs could result.

URGENT REQUIREMENTS

The Deputy Assistant Secretary of Defense stated that procurement of the equipment from General Dynamics offered the best possibility of meeting the urgent requirements, that other potential sources for this equipment would have required extensive lead time to acquire special tooling and test equipment, that a new producer would have been required to satisfy first article testing, and that competitive solicitation would have required 5 to 7 months for the award of the production contract and 15 to 18 months for initial delivery.

The justification for negotiation, rather than formal advertising, was made by the contracting officer under authority of 10 U.S.C. 2304(a)(2), the public exigency exception to formal advertising. As a part of his justification for the first assembly contract, the contracting officer stated that the items were required under Priority 02 (a high priority) for deliveries in February 1967 through May 1967, under the Department of the Army Accelerated Program.

A valid justification for negotiation, however, is not a justification for a procurement on a sole-source basis. According to the Armed Services Procurement Regulation, when negotiating under the cited authority, competition to the maximum extent practicable, within the time allowed, shall be obtained. We believe that the time from December 1965 to June 1966 was sufficient to obtain competition for the radio teletypewriter sets in question.

On April 6, 1966, the Tobyhanna Army Depot was requested to quote on the assembly of the systems. The next day, the depot engineers inspected the procurement model and furnished an estimate. The depot indicated a delivery date earlier than that of General Dynamics. It appears that, in view of the availability of the fully tested model and performance specification along with major components to be Government-furnished, the time needed to prepare a quotation for the assembly of the units was not too extensive.

With respect to special tooling, test equipment, and first-article testing, a qualified producer normally takes matters of this type into account in preparing its proposal. Proposed delivery schedules of the competing producers could have been evaluated in the light of the urgent need. The contract awarded to General Dynamics in June 1966 had a requirement for special tooling, test equipment, and for testing first-article samples. Thus, General Dynamics was in essentially the same position as the other contractors regarding lead time needed to acquire special tooling and the requirement for first-article acceptance.

Whether any of its competitors could have met or beaten the delivery schedule proposed by General Dynamics is a matter which could have been realistically determined by a solicitation of the interested qualified sources.

We believe that competition could have been obtained in terms of price and delivery well in advance of the letter contract award date of June 29, 1966. Besides the emergency planned producer, other interested producers, such as Ling-Temco-Vought, Inc., Radio Corporation of America, and AVCO Corporation, should have been solicited for price and delivery dates.

TEMPEST CAPABILITY

The Deputy Assistant Secretary of Defense stated that General Dynamics possessed the facilities and experience to meet certain stringent tempest capability. He said that this capability involved an electrical design which prevented the loss of classified information through inadvertent emanations.

We found no evidence in the agency files that the Army attempted to determine whether Bendix, Radio Corporation of America, or AVCO Corporation had tempest capability. However, Ling-Temco-Vought, Inc., did make known to the Army its "appropriate clearances tempest testing capability and availability of personnel and facilities."

Before the award of the first assembly contract, the Army and General Dynamics discussed certain requirements of

the tempest testing which could not be met because of certain Government-furnished components. It was agreed that General Dynamics could not be held responsible for shortcomings in such components. Later, an agreement was reached whereby meeting the tempest test requirements was made a design objective in order to relieve the contractor of the responsibility for having the Government-furnished components pass the tests. A clause in the contract was then so worded.

We believe that the Army should have considered the tempest testing capability of the other interested firms before making a sole-source award to General Dynamics.

ENGINEERING DEVELOPMENT MODELS DESIGNED AND CONSTRUCTED IN-HOUSE

The Deputy Assistant Secretary of Defense stated that General Dynamics was the developer of the initial experimental model.

We recognize that General Dynamics did deliver the first experimental model in July 1963. However, after testing this model, the Army decided in 1963 to design and construct two engineering development models under an in-house project. Even these two in-house models did not meet service test requirements and they were rejected. A third in-house model was then designed, constructed, tested, and finally approved as a Standard A item in December 1965.

Also, prior to December 1965 the Electronics Command prepared and provided technical manuals, operator check lists, system schematic diagrams, and operator training at Fort Bragg, North Carolina, for the radio communication system.

It is to be noted that, after General Dynamics delivered the first model, considerable time and effort was devoted in-house by the Army to engineer and develop three additional models during a lapse of about 2 years. It appears that a physical and operational capability comparison of the first model with the fourth model would reveal a substantial difference from a technical point of view.

We believe, therefore, that the Government, in engineering and developing three models after General Dynamics had completed its own model, acquired a knowledge and capability that should have been more advanced than that of General Dynamics. In view of this advanced know-how and the fact that General Dynamics apparently did not assert any proprietary rights in any of the four models, we do not believe that the Government had to rely on General Dynamics as a sole source for the assembly contracts.

CHAPTER 4

CONCLUSION

The Electronics Command did not obtain competition in awarding contracts for the assembly of 1,445 radio communication systems, although there were several qualified sources, there was a suitable procurement package, and, in our opinion, there was sufficient time (December 1965 to June 1966) for competitive negotiations. The procurements on a sole-source basis were made at an average target unit price of \$12,592, before a reduction due to a cost underrun. It now appears that the redetermined price may be about \$10,200 a unit, or about \$6,100 greater than a unit price subsequently obtained on an advertised procurement. The \$6,100 multiplied by 1,445 units is about \$8.8 million. We believe that, had the 1,445 units been purchased on a competitive basis, a good portion of the estimated \$8.8 million might have been saved.

The contracting officer on three occasions, over a period of about 11 months, made determinations to justify the emergency procurements from the same sole source. We believe that other producers should have been solicited to compete for the procurements awarded during the period June 1966 to June 1968 or reasonable efforts, appropriately documented, should have been made to determine whether other sources could deliver in time.

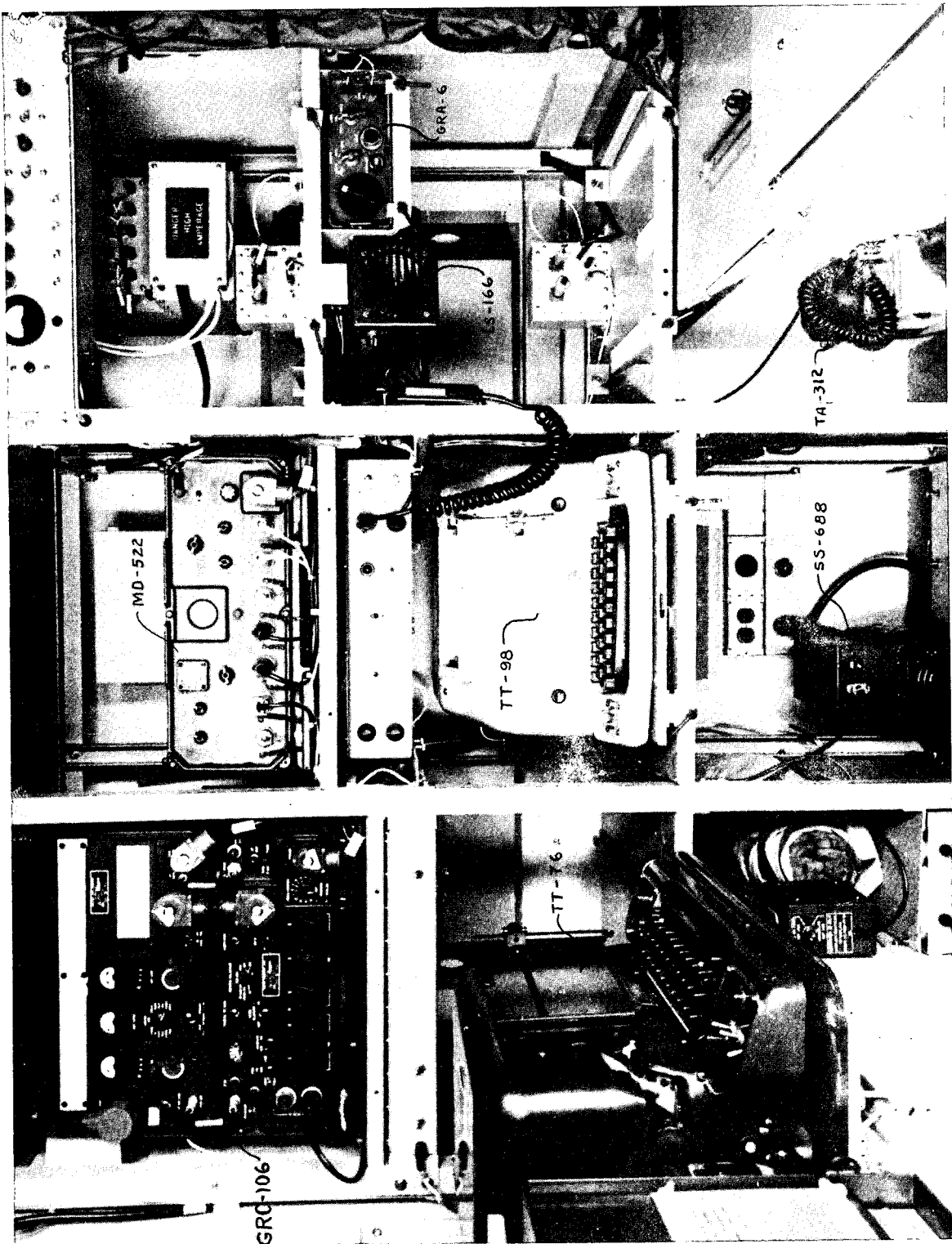
CHAPTER 5

SCOPE OF REVIEW

Our review included an examination of the records and events relating to the development, tests, and procurements of AN/GRC-142 radio teletypewriter sets by the Army since August 1960. Our examination was made at the offices of the Project Manager and the Electronics Command, both located at Fort Monmouth, New Jersey, and at Electronics Command's branch, Philadelphia, Pennsylvania. Also, we obtained information from officials at Headquarters, Army Materiel Command, and the Tobyhanna Army Depot, Tobyhanna, Pennsylvania.

We discussed various aspects of the contracts with the Director of Communications, Avionics Products, and with other officials at the offices of General Dynamics, Rochester, New York. We also held a discussion regarding Ling-Temco-Vought's unsolicited proposal with the company's officials at their branch office, West Long Branch, New Jersey. We further discussed the administration of the contracts at the Defense Contract Administration Services District, Rochester, New York.

APPENDIXES



Source: General Dynamics Corporation's Electronics Division

INTERIOR VIEW OF AN/GRC-142 COMPLETELY ASSEMBLED

APPENDIX II

LIST OF
MAJOR GOVERNMENT-FURNISHED COMPONENTS
SHOWN IN APPENDIX I

<u>Type designator</u>	<u>Nomenclature</u>
AN/GRC-106	Radio set
AN/GRA-6	Control group
MD-522/GRC	Modem
S-318/G	Shelter, 3/4 ton
SS-688	Rotary inverter
TA-312/PT	Telephone
TT-76/GRC	Reperforator transmitter and teletypewriter
TT-98/FG	Teletypewriter

OTHER GOVERNMENT-FURNISHED ITEMS

NOT SHOWN IN APPENDIX I

MT3140/GRC-106 Mounting, plus such other items as:
Space heater
Liquid container
Bracket assembly
Technical manuals

U.S. ARMY ELECTRONICS COMMAND

PROCUREMENTS OF
 RADIO TELETYPEWRITER SET AN/GRC-142
 FROM GENERAL DYNAMICS CORPORATION'S ELECTRONICS DIVISION
 FROM JUNE 1966 THROUGH SEPTEMBER 15, 1969

Contract						
Number	Type	Date	Total quantity	Unit price	Total price	
DA-36-039-AMC-10418(E):						
Letter contract		6-29-66	293			
Definitized	FPI (b)	3-31-67	<u>293</u>	\$17,064 ^(a)	\$ <u>4,999,752</u>	
DAABO5-67-C-0137:						
Letter contract		11-30-66				
Mod. #1		12- 9-66	325			
Mod. #3		5-19-67	<u>769</u>			
Definitized	FPI (b)	6-24-67	1,094			
Mod. #3		8-31-67	<u>30</u>			
Letter contract		6-24-68	1,124	11,530 ^(a)	12,959,720	
Definitized, Mod. #15	FPI (b)	11-21-68	28	8,400 ^(a)	<u>235,200</u>	
			<u>1,152</u>		<u>13,194,920</u>	
Total of sole-source procurements			<u>1,445</u>	12,592 ^(e)	<u>\$18,194,672</u>	
DAABO5-68-C-0035 ^(c)						
	FFP (d) advertised multi-year	6-24-68	226	3,410	770,660	
Mod. #3		9-15-69	<u>480</u>	3,410	<u>1,636,800</u>	
Total of advertised procurements			<u>706</u>		<u>\$ 2,407,460</u>	

^aNegotiated target prices are subject to revision at completion of contracts.

^bFPI--fixed-price-incentive.

^cAdditional 480 to be procured in fiscal year 1971.

^dFFP--firm fixed-price.

^eThis is the average target unit price for 1,445 units.



ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

14 APR 1970

INSTALLATIONS AND LOGISTICS

Mr. C. M. Bailey
Director, Defense Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Bailey:

This is in response to GAO draft report of March 6, 1970, titled, "Sole-Source Contract Awards for Assembly of Radio Communication Systems AN/GRC-142" (OSD Case #3092). The draft report concludes that the U.S. Army Electronics Command did not obtain competition in awarding contracts for the assembly of 1,445 radio communication systems, although, according to GAO, several qualified sources, a suitable procurement package, and sufficient time for competitive negotiations were available. Based on a comparison of prices for these 1,445 units with prices resulting from an advertised procurement in June 1968, the report reflects a savings would have occurred if competitive negotiation had been introduced prior to June 1966. The report recommends competitive procurement when there are several qualified sources, a procurement package suitable for competitive negotiations, and sufficient time for competition.

We concur with the recommendation as it is our policy, as well as a statutory requirement, that the maximum practicable competition be obtained in the procurement of Defense supplies and services. However, following our review of the circumstances of the procurement actions involved in the draft report, we cannot concur that price competition for production could have been introduced earlier than it actually was employed.

The Army has advised that the initial procurements were made to satisfy urgent Southeast Asia requirements under an accelerated

supply program to modernize the field Army. Absent the requirement for urgent delivery and given sufficient time, another qualified producer could probably have furnished acceptable equipment.

Procurement of the equipment from General Dynamics offered the best possibility of meeting the urgent requirements. General Dynamics was the developer of the initial experimental model, the developer of related type equipment, and it possessed the facilities and experience to meet certain stringent tempo capability. This capability involves an electrical design which prevents the loss of classified information through inadvertent emanations, such as Electro-Magnetic radiation.

It is the experienced judgment of Army representatives that other potential sources for this equipment would have required extensive leadtime to acquire special tooling and test equipment and a new producer would have been required to satisfy first article testing. In the judgment of the Army Electronics Command, competitive solicitation would have required five to seven months for award of the production contract and 15 to 18 months for initial delivery. Because of the urgency for the item, two letter order contracts were issued. The first contract was awarded within one month after the Army rejected an alternative plan which was being considered to assemble the system in-house at the Tobyhanna Army Depot. The second letter contract was awarded five months later.

Delivery under the first contract commenced in April 1967 in accordance with the original delivery schedule and was completed in October 1967. Delivery under the second contract commenced in September 1967, a two-month slippage from the original delivery schedule, and was completed in November 1968. Had competitive procurement been considered at the time the first letter contract was awarded, initial deliveries would have commenced about one year later -- based on the U.S. Army Electronics Command's estimate of time needed for competitive procurement.

It is difficult to look back three to four years in retrospect and evaluate the subjective judgments that the Command had to make. Urgent requirements of field forces necessitated the placement of

APPENDIX IV

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contracts with the source offering the optimum probability of early delivery of a quality item. This source was General Dynamics, the sole source developer of the experimental model. Though we concur with your recommendation, we do not believe this case represents a situation where competitive procurement could have been made earlier than 1968, after which, as you know, follow-on procurements were awarded following formal advertising.

We appreciate the opportunity to provide these comments on your draft report.

Sincerely,

A handwritten signature in cursive script, reading "Glenn V. Gibson".

Glenn V. Gibson
Deputy Assistant Secretary of Defense

GENERAL DYNAMICS***Electronics Division***

1400 North Goodman Street, Rochester, New York 14601 • 716 342-8000

8 April 1970

Mr. C. M. Bailey, Director
Defense Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Bailey:

We wish to thank you for the opportunity extended to comment on the draft report to Senator Proxmire relative to sole-source contract awards for assembly of radio communications systems, AN/GRC-142. Mr. Roger Lewis has referred your letter and draft report to me for response in my capacity as General Manager of the Electronics Division of General Dynamics. There are several comments which I feel you should consider prior to finalizing the report. In the draft report you state that two sole-source contracts for assembly of 1445 AN/GRC-142 systems were awarded even though there were several qualified sources, a procurement package suitable for competitive negotiations and sufficient time for competition.

Our records indicate that a suitable procurement package consisting of drawings, specifications, and equipment lists was not available until November 1967, and that the formulation of this procurement package was an identified line item task under the initial AN/GRC-142, Contract No. DA-36-039-AMC-10418(E).

Our records further indicate that the second contract for the assembly of AN/GRC-142 Radio Communications Systems was negotiated and entered into as of 9 December 1966 and modified on 24 June 1967 to add additional quantities making an aggregate quantity of 1152 under the contract. This contract called for initial delivery within eight months, a lead time which we feel could not be achieved unless a supplier had either an existing production line or a complete procurement package; and in the latter case, it is highly uncertain as to whether production could be started up in time to meet the delivery requirement.

Mr. C. M. Bailey, Director
United States General Accounting Office

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8 April 1970

In attempting to evaluate the time element for obtaining adequate competition and contract performance, we reviewed the record of the first procurement which utilized the procurement package and for which competition was obtained. This procurement allowed prospective suppliers 25 days for preparation of proposals. The contract was awarded on 24 June 1968, 27 days thereafter, and 14 months were allowed from award of contract until delivery of the first production unit. I think, therefore, that you should carefully consider whether or not another qualified firm, utilizing only the procurement model of the AN/GRC-142 Radio Communications System from which to prepare engineering drawings suitable for production, could have met the delivery requirement of eight months.

You further noted in the draft report that approximately \$13 million in price savings is indicated when the average unit price of all units procured under the two sole-source contracts is compared to the units procured on an advertised basis. Here again I feel that certain facts should be carefully considered prior to finalizing your report.

The total price for Contract No. DA-36-039-AMC-10418(E) includes work of a non-recurring or non-similar nature to Contract No. DAAB-05-68-C-0035 of the following types: Design, Development, Integration, Layouts, and Special Tooling. Further, ME 165 Meters and TT 523 Signal Drives were GFE on Contract DAAB-05-68-C-0035, and contractor furnished on Contracts DA-36-039-AMC-10418(E) and DA-36-039-AMC-0137(E). These latter contracts also included packaging costs which are shown separately under Contract DAAB-05-68-C-0035. Following is a tabulation of the appropriate line items from the three contracts involved with an adjustment for contractor furnished items and for packaging prices.

<u>Contract No.</u>	<u>Item No.</u>	<u>Qty.</u>	<u>Contract Unit Price</u>	<u>GFE Adj.</u>	<u>Pkg. Adj.</u>	<u>Contract Adj. Unit Price</u>
DA-36-039-AMC-10418(E)	1	293	\$ 17,064	Incl	Incl	\$ 17,064
DA-36-039-AMC-0137(E)	5	1124	11,855	Incl	Incl	11,855
	9	28	8,400	Incl	Incl	8,400
DAAB-05-68-C-0035	17, 18, 19, 33, 39, 45 and 46	1186	* 3,410	\$ 415	\$ 229	4,054

* 3-year multi-year price, not applicable unless all 3 years are procured.

Mr. C. M. Bailey, Director
United States General Accounting Office

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8 April 1970

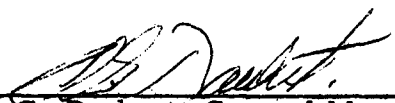
While the foregoing tabulation represents the contract values it does not represent the final price to the Government for Contracts DA-36-039-AMC-10418(E) and DA-36-039-AMC-0137(E). These two contracts are subject to incentive price revision and it is anticipated that the final prices will be less than the target price values reflected above. When the final prices for Contracts DA-36-039-AMC-10418(E) and DA-36-039-AMC-0137(E) are established and adjusted for the non-recurring effort, it is anticipated that if such prices were plotted in a traditional progress improvement curve, a curve of approximately 80 to 85% would result.

Such an improvement trend supports the theory that lower costs are obtained thru volume production and that you expect to pay less for an item as the quantity of units produced increases. While there are no established standards as to the exact slope of any improvement curve, the indicated trend would not vary substantially from values which might be used for forward projections. Since the price of the most recent quantity procured, i. e., 1186 units under a multi-year arrangement was established under competitive conditions, and since that price would plot reasonably well on a line of "best fit" progress improvement curve, there appears to be little basis to assume that substantial savings could have been achieved if the earlier contract quantities had been procured under different methods.

The final price to the Government for supplies obtained thru the formal advertisement procedure is dependent upon many factors which include the firmness and the adequacy of the procurement package, the time available for initiation of a production program and efficient performance to a specified delivery requirement and the competitive environment existing within Industry at the time that bids are advertised. It is extremely difficult to recreate the exact conditions facing both procurement officials and prospective suppliers with regard to a specified procurement. However, from the facts available to me I sincerely doubt that timely deliveries could have been obtained at substantial savings from the prices to be finally negotiated under Contracts DA-36-039-AMC-10418(E) and DA-36-039-AMC-0137(E) had the procurements been effected thru formal advertisement procedures.

Very truly yours,

GENERAL DYNAMICS CORPORATION



A. G. Daubert, General Manager
Electronics Division