CONTRACTOR COMMENTS ON NTDC PROPOSAL REQUIREMENTS

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Goodyear Aerospace Corporation is one of a number of trainer suppliers who have enjoyed a fine working relationship with the Naval Training Device Center over a number of years. During this period of time, NTDC and the trainer industry have worked together to meet the increasingly complex, training equipment needs of the military. Because of the joint effort, each has contributed to the other, with the result that NTDC now stands recognized as an experienced, dedicated organization of unique skills and capabilities and the trainer industry now stands recognized as a distinct, industrial entity of complementary skills and capabilities.

This conference reflects the continuing desire of NTDC to work together with the trainer industry. It was arranged by NTDC for the very commendable purpose of seeking improvement in their procurement performance. NTDC feels, quite properly, that the search should recognize the potential contribution of industry to the achievement of the objective. Thus, all trainer suppliers were given the opportunity to participate so that emphasis could be placed on contractor's problems as they relate to the Center's procurement performance.

Although amenable to various definitions, the words "procurement performance" in my mind cover the broad spectrum of activity from the issuance of the Task Assignment and Directive - the so-called TAAD - by the Programming Office to the acceptance of the training device in the field. There are, of course, many Governmnet and contractor problems occurring during this procurement cycle which might be discussed at this conference. However, it is my purpose today to discuss only certain contractor problems arising at that point in the procurement cycle where we formally interface through the mechanism of a request for proposal. A constant objective of Goodyear Aerospace is the preparation of proposals which are completely responsive to administrative proposal requirements and technical proposal requirements and which reflect a continuing improvement in the quality and effectiveness of content. One of the unfortunate and inevitable by-products of this practice has been the increased cost of proposal preparation.

All contractors recognize that the cost of proposal preparation is a necessary cost of doing business. As a matter of good business practice, both the Government and industry actively support, and suitably implement, programs designed to hold proposal expense to satisfactory minimums. The Government has an understandable interest in this problem since, in one form or other, it pays these costs. Industry, in turn, has equally compelling reasons: the reduction of expense in order to maintain a more competitive cost posture, the increased cost of operating funds in a tight money market, and unrelenting Government pressure for cost reduction across the board. It is understandable, therefore, that contractors view the stretching of the proposal dollar as a major management problem.

Over the past six years, Goodyear Aerospace Corporation has had an eight tenths of one percent increase in proposal cost for each one percent increase in orders booked for all product lines combined. For the same period of time, the trainer product line has had a one percent increase in proposal cost for each one percent increase in orders booked. Stated in another manner, the proportionate increase in trainer proposal cost over the past six years is 25 percent greater than the proportionate increase in total corporate proposal cost for the same period of time.

We plan to continue our policy of upgrading the quality of our proposals and we anticipate that our proposal costs may well continue to rise as a result of the effort.

In our opinion, the results we have achieved clearly justify this type of increased expense.

My purpose in introducing this data was to emphasize the fact that contractors are willing to incur increased proposal cost if, as a result, their proposals reflect improved quality and effectiveness of content. Conversely, contractors are reluctant to accept any proposal cost that does not contribute directly to improved quality and effectiveness of content. With this situation prevailing, it is understandable why contractors question those RFP data requests which seem superfluous or of little value and the submission of which adds unnecessary cost to the preparation of the proposal.

In view of industry's general concern over rising proposal costs on the one hand and the Government's desire to reduce proposal evaluation costs on the other hand, it would seem pertinent to review current NTDC proposal requirements to see if certain revisions might offer the potential for benefit to both parties. Hopefully, with these revisions in effect, proposers could save dollars in proposal cost and NTDC could save manhours in proposal evaluation time. The first of these revisions relates to the cost proposal requirements of a typical APR for a major competitive trainer procurement.

Between the two extremes of a formally advertised buy and a sole source buy lie a spectrum of price proposals that require the exercise of judgement by the Contracting Officer to determine if the amount of potential price reduction warrants the additional cost to the Government to obtain and analyze detailed price or cost data. As a guide, the Armed Service Procurement Regulations (ASPR) states "When there is adequate price competition, cost or pricing data shall not be requested regardless of the dollar amount involved." The criteria to determine when there has been adequate price competition is also set forth in ASPR. These criteria are "(1) at least two responsible offerors (2) who can satisfy the purchaser's requirements (3) independently contend for a contract to be awarded to the responsive and responsible offeror submitting the lowest evaluated price (4) by submitting priced offers responsive to the expressed requirements of the solicitation."

It is not my purpose to offer a discourse on Government contracting principles. I am only noting that price analysis alone will support an award when there is adequate price competition.

Anyone doing business with NTDC over a period of time can testify that all elements of adequate price competition generally are present in the procurement of a prototype trainer. In NTDC's highly competitive, fixed price environment - where the combination of low price and acceptable technical proposal generally secures the award - the submission of a substantial amount of cost detail in the form of multiple breakdowns to various levels certainly does not seem indicated. Now, with the foregoing comments in mind, let's stop for a minute and review the cost data requested.

DD Form 633 - Contract Pricing Proposal

A total proposal price breakdown by specified cost elements.

NTDC Table I - Direct Labor Hours and Material Costs Analysis

A hardware item cost breakdown by specified subsystems in terms of engineering hours by function, manufacturing hours by function, and materials by category.

NTDC Table II - Summary of Cost of Scheduled Items

A total proposal price breakdown by items of the schedule in terms of DD Form 663 cost elements.

NTDC Table III - Material Cost Breakdown

A material cost breakdown by material category in terms of specified materials, quantity, unit prices and total prices.

NTDC Form 4265-1 - Training Course Price Analysis Form

A breakdown of training course costs in terms of specified cost elements.

DD Form 633-2 - Cost and Price Analysis for Technical Publications

A breakdown for each publication item in terms of specified cost elements.

(No Specific Format) - Cost Detail for Implementation of the Reliability Program

A breakdown of Reliability Program costs by unspecified cost elements.

(No Specific Format) - Cost Detail for Implementation of the Integrated Logistic Support Program

A breakdown of ILS program costs by unspecified cost elements.

The bulk of the requested cost data listed on these slides is not significant to implementation of the concept of price analysis in the presence of adequate price competition. Most contractors would agree - and I'm sure the NTDC Contracts Division would agree - that the submission of a DDF 633 formati is sufficient for normal cost proposal evaluation purposes. However, since the additional cost data is requested, we must assume it is used by the Engineering Division for cost evaluation and that, in truth, it does serve a useful purpose. In view of the fact that the Center already has at its disposal a DCAA proposal audit and an ACO cost analysis - neither of which used the specific additional cost data submitted to NTDC - the useful purpose served by such submission is not apparent to all contractors. It is, I think, pertinent to inquire if this additional cost data results in savings to the Government (in the form of cost reductions during negotiations) which outweigh the cost of the contractor's preparation of such cost detail and the cost of the Government's time spent in the analysis of such cost detail.

One who has prepared a cost proposal for a major NTDC procurement involving one or more complex trainers will certainly agree that the task of gathering, allocating, and presenting cost data - accurately and completely - to the format and extent specified by NTDC is a formidable and time consuming task. Goodyear Aerospace Corporation has endeavored to lessen the expense impact of the problem by going to automatic data processing for the collection and organization of cost estimates. The IBM Model 360-30 program we employ for NTDC cost proposals provides a complete print-out of all cost detail required for the NTDC forms.

However, in order to be completely responsive to administrative proposal requirements, we must now manually enter on the DD and NTDC forms the cost detail from the IBM print-out. Thus, a portion of the cost savings gained by use of an automatic data processing system is nullified by subsequent manual handling of automatically processed data. If, as a first priority, relief cannot be obtained from the requirement to submit all of the requested cost detail, then the next priority step leading to a reduction of expense would be a revision to the administrative proposal requirements which would delete the mandatory requirement for the submittal of the data on the specified forms. The required data could then be submitted in IBM format and the full potential of automatic data processing could be realized.

My next questions are directed to Tables I and III.

Table I requires a breakdown of hardware end item cost by specified subsystem cost. Each subsystem cost, in turn, is broken down by type and amount of labor and by type and amount of material. The presentation of total hardware cost by means of labor hour and material dollar allocations to specific subsystems is a task of some magnitude and no little expense to contractors. Harried proposers, fighting a proposal deadline, may yield to the temptation to distribute total cost in the most expedient manner.

Thus, labor hours and material for a hardware end item are not necessarily presented or estimated on the basis of separate subsystem entities or, if so, are not necessarily estimated on the basis of the specific subsystem entities called out in the RFP. Also, a number of the specific subsystems called out in an RFP are not sufficiently descriptive by title or are not accompanied by sufficient identification of content and interface to define the scope of work that the NTDC project engineer would like to see included in each subsystem cost. As a result, a substantial amount of arbitrary judgment must be exercised by a contractor in the allocation of costs to the specified subsystem.

If such allocations of the proposer are subsequently employed by the NTDC project engineer for the purpose of comparing one bidder's estimate for a specific subsystem with another bidder's estimate for the same subsystem, then the unraveling of the arbitrary judgments exercised by each bidder must be a substantial problem to the NTDC project engineer. If such allocations are subsequently employed by the NTDC project engineer for pure cost analysis purposes, then the use of specified subsystems is not important - any meaningful breakdown would be sufficient. It would seem simpler, if such information is really needed, to let each contractor define his own subsystems and allocate costs accordingly. In addition, the NTDC project engineer might gain greater insight to a proposer's technical approach by giving the proposer the opportunity to organize his hardware cost in his own manner.

Further, it might be noted, the Table I approach and intent presupposes that all contractors have identical accounting systems regarding cost centers, labor classifications, and indirect labor charging. Such is simply not the case.

Table III, Material Cost Breakdown, requires contractors to itemize all material by name, number of units, unit value and total value. Further, second level breakouts are required for certain categories of material. Table III, of course, is in addition to the normal requirement that material be categorized by raw, purchased parts, and subcontracted material and is in addition to the normal requirement that a "make or buy" program be submitted. The submission of a Table III - to the required detail - in a proposal for the design, development and fabrication of a complex, prototype trainer is an exercise in frustration - the Table has value only if the detail is accurate and such accuracy is not possible until the design is complete and the drawings are released. Of all the forms, this one presents the strongest case for deletion. If, as a result of this conference, an NTDC-Industry committee would be formed for the purpose of reviewing NTDC cost data requirements to determine feasibility of revisions in scope, presentation format, and detail, a service might be rendered both parties.

Now let's proceed to the TPR - The Technical Proposal Requirements.

A typical TPR for a competitive, major trainer procurement calls for a number of discussions not directly related to the Schedule or the end item specification. For example, one such discussion relates to management factors. The required discussion of related experience, plant facilities, equipment, personnel, and other factors seems hardly necessary if such information has been submitted on previous proposals to NTDC or if information on these subjects was previously provided NTDC in response to the Commerce Business Daily synopsis for that procurement. In the same classification would be the required discussion of project manning and operations. Companies

responding to major requests from NTDC are almost invariably capable, well established members of the defense industry who have demonstrated their ability to successfully manage and operate in a defense environment. It is somewhat difficult to visualize a situation where an NTDC proposal evaluator would discern such a flaw in management techniques or corporate line organization relationships to seriously question the validity and effectiveness of a corporation's organization.

Present technical proposal requirements require submission of a separately bound volume on reliability. The volume is to contain a proposed reliability program plan that is in accordance with the requirements of Specification MIL-STD-785 and Bulletin 33-4. It would seem advantageous for the Government to permit contractors to qualify themselves, in advance, for this requirement of all RFP's - that is, to make an initial submission to NTDC of a document which: details the corporate reliability program capability and policy; shows a clear understanding of the requirements of MIL-STD-785 and Bulletin 33-4; and outlines the basic program required to implement these documents. Once the document has been approved by NTDC, it could be used as a reference by the contractor in responding to all RFP's. Each RFP response by that contractor then need only reference this document and include a statement of: the predicted MTBF to be demonstrated; the table of predicted MTBF values at the major equipment level; the basis on which the final prediction will be made; and the proposed demonstration plan.

Current technical proposal requirements mandate the submission of a separately bound volume detailing an integrated logistic support program plan which will satisfy the requirements of NTDC Bulletin 40-1. In addition, an analysis of recent RFP's indicates that other requirements, over and above the specifics of 40-1, are being requested as an item of proposal response. For what it is worth, we feel that an adequate response to Bulletin 40-1 alone may approximate 100 double spaced pages. An adequate response to the other proposal requirements relating to 40-1, as well as the additional requirements unique to a particular trainer, would, in our opinion, add up to another 20 pages. I would like to suggest that NTDC consider very seriously the possibility of letting contractors qualify in advance their technical posture on ILS and Bulletin 40-1 by the submission of a document which delineates their understanding of, and their capability for, the implementation of an integrated logistic support program. If an evaluation of this document by NTDC personnel shows it to be acceptable and if a survey trip to the contractor's plant confirms his ability to comply with the provisions of 40-1, the contractor could be given notification that he meets NTDC requirements in this area. With this certification on file at NTDC, contractors in responding to RFP's could reference the prior approval and submit only the added detail required for the particular procurement. In a period of time when we are all concerned with good cost reduction practices, it seems somewhat inconsistent to submit comprehensive ILS program plans for each RFP where no more than 20% of the data need differ from proposal to proposal. Again, I believe a NTDC-Industry Committee could function effectively in the development of guidelines relating to implementation of the above approach. Current NTDC proposal requirements mandate the submission of a PERT network and a work breakdown structure in accordance with MIL-P23189 or NTDC Bulletin 02-100. PERT is considered a useful tool and I would not want - publicly, at least - to suggest that the importance of its implementation be minimized in any manner. However, I would suggest that the RFP require only the submission of the critical path for proposal evaluation purposes and that the complete PERT network and work breakdown structure be submitted at some point in time after contract award.

Now, shifting emphasis somewhat, I think it appropriate to mention a few possible revisions to technical proposal requirements which, although not contributing to reduced proposal cost, would contribute to effectiveness of proposal content.

The first of these relates to assignment of technical proposal weighting factors. A contractor, in structuring his response to an RFP, would like to secure some measure of guidance from the inclusion of assigned weighting factors. Since technical proposals are rated in accordance with previously determined criteria, it would seem beneficial to share this knowledge with proposers in all instances.

In a number of RFP's where this information is provided, the weights assigned to the various factors are often at variance with what the contractor considers to be a realistic appraisal of the values. Perhaps this sort of conflict is almost inevitable and unavoidable. (It will be interesting to note if future weights attached to ILS factors confirm the importance which has been assigned to these same factors so far in this conference). If included, the assignment of weighting factors should reflect a current analysis of the relative importance of each significant element of the scope of work contemplated and should not rely too heavily on what was considered proper for a prior unrelated procurement.

The second of these revisons relates to "understanding the problem."

In each RFP, under the technical proposal requirements, there appears a discussion item called "Understanding the problem" in which the proposer is expected to state concisely and lucidly his understanding of the problem to be solved. It would seem singularly appropriate if the NTDC project engineer would be required to include in the RFP package a statement listing the major technical problems that give him concern and the reason for his concern. The proposer, then, in his response to "understanding the problem," could specifically respond to this statement by indicating his knowledge of the problem so identified and his proposed approach to solution. If the NTDC project engineer has a concern of this type, and it is known at the time of RFP issuance, the problem should not be buried in the specification for the proposer to find and identify but instead it should be highlighted with a response required. After all, the particular problem or problems of concern to the NTDC project engineer may not represent a problem or problems to the proposer to be highlighted in his response. The RFP and the proposal response are the primary communication tools leading to an award and every effort should be directed to making them effective.

I would like to take my remaining time to discuss what have been identified as the three major problems facing NTDC - cost, delivery, and performance. Sometimes we become so involved with our daily operations we tend to lose sight of the fact that we are, and have bee n, making progress.

The past six years have seen the introduction of a number of remedial actions by NTDC directed to the eventual solution of these problems. In general, the actions have been beneficial and have resulted in a new-found maturity in the recognition of individual and joint responsibilities.

The trainer industry has cooperated fully in the shift from cost type contracts to fixed price type contracts. In so doing, contractors have demonstrated a willingness to accept a share of the financial risk inherent in the development of today's complex prototype trainer. The trainer industry has cooperated fully in the introduction of meaningful bonuses and penalties on delivery. In so doing, contractors have displayed a willingness to apply full corporate resources to the meeting of required "ready-for-training" dates. The trainer industry has cooperated fully in the acceptance of the concept of substantial penalties for failure to meet specified maintainability, reliability, availability, and performance criteria. In so doing, contractors have found it necessary to program corporate funds for conduct of corollary activity to assure attainment of the specified objectives.

Now it would seem to us that if the cost, delivery, and performance problems identified by NTDC cannot find their solution in this favorable environment, then NTDC must provide greater assistance to the trainer industry in finding the solution - that is, additional avenues explored and doors opened by NTDC to make it possible for the trainer industry to provide further contributions.

To this end, we would suggest NT DC consideration of these possible steps: First, advance orientation of industry to the specific technical problems and requirements of forthcoming procurements. This could be done through the establishment of a formal system where members of the trainer industry can individually present to NTDC Engineering, on a strictly engineering management level, the nature and extent of a prior period's research and development effort and the specific results accomplished.

In return, NTDC Engineering could share with industry their technical concerns related to forward operational requirements. Industry could orient their R and D to the most effective compromise between disciplines and operational requirements and NTDC Engineering could have some assurance that their technical concerns have been exposed to industry for possible advance solution. Second, longer procurement lead times and RFP response times. With some flexibility in the delivery schedule, contractors could evaluate the trade-off between cost and delivery and propose the optimum combination of the two. One month saved in "getting the bid package out" could result, over a period of time, in substantial savings to the Government. Even advance release of the draft specification to bidders would result in yet additional savings to the Government. Third, continuing re-examination of present requirements governing extent and nature of items and services procured. Present contractor technical data requirements and trainer support services represent a constantly increasing percentage of the total contract price. Cost specified in the RFP is cost retained in the response. A review of certain of these requirements could well result in the decision that degree of necessity did not equate with number of dollars paid. Present contractor technical data requirement costs now run as high as 30% of the hardware end item costs and the day is rapidly approaching - if not already here - when the combined total of contractor technical data requirement costs and trainer support item costs will approximate 50% of the hardware end item costs. Fourth, continuing re-examination of requirements and specifications defining the end-item hardware. The present practice of NTDC to review carefully the training requirement in preparing the trainer specifications to the end that well-proven state-of-the-art may be employed where adequate and advance state-of-the-art called for where necessary remains the strongest assurance of procurement of the most suitable trainer for the least cost.

NTDC, throughout the years, has displayed consistent leadership in the procurement of the best in training devices for the military. By their demonstrated competence and through their specific actions, they have constantly challenged the trainer industry to yet higher levels of performance. Speaking as a member of the trainer industry, we welcome these challenges and we look forward to the continued opportunity of working with NTDC in the successful performance of their mission.