CONSTRUCTION

INSTRUCTOR GUIDE

FEDERAL ACQUISITION INSTITUTE

CURRICULUM OF PROCUREMENT
TRAINING COURSES

CURRENT THROUGH
FAC 90-26

OFFICE OF ACQUISITION POLICY

GENERAL SERVICES ADMINISTRATION

INTRODUCTION

APPROACH TO THE COURSE

Length:	Ten days.
Who Should Attend	Contract Specialists who have completed basic courses in procurement planning, sealed bidding, negotiations, cost analysis, and contract administration.
	Objectives: This is a comprehensive course concerning the construction contract process. It is designed for the Contract Specialist who has had the basic required contracting courses, has some experience in the construction contracting field, or is already involved in it.
Instructional Methods	Although the principal purpose of the course is to convey knowledge, lecture is nonetheless only one of the methods employed. The course places emphasis on case studies, exercises, roleplaying, and interactive discussions, rather than lecture.
	Viewgraphs are used to emphasize interaction with the students. Because of the amount of material to be covered, it achieves a fast pace at the beginning, which it continues to maintain throughout the two weeks. Reading assignments are long, requiring several hours outside of class each day.

KEY TO THE FORMAT

❶ Each lesson begins with a topic. There are several topics within each chapter. At the beginning of each topic within a chapter, you will be given the topic, pages of text, the objectives, and the time it begins, as well as the duration. The method employed for that topic is also given. It is a time to pause briefly and set the students on course, motivate them, and state briefly what the topic is about.

❷ The Ref. (i.e., reference) is to the corresponding chapter or pages from the text/reference.

❸ This identifies learning objective(s) related to the topic.

❹ This identifies the starting time for coverage of the topic (i.e. 9:40 AM) and the amount of time budgeted for the topic.

❺ This is the method for instructing this lesson. Other methods include roleplaying, case studies, interactive viewgraphs, and group exercises.

❻ This column provides occasional references to pages from the Text/Reference and from Classroom Materials (for the benefit of the students). Pages from the Classroom Materials always have the prefix CM- and pages from the Text Reference will be preceded by the prefix T/R. Note that, when possible the Classroom Materials have been included in the Instructor Guide. However, in instances where more than two pages are included, the material has been placed at the end of the Instructor Guide Topic. This is necessary in order to maintain continuity and flow of instruction.

This column also contains icons (see the following page for a catalog of icons and the definition of each).

❼ This column presents the teaching points, information to support the teaching points, and transitions.

❽ This column for the most part is blank. Please feel free to add your own personal notes to your copy of the Instructor Guide.

❾ This is a teaching point. You are responsible for covering all such points.

❿ This information is to support the teaching point. We have tried to provide all the information necessary for each teaching point, so that you will not have to do additional research to teach. However, you should try to convey this information in your own words. More importantly, we strongly encourage you to weave in your own examples and draw on your own experience in presenting the teaching point.

KEY TO THE FORMAT

❶TOPIC: 1-4 THE PROCESS OF CONTRACTING FOR DESIGN SERVICES

❷Ref: 1-27 to 1-31

❸Objective: At the completion of this lesson topic students will be able to describe the Brooks Act contracting procedures for A/E design services.

❹Time: **3:00 - 3:10**

❺Method: Lecture, Roleplaying, Viewgraph

Ref.	❼Steps In Presenting The Topic	Instructors Notes
	II. Presentation	
❻	**❾A. The Process of Contracting for Design Services.**	❽
	❿The criteria used in selecting an A/E for a design contract award differs from that of any other type contract.	
	a. Question: Ask the students to relate the criteria which is used in selecting an A/E.? **Record the correct answer on the blackboard.**	
	Answer: "An A/E selection is based on technical qualifications and expertise."	
	b. Question: What is the law that provides procedures to be followed when contracting for design services?	
	Answer: The Brooks Act.	
	c. SHOW VG 1-6: "The Brooks Act."	
	Leave the VG in place and offer additional information concerning the Brooks Act.	

ICONS

The icons used in this instructor guide are shown below:

Show viewgraphs.

Show interactive viewgraph.

Annotation of learning objectives, and instructor notes of special significance.

Roleplay

Use chalkboard/flipchart, VAP Board

Group Exercise

Question/Answer Sessions

INTERACTIVE VIEWGRAPHS

Note that one of the icons cited above is to indicate an "interactive viewgraph."

An interactive viewgraph is a slide on the overhead projector that requires a response from the class. For example, if you are showing a decision table, the "then" side would be empty and the students would help you fill out the answers. Or perhaps the slide asks a particular question about a list of conditions shown on the slide.

PREPARING TO TEACH THE CONSTRUCTION ACQUISITION COURSE

* To teach the Construction Contracting course, you should plan on approximately 80 hours of preparation per week. You will not need this time to research and build your own lecture notes, case studies, roleplays, etc. This Instructor Guide is complete with all of the instructional materials necessary to deliver the course. Rather, you will need the time to become thoroughly familiar with the Text/Reference, Classroom Materials, and the Instructor Guide.

* This copy of the Instructor Guide is your copy to annotate and otherwise mark up as you see fit.

* Build your own examples for teaching points, whenever possible.

* Draw on any supplementary materials available to you. However, be advised that the schedule is tight and extra time is scarce.

* Review the attendance roster prior to each class to evaluate the makeup of the group. (i.e., organization, grade level, etc.) Continue to evaluate for experience and ability level throughout the course. Use this information to form study/work groups as needed.

* Arrange for the necessary training aids:
  - Viewgraphs and overhead projector
  - Viewgraph markers
  - Flipchart and markers
  - Chalk for the chalkboard, or markers for the board

* Examine the classroom before the students arrive, preferably no later than the day before. Make certain there is a table upon which you can place all of your materials. Make sure the location of your table and/or podium is visible by all students. Make certain there is sufficient room for you to move easily among the several tables to assist individuals as needed.

TIPS ON CONDUCTING THE COURSE

* Time management is critical. Stick to the schedule. Move the class along. If questions are asked on Monday that pertain to topics to be covered on Tuesday, defer answering the questions until Tuesday. Make a note to yourself so that the question does not go unanswered.

* At the end of each day, remind the students of their reading assignments for the evening. As indicated in the text, punctuate lectures with questions that the students should be able to answer from the previous night's reading.

* Remember to get the completed course evaluation form from all of the students.

EVALUATING YOUR PERFORMANCE

The following are among the criteria for evaluating your performance.

* Accomplishment of the learning objectives.

* Coverage of all teaching points, case studies, group exercises, and roleplays.

* Effectiveness in presenting the lectures, group exercises, case studies, roleplays, and discussions.

* Use of all Classroom Materials provided to the students.

* Special attention given to students who appear to be confused during the Breaks or the 3:30 to 4:30 time period.

LESSON PLAN

CHAPTER 1

TIME	LESSON	OBJECTIVES
Monday **8:00 - 8:30**	**Introduction** **Preface**	
Monday **8:30 - 9:00**	**1. Need Identified**	• Describe how construction projects are identified. • Identify phases of a five year plan.
Monday **9:00 - 10:15**	**2. Planning**	• Determine whether a formal or informal acquisition plan is to be prepared. • Prepare a written acquisition plan.
Monday **10:15 - 10:35**	**BREAK**	
Monday **10:35 - 11:30**	**2. Planning** (Continued)	
Monday **11:30 - 12:30**	**LUNCH**	
Monday **12:30 - 1:50**	**2. Planning** (Continued)	
Monday **1:50 - 2:10**	**BREAK**	
Monday **2:10 - 2:30**	**3. Design Plan**	• Identify criteria used in determining whether design be prepared in-house or by contract.
Monday **2:30 - 3:15**	**4. Process of Contracting for Design Services**	• Describe Brooks Act procedures.
Monday **3:15 - 3:30**	**5. Construction Project Approval**	• Describe the process of Congressional approval of the Construction Project. • Describe the issues that must be resolved prior to contracting.
Monday **3:30 - 4:30**	**STUDY PERIOD**	

LESSON PLAN

CHAPTER 1

LESSON TOPIC GUIDE

TOPIC: **1.0 INTRODUCTION TO THE COURSE "CONSTRUCTION CONTRACTING"**

Ref: Chapter 1

Objective: Introduction, welcome, establish relaxed atmosphere conducive to learning.

Time: 8:00 - 8:30

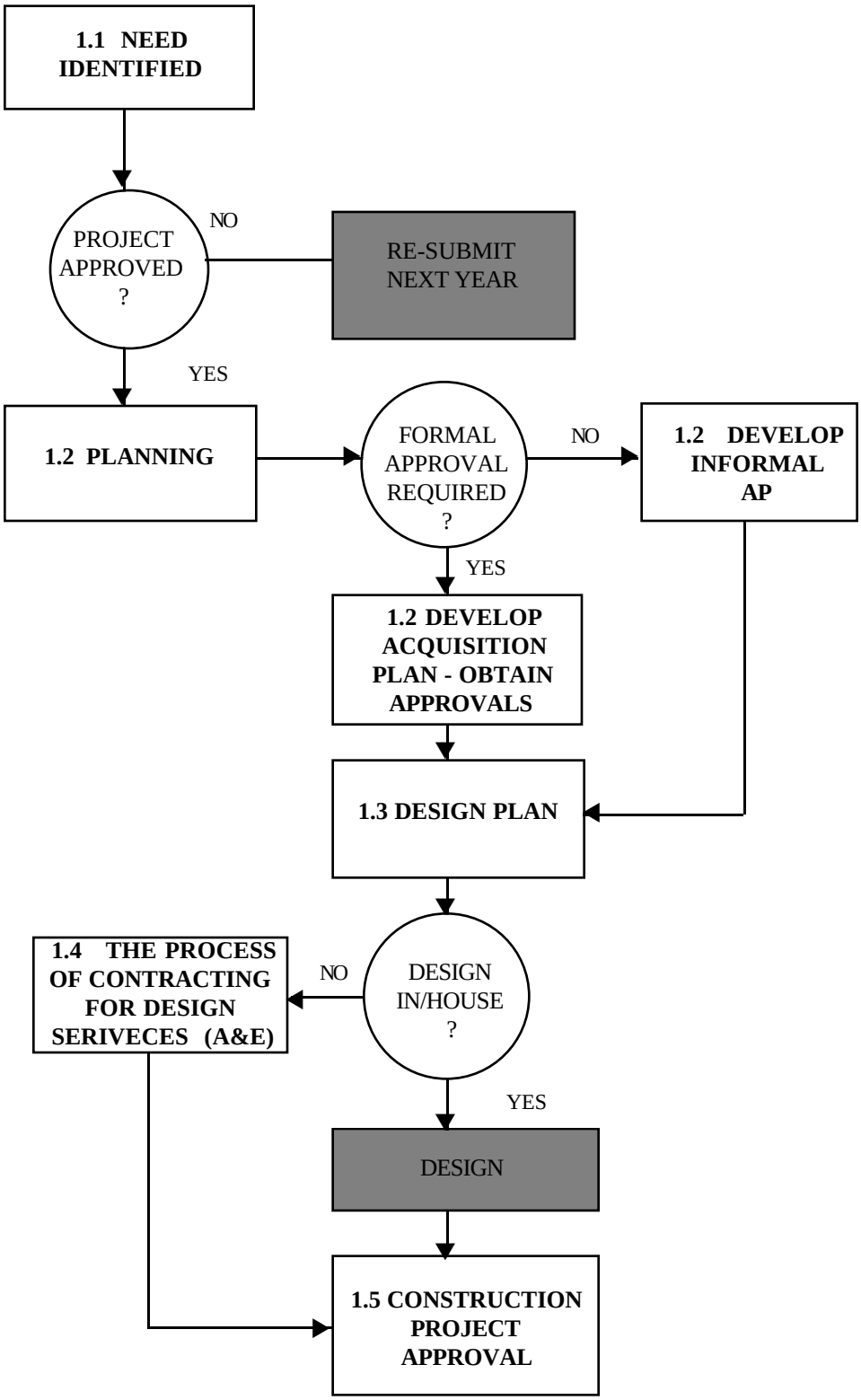
Method: Group Interaction

LESSON PLAN

REF.	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	1.0 INTRODUCTION TO "CONSTRUCTION CONTRACTING"	
	Establish Contact Introduce yourself and welcome the students to the course: **"Construction Contracting."** Ask students to introduce themselves, state their occupation, and identify their respective agencies. Present the basic schedule for the course: * 8:00 - 3:30 Monday through Thursday * 3:30 - 4:30 Study Period Monday through Friday * 8:00 - 4:30 each Friday which includes a 2 1/2 hour comprehensive examination on both Fridays. * One hour for lunch. * Two breaks of 20 minutes each, one in the morning and one in the afternoon. Introduce the physical environment. * Parking * Rest rooms * Eating facilities Complete other registration and administrative tasks.	

REF.	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Introduce the instructional package on their respective desks. * **"Text/Reference"** * Separate volume titled; "**Classroom Exercises."** State that, from time to time, you will have them turn to a page in the Classroom Exercises which will identified by the prefix **CE**. Explain that the students will use both volumes - the Text/Reference and the Classroom Exercises - throughout the course. **Tell the students that:** * They will have homework assigned - namely, nightly reading assignments from the Text/Reference. Reading assignments may be found at the beginning of the Classroom Exercise book. * They will be tested on Fridays . Each test will include approximately 50 multiple choice questions. * Throughout the week students will spend part of their time listening to short lectures. However, they will also have an opportunity to read, participate in group exercises, assume a part in several role plays, etc. **Motivating Statement** * Relax students by telling short story, experience, or joke. * Motivate students by relating that in this course many of their basic; Who, What, When, and How questions will be examined. Knowledge of these procedures will impact upon future studies and job performance. The exercises are specially designed to provide hands on experience in the competency tasks. **Overview** In the first lesson we will examine events that will lead to the decisions that are made early in the acquisition cycle.	

Ref.	Steps In Presenting The Lesson Topic	Instructor Notes
	PRESENTATION Have students read the vignette on first page of Chapter 1 of the Text/Reference - While the students are reading, record the questions presented at the conclusion of the vignette, on the VAP/chalkboard. Explain that the answers presented in the scenario will be provided as we progress through the chapter. LEAD students through <u>flowchart</u> on page 1-4, "**Steps in the Presolicitation Phase**." Briefly describe each step in the Presolicitation phase.	Questions addressed in the vignette: 1) How is a need transformed into a project? 2) How does it progress through the budget stage? 3) What are the strategies that form an acquisition plan? 4) What constitutes the design process?


1.1 NEED IDENTIFIED
PROJECT APPROVED ?
NO
RE-SUBMIT NEXT YEAR
YES
1.2 PLANNING
FORMAL APPROVAL REQUIRED ?
NO
1.2 DEVELOP INFORMAL AP
YES
1.2 DEVELOP ACQUISITION PLAN - OBTAIN APPROVALS
1.3 DESIGN PLAN
1.4 THE PROCESS OF CONTRACTING FOR DESIGN SERIVECES (A&E)
NO
DESIGN IN/HOUSE ?
YES
DESIGN
1.5 CONSTRUCTION PROJECT APPROVAL

TOPIC: **1.1 NEED IDENTIFIED**

Ref: Pages 1-5 to 1-7

Objective: Upon completion of this lesson topic students will be able to describe how to determine the need for a construction project:

* Describe how construction projects are classified.
* Identify phases of a five-year plan.

Time: 8:30 - 9:00

Method: Lecture/Discussion, Case Study, Interactive Viewgraphs

LESSON PLAN

Ref.	Steps In Presenting The Topic	Instructor Notes
	1.1 NEED IDENTIFIED	
	Tell the students: In the following lesson we are going to look at how construction projects are classified, five-year budget cycle milestones, and various special construction acquisition strategies. Explain how this lesson ties in with future lessons. In the procurement process the first step in construction contracting is an **acknowledgment of a need**, which must be: * Real or Apparent. * Existing. * Externally pressured or Self generated. Explain that a determination of a need in the construction environment is driven by one or more of the following **driving factors**:	

Ref.	Steps In Presenting The Topic	Instructor Notes
?	• **<u>Question</u>:** Ask the students to identify the driving factors. **<u>Answers</u>:** **1) <u>User Driven</u>: The need to establish, improve, or upgrade services, such as providing a building or a facility** **2) <u>Technology Driven</u>: A new, improved, or advanced technology which might fill the need by changing the method of operation, such as building a dam or a testing facility** **3) <u>Research Driven</u>: Complex projects usually generated by studies conducted by the federal government or local interest groups such as:** *** Flood control work.** *** Development of hydroelectric power.** *** Recreation facilities.** *** Water quality control.**	
?	• **<u>Question</u>:** Who is responsible? **<u>Answer</u>:** **1) Requesting Activity: Each organization, commonly referred to as the "user" or "client," has the responsibility to project its own needs.** **2) Program Manager: Once the need is established by the user, it must be communicated to the individual (usually within the Design and Construction organization who acts in the capacity of a Program Manager. Program Managers work with the user to:** **✓ Transform needs into working documents.** **✓ Obtain funds.** **✓ Handle administrative details.** **✓ Generally support the need.**	

Ref.	Steps In Presenting The Topic	Instructor Notes
	3) Project Plan: Next the need must be transformed into a project plan, as it will eventually have to compete with other projects and agency budget dollars within your activity. Competition is keen, so it is wise to have an efficient and effective plan.	
	SHOW VG 1-1: CLASSIFICATION 0F CONSTRUCTION PROJECTS	

CLASSIFICATION OF CONSTRUCTION PROJECTS

* **In Terms of Time**
* **In Terms of Dollar Value**

VG 1-1

- **<u>Question</u>:**
  Ask students to explain what is meant by classification in accordance with time and dollar value.

Let VG 1-1 remain on the screen while discussions are going on. After the discussion period, show VG 1-1a which gives a breakdown and correct descriptions.

Terms of Time:

Short Term (Immediate Needs)
Intermediate (Within 2 years)
Long Range (Within a 5 year budget cycle)

Terms of Dollar Value: (Agency specific)

Minor (Under 1.5 million for GSA)
Major (Over 1.5 million for GSA))

VG 1-1a

Ref.	Steps In Presenting The Topic	Instructor Notes
	Classification of Construction Projects Construction projects are normally classified by the user in terms of **time requirements** or **dollar value** (varies with agencies) * **Short Range:** To take care of immediate needs * **Intermediate:** For construction within a two year cycle * **Long Range:** Larger projects in the planning stage * **Major:** Over $1.5 million (Prospectus level project) * **Minor:** Under $1.5 million (Restoration and alteration)	
	SHOW VG 1-2: FIVE YEAR CYCLE FOR LONG RANGE PROJECTS - Leave on screen during discussions. Overlay VG 1-2A during discussions.	

FIVE YEAR CYCLE FOR LONG RANGE PROJECTS

MILESTONES	EVENT
GUIDANCE	NEED IDENTIFIED
DESIGN	CONCEPT A/E
BUDGET	FUNDING
PROGRAM	CONGRESSIONAL APPROVAL
EXECUTION	ADVERTISED/AWARDED

VG 1-2 VG 1-2a

Five-Year Budget Cycle

A typical long range project is planned around the five-year Congressional budget cycle by identifying the five years in terms of **milestones:**

* **Guidance year** (Initiation)
* **Design year** (Concept)
* **Budget year** (Final design and estimate)
* **Program year** (Approval)
* **Execution year** (Contract award)

Ref.	Steps In Presenting The Topic	Instructor Notes
	Note: Construction **backlogs** are structured into tentative annual programs within the agency's budget. Valid projects which cannot be included within the available resources expected over the next five years constitute the unprogrammed portion of the long term requirement. This means that planning and programming are under constant revision as decisions are made and priorities change.	
	• **Question:** What is the five year cycle based on? Describe what typically occurs in each year of the cycle. **Answer:** The five years are based on the Congressional approval cycle	
	During the **Guidance Year** the project is identified as a need and is initiated. During the **Design Year** the decision is made as to whether to design "in-house" or "A/E," and design is initiated. During the **Budget Year** the final design is approved and estimated cost of construction (ECC) is determined. The **Program Year** is the year in which Congress either approves of disapproves the project. During the **Execution Year** the project is advertised and awarded	
	CASE STUDY: Classification of Construction Projects, CE-1.1	
	Ask students to read the case study (CE-1.1) in their Classroom Exercise Book) and based on the previous discussion, classify the case study project as to time and dollars.	

MINI CASE STUDY CE-1.1

MAGIC MOUNTAIN PROJECT

Tom Bradley , who is a Project Manager with the Bureau of Reclamation, received a notice that one of their pumping stations located in the mountains was in dire need of an access road. Heavy snows in the winter and the subsequent melting in the spring left access to the site for maintenance virtually impossible during many months of the year. The project was considered urgent, and the customer requested that it be completed before snowfall next winter. The asphalt road is to be 3/4 mile long and would have to be constructed through mountainous terrain. The Government estimate for construction is $960,000

Questions:

How would Tom Bradley classify this project on his report in terms of time and dollars?

_____

_____

What kinds of procurement problems would one expect to encounter in this situation?

_____

_____

Ref.	Steps In Presenting The Topic	Instructor Notes
	INSTRUCTOR'S KEY TO THE CASE STUDY CE-1.1	
	• **Question:** How would Tom Bradley classify this project on his report in terms of time and dollars? **Answer:** Tom would classify the project as **INTERMEDIATE** in terms of time, and would list it as an urgent minor project as it is under the threshold of $1.5 million. • **Question:** What kind of procurement problems would one expect to encounter in this situation? **Answer:** Lack of competition, higher costs, absence or shortage of labor, start date and completion date could be affected by climate, and urgency of need.	

TOPIC: **1.2 PLANNING**

Ref: Pages 1-8 to 1-24

Objective: At the completion of this lesson topic students will be able to describe the role of the Contract Specialist in Planning.

* Determine whether a formal or informal acquisition plan is to be prepared.
* Prepare a written acquisition plan.

Time:
9:00 - 10:15
10:15 - 10:35 Break
10:35 - 11:30
11:30 - 12:30 Lunch
12:30 - 1:50
1:50 - 2:10 Break

Method: Lecture/Group Exercise, Case Study, and Directed Discussion

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	1.2 PLANNING	
	Tell the Class: In this lesson we will review the role of the Contract Specialist in planning; determine when a formal or informal acquisition plan is to be prepared; and prepare a written acquisition plan. Construction projects are complex and time consuming ventures requiring careful planning. To some degree each construction project is unique. Seldom are two projects ever alike. Viewgraph 1-3 illustrates some basic criteria that must be considered when planning the design of a construction project.	
	SHOW VG 1-3; CONSTRUCTION PROJECT - CONSIDERATIONS	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES

CONSIDERATIONS

1. **Project must be designed in accordance with the applicable codes and standards.**

2. **Plans and specifications must be tailored to the needs and varying conditions.**

3. **Must be properly sequenced.**

VG 1-3

- **<u>Question</u>:**
  Using Exhibit 1-2 of the Text/Reference ask the students to identify other matters that must be taken into consideration prior to designing a construction project. There are many considerations which may be identified by the students. As they are identified, you may list them on the VAP or Chalkboard.

  <u>Answer</u>:
  As shown in Exhibit 1-2 some of the considerations are:

T/R 1-9

* **Seasonal weather**
* **Location of temporary field office and storage area for the construction contractor**
* **Availability of utilities**
* **Site accessibility**
* **The need for phasing the completion dates**
* **Availability of labor, subcontractors, material**
* **Subsoil conditions**
* **Surface topography**
* **Railroad access**
* **Proximity of disposal site**
* **Identification of hazardous material**
* **Demolition requirements**
* **Environmental matters**
* **Need for beneficial occupancy**
* **Contractual: Type and method of contracting**

CONSTRUCTION PROJECT CONSIDERATIONS

CODES, STANDARDS

The construction project must be designed in accordance with all applicable codes and standards. Building codes are basic documents covering such disciplines as electrical, plumbing, fire prevention and safety, mechanical work, property maintenance, energy conservation, elevators. Some of them are:

* Basic Building Code (BOCA) (Used in Eastern and Midwestern U.S.)
* Uniform Building Code (Used on West Coast & some Midwestern)
* Standard Building Code (Prominent in the South)
* National Building Code (Various localities)
* Guide Specifications (Discussed in Chapter 2 under specifications)
* Material Standards (Discussed in Chapter 2 under specifications)
* American Society for Testing Materials (ASTM)
* The American National Standards Institute (ANSI), etc.

PLANS AND SPECIFICATIONS

Working drawings and specifications must describe the work in sufficient detail and type of construction for accomplishment under varying conditions.

Although seasonal factors fluctuate with the geographic location and type of construction activity, on a national basis, summer is the peak season and winter is a slack period for almost all segments of construction. The reason construction is such a seasonal business is primarily the effect inclement weather and low temperatures have on certain key construction materials and operations. The weather can also can create a serious shortage of craftsmen during the summer and unemployment in the winter.

OTHER REQUIREMENTS

Plans must be provided for the construction contractor to set up a temporary field office on Government owned property. Access to the site, and an adequate storage area must also be identified.

The building process must follow a natural order of events which are properly sequenced, and in total combination, constitute a pattern of time requirements.

Other highly variable and often unpredictable factors to be considered.

Availability of:

*labor
*material
*subcontractors and
*utilities

Vagaries of the construction site:

* subsoil conditions
* surface topography
* location of utilities
* railroad access

Other Factors:

* Proximity of disposal site
* Special permits, licenses, environmental and impact statements
* Identification of hazardous Material
* Requirement for demolition to be performed

Exhibit 1-2

Ref.	Steps In Presenting The Topic	Instructor Notes
?	• **Question:** What is the definition of acquisition planning? **Use the VAP board to record the answers.**	
T/R 1-8	**Answer:** **Show VG 1-4 and discuss the FAR definition, comparing the FAR definition to the student's definition.**	

ACQUISITION PLANNING DEFINED

FAR 7.101

"The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition."

VG 1-4

?

• **Question:**
What is the Contract Specialist's role in the early stages of defining the need of a project.

Answer:
The early stages of defining a need is the responsibility of the user/client. The Contract Specialist may participate at the request of the user/client and depending upon agency specific policy.

Ref.	Steps In Presenting The Topic	Instructor Notes
?	• **<u>Question</u>:** How does **acquisition planning** differ from **procurement planning**? **<u>Answer</u>:** **1) <u>Acquisition Planning</u>** **• Involves the entire process of completing a construction project from inception to finish.** **• Acquisition plans are devised and executed by a team consisting of various individuals who represent those who are responsible for completing the project.** **• Must be signed and approved at higher levels. (Think of it in terms of a contract.)** **•If events occur along the way that change the original plan, amendments to the plan must be issued.** **2) <u>Procurement Planning</u>** **• Encompasses only one phase of the acquisition cycle, addressing only the procurement phase.** **• It may, or may not be accomplished by a team.** **• The procurement plan involves the formation of a strategy that is applied to the presolicitation, solicitation/award, and administration of the contract cycle.** **• Assure that all laws, regulations and policies are followed throughout the procurement cycle.**	

Ref.	Steps In Presenting The Topic	Instructor Notes
	CLASS EXERCISE CE-1.2(a), Procurement Strategy Factors. **Time:** 45 minutes **Method:** Group Exercise	
	Refer the students to exercise CE-1.2(a), titled "Procurement Strategy Factors," which may be found in their Classroom Exercise book. **Purpose of the Exercise:** The exercise is intended to provide information which may be useful in developing an acquisition plan. The purpose of it is to stimulate discussions concerning problems and solutions. At the same time, each problem can be related to a potential impact which may affect a particular phase in the acquisition process.	
	Tell the students to: *** Read each problem.** *** Consider ways to avoid the problem.** *** Identify the acquisition phase where the problem could surface, (i.e. the design, procurement, or administrative phase; or a combination thereof).** The students will break into groups. Their answers are to be annotated in the far right hand column of the exercise. At the conclusion of the exercise, each group spokesperson will be called upon to inform the class of the groups' decisions.	

INSTRUCTOR KEY TO PROCUREMENT STRATEGY FACTORS CE-1.2(a)

Indicate Phase:
Design
Solicitation
Administration

FACTORS	LIKELY EFFECTS	REMEDIES TO CONSIDER	PHASE
1. No resources available in-house for design effort.	Requires additional time to contract if not done in-house.	• Contract with A/E.	D
2. Insufficient criteria to define design requirements.	Creates delays or impossible performance by A/E until criteria is developed.	• Issue contract for engineering study as soon as possible.	D
3. Availability of labor in area of construction is doubtful.	Lack of competition. High prices.	• Additional marketing needed. • Consider negotiation • Consider 8(a).	S
4. Market conditions: construction commercial work is brisk.	Contractors too busy with commercial work to bid - lack of competition - shortage of subcontractors.	• Consider performing additional marketing. • Consider an 8(a) contract.	S
5. Current trend in construction: away from bidding government contracts.	Bidding climate produces minimum competition. (seasonal conditions are a factor.) Winter season creates more competitive bids when commercial building slows.	• Packaging requirements (combining projects) to make bidding more attractive. • Use aggressive marketing techniques. • Obtain assistance by contracting local unions. • Postpone issuing bid.	S
6. Urgent project.	Procurement lead time not consistent with urgent requirement.	• Use Term Contract, Indefinite Quantity Contract, JOC, etc. • Competitive negotiation. • Waive Synopsis. • Develop POA&M. • Establish tracking system.	S

FACTORS	LIKELY EFFECTS	REMEDIES TO CONSIDER	PHASE
7. Requirement is for small project with high priority and high visibility.	Tends to be treated as "routine priority" unless steps are taken to track and follow up actions throughout the procurement cycle.	Adopt the team approach. Establish milestones. Develop tracking system.	D/S/A
8. Requirement has large dollar value and is complex.	Government contract surveillance may not be sufficient due to workload, etc. May need more expertise in technical aspects.	Adopt special CQC measures making contractor responsible. Contract Title II services from A/E. Consider Contract Management Services Contract Design and Construction.	D
9. Construction project design contains some state-of-the-art requirements.	May not be suitable for IFB - Government needs to evaluate bidders technical expertise as well as price. Will impact price.	Consider: • Source Selection method. • Two Step Sealed Bidding; or • Design/Build, Term Contract	D
10. Construction project contains features that require high degree of experience or expertise. (i.e., high-rise building, bridges, hospitals, etc.)	Government needs assurance that contractor has the expertise required. Bidders who are not fully qualified may be in line for award if based solely on price.	Consider: • Pre-qualification of bidders (Need additional time to process.); or use • Experience Clause provisions; • Source Selection method of contracting.	D/S
11. Requirement calls for multiple buildings. Contractor to build consecutively or build concurrently?	Decision effects price and occupancy dates as well as liquidated damages provision.	Phase liquidated damages consistent with decision. Needs must be clearly communicated.	D

FACTORS	LIKELY EFFECTS	REMEDIES TO CONSIDER	PHASE
12. Construction to be performed in a remote area.	Lack of competition Higher prices	Consider: • 8(a) contract. • Project packaging (consolidation of several projects together for one contract). • Unrestricted procurement. • Extensive marketing.	D/S
13. Requirement involves furnishing supplies (equipment) in conjunction with large construction project. (i.e., hospital, data processing center, power plant, etc.)	Confusion as to the applicable wage rates (Affects bid prices) (Walsh-Healy/Davis Bacon).	If in doubt contact DOL. Establish and clearly communicate which rate applies to various elements of the contract, if both rates are appropriate for use.	D
14. There is some doubt that funds are sufficient for the project.	Bids may be canceled prior to award due to insufficient funds available for award.	Establish additive/ Alternate bid items and a control amount; or reduce scope.	D
15. The requirement will involve proprietary items.	Likely to receive protest which would require additional time to process/resolve. (Delays)	Assure justifications are accurate and sufficient. Eliminate sole source items if possible. Also consider using "or equal" provision.	D
16. Requirement involves equipment in which acquiring data are essential: (i.e., special training manuals, power plants, EMCS, Post Office facilities, etc.)	Contractor will not furnish data outside of the normal construction submittals unless specifically called for under FAR.	Involve A/E initially in identifying any special data required.	D

FACTORS	LIKELY EFFECTS	REMEDIES TO CONSIDER	PHASE
17. Construction requirement also involves special equipment to be installed requiring maintenance over and above standard warranty.	May result in statutory violation for mixing funds (maintenance). Crossing fiscal years may cause problems. Involves wage rates other than Davis-Bacon. (Service Contract)	Issue separate contracts or develop a method to carefully separate and track funding. Assure service contract clauses are incorporated for maintenance. portion. (Separate contracts is the preferred method.)	D/S
18. Requirement involves substantial damages to the Government if completion is delayed.	Unusually high liquidated damages in which the exact amount cannot be determined.	Contractor pays actual damages accrued rather than a pre-determined daily amount.	A
19. Project located in remote site, making site visit impractical for bidders to arrange.	Higher bid prices based on contingencies. Potential problems in administering contract.	Consider marketing in the nearest metropolitan area w/site visit transportation furnished by the Government. • Negotiation of 8(a) contract.	A/S/D
20. Series of multiple small construction projects for renovation at same location. Numerous contractors working in same area not desirable.	Multiple contracts issued would create an administrative burden to issue and administer.	Consider: • JOC contract; • Indefinite delivery; • Contract packaging; • Term contract.	D/S
21. Large project to be located in environmentally sensitive area.	Additional time is needed to obtain permits and file impact statements.	Allow sufficient time. Request periodic reports on progress.	D/S

FACTORS	LIKELY EFFECTS	REMEDIES TO CONSIDER	PHASE
22. Project involves dredging (preparatory work) in conjunction with construction project.	Quantities of dredging unknown. Leaves room for contingency bidding.	Use lump sump with unit price based on estimated quantity.	D/S/A
23. Project involves demolition as a separate bid item. Location is different than the site of the construction called for in the other bid item.	Possible confusion as to appropriate wage rates applicable. (Davis-Bacon or Service Contract)	Determine if the demolition will be followed by a construction project at the site in order to make determination on appropriate wage rate.	D/S
24. Solicitation is to be issued as a design/ build/manage method of contracting, constructed on privately owned property.	Confusion concerning applicability of the Davis-Bacon Wage rate.	Consult with the Department of Labor well in advance.	D/S/A
25. Solicitation calls for pile driving, excavating, and supervisory erectors.	Unknowns would result in contingencies.	Establish requirement for prices, and use estimated quantities to be added to the lump sum bid. Use "Variations in Estimated Quantities" Clause.	S/D/A
26. Project calls for a foreign made product.	Violation of Buy American Act - Construction Materials clause. May cause lack of competition.	• Request that the A/E substitute another product which is American made; or • Request waiver.	D

Ref.	Steps In Presenting The Topic	Instructor Notes
T/R 1-10	**Tell the class:** Agencies are responsible for performing acquisition planning in order to promote and provide for full and open competition, or at least to the maximum extent possible. The method of **how** and **when** to accomplish a formal acquisition plan is left to the agency's discretion. However, the broad parameters listed in Exhibit 1-3 must be adhered to.	

AGENCY RESPONSIBILITIES

FAR 7.103

1) **ALL CONTRACTS MUST PROVIDE FOR FULL AND OPEN COMPETITION.** In no case will lack of planning or funding be used as an excuse for failure to comply.

2) Review similar projects and procurement histories to assure that acquisition **PLANNERS ADDRESS PAST PROBLEMS PRECLUDING USING FULL AND OPEN COMPETITION.**

3) **ESTABLISH CRITERIA AND DOLLAR THRESHOLDS AS TO WHEN A FORMAL PLAN IS REQUIRED**..

4) **ASSURE THAT THE SAME FAR PRINCIPLES APPLY TO THE INFORMAL PLAN AS THOSE TO BE APPLIED IN THE FORMAL PLAN.**

5) **DESIGNATE NAMES AND POSITIONS OF THOSE WHO WILL PARTICIPATE** in the planning.

6) **ESTABLISH PROCEDURES FOR REVIEW, APPROVAL LEVELS, AND STANDARD FORMAT.**

Exhibit 1-3

FAR 7.105	**Acquisition Plan** The **FAR** is very specific as to the **subject matter** to be addressed in an **acquisition plan** (see Exhibit 1-4). Contract Specialists may be involved in making recommendations concerning contractual matters being addressed in the plan.
	Review the contents of an acquisition plan with the students. Allow 30 minutes.

THE ACQUISITION PLAN CONTENTS

FAR 7.105

1. **Statement of need:** Summarize the technical and contractual history.

2. **Applicable conditions:** Is there an urgency for the project? Explain details such as real estate transactions, environmental impact statements and permits. What is the plan for designing the project? Will it be accomplished in-house, or by A/E contract?

3. **Cost estimates and rationale:** Provide the Estimated Cost of Construction (ECC).

4. **Capability or performance:** Relate to the need. Based on the critically of the project, is the completion date realistic? Include a statement that the time frame is considered reasonable, weather conditions and other matters considered.

5. **Performance period:** This is usually specified by number of calendar days. If the project calls for phasing, provide information.

6. **List any trade-offs:** (Example: Include costs of energy saving measures, balanced against energy conservation) or, if the contractors are to prequalified prior to bidding, loss of time in completing the prequalification process will be traded off in assuring that the awarded contractor will be fully qualified to successfully complete a complex project requiring special skills, in a timely manner.

7. **Risks:** Discuss technical, cost or schedule risks and what efforts are being made to offset .

8. **Plan of Action:** Describe your plans for each factor.

   Construction Management Services consideration
   Design plan
   Type of contract contemplated
   Method of contracting
   Sources
   Expected competition
   Source selection
   Contracting considerations
   Budgeting and funding. If you intend to use additive, alternative bidding procedures, describe them. If any options are involved, these should be explained briefly here. On very large construction projects sometimes incremental funding is required. Explain here.

9. **Product descriptions:** List proprietary products which may be required for the project, here, as well as a brief justification.

10. **Contractor/government performance:.** (Example: Provision for Value Engineering or other incentives). If Government owned utilities are to be furnished above the standard procedures, explain here.

Exhibit 1-4

THE ACQUISITION PLAN CONTENTS

FAR 7.105

11. **Logistic considerations:** (Example: If a construction project is located in a remote area such as an island off the coast, Alaska, an unpopulated area, or in a climate where other logistic problems will be a factor, (such as requiring special handling and storage of materials, describe the conditions and proposed plan to minimize or solve the problems) Include maintenance, warranties, and reliability here.

    (Example: An extended 5 year warranty may be needed on the roofs of buildings because of the specialty of constructing them to withstand severe weather conditions at the site)

12. **Quality Assurance provisions:** If special **CQC** is needed, explain briefly the level required.

13. **Government furnished property:** If equipment or supplies are to be furnished in conjunction with the construction project, identify them.

14. **Environmental considerations:** List the permits which have been, or must be obtained, as well as any restrictions concerning them. If an environmental impact statement has been filed and received, identify it here, including the dates. If asbestos has been identified as a part of the tasks in the project, explain here,. Provide information concerning plan for disposal.

15. **Security:** Any special security requirements must be explained here.

16. **Other:** Discuss all other considerations. If there are matters of safety which have been identified with the project, explain briefly (Example: Large crane operations, high rise building safety matters, fire dangers due to welding or blow torch operations).

17. **Milestones:** (Plan of Action and Milestones) (POA&M)
    Explain any time constraints. Address all phases of the acquisition process Provide such information as to what type of progress evaluation procedures, are to be used (i.e. CPM, Bar Chart, PERT). Provide milestones.

18. Provide the names of all participants involved in acquisition plan.

NOTE; FAR 7-105 encompasses proposed acquisition plan guidance for all types of contracts. Only those that would typically be addressed in a construction project have been addressed in the Exhibit.

Exhibit 1-4 (continued)

Ref.	Steps In Presenting The Topic	Instructor Notes
T/R **1-13-to 1-24**	**Construction Project Methodologies** A major consideration during the acquisition planning phase is the selection of a method of contracting for your construction services.	
?	• **Question:** What is the preferred method of contracting to be used in construction contracting? **Answer:**	
FAR 36.103	**FAR states that construction shall be acquired using sealed bidding procedures as long as the conditions for its use are met.**	
?	• **Question:** A variety of terms have developed over time to differentiate variations in the ways of contracting for construction services. What has been the most commonly used? **Answer:** **The most common has been TRADITIONAL LUMP SUM, using sealed bidding procedures.**	

Ref.	Steps In Presenting The Topic	Instructor Notes
	Show VG 1-5: Construction Project Terminology: **Briefly explain the following "construction" terms.**	

CONSTRUCTION PROJECT TERMINOLOGY

* **Traditional Lump Sum**
* **Design Build (Turnkey)**
* **Job Order Contracting (JOC)**
* **Packaging**
* **Combination Lump Sum, Unit Price**
* **Term Contracts**
* **Demolition**
    * **By Service Contract**
    * **By Construction Contract**

VG 1-5

NOTE: Exhibit 1-6 in the text reference and additional information concerning methods is provided in the Text/Reference.

CLASS EXERCISE CE-1.2(b)
Developing an Acquisition Plan

Time: 65 minutes

Method: Group Exercise

Purpose of the Exercise: To promote an understanding of the decision making process that makes up a formal acquisition plan.

Advise students that, even though not all agencies require the submittal of a formal plan, the considerations that must be made in drafting an informal plan are similar.

Ref.	Steps In Presenting The Topic	Instructor Notes
	CLASS EXERCISE CE-1.2(b), Developing an Acquisition Plan (Cont.)	
T/R 1-11 and 1-12	**Tell the Class:** Divide into groups and appoint a spokesperson for this exercise. Students are to study the information and format for an acquisition plan which can be found in Exhibit 1-4 of the Text/ Reference.	
	Students are to read the case study CE-1.2(b) titled: **"Contract Training Center Project".**	
	Using the space provided they are to first state the issues the case study introduces in the scenario, followed by a synopsis of their plan in addressing the issues.	
T/R 1-8-to 1-24	They may refer to the text for additional information, and as a group, draft an acquisition plan, using the blank acquisition form outline provided in the Classroom Exercise Book..	
	At the conclusion of the exercise, conduct a class discussion by calling on the various groups spokespersons, asking them to share with the class the decisions that were made and the reasons for making them.	

CASE STUDY CE-1.2(b)

CONTRACTS TRAINING CENTER
PROJECT SCENARIO

Mike Stevens is a project manager at a Government agency located on the west coast. He has just received the paperwork and authorization to design and construct a training center on Government owned land which will be used to train Government personnel in all aspects of planning, issuing and administering Government construction contracts. He has been working with the client (user) on this project for two years, and is elated that Congress approved the project. The requirement has been identified as the CTC project, and assigned a number P-138. It has also been identified as a high priority, politically sensitive undertaking. The local congressional representative has made it be known that due to recent procurement reforms, training has gained a high priority within all Government agencies.

The Government estimate of cost of construction (ECC) is $6,725,000, which is considered low. As a matter of fact, the engineers in the construction/design (CD) department have expressed an opinion that the figure set may be insufficient. One of the reasons is due to the new energy savings law which recently passed, requiring some conservation equipment to be installed in the building. It is rumored that the added cost was recognized but due to the "do more for less" philosophy which is currently being promoted by management, the Government estimate was not revised.

The proposed building, to be built on Government owned property, is described as a two story large complex, with classrooms to contain state of the art visual aids systems. The building also will house elevators at both ends, a dock loading ramp, and a large auditorium with complex acoustical characteristics. The auditorium is to be designed like one built in London for a stage production, including state of the art lighting system, and television filming capabilities.

The property adjacent to the site in three directions contains buildings which will have to be demolished in order to build the required parking for students and faculty. A structure also currently exists at the site, which will require demolition prior to construction. The existing building is known to contain asbestos.

The complex is to be constructed falls within Santa Barbara County. It is the home of an influential Congressman who is politically motivated to build the facility in the shortest time frame possible. Therefore, it has high visibility. Perhaps that is why your agency has requested that a formal acquisition plan be accomplished.

The site is currently being studied for environmental impact, and there is some concern that, because of Indian burial grounds nearby, there may be some problems with the local Chief of the tribe, and there are Federally proclaimed wetlands nearby. In addition, there is some concern that the Government may lack the personnel to oversee the project.

The actual location of the project is in a somewhat isolated small community Los Angeles is located 85 miles away. The area has a mild climate. The college campus like surroundings and small town atmosphere makes an ideal location . Government owned studio apartments are located within a two block area which will be provided for out of town students while attending classes. Another proposed project is underway to renovate the apartments, completion of which is to coincide with the occupation of the training center building.

List the issues which must be addressed in the Acquisition Plan.

Instructor Key

After reading the scenario, students are to list the issues which must be addressed in the acquisition plan:

1. High priority.
2. Politically sensitive
3. Low Government Estimate - Funds may be insufficient.
4. Uncertainty concerning new energy savings law.
5. State of the Art Equipment
6. Requirement for foreign made items.
7. Asbestos in buildings to be demolished.
8. Isolated community - may lack bidders.
9. Completion of both projects (CTC and Student housing) must occur at the same time.

CLASS EXERCISE CE-1.2(b)

ACQUISITION PLAN

CONTRACTS TRAINING CENTER (CTC)

A. Acquisition background and objectives

(l) Statement of need

_____
_____
_____
_____
_____

(2) Applicable conditions_____
_____
_____
_____
_____
_____

(3) Cost and rationale

_____
_____

(4) Capability of performance requirements

_____
_____
_____
_____

(5) Performance period requirements

_____
_____
_____
_____

(6) Trade-offs

_____
_____
_____
_____

(7) Risks

_____
_____
_____
_____

(8) Plan of Action

(a) Sources_____

_____

_____

_____

(b) Competition_____

_____

_____

_____

(c) If source selection describe the procedures

_____

_____

_____

_____

_____

_____

(d) Contracting considerations (contract type and method)

_____

_____

_____

_____

_____

_____

_____

(e) Funding

_____

_____

(9) Products requiring special consideration

_____

_____

_____

(10) Contractor Government Performance

(a) Urgency of need

_____

_____

_____

(b) Construction management plan

_____

_____

_____

(11) Logistics (Special warranties, maintenance requirements, data rights)

_____
_____
_____

(12) N/A

_____
_____
_____
_____

(13) Government furnished property (Identify)

_____
_____

(14) Environmental considerations (Including energy conservation measures)

_____
_____

(15) N/A

_____
_____

(16) N/A

_____
_____
_____

(17) Milestones for the acquisition cycle (Estimate dates)

Acquisition plan approval	_____
Plans and Specifications (design)	_____
Revalidation of project, approval	_____
P. I. N	_____
Completion of P R, justifications	_____
Synopsis	_____
Issue solicitation	_____
Evaluation of proposals(Neg)	_____
Evaluation of bids (if IFB)	_____
Audit (Neg)	_____
Complete negotiations	_____
Clearances, contract preparation	_____
Award	_____

(18) Identification of participants in acquisition plan
Name and Address

_____
_____
_____
_____
_____

TOPIC: **1.3 DESIGN PLAN**

Ref: Pages 1-25 to 1-26

Objective: At the completion of this lesson topic students will be able to identify the criteria used in when deciding whether to design in house or by contract.

Time: 2:10 - 2:30

Method: Lecture, Discussions, Viewgraphs

LESSON PLAN

Ref.	Steps In Presenting The Topic	Instructor Notes
	1.3 DESIGN PLAN	
	Tell the class: This lesson topic involves a decision which must be made early in the acquisition cycle. In this lesson we will examine the criteria used to determine whether to contract out or accomplish the A/E design in-house.	
	Whether to accomplish a project design with in-house technicians or by means of issuing an A/E contract is a decision which must be made early in the acquisition cycle.	
	SHOW VG-1-6: "THE A/E CONTRACTING DECISION CRITERIA."	
	ASK STUDENTS TO READ THE INFORMATION CONTAINED IN THE VIEWGRAPH. Leave viewgraph on the screen and conduct a discussion on each element.	

Ref.	Steps In Presenting The Topic	Instructor Notes

THE A/E CONTRACTING DECISION CRITERIA

* **Size and complexity of the project**
* **Schedule constraints**
* **User needs**
* **Procurement strategy**
* **Funding constraints**
* **Availability of design criteria (i.e. topographical, soil investigation, etc.)**
* **Availability of an existing or term contract design services.**
* **In-house capabilities**

VG 1-6

Discussion of Elements:

Size/complexity of the project: In a complex project the Government may want to obtain state of the art. Government may not have resources on specialty type requirements.

Schedule constraints: The scheduling of the project may conflict with in-house scheduling of other projects, conflicting priorities.

User needs: The user is pressuring to "get the project underway" for reasons which may or may not be valid.

Procurement strategy: Strategy may call for in-house design because of time constraints or other reasons. Perhaps it is known that an in-house designer has successfully designed similar projects previously, and it would be an advantage to continue to use this resource.

Funding constraints: There may be a requirement to fund within the current FY budget year.

Availability of criteria for design effort: If criteria is not available the Government must either obtain the information with in-house resources, or let an additional contract to have these studies performed. The outcome of these investigative services may affect design effort.

Following the discussion inform the students that there is one other important consideration that is not listed on the viewgraph.

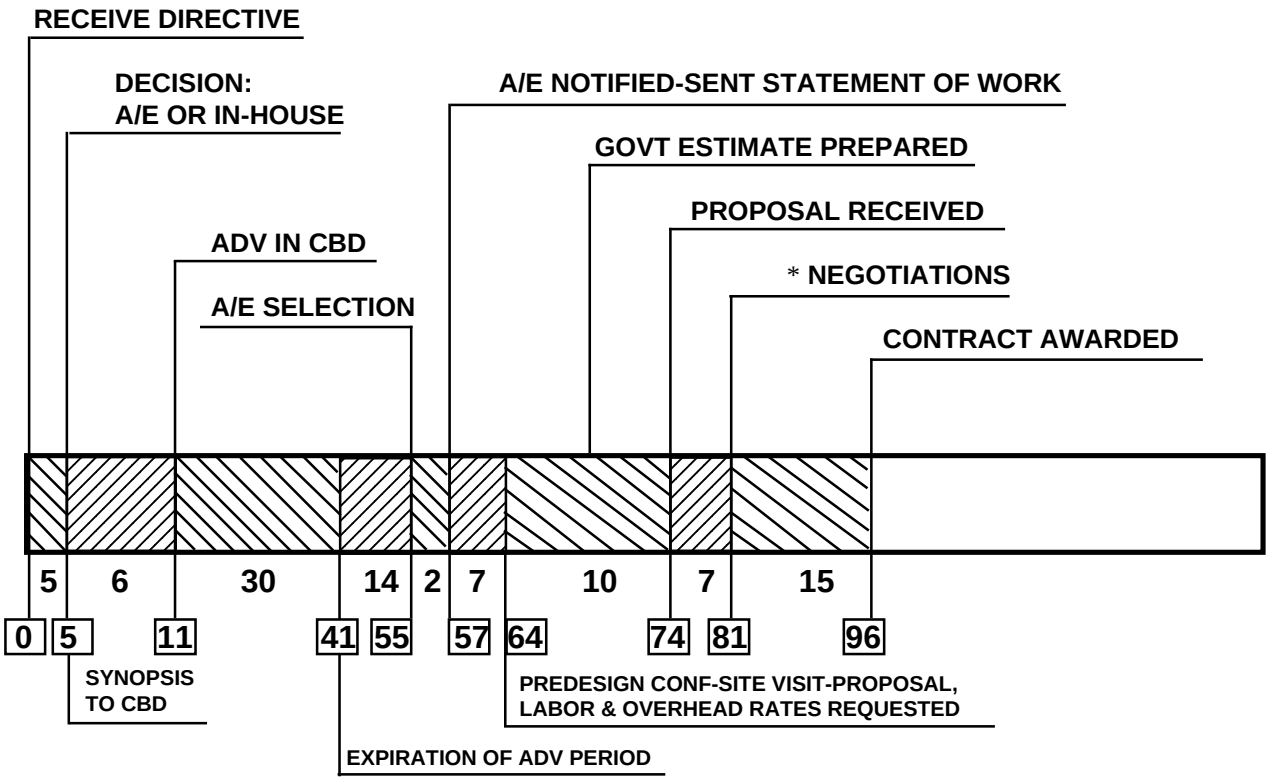
Ref.	Steps In Presenting The Topic	Instructor Notes
	• **Question:** Ask if anyone knows what **that c**onsideration might be? Allow students time to provide their answers, and at the conclusion give them your analysis. **Answer:** **Timeframe for issuing an A/E contract is significant. However, in spite of the fact that it is a time consuming process, most of the Government's construction projects are entrusted to an A/E.** **Time is needed to:** * **advertise,** * **go through the selection process,** * **select a proposal,** * **perform an audit and,** * **negotiate and award a contract.**	
T/R 1-26	**Tell the Class:** Turn to Exhibit 1-9 in your Text/ Reference, "A/E Contract Award Timetable." Explain that the project presented in the exhibit is somewhat typical. The illustration shows 96 days from concept to award, allowing no time for delays, and for audit of the contractor's proposal. Have the students study the timeframes listed and identify times that may be unrealistic.	

A/E CONTRACT AWARD
TIME-T ABLE

(CALENDAR DAYS)

CONCEPT TO CONTRACT AWARD
(See Exhibit 1-10)

CONSTRUCTION PROJECT COST UNDER $8,000,000



* Audit is waived.

Exhibit 1-9

Ref.	Steps In Presenting The Topic	Instructor Notes
	• **<u>Question</u>:** Ask the students to relate their experiences as to the time required for an audit to be performed. **<u>Answer</u>:** **Their answers will vary, depending on agency policy, and who is responsible for the audit. (Answers will probably range from 30 to 180 days).**	
	• **<u>Question</u>:** Ask students to study the exhibit and suggest where delays would most likely occur. **<u>Answer</u>:** **This Question is provided to stimulate interest. There is no <u>right</u> or <u>wrong</u> answer.**	
	Working at the VAP/chalkboard, proceed with the mini lecture by recording the average of the answers provided by the students with reference to the time required for an audit. Add an estimated contingency time for delays, then add the total of the two to 96 days as indication of the total number of days to award an A/E contract through the selection process. Explain that the total derived is an estimate only, but indicates that the process is time consuming.	
	CONCLUSION: If time constraint is an overriding factor and relying on in-house capabilities is not a viable option, use of an existing term contract (Indefinite Quantity) might be an ideal solution. The time saved in awarding a contract by issuing a delivery order against an existing design contract, as opposed to going through the selection process would be considerable.	

NOTES

TOPIC: **1.4 THE PROCESS OF CONTRACTING FOR DESIGN SERVICES**

Ref: 1-27 to 1-34

Objective: At the completion of this lesson topic students will be able to describe the Brooks Act contracting procedures for A/E design services.

Time: 2:30 - 3:15

Method: Lecture/Discussion, Roleplaying, Viewgraph

LESSON PLAN

Ref.	Steps In Presenting The Topic	Instructor Notes
	1.4 THE PROCESS OF CONTRACTING FOR DESIGN SERVICES	
	Tell the class: This lesson topic will provide them with an overall insight into the design procurement process. We will examine the Brooks Bill process, and discuss the steps in the A/E selection process. The criteria used in selecting an A/E for a design contract award differs from that of any other type contract.	
	• **<u>Question</u>:** Ask the students to relate the criteria which is used in selecting an A/E. **Record the correct answer on the blackboard.** **<u>Answer</u>:** "An A/E selection is based on technical qualifications and expertise."	

Ref.	Steps In Presenting The Topic	Instructor Notes
	• **<u>Question</u>:** What is the law that provides procedures to be followed when contracting for design services? **<u>Answer</u>:** **The Brooks Act.**	
	Show VG 1-7: "The Brooks Act."	
	Leave the VG in place and offer the additional information concerning the Brooks Act which follows the viewgraph..	

THE BROOKS ACT
(FAR 36.6)

Provides for :

* **Uniform selection procedures**
  Selection Board
  Selection Authority
* **Definition as to what constitutes professional services**
* **Revealing of names and qualifications of professionals to be employed by the A/E in the design effort**
* **Method of announcing A/E contract awards**

VG 1-7

FAR 36. 602-2

The Brooks Act

* **Uniform Selection Procedures**: In implementing the act **FAR** left some discretion up to the agencies to decide if the selecting and ranking would be done by establishing **ONE** or **TWO boards.** If two boards are appointed, the first board accomplishes the tasks of selecting the names, while the second board functions as a review board, recommending three firms, ranked in order of preference to the Selection Official. Most civilian agencies use only one board, with a Selection Authority making the final selection.

Ref.	Steps In Presenting The Topic	Instructor Notes
	NOTE: Prior to passage of the Brooks Act there had been some confusion among the agencies as to what constituted a professional service. In order to obtain uniformity in this regard, The Brooks Act defined professional services as: **(To provide emphasis put this definition on a Flip chart for reference)**.	
FAR 36.102	**FLIP CHART** **"THE PROFESSIONAL SERVICES OF AN ARCHITECTURAL OR ENGINEERING NATURE, AS DEFINED BY STATE LAW, IF APPLICABLE, WHICH ARE REQUIRED TO BE PERFORMED OR APPROVED BY A PERSON LICENSED, REGISTERED, OR CERTIFIED TO PROVIDE SUCH SERVICES."**	
	The FAR also defines what incidental services may be formed under the A/E procedures. Incidental services <u>outside</u> those listed must be obtained under a services contract, using the UCF format and employing service contract wage rates. Incidental services are allowed under the A/E procedures as long as they require the professional services of an engineer or architect, i.e.: • studies • surveying/mapping • comprehensive planning • program management • plans & specifications • construction phase services • drawing reviews • investigations • evaluations • consultations • conceptual designs • value engineering • soils engineering • preparations of operating and maintenance manuals	
	NOTE: The law provides for revealing of names and qualifications of professional individuals to be employed by the A/E in the proposed design effort. It is deemed necessary because of the Government's intention to award a contract based on technical qualifications, expertise, and experience, rather than price or other factors.	
	NOTE: Award of an A/E contract is announced by revealing the name of the recipient, and the A/E fee. **BUT NOT THE ESTIMATED COST OF CONSTRUCTION.** Awards of $25,000 or over are publicized in the CBD.	

Ref.	Steps In Presenting The Topic	Instructor Notes
	• **<u>Question:</u>** Now that we have gone over the provisions of the Brooks Act, how does the selection process begin? **<u>Answer</u>:** The process begins with the announcement in the **Commerce Business Daily (CBD).**	
	Stress that: The content of the information contained in the CBD is very critical. Failure to provide all of the required information, or the existence of errors will negate subsequent actions, or at a minimum, cause delays in synopsizing corrections.	
T/R 1-30	For reinforcement of learning, have students turn to Exhibit 1-11 in the text. Ask one person to read the listed information to the class, one element at a time. Request responses from the class offering comments, and asking questions as each is read, using the information below.	

CBD ANNOUNCEMENT INFORMATION: A/E CONTRACTS

* Location of work
* Scope of services required
* Significant evaluation criteria and their relative order of importance
* The estimated construction cost range (FAR 36.204)
* Construction costs limitation (if any)
* Type of contract proposed for the A/E service
* Estimated start and completion dates
* Date by which responses to the notice must be received, including the submission of the SF 255
* Appropriate statements regarding any specialized qualifications
* Security classifications, and limitations on eligibility

Exhibit 1-11

Ref.	Steps In Presenting The Topic	Instructor Notes
	Location of Work	
?	• **<u>Question</u>:** Ask students why location of the project is included in the announcement. Briefly record their applicable responses on a VAP/chalkboard. **<u>Answer</u>:** **Responding A/E's may not be interested in designing the project unless it is located in their immediate area. This is not necessarily for the sake of convenience, but because conditions vary considerably from area to area:** **• Local soil conditions** **• Weather patterns** **• Laws and regulations** **• Availability of materials for seismic and environmental requirements** **• Licenses**	
?	**Scope of Services Required**	
T/R 1-31	• **<u>Question</u>:** The term "scope" is often referred to in A/E contracting. Note that it is a requirement in the CBD. What is the meaning of **scope?** **<u>Answer</u>:** **Refer students to page 1-31 of the Text/Reference and select a student to read the paragraph titled; "scope."**	

Ref.	Steps In Presenting The Topic	Instructor Notes
T/R 1-31	**Scope** (Also referred to as "A/E Statement of Services.") You will frequently hear the term **"scope of work"** when discussing an A/E project. Although the term has different meanings during the construction acquisition phase, during the design phase it refers to the: • Written A/E document that defines the scope (boundaries) of the professional services contract. • Nonphysical boundaries, such as those describing the effort involved as well as the submittals needed. • Intent of the design project. Therefore the CBD requires that a brief statement concerning the scope of the services be included in the announcement.	
	Tell the students: **Significant evaluation criteria is stated in relative order of importance.** **Weights are not used in evaluating an A/E.** The evaluation criteria used is expressed in terms of: * Professional qualifications * Specialized experience * Capacity * Past performance * Knowledge of local area conditions The criteria is listed in the order of preference.	
T/R 1-30	**Tell the students:** **The remaining elements in the CBD are listed in Exhibit 1-11, "CBD Announcement Information."** Explain that the next seven elements are included because the A/E needs to know • the general nature of what is to be designed, • how extensive it is, • how much time will be given to accomplish the design, • when responses are to be received, etc. in order to assess the needed effort. For studies which are usually difficult to describe, an estimate of man-years of effort should be included to avoid misunderstanding.	

Ref.	Steps In Presenting The Topic	Instructor Notes
?	• **<u>Question</u>:** Upon conclusion call on one of the students, using the following example: "John, suppose you are an A/E, and you have just read in the CBD about a project that appears to be "right up your alley." What steps would you take with the contracting activity that is advertising this project to inform them that you are interested in designing this project?" **<u>Answer</u>:** **(potential correct answer): Complete the SF 255 and mail it to the activity. If it is a contracting activity that does not have a SF 254 already on file in the firm's name, it would also have to be completed and mailed.**	
?	• **<u>Question</u>:** What is the difference between a SF 254 and a SF 255? **<u>Answer</u>:** **The SF 254 is a questionnaire containing information about the A/E firm.** **The SF 255 contains information that would relate the firm's qualifications for the specific project which has been advertised.**	

A/E QUESTIONNAIRE FORMS

STANDARD FORM 254

The Standard Form 254
Provides general background information about the firm such as:

GENERAL INFORMATION

* Name and address
* Parent company
* Principals
* List of personnel by discipline
* Summary of professional fees
* Profile of firms' past experience
* List of projects

The Standard Form 255
Contains information such as**:**

SPECIFIC INFORMATION FOR A PARTICULAR PROJECT

* Specialized experience of the firm
* Professional capacity to accomplish the project in the required time
* Professional qualifications of the project staff
* Innovative design capability
* Past experience record
* Proven cost control effectiveness
* List of projects

Exhibit 1-12

Ref.	Steps In Presenting The Topic	Instructor Notes
	The next step is the actual selection process.	
	ROLEPLAY: "The Super Selection Board," CE-1.4.	
T/R 1-31	**Ask students to read the information contained in Exhibit 1-13. Discuss the process illustrated in the Exhibit.**	(FAR 36.602-2 through 4)

THE A/E SELECTION PROCESS

Two boards may be established: (FAR allows for Agency discretion.)
If only one board is formed, the process is shortened to include only the Selection Board.

The Preselection Board: (If used)

* Develops and adopts an evaluation procedure and conducts an evaluation based on:
  - Qualifications data (SF 254) maintained locally, and
  - Data which is submitted by firms responding to the CBD announcement.

This board recommends 3 (minimum) to 10 qualified A/E firms to be further evaluated by the Selection Board. (The number varies with size and complexity of the project.)

The Selection Board:

* Interviews, reviews SF 254 and SF 255, and performance reports.
* Performs an independent analysis of the firms (or reviews the recommendations made by the Preselection Board).
* Ranks firms in order of preference (FAR 36.602-3).
* Makes recommendation for final selection of the best qualified firm to the Selection Authority.

The Selection Authority:

* Reviews recommendations made by the Selection Board.
* Final selection made by listing in order of preference.
* If ranking of the most preferred firm is not the one recommended by the board, justification must be included in the file.
* Cannot add firms to the Selection Report.

Exhibit 1-13.

Ref.	Steps In Presenting The Topic	Instructor Notes
	Following the discussion explain that the selection process will be demonstrated by a skit titled: **"The Super Selection Board"** with members of the class appointed to assume various rolls in role playing. Refer students to CE-1.4 for the play parts. **Select students to play the following parts:** * **J.T. Ammons, Engineering Director, Senior Member of the Board**. * **Al Bertini**, **Electrical Engineer, Board Member.** * **Jennifer Willis, Electrical Engineer, Board Member.** * **Earl Thomas, Construction Division, Board Member.** * **George Castle, Recorder, Non-board Member.** * **Dale Stevens: Project Manager, Board Member.** * **Bill Gibson: Head, Contracting Office, Non-board Member.** **Assign the students their parts and have them come to the front of the classroom. (For best results, choose the class extrovert to play the part of J.T. Ammons, who will chair the discussion.)** Preferably they should be seated around a table with Ammons seated at the head of the table. As a minimum, they should perform as a group in front of the class. **Instructions:** Refer to the text of the play located at the conclusion of this subject, "The Process For Contracting For Design Services. Begin by introducing the actors and the parts that they will play. The skit will begin with the instructor setting the stage and reading the following: "As the scene opens, a Selection Board is convening. Prior to the meeting each board member has been provided a copy of the CBD announcement, a description of the scope of the project, and a list of all firms which responded to the CBD announcement."	

Class Exercise CE-1.4

Role Play

THE SUPER SELECTION BOARD

J.T. AMMONS: Good morning ladies and gentlemen. We have before us a selection to be made for design of a very important project. It is one that most of you already know, or at least have heard about. It's the Contracts Training Center Project. Let's hear from our chief engineer and let him explain what the project consists of.

A. BERTINI: With pleasure. This one is going to be important. It will be a two story structure, with elevators, and a commercial loading ramp, surrounded on two sides with lighted parking lots. The downstairs will consist of executive offices, library, a large auditorium with special lighting effects, and a lobby large enough to accommodate large crowds which will empty from the auditorium. The upstairs will house a number of classrooms, all equipped with the latest of visual aids and sound equipment, as well as private offices for the faculty. An existing building will have to be demolished to make room for the facility, and three additional structures will also have to be removed to make ready for the parking lot. In the opinion of the engineering department, the overall cost estimate seems to be on the low side. That may be a problem later on in negotiations, since the A/E must design to that cost figure. So be careful when you are looking at the firms who have responded. We need to make sure they can give us a good competitive price for the design.

J.T. AMMONS: We don't need a large business firm for the effort. Has this been set aside for small business?

GIBSON: Oh yes. You can see right here in the Commerce Business Daily it says it is restricted to small business firms only.

WILLIS: SIXTY TWO APPLICANTS - WOW! That is a large number!!

J.T. AMMONS: Al, what kind of disciplines do you feel are important on this job?

A. BERTINI: To answer your question J. T., all disciplines must be represented. The state of the art requirements for lighting, sound and visual aids will also require some special subs. You will note in your copies of the CBD announcement that structural, electrical, mechanical and civil disciplines are called out in the selection criteria. They are identified as criteria number l and criteria number 2.

CASTLE: That's right. If you look under the criteria listed in number 1, we are requiring that the lead members of the design team representing the structural, mechanical, electrical and site civil be licensed professional engineers. Under criteria number 2 we have further specified that the architects assigned to the design team have a minimum of three years recent experience in the design of this type and size building. In addition, the engineers representing the various disciplines must have a minimum of 3 years' recent design experience on similar projects.

A. BERTINI: Also, I might add that **all,** and I mean **ALL**, the architects assigned to the design team must be registered architects. This was done to ensure that we obtain highly qualified people to design our building.

STEVENS: Excuse me, but George, you said that the contractor's engineers must have 3 years recent design experience on similar facilities. What do you mean by **"recent"?**

A. BERTINI: I'm glad you asked that question Dale. Recent, in this case means the last five years.

WILLIS: What about the site itself? Will there be any problems there?

A. BERTINI: No. There shouldn't be. One small structure is located on the site, but the construction contractor will demo it when the time comes. There are three other buildings which will have to be removed at the time of construction to make way for the two big parking lots to be constructed adjacent to the building. An asphalt access road must also be constructed. However, that will be done under a separate construction contract, and is not a part of the design of the project.

WILLIS: What about utilities?

A. BERTINI: No problem, Jennifer. Existing utilities will handle the project, with the exception of the electrical distribution system, which will require some modifications.

J.T. AMMONS: OK, Let's get on with this. Are there any other questions?

EVERYONE EXCEPT WILLIS: (In unison) **Noooo Questions!**

WILLIS: I have one more question. Evidently someone overlooked the benefits of restricting applicants to the local community. We have a lot of very good designers in the area, and I see awarding the project to a local firm as very beneficial. Restricting it to local A/Es allows us to consult with them frequently. They also have special expertise concerning local conditions. My question is, why wasn't this considered?

GIBSON:	That's a good point! When you are going through the firm's 254/255 packages sort out the firms that are not in the area. Use a radius of 50 miles from this office as our local area. That way we will be sure to get a local firm.
J.T. AMMONS:	Any more questions? If not let's get on with it. We have 62 applicants here. That's a lot. We want to look at each one very carefully. The best way to approach this is to adjourn this session and each of us work independently. The goal is to eventually select three firms for face to face interviews. However, since we will each be selecting our own choice of three, we may differ considerably in our choices. It will work best if we each come up with six names, and then meet again and jointly, through discussions, make the final selection of three. Agree?
EVERYONE:	(In unison) Agree!
J.T. AMMONS:	Good! Before we adjourn and go our separate ways I would like to say that we are looking for the most highly qualified firm to do the work. So, if you see something good in one of the firm's packages that we forgot to include in the selection criteria, let the rest of the selection board know. That way we can all adjust our evaluation criteria to include the new consideration. Carefully review all of the documents presented, especially the SF 254s and 255s. Be sure you review each contractor's performance evaluation on previous contracts. It is also a good idea to create detailed notes on each one. When we reconvene I will expect each of you to be able to justify your selections, and the notes will probably come in handy. They can also be used when drafting the Selection Board Report. We will all meet one week from today, same time, same place. Good luck!

Ref.	Steps In Presenting The Topic	Instructor Notes
?	• **Question:** At the conclusion of this skit ask the class if they believe that the actions portrayed by the "Super Selection Board" were in accordance with the Brooks Bill?**?** Ask for a show of hands Yes or No? If there are board members who believe that one or more actions of the boards were not proper ask them to explain. Discussions may follow. **Answer:** The board members were acting within acceptable guidelines of most agencies, and were in accordance with the Brooks Bill.	

Ref.	Steps In Presenting The Topic	Instructor Notes
	INSTRUCTOR'S KEY TO THE EXERCISE CE-1.4	
	When the Super Selection Board meets again, each board member will have chosen six applicants. The Brooks Act requires that three firms be ultimately chosen, but to allow for some flexibility, promote discussions, and ensure that all firms are treated fairly, this board chose to start out by choosing six. Once they have reduced the list to three, personal interviews will be held face to face. After interviews have been completed, they will go into a closed door session and vote on the ranking of the remaining three firms. Once they have been ranked the selection will be left up to the Selection Authority. What actions were not according to correct procedures? • When Bertini tells the Selection Board to be careful when looking at the firms who have responded to ensure a competitive price for the design, he is making a serious error. The Brooks Act specifically tells us not to consider price in the selection process. [The students should pick up on this aspect. If not, make sure you bring this to their attention.] • The exchange between Willis and Gibson about limiting firms to the local area has two major errors. 1. The Brooks Act does not allow us to eliminate firms based solely on location. It is only acceptable to use as a selection criterion if it results in an appropriate number of qualified firms, given the nature and size of the project. When Gibson tells the Selection Board to disregard any firms outside a 50 mile radius he is arbitrarily eliminating firms who could be most qualified. 2. Gibson, by making this statement is changing the selection criteria that were published in the CBD. This is strictly prohibited during the selection process. The same error occurs when J.T. Ammons instructs the Selection Board members to let each other know if they see “something good,” so they can all adjust their evaluations. This is not an acceptable practice for a Selection Board and can result in a protest to GAO.	
	Note: The procedure used in the skit did not include a Preselection Board. The FAR allows agencies a choice whether to use two boards. DOD agencies favor two boards and a Selection Official, while Civilian agencies prefer one board and a Selecting Authority.	

Ref.	Steps In Presenting The Topic	Instructor Notes
	Ranking of firms is normally based on criteria illustrated in Exhibit 1-14.	

CRITERIA FOR EVALUATING A/E FIRMS

* Professional qualifications
* Specialized experience
* Capacity to accomplish work on time
* Past performance
* Location in and knowledge of the geographical area of the project

Exhibit 1-14

FAR 36.606

Negotiations

Once the selection has been made and approved:

* **The A/E, based on the scope of work provided, will submit a proposal.**
* **An independent Government estimate is prepared.**
* **Audit is requested (if required).**
* **Prenegotiation Memorandum (Business clearance) is prepared.**
* **Negotiations are conducted and contract awarded if the price is fair and reasonable.**

Ref.	Steps In Presenting The Topic	Instructor Notes
	• **<u>Question</u>:** Suppose the final negotiated price is **NOT** considered fair and reasonable and the offeror has submitted its best and final offer? What Happens?	
FAR 15.903 (d)(l) (ii)	**<u>Answer</u>:** In the A/E process, if the Government and offeror cannot reach an agreement on a fair and reasonable price, negotiations with the number one firm are severed and the Government will invite the next A/E in line to the negotiation table. If the same situation occurs with the number two ranked firm, the number three firm on the list is invited to negotiate. There is a statutory limitation of a 6% fee for design services which is based on the estimated cost of construction. Under **NO CIRCUMSTANCES** can this be exceeded throughout the life of the contract.	
T/R 1-32	**Refer students to Exhibit 1-15 of the Text/Reference, "Elements of An A/E Contract." Discuss briefly.**	

ELEMENTS OF AN A/E CONTRACT

* There is a 6% statutory limitation of fee for design services based on the estimated cost of construction (1939 Public Works Act) [FAR 15.903(d)(l)(ii)].

* The contractor agrees to design within the funding available for the project under the Design within Funding Limitation clause (FAR 52.236-22a,c).

* Contractor has the responsibility of redesign for ERRORS or deficiencies under the "Responsibility of the Architect-Engineer Contractor" clause (FAR 52.236-23).

Exhibit 1-15

Ref.	Steps In Presenting The Topic	Instructor Notes
	The 6% A/E fee limitation applies to the direct design services only. **DEMONSTRATION OF THE 6% FEE LIMITATION:** **Use the chalkboard or VAP board and write the following formula:** **Design % = design fee / estimated construction costs** **Design fee is the TOTAL FEE less engineering services, plus post contract award services (options). Design includes costs for:** *** Project Engineer** *** Architect** *** Structural Engineer** *** Mechanical Engineer** *** Electrical Engineer** *** Civil Engineer** *** Landscape Architect** *** Draftsperson** *** Specification writer** *** Typist** *** Consultants** **It does NOT include such elements as:** *** Site investigation services** *** Computer studies** *** Printing, etc.**	

NOTES

TOPIC: **1.5 PROJECT APPROVAL**

Ref: Pages 1-33 to 1-34

Objective: Upon completion of this lesson topic students will be able to identify approvals required prior to contracting for construction.

* Describe the process of Congressional approval of the construction project.
* Describe the issues that must be resolved outside the contract office.

Time: 3:15 - 3:30
3:30 - 4:30 Study Period

Method: Mini-Lecture, Viewgraph

LESSON PLAN

Ref.	Steps In Presenting The Topic	Instructor Notes
	1.5 PROJECT APPROVAL	
	Tell the class: In this lesson we will examine the Congressional approval process of a construction project, based on the preliminary design stage, the A/E's project engineering documentation, constructability review, funding, timing, and other issues which are accomplished outside of the contract office.	
	• **<u>Question</u>:** What is the next step in the construction process once the A/E is selected, the contract is awarded, and the design is completed?	
	<u>Answer</u>: * The requirement is revalidated. * The preliminary cost estimate is reviewed and amended to cover any cost of living increases. * A decision is made whether to proceed with the acquisition. * Government estimate is updated. * Money is appropriated for the construction phase.	

Ref.	Steps In Presenting The Topic	Instructor Notes
	SHOW VG 1-8: "Other Issues To Be Resolved." **Review each issue briefly with the students.**	

OTHER ISSUES TO BE RESOLVED

* If real estate is not under U.S. Government ownership provisions must be made to complete transactions to purchase property, including any easements.
* All impact statements must be filed.
* All necessary permits must be obtained.
* Environmental issues must be addressed.

VG 1-8

LESSON PLAN

CHAPTER 2

TIME	LESSON	OBJECTIVES
Tuesday **8:00 - 8:05**	**Introduction**	
Tuesday **8:05 - 8:30**	**1. Review Procurement Request.**	
Tuesday **8:30-9:40**	**2. Review Specifications and Drawings.**	• Describe Guide Specifications. • Identify proprietary items, or "brand name or equal" products. • Identify type of specifications. • Describe when an SOW is used.
Tuesday **9:40 - 10:00**	**BREAK**	
Tuesday **10:00 - 10:30**	**3. Identify Social Programs Impacting on Construction.**	
Tuesday **10:30 - 11:30**	**4. Identify Information Needed for Formulating Solicitation.**	• Determine magnitude of project. • Select appropriate wage rates. • Identify the Hometown plan applicable. • Establish amount of liquidated damages. • Establish bid opening date. • Select appropriate site visit date. • Identify bonding requirement.
Tuesday **11:30 - 12:30**	**LUNCH**	
Tuesday **12:30 - 1:00**	**4. Identify Information Needed for Formulating Solicitation.**	
Tuesday **1:00 - 1:20**	**5. Prepare Presolicitation Notice.**	• Determine notice requirement. • Publicize in CBD.

LESSON PLAN

CHAPTER 2

Tuesday **1:20 - 2:20**	**6. Prepare Solicitation Using CSI and SF 1442.**	• Utilize FAR matrix to select clauses and provisions.
Tuesday **2:20 - 2:40**	**BREAK**	
Tuesday **2:40 - 2:50**	**7. Determine Extent of Marketing for Project.**	• Determine level of inspection. • Publicize in CBD.
Tuesday **2:50 - 3:00**	**8. Issue the Solicitation.**	• Establish planholders lists. • Determine whether to charge for plans & specs. • Determine number of bid sets required to meet demand.
Tuesday **3:00 - 3:30**	**9. Amend or Cancel the Solicitation.**	• Determine necessity to amend for wage rate changes.
Tuesday **3:30 - 4:30**	**STUDY PERIOD**	

TOPIC: **2.0 SOLICITATION PHASE**

Ref: Chapter 2

Objective: Conduct A Review Of The Procurement Request Documents

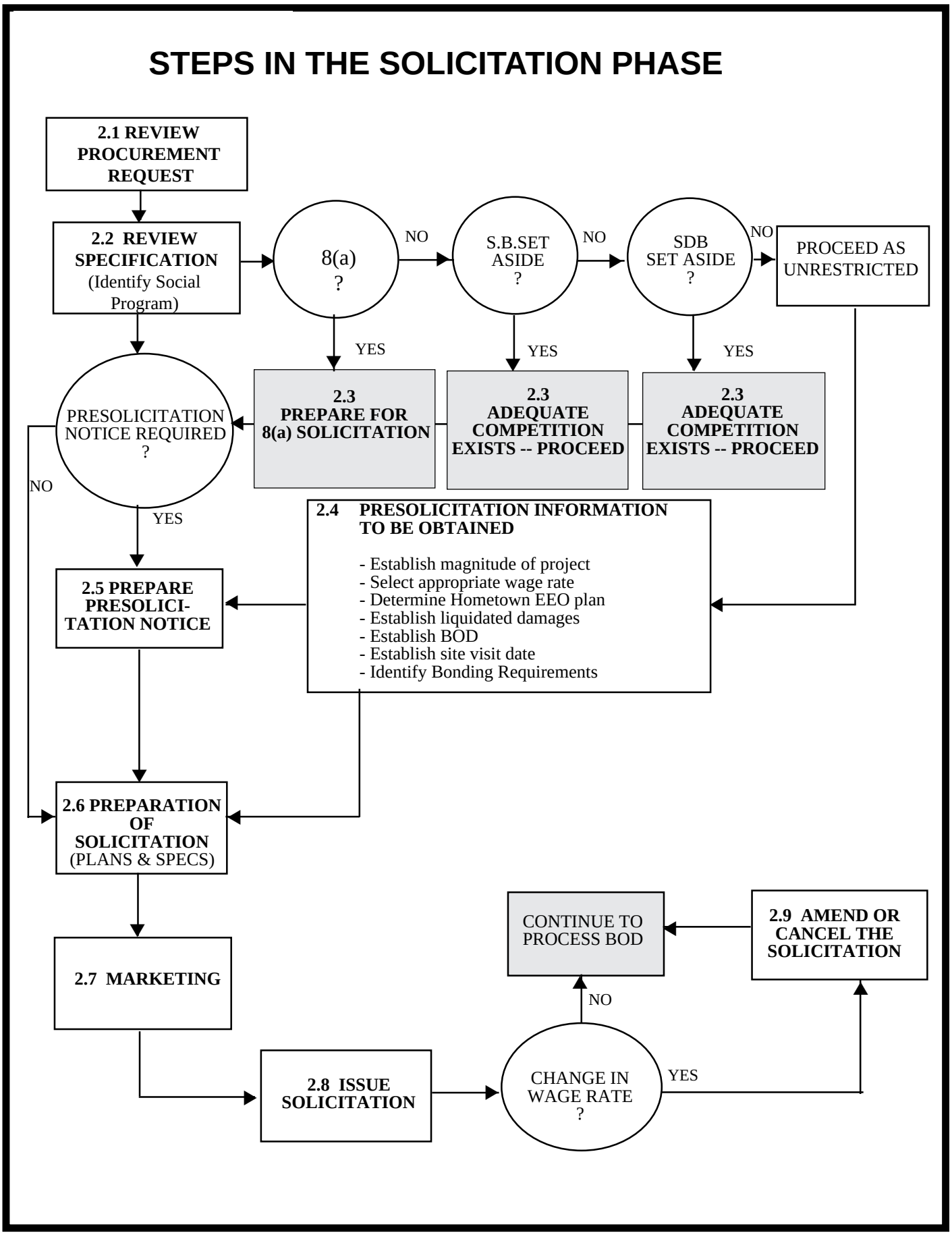
Time: 8:00 - 8:05

Method: Lecture

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.0 SOLICITATION PHASE	
T/R 2-4	Tell the students to turn to the flowchart in their Text/Reference. Briefly describe the steps involved in the Presolicitation Phase. l. Review Procurement Request. 2 Review Specification & Drawings. 3. Social Program Impacting Construction. 4. Identifying Solicitation Information. 5. Prepare Solicitation Notice. 6. Prepare the Solicitation Using CSI Format and SF 1442. 7. Determine Extent of Marketing Required. 8. Issue the Solicitation. 9. Amend or Cancel the Solicitation.	**Inform the class:** The following questions will be addressed and answered during this lesson? a) Why is a review necessary? b) What is a guide specification? c) Why issue a Presolicitation notice? d) What information must be obtained and entered into the solicitation? e) What is the CSI format? f) What is different about a construction bidder's mailing list? g) How are construction projects marketed? h) What are the procedures when DOL issues change to the Wage Rates?
	Tell the class: The lesson is designed to guide the student in making an initial assessment of the documents making up the request, assuring that: * the specification is in the approved format; * all of the necessary documentation and approvals have been obtained; and * funding, accounting & appropriation data is sufficient.	

STEPS IN THE SOLICITATION PHASE



TOPIC: 2.1 REVIEW PROCUREMENT REQUEST

Ref: Pages 2-5 to 2-8

Objective: Conduct A Review Of The Procurement Request Documents

Time: 8:05 - 8:30

Method: Lecture/Group Exercise, and Directed Discussion

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.1 REVIEW PROCUREMENT REQUEST	
	• **Question:** Why is it necessary to review the procurement request package prior to forming or issuing the solicitation? (Solicit answers before showing the Viewgraph.)	
	Answer: **Show Viewgraph 2-1.** **The answer to the question can be found in the viewgraph.**	

REQUIREMENT FOR REVIEW
(FAR 14.202-6)

EACH INVITATION FOR BIDS SHALL BE THOROUGHLY REVIEWED BEFORE ISSUANCE TO DETECT AND CORRECT DISCREPANCIES OR AMBIGUITIES THAT COULD LIMIT COMPETITION OR RESULT IN THE RECEIPT OF NONRESPONSIVE BIDS. CONTRACTING OFFICERS ARE RESPONSIBLE FOR THE REVIEWS.

VG 2-1

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Tell the class: Since the responsibility rests totally with the Contracting Officer, the reviewing process is an important step. The responsibility usually is that of the Contract Specialist, and most often begins when the procurement request is received. Upon receipt, the first task consists of an initial cursory review to determine if the package is complete. An in-depth review will follow.	
	• **Question:** What is meant by "a complete package"? **Answer:** **As a minimum, a complete package will include:** * **All of the documentation to support required justifications such as D & Fs or J & As;** * **The appropriate signatures & approvals;** * **A recommendation by the Small Business Representative; and** * **A funding document showing a sufficient amount of funds which are available for the procurement, and the appropriate accounting data.** * **A complete specification and all of the necessary drawings.**	

TOPIC: **2.2 REVIEW SPECIFICATIONS AND DRAWINGS**

Ref: Pages 2-9 through 2-15

Objective: Perform all tasks associated with reviewing a specification and associated drawings for a construction solicitation.

* Review the specification.
  Describe Guide Specification (Masterspec, Masterformat, etc) and its' purpose.
* Review drawings.
* Identify proprietary or "brand name or equal" products.
* Identify type of specification.
* Determine if use of Statement of Work applies.

Time: 8:30 - 9:40

Method: Lecture, Group Exercise, Viewgraphs and Directed Discussion

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.2 REVIEW SPECIFICATIONS AND DRAWINGS	
	Tell the Class: The review process is probably one of the most important tasks that a Contract Specialist performs. Although the specification and drawings have gone through various technical reviews at different stages, this is the only review that will be conducted from a contractual standpoint at this stage of the procurement cycle.	
	Introduction In this lesson we will study the role of the Contract Specialist in performing a contractual review of a specification and the applicable drawings, emphasizing what to look for, and where to find the deficiencies we are looking for in a step-by-step fashion, using practical exercises to provide "hands-on" experience.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Inform the students that every construction acquisition begins with the formulation of a description of the work to be performed. The description is included in plans, drawings, standards, purchase descriptions, specifications and other technical conditions. In construction, these documents are frequently referred to as "plans and specs". State that both drawings (plans) and specifications are essential in describing a construction project. Each has a specific function. a. Show Viewgraph 2-2, Specifications and Drawings.	

SPECIFICATIONS AND DRAWINGS

SPECIFICATIONS PRESENT *QUALITY*,
(Technical & legal requirements)

DRAWINGS PRESENT *FORM*
(Visual & Graphic)

VG 2-2

	Emphasize that the **functions** of drawings and specifications should always **complement** each other. **They should not overlap.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** Ask the students to describe what type of information the specification should contain. Compare them to that which is contained in Exhibit 2-3.	

SPECIFICATIONS AND DRAWINGS

A Construction specification contains such information as:

- Types and quality of materials.
- Methods of installing and fabricating.
- Quality control for workmanship, inspection and tests.
- Alternative or optional materials or methods.
- Acceptable allowances and tolerances.
- FEDSPEC or MILSPEC requirements.

Drawings contain such information as:

- Location of the project on site.
- Location in the project of materials, equipment and components.
- Overall dimensions of the project.
- Detailed dimensions of size and location.
- Dimensions of equipment.
- Interrelationships between materials, equipment, and connections.
- Identification of types of material.
- Schedules of doors, windows and finishes.
- Notes, giving the basic design data, assumed loads, allowable stresses, design references and requirements.

Exhibit 2-3.

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	• **Question:** Ask how many students know what a "Guide Specification" is? (Show of hands). **Answer:** **Various agencies have adopted a series of Guide Specifications to be used by a designer as a guideline for use in designing a construction project. The guides contain various options concerning methods and other matters, which allows for flexibility, called "tailoring".** **Show VG 2-3, Purpose of Guide Specifications:**	

PURPOSE OF GUIDE SPECIFICATIONS

"TO STANDARDIZE THE SCOPE AND FORMAT OF A CONSTRUCTION PROJECT TECHNICAL SPECIFICATION.

VG 2-3.

	Remind the students that this is the same question that the contract specialist (Joyce) anticipated being asked by Sondra (The trainee in the contracts office) in the scenario at the beginning of the chapter. One has to not only know what a guide specification is, but more important, what its purpose is. ***Joyce decided to provide Sondra with a sample copy of a Guide specification. She believed that studying the example would be the best way for her to learn. Students may examine the same Guide Specification which was provided to Sondra by turning to the Appendix at the end of Lesson 2 of their Classroom Exercise book.***	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** Ask the students to list the advantages of using Guide Specifications other than to standardize. **Answer:** * **Consistency in quality levels.** **By achieving consistency, contractors will not be confused in performing if the quality requirements are from established criteria and format.** * **Saves time** **Ask the students to imagine how long it would take to develop a set of specifications if a designer had to start from scratch on each and every detail.** * **Ease of reference.** **Most follow the Masterformat developed by CSI, which is consistent with the format most construction contractors are familiar with.** * **Notwithstanding the other advantages,** **the format enables the Contract Specialist, once familiar with the structure and numbering system, to perform a quality review in a minimum amount of time by knowing WHERE the contractual problem areas are usually found.**	
?	• **Question:** What, if any, type of Guide Specifications are used by your agency? **Answer:** **Provide students an opportunity to describe the various types used by their agency** **Possible responses:.** **GSA has adopted AIA's MASTERSPEC which follows the CSI format, (except for Division 15, Mechanical, and 16, Electrical). It is similar to the one the Navy and Army Corps of Engineers use.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Guide Specifications are formatted in accordance with the CSI format for each of the 16 divisions.	
?	• **<u>Question:</u>** Most Government agencies use some form of the CSI format. However, some civilian agencies prefer the Uniform Contract Format (UCF). What is meant when we refer to the CSI format? **<u>Answer:</u>** **The CSI is the format used in formulating construction specifications and solicitations. It was developed by the Construction Specification Institute (CSI) which is published in the Manual of Practice, a document which has been widely accepted by the industry for many years.**	
T/R PG. 2-52	Tell students to turn to the last page of Exhibit 2-24 in the Text/Reference, which provides a listing of the 16 divisions of the CSI format.	

THE SIXTEEN DIVISIONS OF A CONSTRUCTION SPECIFICATION

1. General Requirements	**9. Finishes**
2. Sitework	**10. Specialties**
3. Concrete	**11. Equipment**
4. Masonry	**12. Furnishings**
5. Metals	**13. Special Construction**
6. Wood and Plastics	**14. Conveying Systems**
7. Thermal & Moisture	**15. Mechanical**
8. Doors & Windows	**16. Electrical**

Last Page of Exhibit 2-24

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	ADDITIONAL INFORMATION FOR THE INSTRUCTOR REGARDING GUIDE SPECIFICATIONS	
	The sixteen divisions are made up of one or more Guide Specifications covering all aspects of construction. As an example: Division 15 Mechanical may consist of one, or dozens of various mechanical guide specifications, each of which will be identified by a five digit number, the first two digits of which will correspond to the Division Number, i.e. 15011 Mechanical General Requirements 15250 Insulation of Mechanical Systems 15400 Plumbing 15850 Air Handling & Distribution Equipment The first two digits identify the Mechanical Division (15). To further demonstrate, have the students refer to their exercise book and seek out the technical specification Table of Contents which is contained in the exercise CE-2.1, Page CE 2-31. There they will find the listed Divisions that are contained in this particular technical specification. Under each of the divisions is listed the number of guide specifications which go to making up the applicable divisions. Choosing which guide specifications apply, and how they are tailored is usually the Government's responsibility. However, in some instances the choices may be left to the A/E. The applicable ones are provided to the A/E as part of the design requirements. The Government, by providing the guidelines contained in the guide specifications, can be assured of consistency in certain accepted procedures and practices in the construction trade.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** Based on a thorough explanation by the instructor, tell the students to turn to the Guide Specification example in the appendix titled "Interior Fire Alarm System", and then ask "In which one of the 16 Divisions of the CSI Format would it be located? **Answer:** **Division 16, Electrical. Note the number at the bottom of each page. The first two digits of the number (16) are keyed to the Division, the last three numbers are pre-designated units of work.**	
	Notice that it provides various choices which can be made, allowing the specification to be "tailored" to the specific project.	
?	• **Question:** Most of the subject matter covered in the divisions is self-explanatory. However, what kinds of information would you expect to find under Division l under General Requirements? **Answer:** **Administrative requirements of the specification are located there.**	
I	**Show Interactive Viewgraph 2-4, "Name That Division." {NOTE: Place paper over the right hand column of #s to hide from view by students.} Using the List of 16 CSI Divisions as a reference, ask students to identify the division where each of the requirements listed in the viewgraph should be located. As the students list them, record their answers on the blackboard, or directly on the paper overlay of the right hand column of the viewgraph.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES

NAME THAT DIVISION

		Answer
1.	Metal Storage Shelving	12
2	Site Lighting (Temporary)	1
3.	Gutters & Downspouts	7
4.	Temporary Lighting	1
5	Metal Stairs	5
6.	Weatherstripping & Seals	7
7.	Exposed Aggregate Concrete	3
8.	Structural Precast Concrete	13
9.	Highway Paving	2
10.	Gas Turbine Generators	11

IVG 2-4

Remove overlay of IVG 2-4 to show correct answers.

Show Viewgraph 2-5 entitled "The CSI Specification Division Format".

THE CSI SPECIFICATION DIVISION FORMAT

PART I	General Information
PART II	Products, Materials
PART III	Execution of The Work

VG 2-5

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	VG EXPLANATION Inform the students that each of the guide specifications within the 16 Divisions is divided into the three parts shown in the viewgraph. • **Question:** Ask the students to once again refer to the Guide Specification located in the Appendix and find the page where Part I begins in the Interior Fire Alarm System Guide Specification. Note that it is titled "General Information." Part 2? (Product and Material descriptions.) Part 3? (How the task is to be performed.) **Answer:** **Guide Specification** **Part 1:** **Page 2** **Part 2:** **Begins on Page 6** **Part 3:** **Begins on Page 23**	
	• **Question:** What kinds of information can you expect to be found in Part I of each Division? **Answer:** **Show Viewgraph 2-6.**	

PART 1

PART 1 CONTAINS:
General information such as:

* **The applicable references for the specification.**
* **General description of the project.**
* **Submittals required.**
* **Drawings, and**
* **Matters of safety, etc.**

VG 2-6

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	• **Question:** What type of information does Part 2 contain? **Answer:** **Show Viewgraph 2-7.**	

PART 2

PART 2 CONTAINS:

* **Descriptive information on products and materials.**
* **Acceptable Manufacturers.**
* **Mixes.**
* **Fabrication.**

VG 2-7

	• **Question:** Part 3 contains what type of information? **Answer:** **Show Viewgraph 2-8.**	

PART 3

PART III CONTAINS INFORMATION CONCERNING:

* **Workmanship.**
* **Installation.**
* **Testing requirements.**
* **Inspection.**
* **Quality, etc.**

VG 2-8

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	TYPES OF SPECIFICATIONS: Emphasize that **TYPES** of specifications are important to consider when combined with the type of contract contemplated. They must be compatible.	
	Now that the students have understood the technical specification format, TYPES OF SPECIFICATIONS will be discussed.	
	• **<u>Question:</u>** Tell the students to draw upon their knowledge, past experience, and/or the reading assignment for last evening, and name the three basic types of specifications. (A good time to ask for a show of hands in how many completed their reading assignment.) **<u>Answer:</u>** **Functional** **Design** **Performance**	
	• **<u>Question:</u>** What does the contract methodology to be employed have to do with the type of specification to be used? **<u>Answer:</u>** **Certain methodologies such as Design-build or Two-Step Sealed Bidding, require the contractor to propose all of the design criteria which will meet our requirements. (The Government usually does this to obtain state of the art.)** **Point out that when these methodologies are used, we want the contractor to <u>tell</u> <u>us</u> what design features will best suit the Govern-ment's needs. Therefore, a design type specification would not be suitable for a Two-Step Sealed Bidding or a Design-build project.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **<u>Question:</u>** In order to test the student's comprehension concerning the objective being discussed, place the next three viewgraphs on the screen, then ask the students to identify the type of specification; rotate the questions while showing the viewgraphs.	
I	**Show Interactive Viewgraph 2-9.**	

IDENTIFYING TYPES OF SPECIFICATION

<u>SEISMIC CRITERIA:</u> ALL EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE DESIGNED TO RESIST SEISMIC FORCES AND SHALL BE SUITABLY ANCHORED TO STRUCTURAL FOUNDATIONS AND STRUCTURAL SUPPORT MEMBERS SO AS TO PRECLUDE SLIDING OR OVERTURNING UNDER SEISMIC LOADING. ALL PIPING SYSTEMS SHALL BE BRACED OR RESTRAINED TO PRECLUDE DAMAGE OR PERMANENT DEFORMATION UNDER SEISMIC LOADINGS.

IVG 2-9

<u>Answer:</u>
The description is that of a purely performance specification. (Note that we are calling for <u>end results.)</u>

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Show Interactive Viewgraph 2-10.	

IDENTIFYING TYPES OF SPECIFICATION

VERTICAL RUNS OF PIPE NOT OVER 15 FEET LONG SHALL BE SUPPORTED BY HANGERS PLACED NOT OVER ONE FOOT FROM THE ELBOWS ON THE CONNECTING HORIZONTAL RUNS, OR AS INDICATED ON THE DRAWINGS.

IVG 2-10

Answer:
Design specification. Note that it describes "HOW TO."

Show Interactive Viewgraph 2-11.

IDENTIFYING TYPES OF SPECIFICATION

VERTICAL RUNS OF PIPE OVER 15 FEET LONG BUT NOT OVER 60 FEET LONG AND NOT OVER 6 INCHES IN SIZE, OR NOT OVER 30 FEET LONG AND NOT OVER 12 INCHES IN SIZE, SHALL BE SUPPORTED ON HEAVY STEEL CLAMPS. CLAMPS SHALL BE BOLTED TIGHTLY AROUND THE PIPES AND SHALL REST SECURELY ON THE BUILDING STRUCTURE WITHOUT BLOCKING.

IVG 2-11

Answer:
The last one is a combination of design and performance. Tell the students to remember that sometimes the distinction may be difficult to determine. Although a purely design specification is possible, most construction specifications contain language of both.

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Stress that: * **When very careful control over materials or methods is necessary, the design language is used.** * **When careful control over materials or methods is either impossible or unnecessary, then performance specifying is appropriate.**	
	• **Question:** When is a Statement of Work appropriate for use rather than a "full blown" specification of the types just discussed? **Answer:** **Statements of Work, commonly referred to by the acronym SOW, is used in construction when referring to a purchase description which is more appropriate for construction obtained under small purchase procedures, or:** * **When urgent and compelling requirements are negotiated, and a detailed specification is not available, or** * **In issuing orders against a Job Order Contract or Indefinite Quantity contract.**	
	Prepare students for the practical exercise which covers the subject matter thus far. The exercise is presented in two parts, as follows **CE-2.1 Cursory Review of the documents, and** **CE-2.2 Examination of the Plans and Specifications.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.1 "Reviewing the Procurement Request Package" and "Review of the Specifications and Drawings", **STEP I in the review process. "Reviewing the Procurement Request Package"** **Time:** 15 minutes **Method:** Group Exercise **Purpose of the Exercise:** Advise the students that the exercise represents a procurement request which has been received calling for painting and renovation of a building designed to house students in the CTC complex. The documents submitted contain errors, omissions, and ambiguous statements. By performing an initial review one can quickly identify any missing documents and in doing so, may prevent delays from occurring. **Instruction: CE-2.1 Step I** Tell the students to turn to Classroom Exercise CE-2.1 and locate the procurement request documents beginning on page CE 2-15. Explain that the documents constitute a "typical" procurement request package which may consist of, as a minimum, such documents as contained in the exercise: * **Memo from the Project Manager.** * **Description of the project (Encl (1)).** * **Small Business representative recommendation (Encl (2)).** * **Cost estimate (Encl (3)).** * **Funding document (Encl (4)).** * **Specification No. 12-90-B487 (Encl (5)).** * **Drawings (Encl (6)).**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.1 (Continued)	
	Tell the class: These documents will also be utilized in other exercises throughout the day. As other elements are performed, additional material will be introduced Explain that the first task to be performed is a cursory review of the documents.	Tell the students do not continue with Step II until told to proceed. Discussion will be held on Step I before proceeding to Step II.
	Students are to: (Write on blackboard) **1. Identify any documents that may be missing from the package.** **2. Determine if either a J & A or a D & F is required to provide justification for any proposed action.** **3. Determine if funding is sufficient.** **We will examine the Small Business recommendation later.** Tell the class that to perform these tasks they are to break up into small groups and, using the Text /Reference as a guide, study the procurement request documents contained in CE-2.1 beginning on page CE 2-15. They are to identify any immediate discrepancies of the type listed on the blackboard. Also, instruct the students to list discrepancies on the answer sheet furnished in CE-2.1, which is titled "Reviewing the Procurement Request" analysis sheet.	

CLASSROOM EXERCISE
CE-2.1

Reviewing the Procurement Request Package

STUDENT ANALYSIS SHEET

Based on an initial review our group has located the following deficiencies:

Identify any Missing Documents:

_____

_____

_____

_____

_____

Identify any Justifications required:

_____

_____

_____

_____

_____

Funding:

_____

_____

_____

_____

_____

CE-2.1

STUDENT ANALYSIS SHEET
(Continued)

How can these deficiencies be corrected?

_____

_____

_____

_____

_____

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.1 • **Question:** After allowing time to complete the initial review, ask one of the groups to identify any documents that may be missing. **Answer:** * **Missing Documents: Re: Enclosure (4) Government Estimate. (The estimate which was submitted appears to be the A/E estimate and the amount is insufficient.)** **The A/E and the Government estimate are different types of estimates because:** * **The Government usually adds contingencies to the cost.** * **The Government usually adds an amount for G&A.** * **The A/E estimate reflects only the cost estimate associated with the building project.** * **The A/E estimate is compiled at the time of design of the project. It requires revalidation at the time the construction project is approved in order to allow for adjustments in cost of living, either upwards or downwards.** **The Government estimate is an independent document. It is important for the following reasons:** * **Acts as a baseline for funding.** * **Used as a basis to establish the magnitude of the project.** * **Used to determine if sufficient funds are committed for the project prior to issuing the solicitation, which includes G&A and contingencies.** * **The detailed estimate is used as a baseline in negotiation of changes during administration of the contract.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.1 (Continued)	
	• **Question:** Ask a 2nd group to list any justifications that should be included in the procurement package **Answer: None** * **Based on the premise that the solicitation is to be issued as a sealed bid, a Justification & Authorization (J & A) is not required.** * **Based on a cursory review of the documents there are no D & Fs required for justification. (The review is cursory. Therefore an in-depth review which follows may reveal the need for additional justification.)**	
	• **Question:** Ask a 3rd group to describe what, if anything, is required on the funding document. Based on the procurement request documents contained in the exercise, what is the minimum amount of funding that should be committed for this project? **Answer:** **We are unable to ascertain from the documents submitted the minimum amount of funding required because the Government estimate is missing. The one submitted is that of the A/E. Note that the funding document dollar amount shown is less than the A/E's estimate.** * Although the Comptroller signed the $960,000 commit-ment, the accounting and appropriation figures were not cited. This is insufficient, as the Contracting Officer must be certain that the money is not only in a sufficient amount, but the correct appropriation must also be cited. However, in this case we do not have a Government Estimate.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.1 (Continued)	
	FUNDING DOCUMENT	
FAR 32.702	FAR PROVIDES THAT the Government shall not expend funds on proposed procurements unless their is assurance that a contract will be awarded. FAR firmly states that no officer or employee of the Government may CREATE or AUTHORIZE an obligation in excess of the funds available, or in advance of appropriations (Anti-Deficiency Act 31, U.S.C. 1341), unless authorized by law. The funding document submitted may be in a sufficient amount and is signed by the Comptroller, but the accounting and appropriation data are not provided. (Remember that we do not have an official Government estimate.) The contracting officer should request fund citation in order to be assured that the money is appropriate for the procurement.	
	• **Question:** Now that we have discovered some deficiencies in the procurement request, what must be done to correct them? (Call upon another one of the groups to answer) **Answer:** **1. Government estimate must be obtained from the individuals responsible in the amount to cover the anticipated cost of the procurement.** **2. Obtain a funding document from the Comptroller citing the accounting and appropriation data with a sufficient amount of funds.**	
	• **Question:** What might some of the consequences be if the discrepancies described had gone undetected? **Answer:** **1. Violation of the Anti-Deficiency Act.** **2. Lack of correct Government Estimate.** **END OF EXERCISE CE-2.1 (STEP 1)**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE: CE 2.2 "Reviewing Specifications and Drawings" (STEP 2)	
	Immediately following discussions regarding Specifications and Drawings the instructor will initiate the follow on workshop as a continuation of the Exercise.	
	"The Technical Review of the Plans and Specifications."	
	Time Allotted: **45 minutes** **Method:** **Group** **Purpose of the Exercise:** Provides a practical guide in conducting a review of the specification and drawings regarding where to locate contractual type information that may be misplaced, be in error, be omitted, or require additional documentation and/or approval.	Familiarize the students with the documents by referring them to the Classroom Exercise book. Go through the documents with them, explaining each one and how it relates to the exercise.
	It should be stressed to the students that the methods described in locating errors are to be used as guidelines only. Ther is no **guarantee** that each and every error of a specification and drawing may be located by using these methods.	
	STRESS THAT THE STUDENTS ARE TO: • read the instructions for the exercise, and • study the document titled "Mastering the Art of Finding Discrepancies in Plans and Specifications" located on pages CE 2-9 through CE 2-11 before proceeding with the exercise.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE: CE 2.2 "Reviewing Specifications and Drawings" (STEP 2) (cont.)	
	Instruction: Students are instructed to appoint a different spokesperson who will be called upon at the conclusion of the hour to relate the group's findings to the class. Using the procurement request documents in the Classroom Exercise Book, CE 2.1, students are to conduct a comprehensive review of the specification and the plans. The types of deficiencies they are looking for are similar to those described in the document entitled “Mastering the Art of Finding Discrepancies”, which is contained in their Classroom Exercise documents. Each group is to see how many errors can be identified, using the worksheet provided in the CE book labeled as "Procurement Request Analysis Sheet." CE - 2.2, located on page CE 2-5.	

CLASSROOM EXERCISE
CE-2.2 (STEP 2)

Mastering the Art of Finding Discrepancies in Plans and Specifications

Deficiency	Example	Possible Location
Ambiguous or unclear words or phrases are used.	Phrases such as "good workmanship", "installed in a neat, workmanlike manner", "in accordance with best engineering practice", "securely mounted", "properly assembled", "suitably finished", etc.	General Requirements or Part I of any of the Guide Specs making up any one of the Divisions. (Part I addresses General Information.)
2. Experience qualifications are found. (In most cases it is allowed, but must have justification and approval.)	"The installer shall have had a minimum of three years' experience in installing similar type of equipment," or "the services of a qualified fire alarm system manufacturer's representative or technician, who is experienced in the installation and operation of the type being procured must be provided".	General Requirements or Part III of any of the various specs making up any of the Divisions. (Part III describesQuality.)
3. Period of performance is vague.	The period of performance is stated in terms of calendar days from date of award or Notice to Proceed, but because of phased completion dates, it is not clear as to whether the days stated for the phases are concurrent or consecutive.	Special Clauses. Look for the project schedule clause "Commencement, Prosecution, and Completion of Work" in the Additional General Provision section of the specification.
4. Division of responsibilities is not clear.	Use of such phrases as "To the satisfaction of the Contracting Officer". (subjective terminology without defining what must be done to satisfy the CO); or "Item will be installed by others", without stating who the "others" might be, a subcontractor?, the Government? the "user"?	Part III of any of the 16 Divisions specs. (Part III describes Quality.)

Mastering the Art of Finding Discrepancies
CE-2.2(b)
(Continued)

Deficiency	Example	Possible Location
5. Wrong type of specification to be used in the type or method of contract to be executed.	Two Step Sealed Bidding is used to obtain the contractor's design or methods. In this instance a performance specification allows the contractor the flexibility it needs to design the project. Design specification language may be used sparsely but should not be predominant. (Refer to Exhibit 2-7 of the T/R. and Viewgraphs 2-10 through 2-12 that illustrate word usage.)	Language used throughout the technical specification. (Spot check.)
6. "Or equal" item called for, and the specification is silent as to the salient features. Under FAR 10.004(2), use of brand name or equal is permissible under certain agency specific conditions. If used, more than one manufacturer should be listed (Preferably 3 in some agencies). In any case, the salient features must be described in order to determine acceptability of an "equal" that may be offered.	"Blower shall be General Electric, P/N 3200, or Equal."	Drawings or any of the 16 Division Guide Specs which would call for products. (Part II describes products.)
7. A number of drawings appear to be missing.	Drawings are assigned numbers.	CompareTable of Contents to actual Drawings. submitted with the specification. (Section 01011, Additional General Paragraphs.

Mastering the Art of Finding Discrepancies
(Continued)

Deficiency	Example	Possible Location
8. Drawings contain information that rightfully belong in the specification.	Specifications must not repeat information shown on drawings. Drawings must not contain information that belong in the specification, such as,calling for brand name or equal. Drawings should be limited to dimensions of construction, relationship of materials, location and capacity of equipment, etc.	Drawings. Look under "NOTES".
9. Scope of the work, or project description describes work to be performed by disciplines not found in the 16 divisions.	For example: Scope of work describes demolition as part of the project. However, the specification does not contain any information on demolition; OR, the "general intention" describes mechanical equipment to be provided, yet the specification does not contain a Mechanical Division. specification.	Read the General Description of Work and list the various trades needed. Check the Divisions to be sure all have been included. Also check the specification Table of Contents which lists the guide specs by number against what is actually contained in the package to see if any are missing.

CLASS EXERCISE
CE-2.2

REVIEW OF PLANS AND SPECS
STEP 2

1. Technical Specification Deficiencies

   (a) Deficiencies Yes ☐ No ☐

   If yes, identify deficiencies.

   _____

   _____

   _____

   _____

   _____

2. Drawings

   (a) Deficiencies Yes ☐ No ☐

   If yes, identify deficiencies.

   _____

   _____

   _____

   _____

   _____

CLASS EXERCISE
CE-2.2(c)

REVIEW OF PLANS AND SPECS
STEP 2
(Continued)

3. Recommendations: (Explain how the deficiencies can best be corrected.)

_____

_____

_____

_____

_____

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.2 **DEFICIENCIES:** **SPECIFICATION:** 1. The Table of Contents, located at the very beginning of the specifications, pages 2-31 and 2-32 in the Classroom Exercise Book, provides a listing of the 16 CSI Divisions which are applicable to the project. Several of those listed in the Table of Contents are missing from the specification. 2. **Omissions:** The Index of Drawings, Section 01011-1, Additional General Paragraphs, contains a list of drawings applicable to the project. It does not agree with the drawings provided. Several are missing. 3. **Ambiguity:** In paragraph 1.61, Section 01011-4, completion date is listed as 375 days. **Paragraph** 1.6.1.2 states that the phased construction dates add up to 255 days. The discrepancy appears to be in paragraph 1.6.1. 4. **Proprietary Item:** Paragraphs 2.1, 2.1.1, 2.1.2 and 2.2, page 15850 specifies a proprietary item. **DRAWINGS:** 1. **Missing:** The specification (Section 01011-1) contains a listing of all drawings which are provided as part of the specification. In comparing the listing of drawings with actual drawings received there are numerous ones missing from the package. 2. **Proprietary Item:** Drawing Number 637601 calls for a proprietary item. No justification was included. In addition, this type of information is considered contractual and should be contained in the body of the specification rather than on the drawing.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.2 (cont.) 3. **Buy American Violation, and Proprietary Item:** Drawing Number 6370617 calls for an item manufactured by the Tokio Manufacturing Company which would be suspiciously a foreign made item.. The drawing also calls for a specific brand name. The information should be in the specification, and should provide for at least three other brand names, with salient features of the item described. In addition, the notes on the drawing are ambiguous. In the far right hand corner in small print the drawing specifies that the fixtures shall be KLP or equal, whereas at the bottom of the detail it specifies that "All Features Manufactured by Westinghouse."	
	The actions required to correct the deficiencies are: 1. Missing documents must be submitted. 2. Corrections must be made in the specification. 3. If the proprietary items are found to be necessary, justifications must be obtained. IF NOT NECESSARY, THEY MUST BE ELIMINATED. 4. The drawings and specification will need revision. 5. If the item called for is found to be foreign made, either a waiver must be obtained, or it must be deleted from the specification and replaced with an item containing a generic description which can be readily obtained in the U.S. 6. Social Program recommendation is not in conformance with the FAR. 7. Funding citation must be obtained from the Comptroller. 8. Government estimate must be obtained. **CONCLUSION:** **Ask the students to turn to the Text/Reference, Chapter 2 scenario at the beginning of the chapter.**	

4200/84
Aug. 21,. 1991

MEMORANDUM

From: Dale Stevens, Project Manager
To: Bill Gibson, Contracting Officer

Via: Construction Division

Subj: PROPOSED CONTRACT NO. 47408-90-C-B487; VARIOUS REPAIRS AND ALTERNATIONS TO BLDG. 560, SPECIAL PROJECT P-138

Encl:
(1) Description of Project
(2) Small Business Representative Recommendation
(3) Cost Estimate
(4) Funding Document
(5) Specification No. 12-91-B487
(6) Drawings

1. Please initiate all actions necessary to advertise subject contract in the Commerce Business Daily and award construction contract.

2. There is a local requirement which must be incorporated into the solicitation as follows:
"Because of the nature of the work, noise will be a problem during construction. A hospital facility is located across the street with the intensive care unit wing facing Building 560. Accordingly, contractor's work hours will be restricted from 9 A.M. to 3:30 P.M. Monday through Friday, and 10:00 A.M. through 5:00 P.M. on weekends."

2. Enclosures (1) through (5) are forwarded for use in advertising and awarding this contract. Enclosure (4) is the funding document.

3. Please expedite all possible. This project carries a high priority.

JACK L. O'CONNELL
Division Director

GENERAL DESCRIPTION OF THE PROJECT

VARIOUS REPAIRS & ALTERATIONS TO BUILDING 560

AT THE

CONTRACTS TRAINING CENTER COMPLEX

SEASIDE, SANTA BARBARA COUNTY, CALIFORNIA

GENERAL DESCRIPTION:

The work includes demolition, repair, and replacement of existing architectural, mechanical, plumbing, security systems, telephone systems, and incidental related work within an existing two story cast-in-place concrete building used to house students attending the Contracts Training Center. The housing will consist of 100 two-room units. Walls to be demolished include metal stud and plaster, wood stud and gypsum board, and very limited portions of an existing interior 10 inch thick concrete wall which surrounds the majority of the working area. A portion of the existing second floor concrete slab will be removed in order to make room for a spiral stair used for internal circulation. All existing finishing materials will be removed and replaced. Mechanical work will include the installation of new air conditioning units for cooling and the renovation of existing toilet facilities. Electrical work will include the demolition and replacement of all existing power and lighting circuiting, and additional power supply by means of cable.

ENCLOSURE 1

SMALL BUSINESS/LABOR SURPLUS SET-ASIDE REVIEW FORM

1. Case No. 47408-090-B-B487

1. P.R NO.

REQN NO.

3. Total Estimated Value

4. Date 28 August 1991

5. Priority

6. Item Description

Various repairs and alterations to Bldg. 560 at the Contracts Training Center Complex, Seaside, CA

6a. Quantity

7. Small Business Size Standard

SIC Code 1542

Employees =

Dollar $ 17.0 MIL

8. Purchase Office Code 2713

9. FSC SVC Code

10. Claimant Program Code C20

11. Subcontracting Plan Total Estimated Value Meets Subcontracting Plan Requirements Threshhold

☐ Yes

☒ No

NOTE: Subcontracting Plan will be submitted to the Small Business Specialist for review.

12. Recommendations: (If all recommendations are "no", block 14 must be completed.)

YES	NO			
☐	☒	8(a)		
☐	☒	SDB Set-Aside "potential"		
☐	☒	HBCU - MI Set-Aside	%	$
☐	☒	Labor Surplust Set-Aside	%	$
☒	☐	Small Business Set-Aside	%	$
☐	☒	Partial SB Set-Aside with preferential consideration for SDBs	%	$
☐	☒	Small Business - Small Purchase Set-Aside for Emerging Small Business		
☐	☒	Unrestricted		

13. Synopsis Required:

☒ Yes ☐ No

If "no" cite FAR 5.202 exception.

14. Reason Set-Aside Not Initiated/Additional Comments:

*FAR requires that repetitive buys be on the basis of a set-aside.

Reviewed by SBA

SBA Representative

Date

15. Procurement History:

☐ First Time Buy

☐ Previous Acquisition

- ☐ 8(a)
- ☐ SDB Set-Aside
- ☒ SB Set-Aside
- ☐ Set-Aside for emeging SN
- ☐ Other
- ☐ Two or more responsive SB offers on prior acquisition
- ☐ One responsive SDB offer within 10% of award price on prior acqiusition

16. The Procurement Officer ☐ Concurs ☐ Rejects

Recommendations (Document Rejections on Reverse Side)

Procurement Officer

Date

SBA Specialist ☐ Concurs ☐ Rejects

NOTE: Any change in the procurement plan described herein will require return for re-evaluation by the SADBU specialist.

SB Specialist

Date

COST ESTIMATE

DATE PREPARED July 7, 1991

SHEET 1 OF 22

ACTIVITY AND LOCATION
Contracts Training Center
Seaside, CA

CONSTRUCTION CONTRACT NO. 47408-91-B-487

IDENTIFICATION NUMBER

ESTIMATED BY Gold and Associates, Architects AIA

CATEGORY CODE NUMBER

PROJECT TITLE
Various Repairs and Alterations to Bldg. 560

STATUS OF DESIGN
☐ PED ☐ 30% ☐ 100% ☒ FINAL ☐ Other (Specify)

JOB ORDER NUMBER

ITEM DESCRIPTION	QUANTITY		MATERIAL COST		LABOR COST		ENGINEERING ESTIMATE	
	NUMBER	UNIT	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT COST	TOTAL
SUMMARY SHEET								
TOTAL ESTIMATED FUNDED REPAIR COSTS							$301,983	
TOTAL ESTIMATED FUNDED CONSTRUCTION COSTS							$665,750	
TOTAL ESTIMATED FUNDED COSTS							$967,773	

EXAMPLE FORM

REQUEST FOR CONTRACTUAL PROCUREMENT — Page of pages

1. This request must be accepted on a Direct Citation basis only and is subject to the conditions listed on the attached page.	2. Document Number 6830591RCOP134

2. Reference Number	4. Funds Expire On	5. DMS Rating	6. Priority	7. Date Required
002590WX05092	9/30/92	DO		

8. From:	9. For details contact: Financial: Ms. Marge White (805) 982-1034 Technical: Ms. Karen Topping (805) 982-1647
10. To:	11. Mail Invoices to: Block #8 Addressee

12. A. ACRN	B. Appro-priation	C. Sub-Head	Accounting Data to be Cited on Resulting Contracts							
			D. Obj. Class	E. BCN	F. SA	G. AAA	H. TT	I. PAA	J. Cost Code	K. Amount

13. Amounts will NOT be exceeded in the obligation without prior written approval from the user.	L. Total this Document $960,000

Contract Number: 47408-91-B-487

POC:
Description: Various Repairs and Alterations to Building 560

Document Number in Block 2 must be stated on any/all resulting contracts. Copies of executed contracts must be provided to Block #9 and #12 Addressees. Failure to comply with these provisions may result in cancellation of funding.
FAX Phone #: Comm. (805) 982-1017

14. See attached pages for delivery schedules, preservation and packing instructions, shipping instructions and instructions for distribution of contracts and related documents.	M. Grand Total $960,000

15. Cite TAC #944 for any Transportation Charges

16. I certify that the funds cited are properly chargeable for work or services requested.	Authorizing Official: Date: T.J. MARSHALL AUG 11, 1991 Comptroller
17. This request is accepted and the items will be provided in accordance herewith.	Authorizing Official: Date: BILL GIBSON AUG 11, 1991 Contracting Officer

ENCLOSURE 4

SPECIFICATION NO:
12-91-B487
CONTRACT NO:
47408-91-C-B487

VARIOUS REPAIRS & ALTERATIONS TO
BUILDING 560
SPECIAL PROJECT RC1-90

at the

CONTRACTS TRAINING CENTER COMPLEX
SEASIDE, CA
SANTA BARBARA COUNTY

GOLD & ASSOCIATES ARCHITECTS AIA
400 East 17th Street, Suite 501
Harbortown, CA 92627

Branch Manager: _____BOB STEVENS____ Date:_____July 1989_____

Division Director: ____TOM MUNCY_____

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SECTION 01010

GENERAL PARAGRAPHS

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCE

The publication listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by the basic designated only.

CODE OF FEDERAL REGULATIONS (CFR)

41 CFR 60.4	Construction Contractors - Affirmative Action Requirements

1.3 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.3.1 SD-93, Administrative or Close-out Submittals

a. Report of subcontracts
b. Work performed by Contractor
c. Certification of Contractor insurance
d. Certification of subcontractor's insurance
e. Schedule of prices
f. As-built drawings

1.3.1.1 Report of Subcontracts

Provide in accordance with the paragraph titled, "Description of Work Performed by the Contractor."

1.4 GENERAL INTENTION

It is the declared and acknowledged intention and meaning to provide and secure roof repair by replacement and install skylights for building 475, complete and ready for use.

1.5 GENERAL DESCRIPTION

The work includes the demolition, repair and replacement of existing architectural, mechanical, plumbing, security systems and telephone systems and incidental related work within an existing two story cast-in-place concrete building used to house students attending the Contracts Training Center. Walls to be demolished include metal stud and plaster, wood stud and gypsum board, and very limited portions of existing interior 10 inch thick concrete wall which surrounds the majority of the working area. A portion of the existing second floor concrete slab will be removed in order to make room for a spiral stair used for internal circulation. All existing finish materials will be removed and replaced. Mechanical work will include the installation of new air conditioning units for cooling and the renovation of existing toilet rooms. Electrical work will include the demolition and replacement of all existing power and lighting circuiting. As additional power supply is to be added.

1.6 LOCATION

The work shall be located on Government property, Seaside, California, approximately as shown on drawings. The exact location will be indicated by the Contracting Officer.

1.7 GOVERNMENT REPRESENTATIVES

a. The work will be under the general direction of the Contracting Officer of the United States, or another representative of the Government, designated in block 26 of Standard Form 1442. Except in connection with the Disputes Clause of this contracts, this designated person has completed charge of and exercises full supervision over the work so far as it affects the interest of the Government.

b. Any claim submitted under the Disputes Clause shall be submitted to the Contracting Officer in care of the person designated in block 26 of Standard Form 21442 as the representative of the Contracting Officer authorized to receive the claim.

c. The provisions of this paragraph or provisions elsewhere in this contract regarding supervision, approval, or direction by the Contracting Officer or the designated person shall not relieve the contractor of responsibility for accomplishing the work, with regard to sufficiency or time of performance, except as otherwise provided.

1.8 AFFIRMATIVE ACTION COMPLIANCE

Notice of Requirements for Affirmative Action to Ensure Equal Employment Opportunity (Apr 1984):

(Applies when the amount of the contract is in excess of $10,000)

a. The offerers attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade

These goals are applicable to all the Contractor's construction work performed in the covered area If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from the Office of Federal Contract Compliance Programs Office.

c. The Contractor's compliance with Executive Order 11246 as amended, and the regulations in 41 CFR 60.4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60.4. Compliance with the goals will be measured against the total work hours performed.

d. The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs, within 10 working days following award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the--

(l) Name, address, and telephone number of the subcontractor,

(i) Employer identification number of the subcontractor,

(2) Estimated dollar amount of the subcontract;

(3) Estimated starting and completion dates of the subcontract; and

(4) Geographical area in which the subcontract is to be performed.

e. As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Santa Barbara County. (FAR 52.222-23)

1.9 ORAL MODIFICATION

No oral statement by any person other than the Contracting Officer or his representative, as provided in the Contract Clause entitled "Changes" will in any manner or degree modify or otherwise affect the terms of this contract.

1.10 INSURANCE

1.10.1 Minimum Requirements

The Contractor shall procure and maintain during the entire period of performance under this contract the following minimum insurance coverage:

a. Comprehensive general liability: $500,000 per occurrence

b. Automobile liability: $200,000 per person; $500,000 per occurrence, $20,000 per occurrence for property damage,

c. Workmen's compensation: As required by Federal and State workers' compensation and occupational disease laws,

d. Employer's liability coverage: $100,000, except in States where workers compensation may not be written by private carriers,

e. Others as required by State law.

1.10.2 Insurance--Work on a Government Installation (APR 1984)

a. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

b. Before commencing work under this contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (l) for such period as the laws of the State in which this contract is to be performed prescribe or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

c. The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. At least 5 days before entry of each such subcontractor's personnel on the Government installation, the Contractor shall have in field office available for inspection by the Contracting Officer a current certificate of insurance, meeting the requirements of paragraph (b) above, for each such subcontractor. (FAR 52.228-5)

1.11 NO WAIVER BY THE GOVERNMENT

The failure of the Government in any one or more instances to insist upon strict performance to any of the terms of this contracts or to exercise any option herein conferred shall not be constructed as a waiver or relinquishment to any extent of the right to assert or rely upon such terms or option on any future occasion.

1.12 SCHEDULE OF PRICES

1.12.1 Data Required

Within 5 days of receipt of a notice or award, the Contractor shall prepare and deliver to the Contracting Officer a schedule of prices (construction contract) on the forms furnished for this purpose. The schedule of prices shall consist of a detailed breakdown of the contract price, giving the quantities for each of the various kinds of work; the unit prices; and the total prices therefore. The detailed breakdown shall be segregated under each of the construction categories stated in this contract. The required schedule must be based on the actual breakdown of the bid price. Accordingly, subcontractors who may be involved in work under more than one of these categories shall be advised of this requirement in order to furnish such data without delay. The format, content, and number or copies required will be prescribed by the Contracting Officer and will be subject to approval. The submission of the required data shall not otherwise affect the contract terms.

1.12.2 Submittal Instructions

Furnish four copies of the Schedule Of Prices in accordance with the paragraph entitled "Data Required." Payments will not be made pursuant to the contract clause entitled . "Payments to Contractor" until the Schedule Of Prices has been submitted to and approved by the Contracting Officer.

1.13 PAYMENTS TO THE CONTRACTOR

Payments made in accordance with the Contract Clause entitled "Payments Under Fixed-Price Construction Contract" will be made on submission of itemized requests by the Contractor and will be subject to reduction for overpayments or increase for underpayments on preceding payments to the Contractor.

1.13 .1 Payment for Materials Offsite

Pursuant to the paragraph entitled "Payments to the Contractor," payments may be made to the Contractor for materials stored off construction sites. However, the following conditions must be met:

a. The conditions described in the paragraph entitled "Payments to the Contractor."

b. The material must be within distance of 50 miles by streets and roads.

c. The material shall be adequately insured and protected from theft and exposure.

d. The materials shall not be susceptible to deterioration or physical damage in storage or in transit to the jobsite. Items such as steel, machinery, pipe and fittings, and electrical cable are acceptable for progress payments; items such as gypsum wallboard, glass, insulation, and wall coverings are not. Payments will not be made for materials in transit to the jobsite or storage site.

1.13.2 Obligation of Government Payments

The obligation of the Government to make any of the payments required under any of the provisions of this contract shall, at the discretion of the Contracting Officer, be subject to:

a. Reasonable deductions on account of defects in material or workmanship: and

b. Any claims which the Government may have against the Contractor under, or in connection with this contract. Any overpayments to the Contractor shall, unless otherwise adjusted, be repaid to the Government upon demand.

1.14 CONTRACTOR'S INVOICE AND CONTRACT PERFORMANCE STATEMENT

Requests for payment in accordance with the terms of the contract shall consist of:

a. The Contractor's invoice on the form furnished for this purpose, which shall show, in summary form, the basis for arriving at the amount of the invoice; and

b. The contract performance statement on the form furnished for this purpose, which shall show, in detail, the estimated cost percentage of completion and value of completed performance for each of the construction categories stated in this contract. The format, content, and number of copies required will be prescribed by the Contracting Officer and will be subject to his approval. The submission of the required data will not otherwise affect the contract terms.

1.15 EQUITABLE ADJUSTMENTS - WAIVER AND RELEASE OF CLAIMS

a. Whenever the Contractor submits a claim for equitable adjustment under any clause of this contract which provides for equitable adjustment of the contract, such claim shall include all types of adjustments in the total amounts to which the clause entitles the Contractor, including, but not limited to, adjustments arising out of delays or disruptions or both caused by such change. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived: (l) any adjustments to which otherwise might be entitled under the clause where such claim fails to request such adjustments; and (2) any increase in the amount of

b. The Contractor agrees that, if required by the Contracting Officer, it shall execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment. The Contractor further agrees that such release shall discharge the Government, including its officers, agents, and employees, from any further claims, including, but not limited to, further claims arising out of delays and/or disruptions caused by the aforesaid change.

1.16 CHANGES BOARD AND ESTIMATES

In determining any equitable adjustment under the "Changes" clause, the Contracting Officer will, in those instances where the adjustment is estimated by the Person in charge of the construction contract to be $50,000 or more, convene and give full consideration to the report of an advisory board of three members, consisting of two Government representatives appointed by the Contracting Officer and a representative appointed by the Contractor. This board shall report to the Contracting Officer the amount of the change in cost, time, or both, resulting from the ordered change. In making all equitable adjustments under the "Changes" clause, compensation for additions will be based upon estimated costs at the time the work is performed, and credit for deductions will be based upon estimated costs at the time the contract was made. In arriving at the amount of the change in price, if any, allowance may be made for profit, overhead and general expenses, plant rental, and other similar items.

1.17 AS-BUILT RECORDS

1.17.1 As-Built Drawings

Maintain at the jobsite two sets of full-size contract drawings marked to show any deviations which have been made from the contract drawings, including buried or concealed construction and utility features revealed during the course of construction. Record the horizontal and vertical location of all buried utilities that differ from the contract drawings. These drawings shall be available for review by the Contracting Officer at all times. Upon completion of the work, deliver the marked sets of prints to the Contracting Officer. Requests for partial payment will not be approved if the marked prints are not current, and request for final payment will not be approved until the marked prints are delivered to the Contracting Officer.

1.17.2 As-Built Record of Materials

A record of the materials used shall be furnished prior to completion of the contract. Submission of this data is a condition for final payment under the contract.

Where several manufacturers; brands, types, or classes of the item listed have been used in the project, the specific areas where each item was used shall be designated. Designations shall be keyed to the areas and spaces depicted on the contract drawing. The record of materials used shall be furnished in the following format:

MATERIALS DESIGNATION	SPECIFICATION	MANUFACTURER	MATERIALS USED (MANUFACTURER'S DESIGNATION)	WHERE USED

1.18 CONTRACTOR'S DAILY REPORT

The Contractor shall deliver to the Contracting Officer a "Daily Report to the Inspector" on the form furnished for this purpose. The form shall be completed daily and delivered to the Contracting Officer. Data to be reported include data on workers by classification, the move-on and move-off of construction equipment furnished by the Contractor and subcontractors or furnished by the Government, and material and equipment delivered to the site.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3. 1 REGULATIONS

The Contractor and his employees and subcontractor shall become familiar with and obey all local regulations, including fire, traffic, and security regulations. All personnel employed at the site shall keep within the limits of the work (and avenues of ingress and egress) and shall not enter any restricted areas unless required to do so and are cleared for such entry. The Contractor's equipment shall be conspicuously marked for identification.

3.1.1 Working Hours

Regular working hours shall consist of an 8 1/2 hour period established by the Contracting Officer between 7 a.m. and 3:30 p.m., Monday through Friday, excluding Government holidays. The Contractor shall allow ample time to enable satisfactory arrangements to be made by the Government for inspecting the work in progress. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer. All utility cutovers shall be made after normal working hours or on Saturdays, Sundays, and Government holidays. Anticipated costs shall be included in the bid.

3 .2 ORDER OF WORK

The Contractor shall schedule work so as to cause the least amount of interference with local operations. Work schedules shall be subject to the approval of the Contracting Officer. Permission to interrupt any roads, railroads, and/or utility service shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

3.3 WORK BY THE CONTRACTOR

3.3.1 Performance of Work by the Contractor (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty (20) percent of the total amount of work to be performed under the contract. this percentage may be reduced by **a supplemental agreement** to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government. (FAR 52.236-1)

3.3.2 Description of Work Performed by the Contractor

In addition to the requirements of the paragraph entitled "Performance of Work by the Contractor (APR 1984)" and prior to the commencement of work at the site, furnish to the Contracting Officer a description of the work to be performed with the Contractor's own organization and the percentage of the total amount of work to be performed under the contract which this represents. Consider the value of materials as part of the work performed by the Contractor's own organization.

3.4 EXISTING WORK

a. The removal or altering in any way of existing work shall be carried on in such a manner as to prevent injury or damage to any portion(s) of the existing work which remain(s).

b. All portions of existing work which have been altered in any way during construction operations shall be repaired or replaced in kind and in a manner to match existing or adjoining work, as approved by the Contracting Officer. All work of this nature shall be performed by the Contractor at the Contractor's expense and shall be performed as directed by the Contracting Officer. At the completion of all operations, existing work shall be in a condition equal to or better than that which existed before the new work started.

3.5 SANITATION

Adequate sanitary conveniences of a type approved for the use of persons employed on the works shall be constructed, properly secluded from public observation, and maintained by the Contractor in such a manner as required or approved by the Contracting Officer. These conveniences shall be maintained at all times without nuisance. Upon completion of the work, the conveniences shall be removed by the Contractor from the premises, leaving the premises clean and free from nuisance.

3.6 PUBLIC RELEASE OF INFORMATION

a. The Contractor shall not publicly disclose any information concerning any aspect of the materials or services relating to this bid, contract, or purchase order without the prior written approval of the Contracting Officer.

b. The Contractor shall insert the substance of clause "(a)" of this paragraph in each subcontract and purchase order related to the project.

3.7 SPECIFICATIONS AND STANDARDS

The specifications and standards referenced in this project specification, including addenda, amendments, and errata listed, will govern in all cases where references thereto are made. In case of differences between these specifications or standards and this project specification or its accompanying drawings, this Project specification and its accompanying drawings will govern to the extent of such differences. Otherwise, the referenced specifications and standards will apply. The requirement for packaging, packing, marking, and preparation for shipment or delivery included in the referenced specifications will apply only to materials and equipment that are furnished directly to the Government and not to materials and equipment that are to be furnished and installed by the Contractor.

3.8 OPTIONAL REQUIREMENTS

Where a choice of materials or methods, or both, is permitted in this contract, the Contractor will be given the right to exercise the option unless otherwise required by the specification.

3.9 GENERAL PROVISIONS

Any reference within this project specification to a General Provision shall be understood to be a reference to the Contract Clause(s) or the General Paragraph(s) addressing the subject matter of the particular reference.

---End of Section--

SECTION 01011
ADDITIONAL GENERAL PARAGRAPHS

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 763 SUBPART F	Friable Asbestos-Containing Materials in Schools

MILITARY SPECIFICATIONS (MIL)

MIL-S-16155	(Rev. E) Shielding Harness, Shielding Items and Shielding Enclosures for Use in Reduction of Interference from Engine Electrical Systems

MILITARY STANDARDS (MIL-STD)

MIL-S-461	(Rev. C) (Notice 2) Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-462	(Notice 6) Electromagnetic Interference Characteristics

1.3 PROJECT INFORMATION

1.3 .1 Contract Drawings, Maps, and Specifications (SEP 1987)

1.3.1.1 First Copy

Ten (10) sets of half-size contract drawings and specifications will be furnished the Contractor without charge except applicable publications incorporated into the technical provisions by reference. Additional sets will be furnished on request at the cost of reproduction. One set of reproducibles will be furnished the Contractor on a one-time basis in lieu of the above contract drawings at the option of the Contracting Officer.

AGENCY DRAWING NO.	A/E DRAWING NO.	TITLE
6370594	F-3248-01	TITLE SHEET
6370595	F-3248-02	FIRST FLOOR ARCHITECTURAL DEMOLITION PLANS

AGENCY DRAWING NO.	A/E DRAWING NO.	TITLE
6370596	F-3248-03	SECOND FLOOR ARCHITECTURAL DEMOLITION PLANS
6370597	F-3248-04	FIRST FLOOR ASBESTOS AND MECH/PLUMBING DEMOLITION PLANS
6370598	F-3248-05	SECOND FLOOR & ATTIC ASBESTOS AND MECH/PLUMBING DEMOLITION PLANS
6370599	F-3248-06	FIRST FLOOR ELECTRICAL DEMOLITION
6370600	F-3248-07	SECOND FLOOR ELECTRICAL DEMOLITION PLAN
6370601	F-3248-08	KEY PLAN-FIRST FLOOR
6370602	F-3248-09	KEY PLAN-SECOND FLOOR
6370595	F-3248-02	ELECTRICAL

1.3.1.2 Drawing Error and Omission

Omissions from the drawings or specifications - the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

1.3.1.3 Notification of Drawing Discrepancies

The Contractor shall check all drawings furnished immediately upon receipt and shall promptly notify the Contracting Officer of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large scale drawings, shall in general, govern small scale drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

1.4 SUBMITTALS

Submit the following in accordance with Section 01300. "Submittals."

1.4.1 SD-93. Administrative or Closeout Submittals

a. Construction schedule

b. Equipment delivery schedule

c. Monthly update to construction schedule and equipment delivery schedules

d. Record drawings

e. Record of material used in buildings

1.4.1.1 Construction Schedule

Within 15 days after receipt of the Notice of Award, prepare and submit to the Contracting Officer for approval a feasible construction schedule in accordance with the clause entitled "Schedules for Construction Contract." except as modified in this contract.

1.4.1.2 Equipment Delivery Schedule

Within 35 days after the Notice of Award, submit to the Contracting Officer for approval, a schedule showing the procurement plans for materials, plant, and equipment. Submit in the format prescribed by the Contracting Officer, and include as a minimum the following information:

a. Description

b. Date of the purchase order

c. Promised shipping date

d. Name of the manufacturer or supplier

e. Date delivery is expected

f. Date the material or equipment is required according to the current progress schedule or network.

1.5 INFORMATION REQUIRED OF THE CONTRACTOR

1.5.1 Subcontractors and Personnel

Reference is made to the clause of the Contract Clauses entitled "Subcontractors." In addition to the data required by that clause, provide a list of the key personnel of the Contractor and subcontractors (including addresses and telephone numbers) for use in the event of an emergency. As changes occur and additional information becomes available, correct and change the information contained in previous lists.

1.5.2 Information Required by Other Additional General Paragraphs

Furnish information required by the following paragraphs in addition to the information required by the other parts of the contract, sections of the specification, and other subparagraphs of the paragraph "Information Required of the Contractor":

a. "Performance of Work by the Contractor"

b. "Government-Furnished Material and Equipment"

c. "Interruptions to Utilities Services"

d. "Interruptions to Station Operations"

1. 6 PROJECT SCHEDULE, PHASING, AND TIME CONSTRAINTS

1.6.1 Commencement, Prosecution, and Completion of Work (APR 84)

The Contractor shall be required to (a) commence work under this contract within 15 calendar days after the date the Contractor receives the notice to proceed, (b) Execute the work diligently, and (c) complete the entire work ready for use not later than **375 calendar days after** the required commencement of work. The time stated for completion shall include final cleanup of the premises.

(FAR 52.212-3)

1.6.1.1 Definitions

a. The date the Contractor receives the notice to proceed is the date of the Notice of Award of the contract.

b. The period within which the Contractor is required to proceed allows for the mailing of the Notice of Award and the Contractor's submission of the required bonds and Certificate of Insurance.

c. The commencement of work is the last day of the period within which the Contractor is required to proceed.

1.6.1.2 Phased Construction

Within the overall project schedule, commence and complete the work in phases. Each phase of the work shall be within the number of calendar days stated in the following schedule.

a. Scheduled Start Day: The day designated as the beginning of a particular phase; the number listed is the number of calendar days from the commencement of work.

b. Completion Day: The day designated as the end of a given phase and the day the work in that phase must be completed; the number listed is the number of calendar days from the commencement of work.

c. Government shall be allowed two (2) weeks after completion of Phase 1 and before start of Phase 2 for moving into and taking occupancy of Phase 1 portion of project.

d. Schedule:

PHASE	DESCRIPTION	SCHEDULED START DAY	COMPLETION DAY
1	1ST FLOOR EAST SECOND FLOOR	O	120
2	FIRST FLOOR WEST	135	255

1.6.2 Liquidated Damages - Construction (APR 84)

1.6.2.1 Failure to Complete Work

If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum listed below as damages for each phase for each day of delay.

(FAR 52.212-5 (a))

1.6.2.2 Contractor Liability with Government Termination

If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

(FAR 52.212-5 (b))

1.6.2.3 Contractor Liability Without Government Termination

If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

(FAR 52.212-5 (c))

1.6.2.4 Phased Construction

For each day the Contractor fails to complete the work of a phase within the time fixed in the contract or any extensions thereof, a day of delay for that phase is created. The Contractor shall pay to the Government as liquidated damages at the close of business on each day of delay for each phase, the following sums:

PHASE	DAMAGES FOR PHASE PER DAY
1	$1000
2	$1000

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3. 1 FACILITIES AND SERVICES

3.1.1 Availability of Utilities Services

Pursuant to the clause of the Contract Clauses entitled "Availability and Use of Utilities Services," reasonable amounts of the following utilities will be made available to the Contractor at the prevailing rates.

Electricity
Potable water
Sanitary sewer

The point at which the Government will deliver such utilities or services and the quantity available is as indicated. The Contractor shall pay all costs incurred in connecting, converting, transferring the utilities to the work, The Contractor shall make connections, including providing backflow-preventing devices on connections to domestic water lines; providing meters; and providing transformers; and make disconnections.

3.1.2 Contractor's Storage Area

The clause of the Contract Clauses entitled "Operations and Storage Areas" and the following apply:

3.1.2.1 Storage in Existing Buildings

The Contractor shall be working in an existing building; the storage of material will be allowed within the project area only.

3.2 RESTRICTIONS ON EQUIPMENT

3.2.1 Electromagnetic Interference Suppression

a. Electric Motors: Motors shall comply with MIL STD-461 relative to radiated and conducted electromagnetic interference. A test for electromagnetic interference will not be required for motors that are identical physically and electrically to those that have previously met the requirements of MIL-STD-461. An electromagnetic interference supression test will not be required for electric motors without commutation or sliprings having no more than one starting contact and operated at 3,600 revolutions per minute or less.

b. Contractor's Construction Equipment: Equipment used by the Contractor shall comply with MIL-S-16165 for internal combustion engines and MIL-STD-461 for other devices capable of producing radiated or conducted interference.

c. Tests for Electromagnetic Interference Suppression: Conduct tests on electric motors and the Contractor's construction equipment in accordance with MIL-STD-461 and MIL-STD-462. The test location shall be reasonably free from radiated and conducted interference. Furnish the testing equipment, instruments, and personnel for making the tests: a test location; and other necessary facilities.

3.2.2 Radio Transmitter Restrictions

Conform to the restrictions and procedures for the use of radio transmitting equipment, as directed. Do not use transmitters without prior approval.

3.3 RESTRICTIONS ON OPERATIONS

3. 3.1 Restrictions Upon Interrupting Utility Services

The clause of the Contract Clauses entitled "Schedules for Construction Contract"; the paragraph of Section 01010, "General Paragraphs," entitled "Order of Work"; and the following apply:

a. Ensure that new utility lines are complete, except for the connections, before interrupting existing service.

b . Interruption to Water, Sanitary Sewer, Telephone Service, Electric Service, and Fire Alarm: These shall be considered utility cutovers pursuant to the paragraph of Section 01010. "General Paragraphs," entitled "Work Outside Regular Hours." This limit includes time for deactivation and reactivation.

3.1.1 Occupied Building

The Contractor shall be working in an existing building which is occupied. Do not enter occupied portions of the building without prior approval of the Contracting Officer.

3.1.2 Operations

Room 156A shall be accessible to the Government at all times during demolition and construction. All work in this area shall be coordinated with user to assure access.

3.3.2 Security Requirements

No employee or representative of the Contractor will be admitted to the work site without satisfactory proof of United States citizenship or is specifically authorized admittance to the work site.

3.3.2.1 Extraordinary Security Requirements

The clause of the Contract Clauses entitled "Identification of Employees" shall apply. Identification badges will be furnished without charge, if required, but application for and use of badges will be as directed. Immediately report instances of lost or stolen badges to the Contracting Officer.

3.3.3 Permits

Obtain these pursuant to the paragraph of Section 01010, "General Paragraphs," entitled "Station Regulations." Permits are required for, but are not necessarily limited to, welding, digging, and burning. Allow 7 calendar days processing of the application.

3.3.4 Storm Protection

If a warning of gale force winds is issued, take precautions to minimize any danger to persons, and protect the work and any nearby Government property. Precautions shall include, but are not limited to, closing opening; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work if storms of lesser intensity pose a threat to the work or any nearby Government property.

3.3.5 Asbestos Material

Asbestos-containing materials although not indicated as such, might be encountered by the Contractor during construction operations. Accordingly, the Contractor shall remain alert to the possibility of encountering such unidentified materials during construction operations and when encountering them shall stop that part of the work which could impact, mechanically abrade, or otherwise disturb such materials and, instead, notify the Contracting Officer in writing of such findings within 2 days. The Contracting Officer will then either direct a resumption of that part of the work so stopped or direct that sample(s) be taken and tested before the work is resumed. The Contractor shall handle the asbestos containing material as required by Section 02075, "Removal and Disposal of Asbestos Materials." It is intended that all existing friable and nonfriable materials such as, but not limited to, asbestos-cement pipe, ceiling tiles, rigid insulation coverings, and vinyl-asbestos floor tile, not otherwise identified as to asbestos content and which could release airborne concentrations of asbestos fibers in a manner dangerous to human health upon disturbance during construction operations, be identified. Sampling and testing of such friable and nonfriable materials shall be in accordance with 40 CFR 763 SUBPART F, under the direction of a certified industrial hygienist meeting the requirements of Section 02075. Within 40 CFR 763 SUBPART F vis-a-vis this section, the term "local education agency" equates to the word "Contractor"; the term "school" or "school building" equates to the phrase "areas of work under this contract"; and the word "should" equates to the word "shall." If such asbestos containing materials are encountered and must be handled, a change pursuant to the clauses of the Contract Clauses entitled "Changes" and "Differing Site Conditions" will be directed.

3.3.6 Hazardous Materials to be used

Submit Material Safety Data Sheets (MSDS) for all hazardous materials to be used in this project, to the Safety Office and Medical Clinic Industrial Hygiene Division of this region prior to start of construction.

3.3.7 Equipment Warranty Identification

Each item of equipment provided by this contract which is warranted by a subcontractor, manufacturer or supplier shall be identified by a suitable information tag. Tag information shall include name and number, contractor's name and address, warranty period, telephone number and address of warranty contact. Tags shall be self-adhering, adhesive-backed or heavy duty paper attached by, a nylon self locking fastener.

--End of Section--

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1. 1 SUMMARY

Submittals listed or specified in this Contract shall conform to the provisions of this Section, unless explicitly stated otherwise.

1.2 REFERENCES

Not used.

1.3 DEFINITIONS

1.3.1 Submittal Definition

Shop drawings, product data, samples, administrative and closeout submittals, and additional data presented for review and approval. Contract Clauses "Material and Workmanship," paragraph (b); "Specifications and Drawings for Construction," paragraphs (d), (e), and (f); and "Rights in Shop Drawings" apply to all "submittals."

1.3.2 Types of Submittals

a. Shop Drawings: As used in this Section, drawings, schedules, diagrams, and other data prepared specifically for this Contract, by the Contractor or through the Contractor by way of a subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate a portion of the work. Types are as listed in the paragraph entitled "Schedule of Submittal Descriptions (SD)."

b. Product Data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate a portion of the work, but not prepared exclusively for this Contract. Types are as listed in the paragraph entitled "Schedule of Submittal Descriptions (SD)."

c. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship, physically identical to a portion of the work, illustrating a portion of the work or establishing standards for evaluating the appearance of the finished work or both. Types are as listed in the paragraph entitled "Schedule of Submittal Descriptions (SD)."

d. Administrative and Closeout Submittals: Submittals of data for which reviews and approval will be to ensure that the administrative requirements of the project are adequately met, but not to ensure directly that the work is in accordance with the design concept and in compliance with the Contract documents. Types are as listed in the paragraph entitled "Schedule of Submittal Descriptions (SD)."

1.3.3 Approving Authority

The person who is authorized to approve a submittal.

1.3.4 Work

As used in this Section, the construction required by the Contract documents, including labor necessary to produce the construction and materials, products, equipment, and systems incorporated, or to be incorporated in such construction, and including materials, products, equipment, and systems produced both on- and off-site.

1.4 SUBMITTALS

Submit the following in accordance with the requirements of this section.

1.4.1 SD-93 Administrative or Closeout Submittals

a. Submittal Status Log
List each submittal. Include for each submittal the specification section number, SD number, description of item for which the submittal is required; and the Contractor's scheduled date for the submittal. Submit the log on copies of the form "Submittal Status Log," attached. Submit the log within 30 days after notice to proceed.

1.5 PROCEDURES FOR SUBMITTALS

1.5.1 Approving Authority

The approving authority, from whom approval is sought, shall be in accordance with Section 01401, "Contractor Inspection System."

1.5.2 Limits and Constraints Regarding Submittals

a. Submittals shall be complete for each portion of the work; components of the work interrelated as a system, shall be submitted at the same time.

b. When submittal acceptability is dependent on conditions, items, or materials included in separate subsequent submittals, the submittal will be returned without review.

c. Submittals of information not required as a submittal, or covering work for which the submittals have been returned as "approved" or "approved as noted" will be returned without review.

d. Approval of a separate material, product, or component does not imply approval of assembly in which the item functions.

e. The work shall conform to approved submittals, except as to conform to the Contract requirements. Resubmit the submittal if a previously approved submittal has an error or omission.

1.5.3 Scheduling of Submittals

a. Coordinate preparation and processing of submittals with performance of the work so that work will not be delayed by submittal processing. Coordinate and sequence different categories of submittals for same work, and for interfacing units of work, so that one will not be delayed for coordination with another.

b. Except as specified otherwise, allow a review period, beginning with receipt by the approval authority, that includes at least 15 working days for relatively simple submittals or 20 working days for more complex submittals and for potential requirements to be resubmitted.

c. For submittals requiring approval by the Fire Protection Engineer, allow a review period, beginning with receipt by the Contracting Officer, of 60 calendar days for return of the submittal to the Contractor.

1.5.4 Variations

Variations from contact requirements require Government approval pursuant to the Contract Clause entitled "Specifications and Drawings for Construction" and will be considered where advantageous to the Government. Where variations are proposed for consideration, submit a written request, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to the Government. The proposed variation shall be identified separately and included along with the required submittal for the item. When a variation is submitted for approval, the Contractor warrants the following.

1.5.4.1 Variation Is Compatible

The Contract has been reviewed to establish that the variation, when incorporated, will be compatible with other elements of the work.

1.5.4.2 Contractor is Responsible

The Contractor shall take actions and bear the additional costs, including review costs by the Government, necessary because of the proposed variation.

1.5.5 Contractor's Responsibilities

a. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and Contract documents.

b. Ensure that materials is clearly legible. Ensure required specialty stamps are affixed and signed.

c. Stamp each sheet of each submittal with the Contractor's certification stamp, except that data submitted in bound volumes or on one sheet printed on two sides may be stamped on the front of the first sheet only. Word the submittal stamp as follows:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated into Contract Number _____, is in compliance with the Contract drawings and specifcation, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by _____ Date _____

d. Sign the Contractor's certification. The person signing the certification shall be one designated in writing by the Contractor as having the authority. The Signature shall be in original ink. Stamped signatures are not acceptable.

e. Transmit submittals to the approving authority in orderly sequence, in accordance with the Submittal Status Log, and to prevent project delays and delays in work by the Government or separate contractors.

f. Advise the approving authority of the variation, as required by the paragraph entitled "Variations."

g. Correct and resubmit submittal as directed by the approving authority. Direct specific attention, in writing or on resubmitted submittal, to revisions not requested by the approving authority on previous submissions.

h. Retain a copy of approved submittals at the project site, including the Contractor's copy of approved samples.

j. Furnish additional copies of submittals if requested by the Contracting Officer, to a limit of 20 submittals.

k. Ensure no work is begun until the submittals for that work have been returned as "approved" or "approved as noted", except to the extent that a portion of the work must be accomplished as a basis of the submittal.

1.5.6 Approving Authority's Responsibilities

Submittals will be reviewed for approval with reasonable promptness and only for conformance with project design concepts and compliance with the Contract documents.

Submittals will be returned with one of the following notations:

(1) Submittals marked "not reviewed" will indicate the submittal has been previously reviewed and approved, is not required as a submittal, does not evidence being reviewed and approved by the Contractor, or is not complete. Submittal so marked will be returned with an explanation as to the reason it is not reviewed. Returned submittals deemed to lack review by the Contractor or to be incomplete shall be resubmitted with appropriate action, coordination, or change.

(2) Submittals marked "approved" or "approved as submitted" authorize the Contractor to proceed with the work covered.

(3) Submittals marked "approved as noted" authorize the Contractor to proceed with the ~ work as noted provided the Contractor takes no exception to the notations.

(4) Submittals marked "revise and resubmit" or "disapproved" indicate the submittal does not comply with the design concept or the requirements of the Contract documents and shall be resubmitted with appropriate changes.

c. The transmittal sheet returning the submittal will be signed.

1.6 FORMAT AND QUANTITY OF SUBMITTALS

1.6.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to the office of the approving authority. Transmit submittals with a transmittal form prescribed by the Contracting Officer and standard for the project. The transmittal form shall identify the Contractor, indicate the date of the submittal, and include information prescribed by the transmitted form and required in the paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

1.6.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on the transmittal form. Mark each copy of each submittal identically, with the following:

a. Project title and location.

b. Construction Contract number.

c. The Section number of the Section by which the submittal is required.

d. The submittal description (SD) number of each component of the submittal.

e. If a resubmission, an alphabetic suffix on the submittal description, for example, SD-70A, to indicate the resubmission.

f. The name, address, and telephone number of the subcontractor, supplier, manufacturer and any other second tier contractor associated with the submittal.

g. Product identification and location in project.

1.6.3 Format and Quantity for Shop Drawings

a. For shop drawings presented on sheets larger than 8 1/2-inches by 14 inches, submit one reproducible and three prints of each required shop drawing prepared for this project.

(l) Transmit rolled in mailing tubes.

(2) Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to the information required in the paragraph entitled "Identifying Submittals."

(3) After review, the approving authority will retain the prints and return only the reproducible with notation resulting from the review.

b. For shop drawings presented on sheets 8 1/2-inches by 14 inches or less, conform to the format and quantity requirements for product data, and present as a part of the bound volume for the submittals required by the Section.

c. Dimension drawings, except diagrams and schematic drawings; prepare dimensioned drawings to scale. Identify materials and products for work shown.

d. Shop drawings shall be not less than 8 1/2 by 11 inches nor more that 30 by 42 inches.

1.6.4 Format and Quantity for Product Data

a. Submit 4 copies of submittals of product data.

(l) After review, the approving authority will return three copies with notations resulting from the review.

b. Present product data submittals for each Section as a complete bound volume. Include a table of contents listing page an catalog item numbers for product data.

c. Indicate, by prominent notation, each product which is being submitted; indicate the Section and paragraph numbers to which it pertains.

d. Supplement product data with material prepared for the project to satisfy submittal requirements for which product data does not exist. Note that the material is developed specifically for the project.

1.6.5 Format and Quantity of Samples

a. Furnish samples in the sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

(l) Sample of equipment or device: Full size.

(2) Sample of materials less than 2 by 3 inches: Built up to 8 1/2 by 11 inches.

(3) Sample of materials exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches or an adequate size to indicate color, texture, and material variations.

(4) Sample of linear devices or materials, such as, conduit and handrails: 10-inch length or length to be supplied, if less than 10 inches.

(5) Sample of non-solid materials, such as, sand and paint: Submit one pint.

(6) Color selection samples: 2 inches by 4 inches.

(7) Sample panel: 4 feet by 4 feet.

(8) Sample Installation: 100 square feet.

b. Samples showing range of variation: Where variations are unavoidable due to the nature of the materials, submit sets of samples of not less than three units showing the extremes and middle of the range.

c. Quantity, unless otherwise specified:

(l) Submit two samples, or two sets of samples showing range of variation, of each required item. One approved sample, or set of samples, will be retained by the approving authority and one will be returned to the Contractor.

(2) Submit one sample panel. Include components listed in technical section or as directed.

(3) Submit one sample installation, where directed.

(4) Submit one sample of non-solid materials.

d. Reusable samples: Incorporate returned samples into the work only if so specified or indicated. Incorporated samples shall be in undamaged condition at the time of use.

e. Recording of sample installation: Note and preserve the notation of the area constituting the sample installation but remove the notation at the final clean up of the project.

f. When a color, texture or pattern is specified in naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.6.6 Format and Quantity of Administrative and Closeout Submittals

a. Unless otherwise specified, submit administrative and closeout submittals in the format and quantities required for shop drawings.

b. If the submittal includes a document which is to be used in the project or become a part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document, but to a separate sheet accompanying the document.

1.7 SCHEDULE OF SUBMITTAL DESCRIPTIONS (SD)

SD- 13. Design Data

Design calculations, mix designs, analyses, or other data, written in nature and pertaining to a part of the work. A type of shop drawing.

SD-17. Manufacturer's Catalog Data

Data composed of catalog cuts, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents. A type of product data.

SD-3 1. Detail Drawings

Detail drawings consisting of fabrication and assembly drawings for all parts of the work in sufficient detail to enable the Government to check conformity with the requirements of the contract documents. A type of shop drawing.

SD-35. Drawings

Scaled drawings, diagrams, schematic drawings, or other drawings, primarily graphic in nature, illustrating details, configuration, components, physical or functional relationship, and connections of a part of the work and the relationship of one part of the work to others or illustrating relationships among various parts of the work. A type of shop drawing.

SD-44. Manufacturer's Instructions

Preprinted material describing the installation of a product, system, or material, including special notices and Material Safety Data Sheets, if any, concerning impedances, hazards, and safety precautions. A type of product data.

SD-5O. Samples

Physical examples of products, materials, equipment, and assemblies to illustrate quality, finish, or workmanship and referred to in the technical sections as "samples." A type of sample.

SD-S 1. Color Selection Samples

Samples of the available choice of colors,textures, and finishes of a product or material, presented over a substitute identical in texture to that proposed for the work. A type of sample.

SD-SS. Schedules

A tabular listing of information pertaining to the work or a tabular listing including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work. A type of shop drawing.

SD-66. Statements

A document, required of the Contractor, or through the Contractor, by way of a supplier, installer, manufacturer, or other lower tier contractor, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality. A type of shop drawing.

SD-70. Test Reports

A report signed by an authorized official of a testing laboratory that a material, product, or system identical to the material, product or system to be provided has been tested in accordance with requirements specified by naming the test method and material. The test report must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. Testing must have been within three years of the date of award of this Contract. A type of product data.

SD-73. Factory Test Reports

A written report which includes the findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for this project before it is shipped to the job site. The report must be signed by and authorized official of a testing laboratory and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. A type of shop drawing.

SD-76. Certificates of Compliance

A written statement, signed by an authorized official of the manufacturer of a product, system, or material attesting that the product, system, or material conforms to the requirements of the Contract documents. The certificate of compliance must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address. Except for test reports and factory test reports required as separate submissions, the certificate of compliance shall be submitted with substantiating test reports and other supporting data. A type of shop drawing.

SD-77. Field Test Reports

A written report which includes the findings of a test made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. The report must be signed by an authorized official or a testing laboratory or agency and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. A type of shop drawing.

SD-80. Operation and Maintenance Manuals

Data intended to be incorporated in an Operations and Maintenance Manual. A type of administrative and closeout submittal.

SD-87. Posed Instructions

Labels, signs, and templates of operating instructions that are required to be mounted or installed on or near the product for normal, safe operation. A type of administrative and closeout submittal.

SD-93. Administrative or Closeout Submittals

Documentation to ensure compliance with an administrative requirement or to establish an administrative mechanism and referred to in the technical sections as "administrative or closeout submittals." A type of administrative and closeout submittal.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

SUBMITTAL STATUS LOG
INSTRUCTIONS

1. The Submittal Status Log form shall be used by the Contractor for listing submittals. It is intended to be enlarged and used on 8 1/2 x 14-inch paper.

2. Except as noted in Notes 5 and 6, columns (b) through (h) shall be completed by the Contractor for all submittals that are required by the specification. This partially completed form then becomes the submittal log portion of the CQC Plan, for a CQC project, and the material submitted for approval as the submittal status log.

3 . As submittals are received and processed, the remaining columns are to be completed by the Contractor.

4. Column (a) shall be a consecutive number assigned by the Contractor. This number must be placed in the appropriate block of the "Submittal Transmittal Form" when submittals are processed.

5. Columns (b) and (c) together form a unique number for each submittal in the project and are to be used to identify submittals throughout. The second portion of column (c) is filled out only to designate a resubmission, with a capital letter.

6. Column (g) is filled in by the Contractor only to the extent that the CQC Representative will be the approving authority for CQC projects.

7. Column (h) is the principal or first occurring paragraph in the specification Section, where a material or product is specified.

--End of Section--

SECTION 01401

CONTRACTOR INSPECTION SYSTEM

PART 1 GENERAL

1. 1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D3666	1988 Evaluation of Inspection and Testing Agencies for Bituminous Paving Materials
ASTM D3740	1988 Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	1977 (R 1983) Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as used in Construction
ASTM E543	1988 Determining the Qualification of Nondestructive Testing Agencies
ASTM E548	1984 Preparation of Criteria for Use in the Evaluation of Testing and Inspection Bodies

1.3 QUALITY CONTROL

Quality control of this contract shall be accomplished under the Contract Clause entitled, "Inspection of Construction."

1.3.1 Contractor Inspection Plan

The Contractor shall furnish four copies of the Contractor Inspection (CI) plan to the Contracting Officer within 15 calendar days after receipt of the Notice of Award. The CI plan shall detail the procedures, instructions, and reports to be used to assure compliance with the contract. Unless specifically authorized by the Contracting Officer in writing, no construction will be started until the CI plan is approved. This plan will include, as a minimum:

a. The quality control organization in chart form, showing the relationship of the quality control organization to other elements of the firm.

b. Names and qualifications of personnel in the quality control organization.

c. Area of responsibility and authority of each individual in the quality control organization.

d. A listing of outside organizations such as testing laboratories, architects, and consulting engineers that will be employed by the Contractor, and a description of the services these firms will provide.

e. Procedures for reviewing all detail drawings, samples, certificates, or other submittals for contract compliance, including the name of the person(s) authorized to sign the submittals for the Contractor, as complying with the contract.

f. An inspection schedule, keyed to the construction schedule and following the order of the specification technical sections, indicating what inspections and tests, the names of persons responsible for the inspection and testing for each segment of work, and the time schedule for each inspection and test. The phases of control, which are the preparatory, initial, and follow up, will be addressed.

g. The procedures for documenting quality control operation, inspection, and testing, with a copy of all forms and reports to be used for this purpose. The Contractor shall include the submittal status log, specified in Section 01300. "Submittals," listing all submittals required by the specifications and stating the action required by the Contractor or the Government. The Contractor shall also prepare and maintain a testing plan which shall contain a listing of all tests required in the contract. Sample form for the Testing Plan is attached and may be used by the Contractor for these purposes; any other formats must contain the same information as shown on the sample forms.

1.3.2 Contractor Inspection (CI) Plan Meeting

At least 5 days after the CI Plan is submitted, but before construction operations begin, the Contractor shall meet with the Contracting Officer to discuss quality control requirements. The purpose of the meeting shall be to develop a mutual understanding relative to details of the system, including forms to be used for recording the inspection operations, tests, approvals, certifications, administration of the system, and Government surveillance.

1.4 DEFINITIONS

1.4.1 Approval

When the words "approval" and "approved" or words of similar meaning or import are used, they shall mean approval by the approving authority. The approving authority is the Contracting Officer.

1.4.2 Factory Tests

Tests made on various products and component parts prior to shipment to the job site, including but not limited to such items as transformers, boilers, air conditioning equipment, electrical equipment, and precast concrete.

1.4.3 Field Tests

Tests or analyses made at, or in the vicinity of, the job site in connection with the actual construction.

1.4.4 Product

The term "product" includes the plural thereof and means a type or a category of manufactured goods, constructions, installations, and natural and processed materials or those associated services whose characterization, classification, or functional performance determination is specified by standards.

1.4.5 Person

The term "person" means associations, companies, corporations, educational institutions, firms, government agencies at the Federal, State, and local level, partnerships, and societies, as well as divisions thereof, and individuals.

1.4.6 Testing Laboratory

The term "testing laboratory" means any "person" as defined above, whose functions include testing, analyzing, or inspecting "products," as defined above, evaluating the designs or specifications of such "products" according to the requirements of applicable standards.

1.4.7 Certified Inspection Reports

Reports signed by approved inspectors attesting that the items inspected meet the specification requirements other than any exception included in the report.

1.5 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.5.1 SD-93, Administrative or Close-out Submittals

a. Contractor inspection plan

b. Qualifications of testing laboratories

1.6 PROJECT SUBMITTAL SCHEDULES

The Contractor shall maintain at the job site an up-to-date log showing the status of all submittals required by the contract.

1.7 TESTING

1.7.1 Test Results

Reports shall cite the contract requirements, the test or analysis procedures used, the actual test results, and include a statement that the item tested or analyzed conforms or fails to conform to the specification requirements. Each report shall be conspicuously stamped on the cover sheet in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specifications requirements as the case may be. All test reports shall be signed by a representative of the testing laboratory authorized to sign certified test reports. The Contractor shall arrange for immediate and direct delivery of the signed original of all reports, certifications, and other documentation to the Contracting Officer.

1.7.2 Tabulation of Factory Tests and Field Tests

Prior to final payment, the Contractor shall obtain from each laboratory a tabulation of all tests it has performed in connection with the construction contract. Conforming, nonconforming, and retesting shall be tabulated. The tabulation(s) shall be certified as complete, and signed by the authorized representative of the laboratory, and shall be delivered to the Contracting Officer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 QUALITY CONTROL REQUIREMENTS

The Contractor shall inspect and test all work under the contract and maintain records of the inspections and tests. Approvals, except those required for field installations, field applications, and field tests, shall be obtained before delivery of materials and equipment to the project site. Surveillance of the inspection system will be performed by the Contracting Officer.

3.1.1 Factory Tests

Unless otherwise specified, the Contractor shall arrange for factory tests when they are required under the contract.

3.1.2 Factory Inspections by the Contractor

Unless otherwise specified, the Contractor shall arrange and perform all factory inspections specifically required in the technical sections of the specifications. These inspections shall be reported in the Daily Report to Inspector.

3.1.3 Field Inspections and Tests by the Contractor

The Contractor shall furnish all equipment, instruments, qualified personnel, and facilities necessary to inspect all work and perform all tests required by the contract. All inspections and tests performed and test results received each day shall be included in the Daily Report to Inspector.

3.1.3.1 Inspection Procedures

Inspection procedures shall include, as a minimum:

a. Preparatory Inspection: Preparatory inspection shall be performed before beginning each segment of work. Preparatory inspection shall include a review of the contract requirements, the review and approval of shop drawings and other submittal data, a check to assure that required control testing will be provided, a physical examination to assure that all materials and equipment conform to approved shop drawings and submittal data, and a check to assure all required preliminary work has been completed. The Contracting Officer shall be notified at least 24 hours in advance of the preparatory inspection.

b. Initial Inspection; Initial inspection shall be performed as soon as a representative segment of the particular item of work has been accomplished. Initial inspection shall include performance of scheduled tests, examination of the quality of workmanship, a review for omissions or dimensional errors, and approval or rejection of the initial segment of the work. The Contracting Officer shall be notified at least 24 hours in advance of the initial inspection.

c. Follow-Up Inspections: Follow-up inspections shall be performed daily and more frequency as necessary, and shall include continued testing and examinations to assure continued compliance with the contract requirements.

3.1.4 Field Inspections and Tests by the Government

If deemed necessary by the Contracting Officer, field inspections and tests will be made in accordance with the Contract Clause entitled, "Inspection of Construction."

3.1.5 Approval of Testing Laboratories

All laboratory work under this contract shall be performed by a laboratory approved by the Government. The basis of approval includes the following:

a. Testing laboratories performing work in connection with concrete, steel, and bituminous materials shall comply with ASTM E329 and ASTM D366, respectively.

b. Testing laboratories engaged in the testing and inspection of soils and rock or performing nondestructive testing shall comply with ASTM D3740 and ASTM E543, respectively.

c. Testing laboratories performing work not in connection with concrete, steel, bituminous materials, soils and non-destructive testing shall comply with ASTM E548.

5.1 Laboratory Inspection

Prior to approval, the laboratory shall submit in writing the following:

a. Functional description of the laboratory's organizational structure, operational departments, and support departments and services.

b. A list and resumes of the personnel assigned to the proposed testing, including the person charged with engineering managerial responsibility.

c. Affidavit of compliance with the applicable ASTM publication and certification that the laboratory performs work in accordance with technical requirements as required by the contract specifications.

d. A list of test and inspection equipment for each of the proposed test procedures and certification that the equipment is calibrated at prescribed intervals to ensure the validity of the test and inspection data.

e. A copy of the latest Laboratory Inspection Report by an independent agency with laboratory certification that deficiencies (if any) have been corrected.

6 Repeated Tests and Inspections

The Contractor shall repeat tests and inspections after each correction made to nonconforming materials and workmanship until tests and inspections indicate the materials, equipment, and workmanship conform to the contract requirements. The retesting and reinspections shall be performed at no additional cost to the Government.

7 Daily Report to Inspector

The signed "Daily Report to Inspector" shall be delivered to the Contracting Officer by 10:00 a.m. on the working day following the day the work was performed.

8 Monthly Report to Contracting Officer

A summary report shall also be delivered at the end of each month. This shall contain the work done during that month, test results, diagrams, etc.

--End of Section--

SECTION 01560
ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 261	Regulations Identifying Hazardous Waste
40 CFR 262	Regulations for Hazardous Waste Generators
40 CFR 263	Regulations for Hazardous Waste Transporters
40 CFR 264	Regulations for Owners and Operators of Permitted Hazardous Waste Facilities
40 CFR 178	Regulations for Shipping Container Specifications

1.3 ASBESTOS

Remove, handle, and dispose of asbestos in accordance with Section 02075, "Removal and Disposal of Asbestos Materials."

1.4 DEFINITIONS

1.4.1 Sediment Soil and other debris that have eroded and have been transported by runoff water or wind.

1.4.2 Solid Waste

Rubbish, debris, garbage, and other discarded solid materials, except hazardous waste as defined in paragraph entitled "Hazardous Waste," resulting from industrial, commercial, and agricultural operations and form community activities.

1.4.3 Rubbish

Combustible and noncombustible wastes such as paper, boxes, glass, crockery, metal, lumber, cans, and bones.

1.4.4 Debris

Combustible and noncombustible wastes such as ashes and waste materials resulting from construction or maintenance and repair work, leaves, and tree trimmings.

1.4.5 Chemical Wastes
This includes salts, acids, alkalies, herbicides, pesticides, and organic chemicals.

1.4.6 Sanitary Wastes

1.4.6.1 Sewage

Wastes characterized as domestic sanitary sewage.

1.4.6.2 Garbage

Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

1.4.7 Hazardous Waste

Hazardous substances as defined in 40 CFR 261 or as defined by applicable state and local regulations.

1.4.8 Oily Waste

Petroleum products and bituminous materials.

1.5 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.5.1 SD-93, Administrative or Closeout Submittals

a. Solid waste disposal permit

b. Disposal permit for hazardous waste

1.5.1.1 Solid Waste Disposal Permit

Submit one copy of a state and local permit or license showing such agencies' approval of the disposal

1.5.1.2 Disposal Permit for Hazardous Waste

Submit a copy of the applicable EPA permits or licenses for transportation, treatment, storage, and disposal of hazardous waste by permitted facilities.

1.6 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental Protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Land Resources

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor shall be responsible for any resultant damage.

3.1.1.1 Replacement

Remove trees and other landscape features scarred or damaged by equipment operations, and replace with equivalent, undamaged trees and landscape features. Obtain Contracting Officer's approval before replacement.

3.1.1.2 Temporary Construction

Remove traces of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other signs of construction. Grade temporary roads, parking areas, and similar temporarily used areas to conform with surrounding contours.

3.2 CONTROL AND DISPOSAL OF SOLID AND SANITARY WASTES

Pick up solid wastes, and place in containers which are regularly emptied. Do not prepare, cook, or dispose of food on the project site. Prevent contamination of the site of other areas when handling and disposing of wastes. On completion, leave the areas clean. Control and dispose of waste.

3.2.1 Disposal of Rubbish and Debris

Dispose o~ rubbish and debris in accordance with the requirements specified.

3.2.1.1 Removal From Government Property

Remove and dispose rubbish and debris from Government property.

3.2.2 Garbage Disposal

Place garbage in approved container, the Government will provide pickup and disposal service.

3.2.3 Sewage, Odor, and Pest Control

Dispose of sewage through connection to the sanitary sewage system. Where such system is not available, use chemical toilets or comparably effective units, and periodically empty wastes into sanitary sewage system, or construct and maintain an approved type of adequate sanitary convenience for the use of persons employed on the work in accordance with the General Paragraphs tided, "SANITATION." Include provisions for pest control and elimination of odors.

3.3 CONTROL AND DISPOSAL OF HAZARDOUS WASTE

3.3.1 Hazardous Type Waste

Store hazardous waste in approved containers (49 CFR 178) properly labeled to identify the type of waste and the date the container was filled. Remove the containers from the project site, and store and dispose of hazardous waste in accordance with 40 CFR 263 and 40 CFR 264. For oil and hazardous material spills, notify the Contracting Officer immediately.

3.3.2 Petroleum Products

Conduct the fueling and lubricating of equipment and motor vehicles to protect against spills and evaporation. Dispose of lubricants to be discarded and all excess oil.

3.4 DUST CONTROL

Keep dust down at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shaking bags of cement, concrete mortar, or plaster.

SECTION 02050

DEMOLITION AND REMOVAL

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

ANSI A10.6 1983 Demolition Operations - Safety Requirements

1.3 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the station daily; do not allow accumulations inside or outside the building. Store materials that cannot be removed daily in areas specified by the Contracting Officer. Demolish and remove materials containing asbestos in accordance with Section 02080, "Removal and Disposal of Asbestos Materials".

1.4 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.4.1 SD-66, Statements

a. Demolition plan

Submit proposed demolition and removal procedures for approval before work is started. Include procedures for careful removal and disposition of materials specified to be reused, coordination with other work in progress, a disconnection schedule of utility services, and a detailed description of methods and equipment to be used for each operation and of the sequence of operations.

1.5 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," safety requirements shall conform with ANSI A10.6, "Demolition Operations - Safety Requirements."

1.6 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris to occupied portions of the building and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution. Vacuum and dust the work area daily.

1.7 PROTECTION

1.7.1 Existing Work

Protect existing work which is to remain in place, be reused, or remain the property of the Government. Repair items which are to remain and which are damaged during performance of the work to their original condition, or replace with new. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal work. Repairs, reinforcement, or structural replacement must have Contracting Officer approval.

1.7.2 Weather Protection

For portions of the building to remain, protect building interior and materials and equipment from the weather at all times. Where removal of existing roofing is necessary to accomplish work, have materials and workmen ready to provide adequate and temporary covering of exposed areas so as to ensure effectiveness and to prevent displacement.

1.7.3 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.

1.8 BURNING

Burning will not be permitted.

1.9 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Repair items to be relocated which are damaged or replace damaged items with new undamaged items as approved by the Contracting Officer.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVES

3.1.1 Structures

Remove existing portions of structures as indicated.

SUBPART

3.1.2 Utilities and Related Equipment

Remove existing utilities, as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer. If utility lines are encountered that are not shown on drawings, contact the Contracting Officer for further instructions.

3.1.2 Roofing

Remove roofing to effect the connections with new flashing. Remove roofing without damaging the roof deck.

3.1.3 Concrete

Saw concrete a long straight lines to a depth of not less than 2 inches. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. Break out the remainder of the concrete provided that the broken area is concealed in the finished work, and the remaining concrete is sound. At locations where the broken face cannot be concealed, grind smooth or saw cut entirely through the concrete.

3.1.4 Patching

Where removal leaves holes and damaged surfaces exposed in the finished work, patch and repair these holes and damaged surfaces to match adjacent finished surfaces. Where new work is to be applied to existing surfaces, perform removals and patching in a manner to produce surfaces suitable for receiving new work. Finished surfaces of patched area shall be flush with the adjacent existing surface and shall match the existing adjacent surface as closely as possible as to texture and finish. Patching shall be as specified and indicated, and shall include:

b. Where existing partitions have been removed leaving damaged or missing resilient tile flooring, patch to match the existing floor tile.

c. Patch acoustic lay-in ceiling where partitions have been removed. The transition between the different ceiling heights shall be effected by continuing the higher ceiling level over to the first runner on the lower ceiling and closing the vertical opening with a painted sheet metal strip.

3.2 DISPOSITION OF MATERIAL

3.2.1 Title to Materials

Except where specified in other sections, all materials and equipment removed, and not reused, shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition and removal procedures, and authorization by the Contracting Officer to begin demolition. The Government will not be responsible for the condition or loss of, or damage to, such property after notice to proceed. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.2.2 Reuse of Materials and Equipment

Remove and store materials and equipment indicated to be reused or relocated to prevent damage, and reinstall as the work progresses.

.NOTE-END

3.2.2 Disposal of Rubbish and Debris

Dispose of rubbish and debris in accordance with the requirements specified herein.

3.2.3.1 Combustible and Noncombustible Materials

Combustible materials must be separated from noncombustible materials prior to acceptance at the landfill site. Dispose of combustible materials at the Naval Air Station burn pit.

3.2.4 Salvage of Existing Materials and Equipment

Existing materials and equipment which are required to be removed or disconnected to perform the work, but are not indicated or specified for use in the new work, shall remain the property of the Government and shall be transported to storage areas on the station where directed by the Contracting Officer. Likewise, items indicated to be salvaged shall remain the property of the Government, and if not indicated to be reused in the new work shall be transported to storage areas on the station where directed by the Contracting Officer.

3.3 CLEANUP

3.3.1 Debris and Rubbish

Remove and transport debris and rubbish in a manner that will prevent spillage on pavements, street or adjacent areas. Limit to 3/8-cubic yard capacity buggies or other conveyances used on roofs and within the building to transport removed debris. Clean up spillage from pavements, streets and adjacent areas. Conform to other applicable requirements under Section 01560. "Environmental Protection."

--End of Section--

SECTION 02080

REMOVAL AND DISPOSAL OF ASBESTOS MATERIALS

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134	Respiratory Protection
29 CFR 1910.145	Specifications for Accident Prevention Signs and Tags
29 CFR 1926.58	Asbestos, Tremolite, Anthophyllite, and Actinolite
40 CFR 61-SUBPART A	General Provisions
40 CFR 61-SUBPART M	National Emission Standard of Asbestos

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

ANSI Z9.2	1979 Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2	1980 Practice for Respiratory Protection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D1331	1956 (Rev. 1980) Surface and Interfacial Tension of Solutions of Surface-Active Agents

UNDERWRITERS LABORATORIES, INC. (UL)

UL 586	1985 High-Efficiency, Particulate, A* Filter Units

1.3 REMOVAL AND DISPOSAL

1.3.1 Definitions

1.3.1.1 Amended Water

Water containing a wetting agent or surfacant.

1.3.1.2 Area Monitoring

Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of personnel potentially exposed to asbestos.

1.3.1.3 Asbestos

A group of naturally occurring minerals that separate into fibers. There are six asbestos minerals used commercially: chrysotile, amosite, crocidolite. tremolite, anthophyllite, and actinolite.

1.3.1.4 Asbestos Control Area

An area where asbestos removal operations are performed which is isolated by physical boundaries to prevent unauthorized entry of personnel and to prevent the spread of asbestos dust, fibers, or debris.

1.3.1.5 Asbestos Fibers

Asbestos fibers having a length to diameter ratio of at least 3:1 and longer than 5 micrometers.

1.3.1. 6 Asbestos Permissible Exposure Limit

The limit is 0.1 fivers (longer than 5 micrometers) per cubic centimeter of air as an 8-hour time weighted average as determined by Appendix A of 29 CFR 1926.58.

1.3.1.7 Friable Asbestos Material

Material that contains more than one percent asbestos by weight which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable asbestos material is considered hazardous during removal and disposal procedures.

1.3.1.8 HEPA Filter Equipment

High efficiency particulate air (HEPA) filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 micrometers or larger.

1.3.1.9 Local Exhaust System

A system in which static pressure in an enclosed control area is lower than that of the environment outside the control area, as specified herein.

1.3.1.10 Nonfriable Asbestos Material

Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and may not release fibers in excess of the asbestos permissible exposure limit during any appropriate use, handling, storing, transporting or processing. Nonfriable asbestos material may be hazardous during removal and disposal procedures.

1.3.1.11 Personal Monitoring

Sampling of asbestos fiber concentrations within the breathing zone of an employee to determine the 8-hour time weighted average in accordance with Appendix A of 29 CFR 1926.58. The samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12 inches of the nose or mouth of an employee.

1.3.1.12 Removal Encapsulant

A manufactured asbestos penetrating encapsulant designed specifically for asbestos removal.

1.3.1.13 Surfacant (Wetting Agent)

A chemical wetting agent added to water to improve penetration. The surfactant shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of one fluid ounces to 5 gallons of water or as specified by the manufacturer. An equivalent surfactant shall be understood to mean a material with a surface tension of 29 dynes/cm as tested in accordance with ASTM D1331.

1.3.1.14 Time Weighted Average (TWA)

The TWA is an 8-hour time weighted average of airborne concentration of fibers (longer than 5 micrometers) per cubic centimeter of air which represents the employee's 8-hour workday as determined by Appendix A of 29 CFR 1926.58.

1.3.2 Description of Work

The work covered by this section includes the handling of friable materials containing asbestos which are encountered during removal and demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos-containing materials. Perform work in accordance with 29 CDR 1926.58, 40 CFR 61-SUBPART A and 40 CFR 61-SUBPART M, and the requirements specified herein. The asbestos work includes the demolition and removal of piping insulation located within the walls scheduled for demolition and the cleanup and removal of a wide assortment of debris existing within the indicated control area of the attic.

1.3.3 Title to Materials

Materials resulting from demolition work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified herein.

1.3.4 Protection of Existing Work to Remain

Perform demolition work without damage or contamination of adjacent areas. Where such work is damaged or contaminated, restore work to original condition or better.

1.3.5 Medical Requirements

29 CFR 1926.58.

1.3.5 .1 Medical Examinations

Before exposure to airborne asbestos fibers, furnish asbestos workers with a comprehensive medical examination as required by 29 CFR 1926.58. Examination is not required if records show the employee has been examined as required by 29 CFR 1926.58 within the past year. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within 30 calendar day before or after termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist, and mark medical record jackets with the word "ASBESTOS".

1.3.5.2 Medical Surveillance Program

Maintain complete and accurate records of employees' medical examinations, medical records, and exposure measurements as required by 29 CFR 1926.58 for a period of 40 years after termination of employment. Make records of the required medical surveillance program available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health, the Director of The National Institute for Occupational Safety and Health (NIOSH), authorized representatives of affected employees, former employees, or designated representatives.

1.3.6 Training

Within one year prior to assignment to asbestos work, each employee shall be instructed for a minimum of 8 hours by an industrial hygienist with regard to the hazards of asbestos, safety and health precautions, the use and requirements for protective clothing, equipment, and respirators, and the association of cigarette smoking and asbestos-related disease, and the additional requirements of 29 CFR 1926.58. Furnish each employee with a respirator fit test administered by the industrial hygienist as required by 29 CFR 1926.58. Fully cover engineering and other hazard control techniques and procedures.

1.3.7 Permits, State License, and Notifications

Obtain necessary permits and state license in conjunction with asbestos removal, hauling, and disposition, and furnish timely notification of such actions required by federal, state, regional, and local authorities. All asbestos removal shall be performed by an agent licensed by the State Contractors' Licensing Board (as an asbestos contractor) and certified by the California Department of Occupational Safety and Health (for satisfaction of worker protection standards). Notify the United States Environmental Protection Agency (Region IX), Ventura County Air Pollution Control District, NCEL Safety office, CBC Medical Clinic Industrial Hygiene Division and the Contracting Officer in writing 20 days prior to the commencement of work in accordance with 40 CFR 61-SUBPART M.

1.3.8 Safety and Health Compliance

In addition to detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, regional and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.58 an 40 CFR 61-SUBPART A and 40 CFR 61-SUBPART M. Submit matters of interpretation of standard to the appropriate administrative agency for resolution before starting work. Where specification requirements and referenced documents vary, the most stringent requirement shall apply.

1.3.9 Respirator Program

Establish and implement a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134.

1.3.10 Industrial Hygienist

The industrial hygienist shall be certified by the American Board of Industrial Hygiene in comprehensive practice. The industrial hygienist shall be retained by the Contractor for the duration of the asbestos removal and disposal operations.

1.4 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals." Submittals shall be submitted to and approved by the Contracting Officer prior to commencing work involving asbestos materials.

1.4.1 SD-17, Manufacturer's Catalog Data

a. Local exhaust equipment

b. Vacuum equipment

c. Respirators

d. Pressure differential monitor

1.4.2 SD-66, Statements

a. Plan for removal and demolition of asbestos

b. Certification and training of industrial hygienist

c. Approval of landfill

1.4.2.1 Plan for Removal and Demolition of Asbestos

Submit a detailed job-specific plan of the work procedures to be used in the removal and demolition of materials containing asbestos. The plan shall be prepared, signed, and sealed, including certification number and date, by the industrial hygienist. Such plan shall include a sketch showing the location, size, and details of asbestos control areas, location and details of the change rooms, layout of change rooms, layout and location of waste container pass-out airlock system, and locations of local exhaust equipment. The plan shall also include interface of trades involved in the construction, sequencing of asbestos-related work, disposal plan, type of wetting agent or removal encapsulant to be used, air sampling plan, respirators, protective equipment, pressure differential monitoring device, and a detailed description of the method to be employed in order to control pollution. The air sampling portion of the plan shall include air sampling training and strategy, sampling locations, estimated number of samples, sampling methodology, and frequency and duration of sampling. The plan shall be approved prior to the start of asbestos work. Prior to beginning work, the Contractor and industrial hygienist shall meet with the Contracting Officer to discuss in detail the asbestos plan, including work procedures and safety precautions. Notify the Contracting Officer 20 working days prior to start of asbestos work.

1.4.2.2 Qualifications of Testing Laboratory

Submit the name, address, and telephone number of the industrial hygienist selected to prepare the asbestos plan, direct monitoring and perform training. Submit certification that the industrial hygienist is certified by the American Board of Industrial Hygiene in comprehensive practice. Include certification number and date. Submit certificates signed and dated by the industrial hygienist and by each employee that the employee has received training for a minimum of 8 hours by the industrial hygienist in the handling of materials that contain asbestos as required by 29 CFR 1926.58.

1.4.2.4 Approval of Landfill

Submit written evidence that the landfill is approved for asbestos disposal by the state and local regulatory agencies.

1.4. 3 SD-76, Certificates of Compliance

a. Local exhaust and vacuum filters b. Respirators

1.4.4 SD-77, Field Test Reports

a. Air monitoring

b. Local exhaust system

1.4.4.1 Air Monitoring

Fiber counting shall be completed and results reviewed by the industrial hygienist within 16 hours. The industrial hygienist shall notify the Contractor and Contracting Officer immediately of exposure to asbestos fibers in excess of the permissible exposure limit. Submit monitoring results to the Contracting Officer within 3 working days, signed by the testing laboratory employee performing air monitoring, the employee that analyzed the sample, and the industrial hygienist.

1.4.4.2 Local Exhaust System

The local exhaust system shall be operated continuously, 24 hours a day, until the enclosure of the asbestos control area is removed. Pressure differential recordings for each workday shall be reviewed by the industrial hygienist and submitted to the Contracting Officer within 24 hours from the end of each workday. The industrial hygienist shall notify the Contractor and Contracting Officer immediately of any variance in the pressure differential which could cause exposure of adjacent unsealed areas to asbestos fiber concentrations in excess of 0.1 fibers (longer than 5 micrometers) per cubic centimeters of air.

1.4.5 SD-93, Administrative or Closeout Submittals

a. Notification to equipment rental agency
b. Landfill delivery records

1.4.5.1 Notification of Equipment Rental

If rental respirator equipment is to be used during asbestos handling and disposal, written notification concerning the intended use of the equipment will be furnished to the rental agency, with a copy to the Contracting Officer.

1.4.5.2 Landfill Delivery Records

Within 3 working days after delivery of asbestos-laden material to landfill, submit detailed delivery tickets, prepared, signed, and dated by an agent of the landfill, certifying the amount of asbestos materials delivered to the landfill

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 EQUIPMENT

Furnish the Contracting Officer with two complete sets of personal protective equipment daily, as required herein, for entry to inspection of the asbestos control areas. The personal protective equipment furnished to the Contracting Officer shall include respirators, disposable protective whole body covering, head coverings, gloves, foot coverings, eye protection, and use of the Contractor's change room. The personal protective equipment shall remain the property of the Contractor.

3.1.1 Respirators

Select respirators approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing asbestos fibers. Furnish personnel engaged in the removal and demolition of asbestos materials with Type C supplied air respirators, continuous flow or pressure demand class, until the industrial hygienist establishes the TWA. After the TWA is established, the Contractor shall furnish respirators as presented in 29 CFR 1926.58 as follows:

RESPIRATOR REQUIRED RESPIRATOR	TIME WEIGHTED AVERAGE OF ASBESTOS IN THE BREATHING ZONE OUTSIDE THE (fibers longer than 5 micrometers per cubic centimeter of air)
Half-mask air-purifying respirator equipped with high-efficiency filters	2.0 or less
Full facepiece air-purifying respirator equipped with high-efficiency filters.	2 - 10
Powered air-purifying respirator equipped with high-efficiency filters or supplied-air respirator operated in continuous flow mode.	10 - 20
Full facepiece supplied-air respirator operated in pressure demand mode.	20 - 200
Full facepiece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.	greater than 200 or unknown

NOTE: a. Respirators assigned for high environmental concentrations may be used at lower concentrations.
b. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

3.1.2 Special Clothing

3.1.2.1 Protective Clothing

Furnish personnel exposed to airborne concentrations of asbestos fibers greater than or equal to the permissible exposure limit with fire-retardant, disposable protective whole body clothing, head coverings, gloves, and foot coverings. Furnish disposable plastic or rubber gloves for comfort, but shall not be used alone. Use tape to secure sleeves at the wrists and to secure foot coverings at the ankles.

3.1.2.2 Work Clothing

Cloth work clothes may be worn under the disposable protective coveralls

3.1.3 Change Rooms

Provide a temporary unit with a separate equipment room, decontamination locker room, and a clean locker room for personnel required to wear whole body protective clothing. Separate each room from each other and from the control area by airlocks. Provide two separate lockers for each asbestos worker, one in each locker room. Keep street clothing and street shoes in the clean locker. Vacuum and remove asbestos-contaminated disposable protective clothing in impermeable bags or containers for disposal. Do not remove disposable protective clothing in the decontamination locker room. Remove cloth work clothing in the decontamination room. Tag and bag cloth work clothes for laundering and keep work shoes in the decontamination locker. Do not wear work clothing between home and work. Provide showers with hot and cold water. Locate showers between the decontamination locker room and the clean locker room, and require employees to shower before changing into street clothes. Shower wastewater shall be handled and disposed of as asbestos-contaminated material or shall be filtered through a final filter of at least 0.5 micron particle size collection capability before disposal into the sanitary sewer system. Handle and dispose of filters as asbestos contaminated material. Clean asbestos-contaminated work clothing in accordance with 29 CFR 1926.58. Change rooms shall be physically attached to the asbestos control area.

3.1.4 Eye Protection

Furnish goggles for personnel engaged in asbestos operations when the use of a full face respirator is not required.

3.1.5 Caution Signs and Labels

Provide caution signs printed in English at approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Provide caution labels printed in English. Affix labels to asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos contaminated products.

3.1.5.1 Caution Sign

29 CFR 1910.45, paragraph (d) (4), vertical format, minimum 20 by 14 inches; spacing between two consecutive lines shall be at least equal to the height of the upper line. Display the following legend in the lower panel:

Legend	Notation
Danger	l-inch Sans Serif Gothic or Block
Asbestos	l-inch Sans Serif Gothic or Block
Cancer and Lung Disease Hazard	1/4-inch Sans Serif Gothic or
Respirators and Protective Clothing Are Required in this Area	1/4 inch Gothic

3.1.5.2 Caution Labels

Provide label with sufficient print size to be clearly legible, with bold print on a contrasting background, displaying the following legend:

DANGER

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

3.1.6 Tools and Local Exhaust System

Provide the local exhaust system in accordance with ANSI Z9.2 and as specified herein. Provide a local exhaust system in the asbestos control area. Filters on vacuums and exhaust equipment shall be absolute HEPA filters and UL 586 labeled. Provide local exhaust equipment designed for a minimum of one control area air change every 15 minutes and additional air change flow rate sufficient to maintain a minimum pressure differential of minus 0.02 inch of water column relative to adjacent, unsealed areas. Provide a manometer-type or magnetic-type negative pressure differential monitor with minor scale divisions of 0.02 inch of water and accuracy within plus or minus one percent. Calibrate the manometer daily as recommended by the manufacturer. Furnish manually recorded readings of the pressure differential between locations in the asbestos control area and adjacent unsealed areas at the beginning of each workday and every 2 working hours thereafter. Pressure differential readings shall be taken at several points inside the asbestos control area including the furthest point from the local exhaust equipment. The local exhaust system shall be operated continuously, 24 hours a day, until the asbestos control area enclosure is removed. Replace filters as required to maintain the efficiency of the system. The building heating, ventilating, and air conditioning (HVAC) system shall not be used as the local exhaust system for the asbestos control area.

3.2 WORK PROCEDURES

Perform asbestos-related work in accordance with 29 CFR 1926.58 and as specified herein. Use dry removal procedures. Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking shall not be permitted in the asbestos control area or change room. Personnel or other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos greater than or equal to 0.1 fibers (longer than 5 micrometers) per cubic centimeter or air unless the personnel protection provisions of this specification are complied with by the trade personnel. Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the asbestos control areas. Seal intake and exhaust vents in the asbestos control area with 6-mil plastic sheet and tape. Seal seams in HVAC components that pass through asbestos control area.

3.2.1 Furnishings

Furniture and equipment will be removed from the work area by the Government before asbestos work begins.

3.2.2 Masking and Sealing

3.2.2.1 Asbestos Control Area Requirements

Seal openings in areas where the release of airborne asbestos fibers is expected. Prior to commencing asbestos demolition and removal procedures, establish an asbestos control area with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated asbestos control area. The established control area shall be provided with protective covering of walls and ceilings with a continuous membrane of two layers of minimum 4-mil plastic sheet sealed with tape to prevent water or other damage and two layers of 6-mil plastic over floors extending a minimum of 12 inches up walls. Seal joins with tape. Openings will be allowed in enclosures of asbestos control areas for the supply and exhaust of air for the local exhaust system.

3.2.3 Asbestos Handling Procedures

3.2.3.1 General Procedures

Wet asbestos material with a fine spray of amended water, other approved wetting agent, or a removal encapsulant during removal, cutting, or other handling to reduce the emission of airborne fibers. Remove material and immediately place in sealed impermeable bags. Collect asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing which may produce airborne concentrations of asbestos fibers, place in sealed impermeable bags constructed of 6-mil plastic sheet. Sealed impermeable bags shall be stored and removed in asbestos waste drums. Provide asbestos caution labels on sealed impermeable bags and asbestos waste drums. Where unusual circumstances prohibit the use of sealed impermeable bags, the industrial hygienist shall submit, in the asbestos plan, an alternate proposal for removal of asbestos materials and containment of asbestos fibers.

3.2.4 Monitoring

Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1926.58 and as specified herein, Air quality monitoring, testing and reporting shall be performed by a full time employee of the testing laboratory. The Government shall have the option to perform independent monitoring.

3.2.4.1 Monitoring Prior to Asbestos Work

Perform area monitoring and establish the reference TWA one day prior to the masking and sealing operations for each asbestos removal site.

3.2.4.2 Monitoring During Asbestos Work

Perform personal and area monitoring on characteristic asbestos work tasks and establish the TWA during the first exposure to airborne concentrations of asbestos. Thereafter, perform personal and area monitoring at a frequency designated by the industrial hygienist, but not less than once every 4 hours. Perform area monitoring during the work shift, inside the asbestos control area, outside the entrance to the asbestos control area, and at the exhaust opening of the local exhaust system. If monitoring outside the asbestos control area shows airborne concentrations have reached 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air, the industrial hygienist shall stop work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately.

3.2.4.3 Monitoring After Final Cleanup

Perform aggressive area monitoring after surfaces have been thoroughly dried. Perform aggressive area monitoring of asbestos fibers and establish the TWA of less than 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air after final cleanup but before removal of the enclosure of the asbestos control area. Perform area monitoring and establish the TWA 2 days and 5 days after the enclosure of the asbestos control area is removed. Aggressive area monitoring shall be performed using portable fans to simulate actual use conditions as directed by the industrial hygienist. The fibre counts from the samples shall be less than 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air. Should final samplings indicate a higher value,.the Contractor shall reclean the area and repeat the monitoring.

3.2.5 Site Inspection

While performing asbestos removal work, the Contractor shall be subject to onsite inspection by the Contracting Officer, who may be assisted by safety or health personnel. If the work is in violation of specification requirements, the Contracting Officer will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

3.3 CLEANUP AND DISPOSAL

3.3.1 Cleanup

Maintain surfaces of the asbestos control area free of accumulations of asbestos fibers. Restrict the spread of dust and debris; keep waste from being distributed over the general area. Do not dry sweep or blow down the space with compressed air. When asbestos removal, disposal, and cleanup are complete, the industrial hygienist shall certify, in writing, that the concentration of airborne asbestos in the control area and the waste container removal system are less than 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air and that there is are no visible accumulation of dust. Do not remove the asbestos control area enclosure and caution signs prior to the Contracting Officer's receipt of the industrial hygienist's certification. After final cleanup, remove filters on the building HVAC system in the control area and provide new filters. Handle and dispose filters as asbestos-contaminated materials. Re-establish HVAC, mechanical, and electrical systems in working order. The Contracting Officer will visually inspect the affected surfaces for residual asbestos material and accumulated dust before and after the removal of the asbestos control area; the Contractor shall reclean areas showing dust or residual asbestos materials. If recleaning is required, monitor the asbestos airborne concentration after recleaning. Notify the Contracting Officer before unrestricted entry is permitted. The Government shall have the option to perform independent monitoring to certify the areas are safe before entry is permitted.

3.3.3 Removal of Asbestos Waste Containers

Store asbestos waste containers in the asbestos control area until the control area cleanup is complete, or provide a waste container removal system. Asbestos waste containers shall not be removed through the change rooms. The waste container removal system shall consist of a washdown station inside the asbestos control area, a washroom, and a waste container holding area. Provide airlocks between each area and an airlock with access to outside the asbestos control area from the holding area. Provide caution signs as specified herein for asbestos control areas. The waste container removal system shall be a temporary unit constructed to prevent the escape of asbestos fibers from the area. The system shall be physically attached to the asbestos control area. Personnel entering the waste container removal system shall wear personal protective equipment. The system shall not be used to enter or exit the worksite. Access to outside the waste container removal system shall be sealed except during the removal of asbestos waste containers. Perform cleanup of the waste container removal system as specified herein for enclosured asbestos control areas. Do not removed the waste container removal system enclosure and caution signs prior to the Contracting Officer's receipt of the industrial hygienist's cleanup certification

3.3.3 Disposal of Asbestos

Dispose of waste asbestos material at a state-approved sanitary landfill off Government property. Procedure for hauling and disposal shall comply with 40 CFR 61-SUBPART M, and state, regional, and local standards. Sealed impermeable bags may be dumped from drums into the burial site unless bags have been broken or damaged. Damaged bags shall remain in the drum and the entire contaminated drum shall be buried. Uncontaminated drums may be recycled. Workers unloading sealed drums shall wear appropriate respirators and personal protective equipment when handling asbestos materials at the disposal site as directed by the industrial hygienist.

-- End of Section-- 02080-13

SECTION 15011

MECHANICAL GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent reference. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR l910-SUBPART 0	Machinery and Machine Guarding
29 CFR 1910.219	Mechanical Power-Transmission Apparatus

SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, INC. (SMACNA)

SMACNA GFSR	1982 Guidelines for Seismic Restraints (GFSR) of Mechanical Systems and Plumbing Piping Systems, (First Edition)

1.3 RELATED REQUIREMENTS

Submit drawings a minimum 14 by 20 inches in size, using a minimum scale of 1/8 inch per foot. Include floor plans, sectional views, wiring diagrams, and installation details of equipment; and equipment spaces identifying and indicating proposed location, layout and arrangement of items of equipment, control panels, accessories, piping, ductwork, and other items that must be shown to ensure a coordinated installation. Wiring diagrams shall identify circuit terminals, and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Drawings shall indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices.

1.3.1 Manufacturer's Instructions

Where installation procedures or part of installation procedures are required to be in accordance with the manufacturer's instructions, submit printed copies of those instructions prior to installation. Installation of the item shall not proceed until the manufacturer's instructions are received. Failure to submit can be cause for rejection of the equipment or material.

1.3.2 Certificates of Compliance

Submit a certificate of compliance from the manufacturer for approval for products, finishes, and equipment as specified in the technical sections whose compliance with organizational standards or specifications is not regulated by an organization using its own listing or label as proof of compliance. The certificate shall identify the manufacturer, the products, equipment,or materials and the referenced standard and shall simply state that the manufacturer certifies that the product conforms to the requirements specified.

1.3.2.1 Reference Standards Compliance

Where equipment or materials are specified to conform to industry and technical society reference standards of organizations such as the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association (NEMA), American Society of Mechanical Engineer (ASME), American Gas Association (AGA), American Refrigeration Institute (ARI), and Underwriters Laboratories (UL), submit proof of such conformance. If an organization uses a label or listing to indicate compliance with a particular reference standard, the label or listing will be acceptable evidence, unless otherwise specified in the individual sections.

1.3.2.2 Independent Testing Organization Certificate

In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing and approved by the Contracting Officer. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.3.3 Operation and Maintenance Manuals

Comply with the requirements of Section 01730 and the technical sections.

1.3.4 Operating Instructions

Submit text of posted operating instructions for each system and principal item of equipment as specified in the technical sections.

1.4 QUALITY ASSURANCE

1.4.1 Material and Equipment Qualifications

Provide materials and equipment that are standard products of manufacturers regularly engaged in the manufacture of such products, which are of a similar material, design and workmanship. Standard products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. the 2-year use shall include applications of equipment and materials under similar circumstances and of similar size. The product shall have been for sale on the commercials market through advertisements, manufacturers' catalogs, or brochures during the 2 year period.

1.4.2 Alternative Qualifications

Products having less than a two-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6000 hours, exclusive of the manufacturer's factory or laboratory tests, can be shown.

1.4.3 Service Support

The equipment items shall be supported by service organizations. Submit a certified list of qualified permanent service organizations for support of the equipment which includes their addresses and qualifications. These service organizations shall be reasonably convenient to the equipment installation and able to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

1.4.4 Manufacturer's Nameplate

Each item of equipment shall have a nameplate bearing the manufacturer's name, address, model number, and serial number securely affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.

1.4.5 Modification of References

In each of the publications referred to herein, consider the advisory provisions to be mandatory, as though the word, "shall" had been substituted for "should" wherever it appears. Interpret references in these publications to the "authority having jurisdiction," or words of similar meaning, to mean the Contracting Officer.

1.5 DELIVERY, STORAGE, AND HANDLING

Handle, store, and protect equipment and materials to prevent damage before and during installation in accordance with the manufacturer's recommendations, and as approved by the Contracting Officer. Replace damaged or defective items.

1.6 POSTED OPERATING INSTRUCTIONS

Provide for each system and principal item of equipment as specified in the technical sections for the use of the operation and maintenance personnel. The operating instructions shall include the following:

a. System Descriptive Information: Wiring diagrams, control diagrams, piping diagrams, control sequence and operating points for each principal system and item of equipment. Post instructions where directed.

b. Equipment Instructions: Attach to or post adjacent to each principal item of equipment and include directions.

(l) Start up, proper adjustment, operating, lubrication, and shutdown procedures.

(2) Safety precautions, procedure in the event of equipment failure.

(3) Other areas as recommended by the manufacturer of each system or item of equipment.

Print or engrave, and frame under glass or in approved laminated plastic, Operating instructions exposed to the weather shall be made of weatherproof materials or enclosed to be weather protected. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

1.7 SAFETY REQUIREMENTS:

1.7.1 Equipment Safety

Fully enclose or properly guard in accordance with 29 CFR 1910.219 belts, pulleys, chairs, gears, couplings, projecting setscrews, keys, rotating parts, and other power transmission apparatus, located where persons can come in close proximity thereto. Points of operation, ingoing nip points, and machinery producing flying chips and sparks shall be guarded in accordance with the applicable portions of 29 CFR l910-SUBPART 0. Provide positive means of locking out equipment so that equipment cannot be accidentally started during maintenance procedures. high-temperature equipment and piping so located as to endanger personnel or create a fire hazard shall be properly guarded or covered with insulation of the type specified. Provide catwalks, maintenance platforms, and guardrails where required for safe operation and maintenance of equipment. Provide ladders or stairways to reach catwalks and maintenance platforms. Ensure that access openings leading to equipment are large enough to carry through routine maintenance items such as filters and tools.

1.7.2 Warning Sign

Provide a permanent placard or sign at the entrance to confined spaces contained in the equipment. The sign shall warn personnel not to enter the space until the atmosphere inside has been tested and systems have been deenergized.

1.8 ELECTRICAL REQUIREMENTS

Provide electrical components of mechanical equipment and systems such as motors, controllers, contractors and disconnects under Division 15, except that controllers indicated as part of motor control centers shall be provided under Section 16402, "Interior Wiring Systems"; these components shall meet the minimum requirements as specified in Section 16011, "Electrical General Requirements," and Section 16402, "Interior Wiring Systems," and all additional requirements specified in the section covering the associated mechanical equipment. Extended voltage range motors will not be permitted. Provide interconnecting wiring for components of packaged equipment as an integral part of the equipment. Interconnecting power wiring and conduit for field erected equipment and control wiring rated at 100 volts or higher and conduit shall be as specified in Division 16. Control wiring rated at 100 volts or less and conduit shall be specified in Division 15.

1.9 SEISMIC RESTRAINTS

Provide seismic restraints for ductwork and piping in accordance with SMACNA GFSR. For equipment seismic restraints, comply with Section 15200, "Noise, Vibration and Seismic Control."

1.10 UNDERGROUND STORAGE TANK SYSTEMS FOR HAZARDOUS LIQUID AND MATERIALS

Obtain construction permit and perform tests and inspection in accordance with the regulations of the state and local jurisdiction. In case of conflicts in regulations, the local jurisdiction regulations will govern. Obtain inspection and approval by the state and local jurisdiction in which underground storage tanks for hazardous liquid and materials are installed.

1.11 INSTRUCTIONS TO GOVERNMENT PERSONNEL

When specified in other sections, furnish the services of competent instructors to give full instruction to the designated Government personnel in the adjustment, operation, and maintenance, including pertinent safety requirements, of the specified equipment or system. Instructors shall be thoroughly familiar with all parts of the installation

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

--End of Section--

SECTION 15250
INSULATION OF MECHANICAL SYSTEMS

PART 1 GENERAL

1. 1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ATSM)

ASTM A167	1988 Stainless and Heat-Resisting Chromium-Nickel Steel
Plate, Sheet, and Strip	
ASTM B209	1988 Aluminum and Aluminum-Alloy Sheet and Plate
ASTM C177	1985 Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
ASTM C195	1977 (R 1983) Mineral Fiver Thermal Insulating Cement
ASTM C533	1985 Calcium Silicate Block and Pipe Thermal Insulation
ATSM C534	1988 Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form
ATSM C547	1977 Mineral Fiber Preformed Pipe Insulation
ATSM C552	1988 Cellular Glass Block and Pipe Thermal Insulation
ATSM C553	1970 (R 1977) Mineral Fiber Blanket and Felt Insulation
(Industrial Type)	
ATSM C612	1983 Mineral Fiber Block and Board Thermal Insulation
ATSM C916	1985 Adhesives for Duct Thermal Insulation
ATSM D828	1987 Tensile Breaking Strength of Paper and Paperboard

ASTM E84	1988 Surface Burning Characteristics of Building Materials
ASTM E96	1980 Water Vapor Transmission of Materials

FEDERAL SPECIFICATIONS (FS)

FS L-P~535	(Rev E) Plastic Sheet (Sheeting): Plastic Strip: Poly (Vinyl Chloride) and Poly (Vinyl Chloride-Vinyl Acetate), Rigid
FS HH-B- 100	(Rev. B) Barrier Material Vapor (For Pipe, Duct and Equipment Thermal, Insulation)

MILITARY SPECIFICATIONS (MIL)

MIL A-3316	(Rev. C) (Int Amd. l) Adhesives, Fire-Resistant, Thermal Insulation
MIL-A-24179	(Rev. A) (Amd. l) Adhesives, Flexible Unicellular-Plastic Thermal Insulation
MIL-C-19565	(Rev. C) (Amd. l) Coating Compounds, Thermal Insulation, Fire- and Water-Resistant, Vapor Barrier
MIL-C-20079	(Rev. H) Cloth, Glass: Tape, Textile Glass; and Thread, Glass and Wire-Reinforced Glass

MANUFACTURERS STANDARDIZATION SOCIETY
OF THE VALUES AND FITTINGS INDUSTRY (MSS)

MSS SP-58	1988 Pipe Hangers and Supports-Materials, Design and Manufacture
MSS SP-69	1983 Pipe Hangers and Support-Selection and Application

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 255	1984 Surface Burning Characteristics of Building Materials

UNDERWRITERS LABORATORIES, INC. (UL)

UL 723	1983 Surface Burning Characteristics of Building Materials

1. 3 RELATED REQUIREMENTS

Section 15011, "Mechanical General Requirements," applies to this section, with the additions and modifications specified herein.

1.4 DEFINITIONS

1.4.1 Finished Spaces

Spaces used for habitation or occupancy where rough surfaces are plastered, panelled, or otherwise treated to provide a pleasing appearance.

1.4.2 Unfinished Spaces

Spaces used for storage or work areas where appearance is not a factor, such as unexcavated spaces and crawl space.

1.4.3 Concealed Spaces

Spaces out of sight. For example, above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

1.4.4 Exposed Open to view. For example, pipe running through a room and not covered by other construction.

1.4.5 Fugitive Treatments

Treatment subject to deterioration due to aging, moisture, high humidity, oxygen, ozone, and heat. Fugitive materials are entrapped materials that can cause deterioration, such as solvents and water vapor.

1.4.6 Outside

Open to view up to 5 feet beyond the exterior side of walls, above the roof, and unexcavated or crawl spaces.

1.4.7 Conditioned Space

An area, room or space normally occupied and being heated or cooled for human habitation by any equipment.

1. 5 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.5.1 SD-17, Manufacturer's Catalog Data

a. Insulation
b. Jackets
c. Casings
d. Vapor-barrier materials
e. Accessory materials

1.5 . 1 SD-76, Certificates of Compliance

a. Insulation

b. Jackets

c. Casings

d. Vapor-barrier materials

e. Accessory materials

Submit standards compliance labels on each container or package.

1.6 QUALITY ASSURANCE

Every package or standard container of insulation, jackets, cements, adhesives, and coatings delivered to the project site shall have the manufacturer's stamp or label attached giving name of manufacturer, brand and description of material. Insulation packages and containers shall be asbestos-free.

1.7 FLAME-SPREAD AND SMOKE-DEVELOPED RATINGS

In accordance with NFPA-255, ASTM E84 or UL 723, the materials shall have a flame-spread rating of not more than 50.

1.7.1 Materials Tests

Test factory-applied materials as assembled. Field-applied materials may be tested individually. Use no fugitive or corrosive treatments to impart flame resistance. UL label or satisfactory certified test report from a testing laboratory will be required to indicate that fire hazard ratings for materials proposed for use do not exceed those specified. Flame-proofing treatments subject to deterioration due to effects of moisture or high humidity are not acceptable.

1.7.2 Materials Exempt From Fire-Resistant Rating

Nylon anchors.

1.7.3 Special Exempt Materials

Materials exempt from fire-resistant rating when installed in outside locations, buried, or encased in concrete: PVC casing and glass-fiber-reinforced plastic casing.

PART 2 PRODUCTS

2.1 PIPING INSULATION

Piping systems, except buried pipe requiring insulation, types of insulation required, and insulation thickness shall be as listed in Tables I and II herein. Except for flexible unicellular insulation, insulation thickness as specified in Table II shall be one inch greater for insulated piping systems located outside. Unless otherwise specified, insulate all fittings, flanges, and valves, except valve stems, hand wheels, and operators. Provide factory premolded, precut, or field-fabricated insulation of the same thickness and conductivity as insulation on adjacent piping. Insulation exterior shall be factory cleanable, grease resistant, non-flaking and non-peeling. Pipe insulation shall conform to the referenced publications in Table I.

2.1.1 Pipe Insulation Beyond Building Walls

For 5 feet beyond the exterior side of building walls, conform to Section 02696, "Insulation for Exterior Piping," in tunnels, in manholes, under and above piers, in trenches on piers, and for above ground piping.

2.1.2 Flexible Unicellular Insulation

ASTM C534. Provide adhesive as recommended by insulation manufacturer or conforming with MILA-24179.

2.1.3 Piping Insulation Finishes

2.1.3 1 All-Purpose Jacket

Except calcium silicate and unicellular insulation, provide a factory applied all-purpose jacket with or without integral vapor barrier as required by the service. Provide jackets in exposed locations with a white surface suitable for field painting. Allow a maximum water vapor permeance of 0.05 perm in accordance with ASTM E96, a puncture resistance of not less than 50 Beach units, and a minimum tensile strength of 35 pounds-force per inch of width in accordance with ASTM D828.

2.1.3.2 Vapor-Barrier Material

FS HH-B-100, Type I. Resistant to flame, moisture penetration, and mold growth. Provide vapor barrier material on pipe insulation as required in Table I.

2.1.3.3 Metal Jackets

Provide a moisture-barrier lining for metal jackets located outside.

a. Aluminum Jackets: ASTM B209, Alloy 3003 or 3004 Temper H14, 0.016-inch thick, smooth.

c. Piping, Fittings, Flanges, and Values in Outside Locations: Finish elbows and curved piping with factory-fabricated metal covers. Finish tees, flanges, and valves with metal covers. Covers shall be same thickness and material as jackets on adjacent piping.

2.2 HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS INSULATION

Provide insulation on ducts and plenums of Heating, Ventilating and Air Conditioning Systems (HVAC).)

2.2.1 Duct Insulation in Concealed Spaces

Blanket flexible mineral fiber insulation conforming to ASTM C553, Type I, Class B-3, 1.0 pound per cubic foot nominal, 2.0 inches thick. Provide flexible insulation in concealed spaces only.

2.2.2 Duct Insulation Not in Concealed Spaces

Mineral fiber in accordance with ASTM C612, Class 2 (maximum surface temperature 400 degrees F), 6 pcf (pounds per cubic foot) average, one inch thick.

2.2.3 Acoustically Lined Ducts

For ductwork indicated indicated or specified in Section 15895, "Ductwork and Ductwork Accessories," to be acoustically lined, provide external insulation as specified in paragraph entitled "Duct Insulation Not in Concealed Spaces."

2.2.4 Duct Insulation Finishes

2.2.4.1 Vapor-Barrier Material

Provide a factory applies all-purpose jacket with or without integral vapor barrier as required by the service. All-purpose jacket shall have a maximum water vapor permeance of 0.05 perm per ASTM E96; ;puncture resistance of not less than 50 Beach units; and a tensile strength of not less than 35 pounds-force per inch of width in accordance with ASTM D828.

2.2.4.2 Vapor-Barrier Material

FS HH-B-100, Type I for duct in equipment room and exposed areas and Type I or II in remaining areas. Material shall be resistant to flame, moisture penetration, and shall not support mold growth. Provide vapor barrier on HVAC duct insulation, except insulation for heating only.

2.3 ADHESIVES, SEALANTS, AND COATING COMPOUNDS

2. 3.1 Insulation and Vapor Barrier Adhesive

Provide ASTM C916, Type I or Type II adhesive for securing insulation to metal surfaces and for vapor barrier lap only in building interior.

2.3.2 Lagging Adhesive

MIL-A-3316, Class 1, for bonding fibrous glass cloth to unfaced fibrous glass insulation; for bonding cotton brattice cloth the faced and unfaced fibrous glass insulation board; for sealing edges of and bounding fibrous glass tape to joints of fibrous glass board; or for bonding lagging cloth to thermal insulation, or Class 2, for attaching fibrous glass insulation to metal surfaces.

2.3.3 Mineral Fiber Insulation Cement

ASTM Cl95, thermal conductivity 0.85 maximum at 200 degrees F mean when tested in accordance with ASTM C177.

2.3.4 Vapor Barrier Coating

MIL-C-l9565, Type II, indoor only above surface temperature 60 degrees F, color white.

2.4 ACCESSORIES

2.4.1 Staples

ASTM A167, Type 304 stainless steel outside-clinch type.

2.4.2 Insulation Bands

3/4 inch wide; or 0.01 8-inch stainless steel.

2.4.3 Bands for Metal Jackets

3/8-inch minimum width; O.01-inch stainless steel.

2.4.4 Anchor Pins

Provide anchor pins and speed washers recommended by insulation manufacturer.

2.4.5 Glass Cloth and Tape

MIL-C-20079, Type I, Class I cloth, and Type II, Class 1 or 3 tape. Tape shall be 4-inch wide rolls. Class 3 tape shall be 4.5 ounces per square yard. In lieu of glass cloth and tape. open weave glass membrane may be provided.

2.4.6 Wire

Soft annealed stainless steel, 0.047-inch nominal diameter.

PART 3 EXECUTION

3. 1 PREPARATION

Do not insulate materials until system tests have been completed and surfaces to be insulated have been cleaned of dirt, rust, and scale and dried. Insulate return ducts, outside air intakes and supply ducts to the room outlets, flexible runouts, plenums, casings, mixing boxes, filter boxes, coils, fans, and the portion of air terminals not in the conditioned spaces. Ensure full range of motion of equipment actuators. Modify insulation to avoid obstruction with valve handles, safety reliefs, and other such items. Allow adequate space for pipe expansion. Install insulation with jackets drawn tight and cement down on longitudinal and end laps. Do not use scrap pieces where a full length section will fit. Insulation shall be continuous through sleeves, wall and ceiling openings.except at fire dampers in duct systems. Extend surface finished to protect surfaces, ends, and raw edges of insulation. Apply coatings and adhesives at the manufacturer's recommended coverage per gallon. Individually insulate piping and ductwork. Provide a moisture and vapor seal where insulation terminates against metal hangers, anchors and other projections through the insulation on surfaces for which a vapor seal is specified. Keep insulation dry during application of finish. Bevel and seal the edges of exposed insulation. Unless otherwise indicated, do not insulate the following:

b. Factory preinsulated flexible ductwork;

c. Factory insulated ductwork. plenums, casings, mixing boxes, filter boxed;

e. Vibration isolating connections;

f. Adjacent insulation;

g. ASME stamps;

h. Fan name plates; and

i. Access plates in fan housings.

3.2 PIPING INSULATION

3.2.1 Pipe Insulation (Except Unicellular and Calcium Silicate Insulation)

Place sections of insulation around the pipe and joints tightly butted into place. The jacket laps shall be drawn tight and smooth. Secure jacket with fire resistant adhesive conforming to MIL-A-3316, Class 2, factory applied self sealing lap, or stainless steel outward clinching staples spaced not over 4 inches on centers and 1/2 inch minimum from edge of lap. Cover circumferential joints with butt strips, not less than 3 inches wide, of material identical to the jacket material. Overlap longitudinal laps of jacket material not less than 1 1/2 inches. Adhesive used to secure the butt strip shall be the same as used to secure the jacket laps. Apply staples to both edges of the butt strips.

When a vapor barrier jacket is required, as indicated in Table I, or on the ends of sections of insulation that butt against flanges, unions, valves, fittings, and joints, us a vapor barrier conforming to MIL-C-19565, Type II or manufacturer's weatherproof coating for outside service. Apply this vapor barrier coating at all longitudinal and circumferential laps. Patch damaged jacket material by wrapping a strip of jacket material around the pipe and cementing, stapling, and coating as specified for butt strips. Extend the patch not less than 1 1/2 inches past the break in both directions. At penetrations by pressure gauges and thermometers, fill the voids with the vapor barrier coating for outside service. Seal with a brush coat of the same coating. Do not use staples to secure jacket laps on pipes carrying fluid medium at temperatures below 35 degrees F. Where penetrating roofs, insulate piping to a point flush with the top of the flashing and seal with the vapor barrier coating. Butt tightly the exterior insulation to the top of the flashing and interior insulation. Extend the exterior metal jacket 2 inches down beyond the end of the insulation. Seal the flashing and counterflashing underneath with the vapor barrier coating.

3.2.2 Calcium Silicate Pipe Insulation

Secure insulation with stainless steel metal bands on 12-inch maximum centers. Apply a skim coat of hydraulic setting cement directly to the insulation. When dry, apply a flooding coat of MIL-A-33 16, Class I, adhesive over the hydraulic setting cement. Press a layer of MIL-C-20079 glass cloth or tape into adhesive and seal laps and edges with adhesive. Coat cloth with adhesive cut at a ratio of one part water to five parts adhesive in color other than white for the purpose of visual inspection to ensure sizing of entire surface. At Contractor's option secure 0.016 metal jacket to surface of insulation in accordance with paragraph titled "Metal Jackets for Outside Ductwork."

3.2.3 Hangers and Anchors

Pipe insulation shall be continuous through pipe hangers. Where pipe is supported by the insulation, provide MSS SP-58, Type 40 galvanized steel shields of MSS SP-58, Type 39 protection saddles conforming MSS SP-69. Inserts shall have sufficient compressive strength to adequately support the pipe without compressing the inserts to a thickness less than the adjacent insulation. Insulation inserts shall cover the bottom half of the pipe circumference 180 degrees and be not less in length than the protection shield. Vapor-barrier facing of the insert shall be of the same material as the facing on the adjacent insulation. Seal inserts into the insulation with MIL-C-19565 vapor barrier coating, Type II or for exterior work, manufacturer's recommended weatherproof coasting, as applicable. Where protection saddles are used, fill all voids with the same insulation material as used on the adjacent pipe. Where anchors are secured to chilled piping that is to be insulated, insulate the anchors the same as the piping for a distance not less than four time the insulation thickness to prevent condensation. Vapor seal insulation around anchors.

3.2.4 Sleeves and Wall Chases

Where penetrating interior walls, extend a metal jacket 2 inches out on either side of the wall and secure on each end with a band. Where penetrating floors, extend a metal jacket from a point below the back-up material to a point 10 inches above the floor with one band at the floor and one not more than one inch form end of metal jacket. Where penetrating exterior walls, extend the metal jackets through the sleeve to a point 2 inches beyond the interior surface of the wall.

3.2.5 Flanges, Unions, Valves and Fittings for Hot Piping

Flanges, Unions, Valves, and Fittings Insulation (Except Flexible Unicellular) for Hot Piping: Factory fabricated removable and reusable insulation covers may be used. For inside domestic hot water, heating hot water, A/C condensate drains, high temperature hot water, exposed hot water, A/C condensate drains, high temperature hot water, exposed hot water piping and drains in handicap areas, place factory premolded, precut or field-fabricated segmented insulation of the same thickness and conductivity as the adjoining pipe insulation around the flange, union, valve, and fitting abutting the adjoining pipe insulation. If nesting size insulation is used, overlap 2 inches or one pipe diameter, whichever is larger. Use insulating cement to fill voids. Elbows insulated using segments shall have not less than three segments per elbow. Place and joint the segments with manufacturer's recommended water-vapor resistant, fire retardant, and adhesive appropriate for the temperature limit of the service. Upon completion of installation of insulation, apply two coasts of MIL-A13316, Class 1 lagging adhesive with MIL-C-20079, Type II, Class 3 glass tape embedded between coats. Overlap tape seams one inch. Extend adhesive onto adjoining insulation not less than two inches. The total dry film thickness shall be not less than 1/16 inch. Where unions are indicated not to be insulated, taper the insulation to the union at a 45 degree angle. Coat the insulation and all purpose jacket with two coats of MIL-A13316, Class 1 lagging adhesive and with MIL-C-20079, Class 3 glass tape embedded between coats. The total dry film thickness shall be not less than 1/16 inch. At the option of the Contractor, factory premolded one-piece FS L-P-535, Composition A, Type II, Grade GU, PVC fitting covers may be provided in lieu of two coats of adhesive with tape embedded between coats. Factory premolded field-fabricated segment or blanket insert insulation shall be provided under the fitting covers. Install factory premolded one-piece PVC fitting covers over the insulation and secure by stapling, taping with PVC vapor barrier tape, or with metal or plastic tacks made for securing PVC fitting covers. Do not provide PVC fitting covers where exposed to the weather. Provide PVC fitting covers only in ambient temperatures below 150 degrees F.

3.2.6 Flanges, Unions, Valves and Fittings for Cold Piping

Factory-fabricated removable and reusable insulation covers may be provided. For piping insulation inside the building that service dual temperature, domestic cold water above ceilings, refrigerant suction, and all exposed laboratory drains, coat pipe insulation ends with MIL-C-19565 Type II vapor barrier coating not more than 6 inches from each flange, union, valve, anchor or fitting. Place insulation of the same thickness and conductivity as the adjoining pipe insulation, either premolded or segmented, around the item, butting the adjoining pipe insulation. If nesting size insulation is provided overlap the insulation 2 inches or one pipe diameter. Use loose fill mineral wool or insulating cement to fill the voids. Elbows insulated using segments shall not have less than three segments per elbow. Secure insulation by wire or tape until finish coating is applied. Apply two coats of MIL-C- 19565, Type II, vapor barrier coating with MIL-C-20079 glass tape embedded between coats. Overlap tape seams one inch. Extend the coating out onto the adjoining pipe insulation 2 inches. Where unions are shown not to be insulated, the insulation shall be tapered to the union at a 45-degree angle. Seal the insulation and jacket with two coats of MIL-C-16565 Type II vapor barrier coating with MIL-C-20079 glass tape embedded between coats. Insulate anchors attached directly to the pipe for a sufficient distance to prevent condensation but not less than 6 inches from the insulation surface. Insulate flexible connections at pumps and other equipment with unicellular plastic insulation, unless otherwise indicated. At the option of the Contractor, premolded, one-piece polyvinyl chloride (PVC) fitting covers in accordance with FS L-P-535, Composition A, Type II, Grade GU may be provided in lieu of the embedded dass tape. Factory premolded insulation or field-fabricated insulation segments shall be provided under the fitting covers. Blanket inserts may be provided. Secure the covers with adhesive and vapor barrier tape with a vapor resistance of maximum 0.05 perm in accordance with ASTM E96, or with tacks made for securing PVC covers. Then coat all tape seams and tacks with Type II vapor barrier coating. Do not use premolded PVC fitting covers where exposed to weather. Provide PVC covers only when medium temperature is not less than 35 degrees F and ambient temperature is below 150 degrees F.

3.2.7 Piping Exposed to Weather

3.2.7.1 Metal Jackets

Install over the insulation. Metal jackets shall have side and end lap at least 2 inches wide with the cut edge of the side tap turned inside one inch to provide a smooth edge. Overlap the jacket not less than 2 inches at longitudinal and circumferential joints and secure with metal bands at not more than 9-inch centers or with screws at not more than S-inch centers. Overlap longitudinal joints down to shed water. Seal circumferential joints with a coating recommended by the insulation manufacturer for weatherproofing.

7.2 Flanges, Unions, Valves and Fittings, and Accessories

Insulate and finish as specified for the applicable service. Apply two coats of an emulsion type weatherproof mastic for hot service and vapor barrier mastic for cold service recommended by the insulation manufacturer. Embed MIL-C-20079 glass tape

in the first coat. Overlap tape not less than one inch and the adjoining metal jacket not less than 2 inches. Factory preformed metal jackets may be provided in lieu of the above for hot service.

3.3 DUCTS, PLENUMS, AND CASINGS (HVAC) INSULATION

3.3 1 Rigid Insulation

Secure rigid insulation by impaling over pins or anchors located not more than 3 inches from joint edges of boards, spaced not more than 12 inches on centers and secure with washers and clips. Spot weld anchor pins or attach with a waterproof adhesive especially designed for use on metal surfaces. Apply insulation with joints tightly butted. Neatly bevel insulation around name plates and access plates and doors. Each pin or anchor shall be capable of supporting a 20-pound load. Cut off protruding ends of pins, after clips are sealed with coating compound conforming to MIL-C- 19565, Class II for inside work or manufacturer's recommended weatherproof coating for outside work, and reinforced with open weave glass membrane.

3.3.2 Flexible Blanket Insulation

Apply insulation with all joints tightly butted. Secure insulation to ductwork with adhesive in 6-inch wide strips on 12-inch centers. Staple laps of jacket with outward clinching staples and seal with foil scrim kraft (FSK) tape. For ductwork over 24 inches on horizontal duct runs, provide pins, washers and clips. Provide pins on sides of vertical ductwork being insulated. Space pins and clips on 18-inch centers and not more than 18 inches from duct corners. Carry insulation over standing seams and trapeze-type hangers. Install speed washers with pins and pin trimmed to washer. Sagging of flexible duct insulation will not be permitted. Cut off protruding ends of pins after clips are secured and sealed with coating compound conforming to MIL-C-19565, Type II for inside work. For warm air ducts, overlap insulation not less than 2 inches at joints and secure the laps with outward clinch staples on 4-inch centers. In cold air ducts, vapor seal all joints and staple as specified.

3.3.3 Insulation Finishes and Joint Sealing

Fill all breaks, punctures, and voids with vapor barrier coating compound conforming weatherproof coating for outside service. Vapor seal all joints by embedding a single layer of 3-inch wide open weave glass membrane, 20 by 20 mesh maximum size between two 1/16-inch wet film thickness coats of MIL-C- 19565, Type II vapor barrier coating compound. Draw glass fabric smooth and tight with a 1 1/2-inch overlap. At jacket penetrations such as hangers, thermometers, and damper operating rods, fill voids in the insulation with MIL-C-19565, Type II vapor barrier coating. Brush a coat of MIL-C19565, Type II vapor barrier coating where required on HVAC ducts. Provide vapor barrier jacket continuous across seams, reinforcing, and projections. Where height of projections is greater than insulation thickness, carry insulation and jacket over the projection. For joints for heating only systems, provide insulation with two coats of fire resistant adhesive conforming to MIL-A-3316, Class 2 with glass fabric conforming to MIL-C-20079, Type I or II, 20 by 20 maximum size mesh embedded between coats.

3.3.4 Metal Jackets for Outside Ductwork

Ensure metaljacket side and end laps at least 2 inches wide, with the cut edge of the side lap turned under on inch to provide a smooth edge. Place horizontal laps to shed water. Seal vertical laps with insulation manufacturer is recommended weatherproof coating. Secure jackets in place with aluminum or stainless steel steel bands on 9-inch centers. Where ducts penetrate exterior walls, continue the increased thickness required for ductwork exposed to weather and the metal jackets through the sleeve to a point 2 inches beyond the interior surface of the wall. Where metal jacket abuts an uninsulated surface, seal joints with a weatherproof mastic recommended by the insulation manufacturer. For rectangular ducts, provide corner angles to exposed corners of the insulation. Apply two coats of weatherproof coating recommend by insulation manufacturer to the entire surface with a layer of MILC120079 glass cloth embedded between coats. Ensure glass cloth overlaps not less than 2 inches at joints and adjoining surface. Each coat of weatherproof coating shall be 1/16-inch minimum thickness.

3.3.5 Access Plates and Doors

On acoustically lined ducts, plenums, and casing, provide insulation on access plates and doors. On externally insulated ducts, plenums, and casings provide insulation-filled hollow steel panels and doors for access openings. Bevel insulation around access plates and doors.

3.4 PAINTING AND IDENTIFICATION

Paint in accordance with Section 09900, "Painting." Piping identification shall be as specified in other sections.

3.5 REPLACEMENT OF EXISTING ASBESTOS INSULATION

Remove existing asbestos insulation in accordance with Section 02080, "Removal and Disposal of Asbestos Materials". When existing asbestos insulation is to be replaces, provide new asbestos-free insulation. Label or stencil new insulation "Asbestos-Free" after final finishing and painting.

3.6 FIELD INSPECTION

Visually inspect to ensure that materials provided conform to specifications. Inspect installations progressively for compliance with requirements.

TABLE I

Insulation Material For Piping

Service	Material	Spec.	Type	Class	Vapor Barrier Required
Refrigerant Suction Piping	Flexible Unicellular	ASTM C534	I or II		No
A/C condensate Drain Located Inside Bldg.	Cellular Glass	ASTM C552	II	2	No
Exposed Laboratory Drains, Exposed Domestic Water Piping and Drains to Areas for Handicap Personnel	Flexible Unicellular	ASTM C534	I or II		No

TABLE II

Piping Insulation Wall Thickness

		Tube and Pipe Size (Inches)				
Service	Material	1/4-1 1/4	1 1/2-3	3 1/2-5	6-10	11-36
Domestic Water (Hot or Cold), Heating Hot Water, and Insulated Drains)	Mineral Fiber	1	1.5	1.5	2	2
	Cellular Glass	1.5	1.5	1.5	1.5	1.5
	Flexible Uni-cellular	0.5	0.75	0.75	N/A	N/A
Refrigerant Suction Piping	Flexible Uni-cellular	0.5	0.75	N/A	N/A	N/A

*NOTE: Insulation located outside shall be one inch thicker than that shown in table above.

TABLE III

Insulation For Equipment

Material	Spec	Type	Class	Vapor Barrier Required
Drain Pans	2"			For Chilled Water Systems

*Exact insulation thickness may be determined by proposed condition of use.

--End of Section--

SECTION 15400

PLUMBING

PART 1 GENERAL

1. 1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

ANSI Al 12.6. lM	1979 Support for Off-the-Floor Plumbing Fixtures for Public Use
ANSI A112.18.1M	1979 Finished and Rough Brass Plumbing Fixture Fittings
ANSI A 112.19. lM	1979 Enameled Cast Iron Plumbing Fixtures
ANSI Al 12.19.2M	1982 Vitreous China Plumbing Fixtures
ANSI Al 12.19.5	1979 Trim for Water-Closet Bowls, Tanks, and Urinals
ANSI Al 12.26. lM	1984 Water Hammer Arresters
ANSI A112.36.2M	1983 Cleanouts
ANSI B 16.1	1975 Cast-Iron Pipe Flanges and Flanged Fittings, Class 25,125, 250 and 800
ANSI B 16.12	1983 Cast-Iron Threaded Drainage Fittings
ANSI B 16.18	1984 Cast Copper Alloy Solder Joint Pressure Fittings
ANSI B 16.22	1980 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
ANSI B 16.23	1984 Cast Copper Alloy Solder Joint Drainage Fittings - DMV
ANSI B 16.24	1979 Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300
ANSI B 16.26	1983 Cast Copper Alloy Fittings for Flared Copper Tubes

ANSI B 16.29	1980 Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DMV
ANSI B 16.32	1984 Cast Copper Alloy Solder Joint Fittings for Solvent Drainage Systems
ANSI B16.39	1977 Malleable-kon Threaded Pipe Unions, Class 150, 250 and 300

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC. (ASHRAE)

ASHRAE 90A	1980 Energy Conservation in New Building Design (Sections 1 through 9)

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)

ASSE 1003	1981 Water Pressure Reducing Valves for Domestic Water Supply Systems
ASSE 1010	1982 Water Hammer Arresters

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A53	1987 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
ASTM A74	1982 Cast-Iron Soil Pipe and Fittings
ASTM A120	1984 Pipe, Steel, Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless for Ordinary Uses
ASTM B32	1987 Solder Metal
ASTM B61	1986 Steam or Valve Bronze Castings
ASTM B62	1986 Composition Bronze or Ounce Metal Castings
ASTM B88	1986 Seamless Copper Water Tube
ASTM B306	1986 Copper Drainage Tube (DMV)
ASTM C564	1970 (Rev. 1982) Rubber Gaskets for Cast-Iron Soil Pipe and Fittings
ASTM F441	1984 Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C500	1980 Gate Valves, 3 Through 48 inch NPS, for Water and Sewage Systems
AWWA C651	1986 Disinfecting Water Mains

CAST-IRON SOIL PIPE INSTITUTE (CISPI)

CISPI 301	1985 Hubless Cast-Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications
CISPI 310	1985 Patented Joint for Use in Connection with Hubless Cast-Iron Sanitary System
CISPI HSN	1985 Neoprene Rubber Gaskets for Hub and Spigot Cast Iron Soil Pipe and Fittings

FEDERAL SPECIFICATIONS (FS)

FS L-P-387	(Rev. A) (Amd. 2) Plastic Sheet, Laminated, Thermosetting (For Designation Plates)
FS QQ-C-390	(Rev. B) Copper Alloy Castings (Including Cast Bar)
FS TT-P-645	(Rev. A) Primer, Paint, Zinc Chromate, Alkyd Type
FS W-H-196	(Rev. J) (Amd. l) Heater, Water, Electric and Gas Fired, Residential
FS WW-N-351	(rev C) (Amd. l) Nipples, Pipe, Threaded
FS WW-U-516	(Rev. B) Unions, Brass or Bronze, Threaded Pipe Connections, and Solder Joint Tube Connections
FS WW-V-35	(Rev. C) Valve, Ball

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO)

IAPMO UPC	1985 Uniform Plumbing Code

MILITARY SPECIFICATIONS (MIL)

MIL-G-1086	(Rev. E) Gasket Material, Synthetic Rubber (For Bolted Steel Tanks)
MIL-T-12295	(Rev. E) (Amd. 2) Tanks, Hot Water Storage
MIL-V-13612	(Rev. E) Valves, Relief, Pressure and Temperature (For Hot Water Supply Systems)
MIL-V-18433	(Rev. B) Valves, Temperature-Regulating (Thermostatically Controlled)

MANUFACTURERS STANDARDIZATION SOCIETY
OF THE VALVE AND FITTINGS INDUSTRY (MSS)

MSS SP58	1983 Pipe Hangers and Supports - Materials, Design and Manufacture
MSS SP69	1983 Pipe Hangers and Supports - Selection and Application

PLUMBING AND DRAINAGE INSTITUTE (PDI)

PDI WH2011977	Water Hammer Arrestors

1.3 GENERAL REQUIREMENTS

Section 15011, "Mechanical General Requirements," applies to this section, with the additions and modifications specified herein. Plumbing systems including fixtures, equipment, materials, installation, and workmanship shall be in accordance with the IAPMO UPC except as modified herein. In the Plumbing Code referred to herein, the advisory provisions shall be considered to be mandatory, as though the word "shall" had been substituted for the word "should" wherever it appears; reference to the "authority having jurisdiction," the Administrative Authority, the Plumbing Official, and the Design Engineer shall be interpreted to mean the Contracting Officer. Capacity of equipment shall be not less than that indicated. Plumbing systems shall include all water and sanitary piping buried and above ground except water and sanitary piping more than 5 feet outside of the building walls.

1 .4 SUBMITTALS

1.4.1 SD-17, Manufacturer's Catalog Data

Manufacturer's Data:

a. Pipe and fittings
b. Valves
c. Plumbing fixtures
d. Water heaters

e. Pipe supports (hangers)
g. Gauges and thermometers
j. Drains
k. Water hammer arresters
1. Backflow preventers
m. Electric water coolers

1.4.2 SD-31, Detail Drawings

Shop Drawings:

a. Access panels

1.4.3 SD-76, Certificates of Compliance

Certificates of Compliance:

a. Pipe and fittings
b. Valves
c Water flushing volume of flushometer and water closet combination
d. Water flushing volume of flushometer and urinal combination
e. Backflow preventers

1.4.4 SD-80, Operation and Maintenance Manuals a. Water heaters

1.4.5 SD-87, Posted Operating Instructions

a. Water heaters
b. Pumps

PART 2 PRODUCTS

2.1 DMV (DRAIN, WASTE, AND VENT) PIPING

Fittings shall be long radius fittings, except fittings in vent piping may be short radius fittings. Minimum size piping shall be 2 inches for buried piping and 1.5 inches for above ground piping.

2.1.1 Buried Piping

Buried piping includes piping up to but not more than 6 inches above ground or floor slab on grade

2.1.1.1 Cast-Iron Hubless Pipe and Fittings

CISPI 301 with CISPI 310 coupling joints.

2.1.1.2 Cast-Iron Hub and Spigot Pipe and Fittings

ASTM A74 with ASTM C564 or CISPI HSN rubber compression gasket joints, or calked and leaded Joints.

2.1.2 Above ground Piping

2.1.2.1 Cast-Iron Hubless Pipe and Fittings

CISPI 301 with CISPI 310 coupling joints.

2.1.2.2 Copper Tubing

ASTM B306, with ANSI B16.23, ANSI B16.29, or ANSI B16.32 solder joint fittings using ASTM B32, 95-5 tin-antimony or Grade Sn96 tin-silver solder, and flux containing not more than 0.2 percent lead.

2.1.2.3 Steel Pipe

ASTM A53 or ASTM A120, Schedule 40, hot-dip galvanized, threaded end connections; with ANSI B16.12 hot-dip galvanized threaded fittings.

2.1.3 Cleanouts

ANSI Ai 12.36.2M; provide threaded bronze cleanout plugs.

2.1.3.1 Floor Cleanouts

Provide cast-iron floor cleanout with anchor, adjustable height polished bronze or nickel bronze rim and scoriated floor plate with "CO" cast in the plate, and countersunk screws for installing floor plate flush with finished floor.

2.1.3.2 Wall Cleanouts

Provide polished stainless steel or chromium-plated bronze cover plate and secure to cleanout plug with countersunk screws.

2.1.3.3 Flush Strainer Floor Drains

Provide with double drainage flange, perforated or slotted cast bronze or nickel bronze strainer, adjustable collar, and P-trap. Drains of sized 2, 3, and 4 inches shall have strainers with minimum free drainage area of 5, 11, and 18 square inches, respectively.

2.2 DOMESTIC WATER PIPING

2. 2.1 Buried Piping and Above ground Piping

2.2.1.1 Copper Tubing

ASTM B88, Type K, with ANSI B16.18 or ANSI B16.22 solder joint fittings using ASTM B32, 955 tin-antimony or Grade Sn96 tin-silver solder, and flux containing not more than 0.2 percent lead; or with ANSI B16.26 flared joint fittings. ASTM B88, Type L, may be provided for above ground piping.

2.2.2 Water Valves

Provide valves suitable for minimum of 125 psig and minimum of 180 degrees F hot water. Valves shall have solder end connections for connections between bronze valves and copper tubing. Copper alloy and bronze valve body shall be ASTM B61 or ASTM B62 copper alloy. Ball valves and butterfly valves may be provided in lieu of gate valves.

2.2.2.1 Ball Values

FS WW-V-235, full port design, copper alloy. Valves shall have two-position lever handles.

2.2.2.2 Combination Pressure and Temperature Relief Valves

MIL-V-13612 with test lever.

2.2.2.3 Water Pressure Reducing Valves

ASSE 1003.

2.2.3 Dieletric Connections

Provide at connections between copper and ferrous metal piping materials. ASTM F441, Schedule 80, CPVC threaded pipe nipples, 4-inch minimum length, may be provided for dielectric connections in pipe sizes 2 inches and smaller.

2.2.4 Water Hammer Arresters

PDI WH201, ANSI Al 12.26.1M, or ASSE 1010.

2.2.5 Valve Boxes

For each buried valve provide cast-iron, ductile-iron, or plastic box of a suitable size. Provide cast iron, ductile-iron, or plastic cover for the box with the word "WATER" cast on the cover. Plastic boxes shall be constructed of ABS plastic or inorganic fiber-reinforced black polyolefin plastic. Coat cast-iron and ductile-iron boxes with bituminous paint.

2.3 MISCELLANEOUS PIPING MATERIALS

2.3.1 Pipe Nipples

FS WW--N-35 1, copper alloy for use in copper tubing and hot-dip galvanized Schedule 80 steel pipe for use in steel piping.

2.3.2 Unions

FS WW-U-S 16 for use in copper tubing; ANSI B 16.39 hot-dip galvanized steel for use in steel piping.

2.3.3 Flanges

ANSI B16.1, Class 125, for use in ferrous piping; ANSI B16.22 or ANSI B16.24 for use in copper tubing; with MIL-G-1086 full face flat type synthetic rubber gaskets.

2.3.4 Escutcheon Plates

One piece or split hinge type metal plates for piping passing through floors, walls, and ceilings in exposed spaces, chromium-plated finish on plates in finishes spaces, paint finish on plates in unfinished spaces, and with set screws or other approved positive means to anchor plates in place securely.

2.3.5 Pipe Sleeves

2.3.5.1 Sleeves in Masonry and Concrete Walls, Floors, Roofs

ASTM A53 or ASTM A120, Schedule 40 or Standard Weight, hot-dip galvanized steel pipe sleeves.

2.3.5.2 Sleeves in Non-Masonry Walls, Floors, and Roofs

Sleeves in Partitions and Other Than Masonry and Concrete Walls, Floors, and Roofs; Hot-dip galvanized steel sheet having a nominal weight of not less than 0.90 pounds per square foot.

2.3.6 Pipe Hangers and Supports

Provide MSS SP58 and MSS SP69, Type 1, of the adjustable type, except as modified herein or indicated otherwise. Attachments to steel W or S beams shall be with Type 21 clamps. Attachments to steel angles and channels (with web vertical) shall be with Type 20 clamp with a beam clamp channel adaptor. Attachments to steel channel (with web horizontal) shall be with drilled hole on centerline and double nut and washer. Attachments to concrete shall be with a drilled hole with expansion anchor. Attachments to wood shall be as indicated. Hanger rods and attachments shall be full size of the hanger threaded diameter. Provide Type 40 insulation protection shields for insulated piping. Provide steel support rods. Provide nonmetallic isolators between copper tubing and the hangers.

2.3.7 Access Doors

Provide 12- by 12-inch factory prefabricated and primed flush face steel access doors including steel door frame with continuous hinges and tum-screw-operated latch. Door frame shall be for installation in plaster and masonry walls. Furnish doors under this section to provide proper access to concealed valves; install doors under the appropriate section of this specification.

2.4 FIXTURES, FITTINGS, ACCESSORIES, AND SUPPLES

Provide control-stop valves in each supply to each fixture. The finish of fittings, accessories, and supplies exposed to view shall be chromium-plated per ANSI Al 12.18. lM. Centerset faucets shall be top-mounted with inlets on not greater than 4-inch centers. Provide special roughing-in for wheelchair fixtures.

2.4.1 Flush Valve Type Water Closets (WC-l)

ANSI A112.19.2M, white vitreous china, floor-mounted, floor outlet as indicated, siphon jet, elongated bowl, black solid plastic elongated open-front seat, and ANSI Al 12.12.5 trim. Provide large diaphragm (not less than 2.625 inches upper chamber inside diameter at the point where the diaphragm is sealed between the upper and lower chambers) nonhold-open flush valve of chrome plated cast brass conforming to FS QQ-C0390, including vacuum breaker and angle (control-stop) valve with back check, mounted approximately 39 to 44 inches above floor. The water flushing volume of the flush valve and water closet combination shall not exceed 3.5 gallons per flush from 15 to 90 psi; furnish closet manufacturer's certification of conformance. Provide ANSI A112.6.1M carrier with feet.

2.4.2 Wheelchair Water Closets (WC-2)

Provide same as specified for water closets (WC-1) except water closet height to top of seat shall be 17 to 19 inches above floor.

2.4.3 Flush Valve Type Urinals (UR-1 and UR-2)

ANSI A112.19.2M white virtreous china, wall-mounted, wall outlet, siphon jet, integral trap, extended side shield, and ANSI A112.19.5 trim. Provide large diaphragm (not less than 2.625 inches upper chamber inside diameter at the point where the diaphragm is sealed between the upper and lower chambers), nonhold-open flush valve of chrome plated cast brass conforming to FS OQ-C-390, including vacuum breaker and angle (control-stop) valve with back check. The water flushing volume of the flush valve and urinal combination shall not exceed 1.5 gallons per flush from 15 to 90 psi. SD-76, furnish urinal manufacturer's certification of conformance. Provide ANSI A112.6.1M concealed wall hangers with thru-bolts and back plates for mounting. UR-1 and UR-2 are the same except for mounting heights.

2.4.4 Lavatories (L-1)

ANSI A112.19.1M, white enameled cast-iron, shelf back type, minimum dimensions of 19 inches wide by 16 inches front to rear. Provide ANSI A112.18.1M copper alloy centerset faucets with aerator, perforated grid strainers, and 1.25-inch adjustable P-traps. Provide ANSI A112.6.1M concealed wall hangers with thru-bolts and back plates for mounting.

2.4.5 Service Sink (SS-1)

ANSI A112.19-1M, white enameled cast-iron, floor mounted, minimum dimensions of 22 inches wide by 18 inches front to rear with 9-inch splashback, and stainless steel rim guard. Provide ANSI A112.18.1M copper alloy back-mounted combination faucets with vacuum beaker and 0.75 inch external hose threads.

2.5 DOMESTIC WATER HEATERS

2.5.1 Storage Tanks

MIL-T-12295, cement- or glass-lined vertical steel tanks, minimum of 125 psig working pressure.

2.5.2 Water Temperature Regulating Valves

MIL-V-18433, with adjustable range thermostat to allow hot water settings between 110 and 180 degrees F.

2.6 DOMESTIC WATER HEATERS

FS W-H-196, glass-lined steel tanks, high efficiency type conforming to ASHRAE 90A requirements, electric water heaters with single heating element, with adjustable range thermostat to allow hot water settings between 110 and 180 degrees F.

PART 3 EXECUTION

3.1 INSTALLATION

Installation of plumbing systems including fixtures, equipment, materials, and workmanship shall be in accordance with IAPMO UPC, except as modified herein. When fixtures require both hot water and cold water supplies, provide the hot water supply to the left of the cold water supply.

3.1.1 Threaded Connections

Jointing compound for pipe threads shall bepolytetraflouroethylene (PTFE) pipe thread tape, pipe cement and oil, or PTFE powder and oil, apply only on male threads. Provide exposed terrous pipe threads with one coat of FS TT-P-645 primer applied to a minimum dry film thickness of 1.0 mil.

3.1.2 Solder End Valves

Remove stems and washers and other items subject to damage by heat during installation. Reassemble valve after soldering is completed. Valves without heat sensitive parts do not require disassembly but shall be opened at least two turns during soldering.

3.1.3 Pipe Supports (Hangers)

Provide additional supports at the concentrated loads in piping between supports, such as for inline water pumps and flanged valves.

3.1.3.1 Piping to Receive Insulation

Provide temporary wood spacers between the insulation protection shield and the pipe in order to properly slope the piping and to establish final elevations. Temporary wood spacers shall be of the same thickness as the insulation to be provided under Section 15250, "Insulation of Mechanical Systems."

3.1.3.2 Maximum Spacing Between Supports

a. Vertical Piping: Support metal piping at each floor, but not at more than 10-foot intervals.

b. Horizontal Piping: Support cast-iron piping at 5-foot intervals, except for pipe exceeding 5-foot length, provide supports at intervals equal to the pipe length but not exceeding 10 feet.

Nominal Pipe Size (inches)	One and under	1.25	1.5	2	2.5	3	3.5	4	5	6
Steel Pipe	7	8	9	10	11	12	13	14	15	16	17
Copper Tube	6	7	8	8	9	10	11	12	13	14

3.1.4 Installation of Pipe Sleeves

Provide pipe sleeves where piping passes through walls, floors, roofs, and partitions. Secure sleeves in proper position and location during construction. Provide sleeves of sufficient length to pass through entire thickness of walls, floors, roofs, and partitions. Provide not less than 0.25-inch space between exterior of piping or pipe insulation and interior of sleeve. Firmly pack space with insulation and caulk at both ends of the sleeve with plastic waterproof cement which will dry to a firm but pliable mass, or provide a segmented elastomeric seal. Seal both ends of penetrations through fire walls and fire floors to maintain fire resistive integrity with UL listed fill, void, or cavity material. Extend sleeves in floor slabs 3 inches above the finished floor, except sleeves are not required where DWV piping passes through concrete floor slabs located on grade.

3.2 NAMEPLATES

Provide laminated plastic nameplates for equipment, gages, thermometers and valves; stop valves in supplies to fixtures will not require nameplates. Laminated plastic shall be 0.125-inch thick malamine plastic conforming to FS L-P-387, black with white center core. Surface shall be a matte finish. All corners shall be square. Accurately a align lettering and engrave into the white core. Minimum size of nameplates shall be 1.0 inch by 2.5 inches. Lettering shall be minimum of 0.25-inch high normal block lettering. SD-87, Key the nameplates to a chart and schedule for each system. Frame charts and schedules under glass and place where directed near each system. Furnish two copies of each chart and schedule. Each inscription shall identify its functions. Equipment nameplates shall show the following information.

a. Manufacturer, type, and model number
b. Contract number and accepted date
c. Capacity or size
d. System in which installed
e. System which it controls

3.3 CONNECTIONS TO EXISTING WATER SUPPLY SYSTEMS

Use tapping or drilling machine valve and mechanical joint type sleeves for connection to be made under pressure. Bolt sleeves around mains; bolt valve conforming to AWWA C500 to the branch. Open valve, attach drilling machine, make tap, close valve, and remove drilling machine, all without interruption of service. Notify the Contracting Officer in writing at least 15 days prior to the date the connections are required; receive approval before any service is interrupted. Furnish all materials required to make connections into the existing water supply systems and perform all excavating, backfilling, and other incidental labor as required. Furnish the labor and the tapping or drilling machine for making the actual connections to the existing systems.

3.4 FIELD TESTING

Before final acceptance of the work, text each system as in service to demonstrate compliance with the contract requirements. Perform the following tests in addition to the tests specified in IAPMO UPC, except as modified herein. Correct all defects in the work provided by the Contractor, and repeat the tests until the work is in compliance with contract requirements. Furnish water, electricity, instruments, connecting devices, and personnel for the tests.

3.4.1 Domestic Water Piping

Before insulation is applied, hydrostatically test each piping system at not less than 100 psig with no leakage or reduction in gauge pressure for 2 hours.

3.4.2 DWV Piping

Before the installation of fixtures, cap the ends of each system, fill the piping with water to the roof, and allow to stand until a thorough inspection has been made. If the system is tested in sections, each opening shall be plugged and each section tested with not less than a 10-foot head or water. After the plumbing fixtures have been set and their traps filled with water, subject the entire sanitary system to a final air pressure test of not more than 1.0 inch of water column. Perform the air and smoke test with an approved smoke testing machine which must show a clear passage of smoke and air throughout the entire system. The entire system must be proven absolutely tight under such test.

3.5 DISINFECTION

Disinfect the new water piping and existing water piping affected by Contractor's operations in accordance with AWWA C651. Fill the piping systems with solution containing minimum of 50 parts per million of available chlorine and allow solution to stand for minimum of 24 hours. Flush the solution from the systems with clean water until maximum residual chlorine content is not greater than 0.2 parts per million.

End of Section

SECTION 15850

AIR HANDLING AND DISTRIBUTION EQUIPMENT

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the ba sic designation only.

AIR MOVEMENT AND CONTROL ASSOCIATION, INC. (AMCA)

AMCA 210	1985 Laboratory Method of Testing Fans for Rating
AMCA 300	1985 Reverberant Room Method for Sound Testing of Fans

ACOUSTICAL SOCIETY OF AMERICA (ASA)

ASA 13	1982 Determination of Sound Levels of Noise Sources in a Spacial Reverberation Test Room

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM A123	1984 Zinc (Hot-Dip Galvanized) Coatings on Iron Steel Products
ASTM B117	1985 Salt Spray (Fog) Testing
ASTM D1654	1979 (Rev. A) Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910	OSHA Safety and Health Standards

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS2	1983 (Rev. 1 1984) Industrial Control Devices, Controllers and Assemblies
NEMA ICS6	1983 (Rev. 2 1986) Enclosures for Industrial Controls and Systems
NEMA MG1	1978 (Rev. 1-8) Motors and Generators
NFPA 70	1984 National Electrical Code

UNDERWRITERS LABORATORIES, INC. (UL)

UL 705	1984 Power Ventilators
UL 883	1980 Fan-Coil Units and Room Fan-Heater Units

1.3 GENERAL REQUIREMENTS

Section 15011, "Mechanical General Requirements," applies to this section with the additions and modifications specified herein.

1.4 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.4.1 SD-17, Manufacturer's Catalog Data

b. Fans

c. Fan-coil units

h. Roof curbs

Include sound rating data and sound power level for all octave-band center frequencies or loudness level.

1.4.2 SD-70, Test Reports

a. Corrosion test

1.4.3 SD-76, Certificates of Compliance

b. Fans

c. Fan-coil units

1.4.4 SD-77, Field Test Reports

a. Operational test

b. Air handling and distribution equipment tests

Include certification by the equipment manufacturer's representative.

1.4.5 SD-80, Operation and Maintenance Manuals

b. Fans, Data Package 3

c. Fan-coil units, Data Package 3

1.5 TESTING FOR CORROSION PROTECTION

Comply with ASTM A123, or protect the equipment with a corrosion-inhibiting coating or paint system that has proved capable of satisfactorily withstanding corrosion in accordance with ASTM B117. Test 125 hours for equipment installed indoors and 500 hours for equipment installed outdoors or subjected to a marine atmosphere. Each specimen shall have a standard scratch as defined in ASTM D1654.

1.5.1 Corrosion Criteria

Upon completion of exposure, coating or pint shall show no indication of deterioration, loss of adhesion, or any indication of rust or corrosion extending further than 1/8-inch on either side of original scratch.

1.5.2 Thickness of Coating

Thickness of coating or paint system on the actual equipment shall be identical to that on the test specimens with respect to materials, conditions of application, and dry film thickness.

1.5.3 Corrosion Protection for Marine Environments

Provide a special finish on the interior of the equipment and the exterior, where indicated. Apply coating at the premises of a company specializing in such work.

1.5.3.1 Mild Steel and Factory Primed Surfaces

a. Synthetic Resin Primer: 36 percent plus or minus 6 percent solids content by volume; 1 coat, 3 mils minimum dry film thickness.

b. Vinyl Copolymer: 23 percent plus or minus 4 percent solids content by volume; 2 coats, 1 1/2-mils minimum dry film thickness per coat.

1.5.3.2 Nonferrous Heat Exchanger Fin Coil Surfaces

Vinyl copolymer, 4 coats, 1 1/2-mils minimum dry film thickness per coat.

1.5.3.3 Galvanized Surfaces

a. Polyamide Epoxy Primer: 48 percent plus or minus 2 percent solids content by volume; 1 coat, 2 mils minimum dry film thickness.

b. Vinyl Copolymer: 23 percent plus or minus 4 percent solids content by volume; 2 coats, 1 1/2-mils minimum dry film thickness per coat.

1.5.3.4 Aluminum Surfaces Other than Fin Coil Surfaces

a. Polyamide Epoxy Primer: 48 percent plus or minus 2 percent solids content by volume; 1 coat, 2 mils minimum dry film thickness.

b. Vinyl Copolymer: 23 percent plus or minus 4 percent solids content by volume; 2 coats, 1 1/2-mils minimum dry film thickness per coat.

PART 2 PRODUCTS

2.1 FANS

General Electric Model 280 Sound rating per AMCA 300: statically and dynamically balanced, with air capacities, brake horsepowers, fan types, fan arrangement, sound power levels or loudness level, and static pressure, as indicated. Fan bearing life shall have a minimum average life of 200,000 hours at design operating conditions. Provide guard (bird) screens for outdoor inlets and outlets. Equip with automatic (backdraft) dampers where indicated. Have thermal overload protection in the operating disconnect switches within the building. Construct housings and fan wheels of aluminum, except as specified otherwise. Provide non-sparking construction where indicated.

2.1.1 Centrifugal Fans

AMCA 210 with AMCA seal, forward-curved single width type, V-belt drive motors, and manual inlet vanes. Inlet and outlet duct connection shall be flanged.

2.1.1.1 Housing

Cylindrical welded steel construction, bolted or hinged access plates, and flanged inlets and outlets.

2.1.2 Power Roof Ventilators

General Electric Model. UL 705 with UL label and AMCA 210 AMCA seal, centrifugal fans in low silhouette housings of corrosion-resistant metal or high impact plastic with glass fiber reinforcement. Equip motors with unfused safety disconnect switches mounted under fan housings. Mount motors out of air stream. Provide factory-fabricated roof curbs.

2.2 FAN-COIL UNITS

General Electric. UL 883 with UL seal, factory fabricated. Provide replaceable filters, grease or oil-lubricated motor bearings with minimum average life of 200,000 hours at the design operating conditions, and vibration isolators. Conform with requirements below.

2.2.1 Coils

Single refrigerant.

2.2.2 Style

Horizontal

PART 3 EXECUTION

3.1 INSTALLATION

Install air distribution equipment as indicated and in accordance with the manufacturer's instructions. Provide clearance for inspection, repair, replacement, and service. Electrical work shall conform with NFPA 70 and Division 16, "Electrical." Provide overload protection in the operating disconnect switches and magnetic starters.

3.2 FIELD INSPECTION AND TESTS

Schedule and administer the specified tests. Provide personnel, instruments, and equipment for such tests. Correct defects and repeat the respective inspection and tests. Give the Contracting Officer ample notice of the dates and times scheduled for tests and trial operations. Conduct inspection and testing in the presence of the Contracting Officer.

3.2.1 Field Inspection

Prior to initial operation, inspect equipment installation for conformance with drawings and specifications.

3.2.2 Field Tests

3.2.2.1 Preliminary Tests

For each item of air handling and distribution equipment and its components, peform an operational test for a minimum period of 8 hours.

3.2.2.2 Testing and Balancing

After preliminary tests, test, adjust, and balance with air handling and distribution equipment in accordance with Section 15895, "Ductwork and Ductwork Accessories".

End of Section

SECTION 15895

DUCTWORK AND DUCTWORK ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A123	1989 Zine (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A527/527M	1985 Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Lock-Forming Quality
ASTM B117	1985 Salt Spray (Fog) Testing
ASTM C423	1989 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
ASTM C553	1970 (R 1977) Mineral Fiber Blanket and Felt Insulation (Industrial Type)
ASTM D1654	1979 (Rev. A) R 1984) Painted or Coated Specimens Subjected to Corrosive Environments
ASTM E96	1980 Water Vapor Transmission of Materials
ASTM E437	1985 Industrial Wire Cloth and Screens (Square Opening Series)

FEDERAL SPECIFICATIONS (FS)

FS HH-I-1030	(Rev. B) Insulation, Thermal (Mineral Fiber, for Pneumatic or Poured Application)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 90A	1985 Installation of Air Conditioning and Ventilating Systems

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, INC. (SMACNA)

SMACNA FGDCS	1982 Fibrous Glass Duct Construction Standards
SMACNA GFSR	1982 (Addenda 1985) Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems (First Edition)
SMACNA HVACALTM	1985 HVAC Air Duct Leakage Test Manual
SMACNA HVACTAB	1983 HVAC Systems - Testing, Adjusting and Balancing

UNDERWRITERS LABORATORIES, INC. (UL)

UL 181	1981 Factory Made Air Ducts and Connectors
UL 555	1979 Fire Dampers and Ceiling Dampers, Third Edition
UL 555S	1983 Leakage Rated Dampers for Use in Smoke Control Systems
UL 90C	1987 Test Performance of Air Filter Units

1.3 RELATED REQUIREMENTS

Section 15011, "Mechanical General Requirements", applies to this section with the additions and modifications specified herein.

1.4 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.4.1 SD-13, Design Data

a. Duct span versus reinforcement schedule

Submit maximum duct dimension, board stiffness rating, board thickness, type and spacing of reinforcement, and maximum duct static pressure.

1.4.2 SD-17, Manufacturer's Catalog Data

a. Dampers

b. Acoustical duct silencers

c. Flexible ducts and connectors

d. Fibrous glass ductwork

e. Insulation and vapor barrier

f. Duct colors

g. Air filters

h. Drip pans

i. Bird screens

j. Diffusers, registers and grilles

h. Sheet metal

1.4.3 SD-35, Drawings

a. Hanger and support details

1.4.4 SD-44, Manufacturer's Instructions

a. Ductwork and ductwork accessories

Include job inspection checklist, methods of on-site storage and handling, and recommended repair methods.

1.4.5 SD-55, Schedules

a. Diffuser, registers and grilles

b. Hanger and support schedule

Submit a schedule of all inlets and outlets indicating location, catalog model number, manufacturer, dimensional information, sound pressure level rating, nominal rated volumetric flow rate (cfm), neck or face volicty at specified cfm, pressure drop at specified cfm, throw and drop for outlets, range for diffusers, and maximum and minimum cfm modulation.

1.4.6 SD-70, Test Reports

a. Corrosion protection

1.4.7 SD-73, Factory Test Reports

a. Acoustical duct silencer acoustical tests

b. Plenum or casing acoustical tests

1.4.7.1 Acoustical Duct Silencers

Submit certified test data from an independent acoustical testing laboratory, listing sound noise reduction characteristics, static pressure drop, air flow velocity capacity, and insertion loss data.

1.4.8 SD-76, Certificates of Compliance

a. Fire dampers and automatic dampers

1.4.9 SD-77, Field Test Reports

a. Testing and balancing of air systems

1.5 QUALITY ASSURANCE

SMACNA Duct Construction Manuals: The SMACNA recommendations shall be considered as mandatory requirements. Substitute the word "shall" for the word "should" in these manuals.

1.6 TESTING FOR CORROSION PROTECTION

Comply with ASTM A123 or protect the equipment with a corrosion- inhibiting coating or paint system that has proved capable of satisfactorily withstanding corrosion in accordance with ASTM B117. Test 125 hours for equipment installed indoors and 500 hours for equipment installed outdoors or subjected to marine atmosphere. Each specimen shall have a standard scratch as defined in ASTM D1654.

1.6.1 Corrosion Criteria

Upon completion of exposure, coating or paint shall show no indication of deterioration or loss of adhesion, nor shall there be indication of rust or corrosion extending further than 1/8 inch on either side or original scratch.

1.6.2 Thickness of Coating

Thickness of coating or paint system on the actual equipment shall be identical to that on the test specimens with respect to materials, conditions of application, and dry film thickness.

1.7 PRESSURE-VELOCITY CLASSIFICATION

SMACNA HVACDCS, Section 1, and as indicated:

PART 2 PRODUCTS

2.1 BASIC MATERIALS

2.1.1 Galvanized Steel Sheets

ASTM A527/527M; coating designation G90.

2.1.2 Galvanized Steel Hot Dipped After Fabrication

ASTM A123.

2.2 DUCTS OF PRESSURE CLASSES 3-INCH OR LESS WATER GAUGE

Construction, metal gauge, hangars and supports, and reinforcements shall conform with SMACNA HVACDCS. Ductwork shall be airtight and shall not vibrate or pulsate when system is in operation. Air leakage shall be less than 5 percent of the system capacity. Construct ductwork of galvanized steel or aluminum.

2.2.1 Curved Elbows

Make a centerline radius not less than 1 1/2 times the width or diameter of the duct.

2.2.2 Joints

Make airtight. No dust marks from air leaks shall show at duct joints or connections to grilles, registers, and diffusers.

2.2.3 Laps

Make laps at joints in the direction of air flow. Space button-punch or bolt-connection in standing seams at fixed centers not greater than 6 inches. Longitudinal locks or seams, know as "button-punch snap-lock", may be use din lieu of Pittsburg Lock, but will not be permitted on aluminum ducts.

2.2.4 Fittings

Elbows, vaned elbows, take-offs, branch connections, transitions, splitters, volume dampers, fire dampers, flexible connections, and access doors shall conform with SMACNA HVACDCS, Section 2. Factory fabricate test holes to be airtight and noncorrosive with screw cap and gasket.

2.2.5 Acoustical Duct Silencers

2.2.5.1 Dynamic Insertion Loss (DIL) Ratings

Required STC 45 conform with the following:

Dynamic Insertion Loss Ratings:
Forward (+)/Reverse (-) Flow

Octave Band	63	125	250	500	1K	2K	4K	8K
DIL.dB(-)1000 fpm	13	26	42	52	55	53	51	42
DIL.dB(+)1000 fpm	13	23	42	52	55	53	51	45

2.2.5.2 Self-Noise Power Levels (SNPL)

All sizes shall conform to the following:

Self-Noise Power Levels (SNPL)
dB re:10^{-12} Watts

Octave Band	1	2	3	4	5	6	7	8
HZ	63	125	250	500	1K	2K	4K	8K
SNPL.dB(-)1000 fpm	54	51	50	51	53	56	52	40
(-)750 fpm	13	23	42	52	55	53	51	45
(-)500 fpm	40	40	39	36	47	48	37	20
(+)500 fpm	36	29	35	30	31	35	22	20
(+)750 fpm	47	41	42	40	40	43	33	22
(-)1000 fpm	55	49	49	47	46	49	42	32

2.2.5.3 Acoustical Duct Silencers (Sound Baffles STC 45)

Factory-Fabricated. Construct rectangular silencers of galvanized steel sheets. The outer casing shall be not less than 22 gauge. Acoustical filler material shall be of inorganic mineral or glass fiber of a density sufficient to obtain the specified acoustic performance and be packed under not less than 5% compression to eliminate voids due to vibration and settling. Material shall be inert, vermin and moisture proof. Air flow capacities shall be as indicated. Pressure drops through the attenuators shall not exceed the values indicated, or shall be not in excess of 15 percent of the total external static pressure of the air handling system, whichever is less. Acoustically test duct silencers with metal duct inlet and outlet sections while under the rated air flow conditions. Noise reduction data shall include the effects of flanking paths and vibration transmission. Construct silencers to be airtight when operating at the internal static pressure pot not less than 2 inches water gauge. Conform with self-noise power level requirements specified in paragraph entitled "Self-Noise Power Levels". Conform with dynamic insertion loss (DIL) rating requirements specified in paragraph entitled "Dynamic Insertion Loss (DIL) Ratings".

2.3 FLEXIBLE DUCTS AND CONNECTORS

UL 181, Class I, UL listed, SMACNA HVACDCS, and additional requirements herein specified. Use to connect between rigid ducts and outlets or terminals. There shall be no erosion, delamination, loose fibers, or odors from the ducts into the air stream. At 250 degrees F, minimum rating pressures shall be 6 inches water positive and 1/2 inch negative, up to 4,000 cfm and 2 inches water positive and 1/2-inch negative, up to 2500 cfm flexible ducts. Flexible ducts shall be 8 feet in length to facilitate future relocation of registers and diffusers. Minimum bend radius shall be twice the duct diameter.

2.3.1 Materials

Interlocking spiral or helically corrugated type constructed of aluminum.

2.3.2 Insulation of Vapor Barrier

ASTM C553; minimum one inch nominal thickness and one lb./cu. ft. density. Sheath the insulation with a vapor barrier having a maximum water vapor permeance of 0.20 perm in accordance with ASTM E96, Procedure A. Coat ends of insulation with cement to prevent erosion and delamination.

2.3.3 Joints

Make airtight slip joints, seal with pressure-sensitive vapor-seal adhesive tape or duct sealer, and secure with sheet metal screws. To prevent insulation compression, place 2-inch wide by one-inch thick closed cell foam plastic spacers over the joints under vapor barriers. To provide a vaportight joint, use a zinc-coated steel, corrosion-resistant steel or aluminum clamp over such spacers.

2.4 CASINGS AND PLENUMS

Factory fabricate components with field installation. The plenum or casing manufacturer shall provide certified testing data, obtainable directly from an independent acoustical laboratory, listing sound absorption and transmission loss characteristics of panel assembly. Sound absorption coefficients and should transmission loss, determined by an independent laboratory, shall be in accordance with ASTM C423 and ASTM E90 respectively.

2.5 DRIP PANS

Provide each cooling coil section in both field-and-factory assembled casings with a stainless or galvanized steel drip pan not less than 18 gauge with drain connections. Drip pans shall collect, confine, and dispose of all condensate from cooling coils and attachments, including headers, return bends, distributors, and uninsulated pipe and fittings. Where individual eliminator blades are in section (not in one piece from top to bottom of coil bank) provide auxiliary drip troughs at bottom of each section with drains to drip pans. Insulate drip pans with water impervious insulation of sufficient thickness to prevent condensate formation on the exterior at ambient conditions to be encountered.

2.6 DIFFUSERS, REGISTERS, AND GRILLES

2.6.1 Material and Finishes

Construct diffusers, registers, and grilles of aluminum.

2.6.2 Sound Pressure Level

Manufacturer certified sound pressure level rating of inlets and outlets. Conform with the following permissible room sound pressure levels.

NC Range, dB	Typical Application
30	Office

2.6.3 Throw

Defined as distance from the diffuser, register, or grille to the point which the air velocity falls below 50 feet per minute. Throw shall not exceed 1 times the outlet mounting height.

2.6.4 Drop

Maximum drop of air stream shall not be so great that it is within 5 feet of the floor at the end of the throw.

2.6.5 Ceiling Diffusers

Equip with baffles or other devised required to provide proper air distribution pattern as indicated. Provide factory-fabricated, single key, volume dampers. Except for linear air diffusers, internal parts shall be removable through the diffuser neck for access to the duct and without the use of special tools.

2.6.5.1 Circular, Square, and Rectangular Diffusers

Construct each ceiling diffuser of four or more concentric elements designed to deliver air in a generally horizontal direction with excess smudging of the ceiling. The interior elements of square and rectangular ceiling diffusers may be circular, square, or rectangular as manufacturer's standard.

2.6.6 Registers

Double-deflection supply registers. Provide manufacturer-furnished volume dampers. Volume dampers shall be of the group-operated, opposed-blade type and key adjustable by inserting key through face of register. Operating mechanism shall not project through any part of the register face. Automatic volume control devices will be acceptable. Provide exhaust and return registers as specified for supply registers, except that they shall have a single set of nondirectional face bars or vanes having the same appearance as the supply registers.

2.6.7 Grilles

Construct and finish as specified above for registers, except that volume dampers shall be omitted.

2.7 DUCT SLEEVES AND PREPARED OPENINGS

2.7.1 Duct Sleeves and Closure Collars

Fabricate from minimum 20-gauge aluminum. Where sleeves are installed in bearing walls, provide structural steel sleeves as indicated.

2.7.2 Prepared Openings

Provide one-inch clearance between the duct and the sleeve.

2.8 ACCESS DOORS

Weld door frame in place. Door shall be rigid and airtight with neoprene gaskets and two or more chrome-plated with copper or nickel base steel hinges and tension fasteners. Provide doors as large as practical. Mount doors, if possible, so that air pressure holds them closed.

2.9 DAMPERS AND LOUVERS

Construct dampers and louvers with two gauges heavier than ducts in which installed. Except as modified herein, the construction shall be of aluminum or galvanized steel with interlocking edges and maximum 10-inch blade width. Conform with SMACNA VACDCS. Dampers shall be opposed blade type where indicated.

2.9.1 Backdraft Dampers (Gravity Dampers or Shutters)

Factory-fabricated, with statically and dynamically balanced blades that open automatically when the fan starts and close by gravity when the fan stops. Provide the edges of blades with felt or rubber strips to prevent rattling.

2.9.2 Manual Volume Dampers

Balancing, factory-fabricated type. Equip dampers with accessible mechanism such as quadrant operators or 3/16-inch rods brought through the side of ducts with locking setscrew and bushing. Where quadrant operators are used they shall be chrome plated or enamel pained with all exposed edges rounded.

2.9.3 Fire Dampers

UL 555.

2.9.4 Automatic Smoke-Fire Dampers

Multiple blade type, 180 degrees F fusible fire damper link; smoke damper assembly to include pneumatically powered operator. Listed per UL 555 as a 1 1/2 hour rated fire damper; further qualified under UL 555S as a leakage rated damper. Leakage rating under UL 555S should be no higher than Class II (10 cfm per square foot at one-inch water gauge (w.g.) at an elevated temperature Category B (250 degrees F for 30 minutes.) Allow maximum pressure drops of 0.1-inch w.g. in the damper open position with average duct velocities of 2500 fpm.

2.9.5 Automatic Smoke Dampers

UL listed multiple blade type, supplied by smoke damper manufacturer, with pneumatic damper operator as part of assembly. Qualified under UL 555S with a leakage rating no higher than Class II 910 cfm per square foot at one-inch w.g. at an elevated temperature category B (250 degrees F for 30 minutes). Allow maximum pressure drops of 0.1-inch w.g. in the damper open position with average duct velocities of 2500 fpm.

2.9.5.1 Bird Screens

ASTM E437, general industrial-use wire cloth, Grade C, medium light or heavier, nominal 2-mesh 0.063-inch wire diameter, aluminum or stainless steel bird screens. Provide removable inspection screens of grooved type, with vinyl or neoprene spline insert for securing screen cloth.

2.10 AIR FILTERS

Provide visible identification on media frames showing model number and air-flow direction.

2.10.1 Replaceable

UL 900, Class, throw-away frames and media one-inch nominal thickness, and size as indicated.

PART 3 EXECUTION

3.1 INSTALLATION

Installation shall conform to NFPA 90A, SMACNA HVACDCS and SMACNA FGDCS. Provide mounting and supporting of ductwork and accessories including, but not limited to, structural supports, hangers, vibration isolators, stands, clamps and brackets, access doors, and dampers. Use electrical isolation between dissimilar metals. Electrical isolation my be fluorinated elastomers or sponge-rubber gaskets. Install ductwork accessories as indicated in accordance with the manufacturer's printed instruction. Allow clearance for inspection, repair, replacement, and service.

3.1.1 Ductwork

When air distribution systems are operated, there shall be no chatter, vibration, or dust marks. After ducts are thermally or acoustically insulated, ensure air flow area equal to duct cross section dimensions indicated.

3.1.1.1 Field Changes to Ductwork

Those required to suit the sizes of factory-fabricated equipment actually furnished, shall be designed to minimize expansion and contraction. Use gradual transitions in field changes as well as modifications to connecting ducts. Provide jumper ducts for discharging air into duct junctions as indicated.

3.1.1.2 Dampers

When installed on ducts to be thermally insulated, equipment each damper operator with stand-off mounting brackets, bases, or adapters to provide clearance between the duct and operator not less than the thickness of insulation. Stand-off mounting items shall be integral with the operator or standard accessory of damper manufacturer.

3.1.1.3 Deflectors

Provide in square elbows, duct-mounted supply outlets, take-off or extension collars to supply outlets, and tap-in branch-off connections. Adjust supply outlets to provide air volume and distribution as indicated or specified.

3.1.1.4 Fire Dampers

Provide in accordance with UY 555 and locate in accordance with NFPA 90A.

3.1.1.5 Access Doors

Provide for automatic dampers, volume dampers, fire dampers, coils, thermostats, temperature controllers, valves, filters, humidifiers and other concealed apparatus requiring service and inspection in the duct systems.

3.1.1.6 Duct Sleeves and Prepared Openings

Provide for ductwork penetrations through which metallic ductwork passes.

a. Duct Sleeves: Allow one-inch clearance between duct and sleeve or one-inch clearance between insulation and sleeve for insulated ducts, except at grilles, registers, and diffusers.

b. Prepared Openings: Allow one-inch clearance between duct and opening or one-inch clearance between insulation and opening for insulated ducts, except at grilles, registers, and diffusers.

c. Closure Collars: Provide minimum 4 inches wide on each side of the ductwork penetrations where sleeves or prepared openings are installed. Fit collars snugly around ducts and insulation. Grind smooth edges of collar to preclude tearing or puncturing insulation covering or vapor barrier. Use nails with maximum 6-inch centers on collars.

3.1.1.7 Packing

FS HH-I-1030. Pack with mineral fibre in spaces between sleeve or opening and duct or duct insulation.

3.1.2 Duct Hangers and Supports

SMACNA HVACDCS, Section 4. Unless otherwise indicated, provide not less than two one- by 1/16-inch galvanized strap-iron hangers spaced one on each side of duct. Provide seismic restraint complying with SMACNA GFSR. Anchor risers in the center of the vertical run to allow ends of riser free vertical movements. Attach supports only to structural framing members and concrete slabs. Do not anchor supports to metal decking unless a means in provided and approved for preventing the anchors from puncturing the metal decking. Where supports are required between structural framing member, provide suitable intermediate metal framing. Where C clamps are used, use retainer clips.

3.1.2.1 Flexible Ducts

Support ducts by hangers every 3 feet, unless supported by ceiling construction. Use stretch flexible air ducts to smooth out corrugations, and long radius elbows, where possible, using a minimum length to make connections.

3.1.2.2 Flexible Connectors

Provide flexible connectors between fans or ducts or casings and where ducts are of dissimilar metals. For round ducts, securely fasten flexible connectors by zinc-coated steel clinch-type draw-bands. For rectangular ducts, lock flexible connectors to metal collars.

3.1.3 Inspection Plates and Test Holes

Provide, where required, in ductwork or casings for all balance measurements. Test holes shall be factory fabricated, airtight, and noncorrosive with screw cap and gasket. Extend cap through insulation.

3.1.4 Acoustical Duct Silencers (Sound Baffles, STC 45)

Provide duct silencers and non-conductive duct sections at duct penetrations through sound group 3 walls as specified and where indicated on drawings.

3.1.5 Flashings

Provide waterproof flashings where ducts pass through exterior roofs.

3.1.6 Cleaning of Ducts

Remove all debris and dirt from ducts and wipe clean. Before installing air outlets, use air handler to blow dry air through entire system at maximum attainable velocity. Provide temporary air filters for this operation.

3.1.7 Air Filters

Install with sealant and gaskets to prevent by-passing of air.

3.1.8 Drain (Drop) Pans, Drain Connections, and Drain Lines

Provide coils with drain and drain connections. Where coils are sectionalized with one section above the other, install intermediate drain pans. There shall be no entrainment of water in air stream. Drain condensate from drain pans to the nearest disposal points as indicated. Equip drain lines with U-traps and a seal height one inch greater than the maximum static pressure rating of the fan system.

3.2 FIELD QUALITY CONTROL

The Contractor is responsible for the administration and direction of tests. Furnish instruments, equipment, connecting devices, and pesonnel for the tests. Notify Contracting Officer 3 days before inspection or testing is scheduled. Correct all defects in work. Repeat tests until the work is in compliance.

3.2.1 Air Duct Leakage Tests

Comply with SMACNA HVACALTM. Test ducts, plenums, and casings for air leakage. Prior to application of insulation, subject new ductwork to static pressure equivalent to that indicated. Before installing supply outlets, apply temporary caps where outlets will be connected. Connect and test blower temporarily to inlet end of duct and, by throttling its intake, adjust static pressure in duct to required value. Read voltage and current to blower motor and total static pressure across blower wheel. Apply data to AMCA certified performance table for the test blower to derive volumetic flow rate (cfm) of air injected into duct. Remove temporary caps and test blower. Verify the maximum allowble air leakage of the total air that duct is required to deliver. Perform the measurement of leakage using a calibrated orifice tube with its individual calibration curve.

3.2.2 Balancing and Testing of Air Systems

Comply with SMACNA HVACTAB to achieve and confirm compliance with drawings and specifications; prepare complete report of final test results.

End of Section

TOPIC: **2.3 IDENTIFY SOCIO ECONOMIC PROGRAMS**

Ref: Pages 2-15 to 2-25

Objective: At the completion of this lesson topic students will be able to correctly determine the socio programs applicable to construction contracts.

Time: 10:00 - 10:30

Method: Lecture, Viewgraphs, Class Exercise

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.3 IDENTIFY SOCIO ECONOMIC PROGRAMS	
	Tell the Class: Not all of the socio economic programs apply to construction contracts. You need to know which ones are applicable, and you need to be familiar with the different options available in order to review and evaluate the recommendation that comes to you with the procurement package.	
	Introduction It is the policy of the Government that a "fair portion" of Government contracts and subcontracts be placed with small businesses. Although the policy may be difficult to follow in issuing such contracts as R & D, Systems procurements etc., it has not been difficult in the construction arena. This is because the construction industry is mostly made up of businesses who are classified under the Small Business Act as being small. Therefore, even when awarding a construction contract to a large business, the small business subcontractor is the one who usually performs the bulk of the work. This lesson is designed to be informative as to the programs which apply to construction.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	The three small business programs which have a major impact on construction are reflected in Viewgraph 2-12.	

SMALL BUSINESS PROGRAMS IMPACTING CONSTRUCTION

1. **SMALL BUSINESS SET ASIDES**
2. **SBA 8(a) Set Asides**
3. **Small Business Competitiveness Demonstration Program**

VG 2-12.

State that under the policy of the Federal Government, proposed construction procurements are reviewed to determine whether to set aside for small businesses or the competitiveness demonstration program, or to negotiate a contract under the 8(a) program. Partial Small Business and labor surplus area set asides are not applicable to construction procurement.

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	• **Question:** Are Labor Surplus Area Set Asides appropriate in a construction contract? **Answer:** **Labor surplus area set asides are based on the premise that the Contracting Officer gives preferential consideration to awarding a contract to a contractor who will perform in an area where statistics show that unemployment is high (over 6%).**	
FAR 19.50-4	**FAR exempts Military construction projects from LSA Set Asides. In all other contracts, LSA is a consideration. FAR lists the order of preference for civilian agencies as follows:** **1. Total Set-Aside for SB located in Labor Surplus Areas.** **2. Total Set Aside for SB.** **3. Total labor surplus area set aside for L.B.**	
FAR 19. 102(g)	State that the Small Business Administration establishes small business size standards on an industry-by-industry basis, based on Standard Industrial Classifications (SIC) codes which are numbered.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** In construction, what is the criteria which determines whether a firm is considered small business? **Answer:** **A business that is:** **(S I C code 15)** *** Independently owned and operated;** *** Not dominant in its field of operation;** *** Has aggregating receipts during a three year period of not more than $17 million. ($13.5 for dredging).** **(S I C code 17)** *** Special Trades, not more than $7 million.** *** Refer students to Exhibit 2-10 in the Text/ Reference for a listing of "Special Trades", as well as other classifications.**	
T/R 2-20		
?	• **Question:** How is it determined whether a set aside is to be established? **Answer:** **The FAR specifies that if there is a reasonable expectation that offers will be obtained from at least two responsible small business concerns, and award will be made at a fair market price, a set aside shall be established.**	
FAR 19-502-2		

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
FAR 19.800	• **Question:** Ask students to describe the 8(a) program, which was established by Section 8(a) of the Small Business Act. **Answer:** **The 8(a) program is one in which a small disadvantaged contractor is selected by SBA and the Government enters into negotiations with the firm. The resultant contract is a tri-partite agreement in which the prime contractor is the Small Business Administration and the subcontractor the small business contractor.**	
	• **Question:** How is the 8(a) contractor selected? **Answer:** **The Small Business Administration selects a construction contractor for 8(a) contracts by:** * **using the standard criteria of capability;** * **analyzing a prospective firm's qualifications for performing work in the construction trade categories; and** * **the concern's capacity measured in each trade in terms of estimated dollar value.**	
FAR 19.805	• **Question:** What about competing 8(a) contracts? When is this considered appropriate? **Answer:** **Show VG 2-13 which lists the criteria.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES

CRITERIA FOR COMPETITIVE 8(a) SET ASIDE

1. **ANTICIPATED AWARD PRICE OF 3 MILLION FOR CONSTRUCTION.**

2. **REASONABLE EXPECTATION OF TWO ELIGIBLE, RESPONSIBLE BIDDERS.**

3. **WILL BE CONDUCTED BY SEALED BIDDING OR COMPETITIVE NEGOTIATION.**

VG 2-13

State that the Office of Federal Procurement Policy (OFPP) implemented Title VII of Public Law 100-656 through issuance of the "Small Business Competitiveness Program Test Plan" in August of 1989.

FAR 19.10

- **Question:**
  What does the law do?

  Answer:
  It has temporarily suspended small business set asides under four designated industry groups, of which construction and Architectural and Engineering Services represent two of the four groups. The FAR targeted specific agencies to participate in the test.

NOTE: During the test period, reports are furnished by the various agencies dealing in construction, concerning how many small businesses, SDBs, etc. are awarded on procurements which are unrestricted. If the number of small business contracts awarded falls below the preset 35 percentage, set asides will be reinstated.

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.3, "Social Program Recommendations"	
	Time: **15 minutes** **Method:** **Group Exercise (Continued)** **Purpose of the Exercise:** Reinforcement of the learning objective concerning the identification of the social programs applicable to construction, and on what basis a determination is made in any given procurement. **Instructions:** Students are to refer to the Class Exercise CE-2.1 documents, Procurement Request, "Various Repairs and Alterations to Building 560". Examine the recommendation made by the Small Business Representative, and determine if the recommendation is appropriate (Enclosure 2). **NOTE:** Small Business Representatives are referred to by various titles within DOD and the civilian agencies. (i.e., Associate for Small Business, Deputy for Small Business, Small Business Representatives, Procurement Center Representative (PCR), and SADBUs.) Some are employed by SBA, and some are employed by the Agencies as advisors). **The form "Analysis of the Small Business Representative Recommendation" is provided to document their answers.**	

CLASSROOM EXERCISE CE-2.3
Worksheet

Analysis of The Small Business Representative Recommendation

Describe the problem or discrepancy:

_____

_____

_____

_____

_____

_____

What would you recommend be done to correct the situation?

_____

_____

_____

_____

_____

_____

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.3, Social Program Determination	
FAR 19.505	Stress that although it is the job of an individual employed by SBA as a Small Business Representative to make such recommendations, the ultimate decision to overturn the recommendation can be made by the Contracting Officer under appeal provisions in FAR. **NOTE:** If the recommendation is one made by an individual employed by the agency as an advisor, and the Contracting Officer disagrees with it, it is usually resolved by mutual agreement.	
FAR 19. 502-2	• **<u>Question</u>: (Ask once again.)** What is the basis in FAR in which to determine if a small business set aside is to be made? **<u>Answer</u>:** **If there are two or more firms expected to respond with a price that is considered fair market value, the Contracting Officer shall set the proposed procurement aside for Small Businesses.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.3 (Continued)	
	• **Question:** Based on the answer just provided, ask for a show of hands as to how many agree with the recommendation made by the Small Business Representative that "this be a total Small Business Set Aside." **Answer:** **Under the present law, if you are one of the target agencies, the solicitation would have to be issued as "unrestricted".**	
	• **Question:** Generally if you do not agree with a recommendation, what action must you, the Contract Specialist, take?	
	Answer: **The Contract Specialist must discuss the recommendation with the Contracting Officer.** **The Contracting Officer must follow the procedures in FAR and decide whether to appeal the recommendation in writing (if it originated with the SBA).**	

FAR Subpart 19.10

FAR 19.505

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE CE-2.3 (Continued)	

SUMMARY OF THE SOCIO LAWS IMPACTING CONSTRUCTION CONTRACTS

The social programs most likely affecting construction contracts are those dealing with Small Businesses, Disadvantaged Businesses, 8(a) contracts and Emerging Small Businesses:

Small Business Set Asides: Even though the construction industry consists mainly of small businesses performing specialized construction tasks, under the test program, construction contracts which are expected to exceed the $25,000 threshold are to be issued as "unrestricted procurements".

8(a) Competitive Set Asides in construction are not established unless the solicitation is expected to exceed the $3,000,000 threshold, and meets the other FAR criteria.

8(a) negotiated contracts are compatible with the construction environment, and are frequently issued by all agencies.

Emerging Small Business set asides apply to all construction solicitations not expected to exceed the “reserve amount” established by the Office of Federal Procuremeny Policy. Emergency Small Businesses are small businesses which do 50% of the required business used to classify a small business.

TOPIC: **2.4 IDENTIFY INFORMATION FOR FORMULATING THE SOLICITATION**

Ref: Pages 2-26 through 2-35

Objective: Gather all of the information needed to prepare a solicitation.

Time: 10:30 - 11:30
11:30 - 12:30 LUNCH
12:30 - 1:00

Method: Class Exercise

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.4 IDENTIFY INFORMATION FOR FORMULATING THE SOLICITATION	
	Tell the Students: The following lesson consists of the process of gathering necessary facts and information to complete the solicitation. These are the missing pieces that are needed to put the package together. **Introduction** The lesson is to inform the student what information is needed to complete the procurement package and where the information can be found. The lesson will be conducted almost entirely by a classroom exercise which is designed to give the student "hands on" experience both in knowing what information is required and where it can be obtained.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	Presentation State that once the procurement package has been reviewed and all of the necessary changes, clarification, corrections etc. have been obtained, it is time to complete the review of the solicitation package and formulate the boilerplate which is added to the technical specifications and drawings. In order to do so, certain information must be obtained and made available to prospective bidders/offerors by placing it in the solicitation.	
?	• **Question:** What kinds of information are we talking about? **Answer:** * **Determine the magnitude of the project.** * **Select the appropriate wage rate.** * **Identify the Hometown Plan applicable.** * **Establish amount of liquidated damages.** * **Select an appropriate site visit date.** * **Establish bid opening date.** * **Identify bonding requirements.**	
☞	Tell the students that we are going to "learn by doing" in a planned exercise which will allow the students go about completing all of the above tasks.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.4 "Identify Information For Formulating Solicitation"	
	Time: **45 Minutes** **Method:** **Group Exercise (Continued)** **Purpose of this portion of the exercise:** To provide "hands-on" experience in seeking out and providing the information required. **Instruction:** The answers to this portion of the exercise should be a group consensus. Tell them that the person selected to play the part of the Contracting Officer, will be the decision maker of the group on any matters which would, in a real life situation, need the concurrence of a CO, or in matters in which the group may not all agree. Students will refer to the following references and/or documents in completing this part of the exercise: * **Text/Reference, pages 2-26 through 2-35.** * **General Wage Decision CA 90-2 Classroom Exercise Book, Chapter 2, CE-2.4.** * **Hometown Plan, Classroom Exercise Book, Chapter 2, CE-2.4.** * **Table for Computing Liquidated Damages, CE-2.4** * **Julian Calendar, CE-2.4** * **Procurement Package, Classroom Exercise Book, Chapter 2, CE-2-1.**	**Note to Instructor:** Prior to beginning the exercise, tell the students to turn to CE-2.4 beginning at CE-143 and “walk them through” the documents. Explain how each document has a purpose in the exercise.

INSTRUCTIONS

CLASSROOM EXERCISE CE-2.4

Identify Information for Formulating the Solicitation

Time: 30 Minutes

Method: Group Exercise

Instruction: Appoint the following individuals:

* Group Spokesperson
* Recorder
* Contracting Officer

If and when there may be disagreement among group participants, the person appointed Contracting Officer will make any decisions necessary.

The Text/Reference, Chapter 2, pages 2-26 through 2-35, may be useful in completing the following exercise.

In addition, the following documents are provided:
* Magnitude of the Project CE-2.4
* General Wage Decision No. CA 90.2, Classroom Exercise CE-2.4
* Hometown Plan, Classroom Exercise Book, Chapter 2, CE-2.4
* Liquidated Damages, CE-2.4
* Julian Calendar CE-2.4
* Recording the Information Worksheet, CE-2.4
* Procurement Request Package entitled "Repair and Alteration of Bldg. 560," Classroom Exercise Book, Chapter 2, CE-2.1, which was used in a previous exercise.

Using the Procurement Request Package provided earlier in Step 1 of the exercise, obtain the necessary information that you would need to complete the solicitation documents, recording the information on the sheet provided.

Accomplish the following tasks in steps. Record your findings on the answer sheet provided at the end of the exercise

1. Establish the Magnitude of the Project.

2. Identify all of the disciplines required to complete the project by reviewing the specification. Review the wage rate to determine:
   (a) Classification of the wage rate (i.e. Building, Residential, Highway, or Industrial),
   (b) If the county (location) of the construction site is covered, and
   (c) If all the disciplines are covered.

3. Identify the Hometown Plan and establish the percentage goals for minorities and females.

INSTRUCTIONS

CLASSROOM EXERCISE CE-2.4
(Continued)

4. Review the specification and determine what liquidated damages apply by consulting the chart provided.

5. A Julian calendar is provided to assist you in establishing site visit dates, as well as bid opening dates.

6. What are the bonding requirements?

7. Are there any special clauses or provisions which should be aded due to special requirements?

CLASSROOM EXERCISE CE-2.4

WORKSHEET

Identify Information for Formulating Solicitation

The following information is recorded as being applicable to the solicitation package "Repair and Alterations of Building 560."

The Magnitude of the Project is $_____

The appropriate wage rate classification is _____
(Exhibit 2-15, Text Reference pages 2-28 and 2-29.)

List the disciplines which are required for the project: (Refer to the Specification Table of Contents.)

_____

_____

_____

_____

_____

_____

_____

Are there any disciplines not covered by the wage determination? What are they?

_____

What is the Hometown Plan? (Text Reference Page 2-31 and 2-32.)

What is the goal percentage for female workers?

_____

What is the goal percentage for minority workers?

_____

What are the amounts of liquidated damages that apply?

_____

Are there phasing requirements? (Refer to the specification.) ____ Yes ____ No

If "yes", what are the liquidated damages to be applied to the phasing?

_____

Establish Bid Opening Date. (Text/Reference page 2-33)

_____

_____

Establish site visit date and point of contact: (T/R page 2-33 and 2-34.)

Identify bonding requirements. (T/R Page 2-34.)

Bond	Amounts
_____	_____
_____	_____
_____	_____
_____	_____

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO EXERCISE CE-2.4	
	1. MAGNITUDE OF THE PROJECT:	
T/R 2-26	Based on the Government estimate of $960,000, the magnitude would be between $500,000 and $1,000,000. (See Exhibit 2-14 in the Text/Reference.)	
	2. SELECT THE APPROPRIATE WAGE DETERMINATION: "Walk" the students through the following steps:	
	State that Davis Bacon wage rates are divided into four schedules: 1. Residential 2. Building 3. Highway 4. Heavy	
T/R 2-28	The correct selection for the classification of our project is **"BUILDING"**. (This is based on the criteria described in Exhibit 2-15.)	
T/R 2-28, 2-29	Following the procedure outlined in the Text/Reference, the next step is to refer to the Table of Contents on page 1 of the specification.	
	• **Question:** By reading the Table of Contents preceding the specification Section 01010, ask the students to list the trades which will be necessary to complete this project. Record their answers on the blackboard. **Potential Answers:** **Laborers** **Cement workers** **Masonry workers** **Sheet metal fabricators and installers** **Carpenters** **Insulators** **Painters** **Plumbers** **Mechanical** **Electricians**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO EXERCISE CE-2.4 (Continued)	
	• **Question:** Does the specification we are reviewing contain a Division for each trade named? **Answer:** **No. This can be determined by checking the index of numbers with what has been included in the technical specification.**	
	• **Question:** Name the ones which are missing in the class exercise scenario. **Answer: (Again, checking numbers)** **(All of Divisions 3 through 10 and 16 are missing.)** **Concrete** **Masonry** **Metal Fabrication** **Carpentry** **Thermal & Moisture Protection** **Ceiling Insulation** **Doors & Windows** **Finishers (Painting)** **Bathrooms (Plumbing)** **Electrical**	
	The last step in the process is to locate the listing for the county where the project will be built. In the scenario the location where the project is to be constructed is in Santa Barbara County. The wage rates are compiled of multiple counties. Santa Barbara County falls within Area 2.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO EXERCISE CE-2.4 (Continued)	
	• **Question:** Now that the appropriate wage rate has been identified as CA 90-2, Area 2 listing under the "Building" classification, how do we know that all of the trade disciplines required to build the project are covered in the wage rate? **Answer:** **By using a similar process such as the one we just completed. The disciplines have already been identified. Consult the various wage rates listed for Santa Barbara county for each trade.**	
T/R 2-29, 2-30	• **Question:** What must be done, if anything, if there are any missing ones? **Answer:** **A wage rate must be obtained from the DOL on a SF 308, Request for Determination And Response.**	
	3. IDENTIFY THE HOMETOWN PLAN WHICH IS APPLICABLE.	
T/R 2-31	• **Question:** What is meant by a designated "Hometown Plan?" **Answer:** **A tri-partite agreement among construction contractors, unions and minority groups within a defined area, designating a plan for compliance with the Executive Order, which is approved by the Office of Federal Contract Compliance Program (OFCCP) of DOL.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO EXERCISE CE-2.4 (Continued)	
	• **<u>Question</u>:** Now that we know what a Hometown Plan is, how is it applied to a construction solicitation? And how do we go about finding out which Hometown Plan applies to our solicitation? **<u>Answer</u>:** * **All construction contracts which have incorporated the Equal Opportunity Clause must also incorporate an Affirmative Action Compliance Requirements Clause.** * **The clause provides fill-in blanks in which to enter the Hometown Plan, specifying goal percentages for the hiring of minorities and females for that particular solicitation in that particular locale.** * **The OFCCP publishes all of the Hometown Plans in the Federal Register. They are listed by locality, providing the percentages of minorities and females which must be hired.**	
FAR 52-222-27		
	* **To obtain the Hometown Plan percentage that applies to the solicitation exercise in hiring minorities, CE-2.4 provides an excerpt from the Federal Register, showing Santa Barbara County as an SMSA County plan, at 19.7%.** **(NOTE: SMSA is a statistical reference meaning Standard Metropolitan Statistical Area (Cities) (See Glossary.)**	
	Note: The percentage goal for female employment has been adopted at 6.9% nationwide. Therefore the 6.9% remains constant. Based on the locality of the project, the percentage for hiring minorities varies considerably. Students may now record the correct percentages on their worksheets CE-2.4 for the exercise if they have not already done so.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO EXERCISE CE-2.4 (Continued)	
	4. ESTABLISH LIQUIDATED DAMAGES	
	• **Question:** Assume that you are responsible for establishing the liquidated damages for the project exercise. What would be the appropriate dollar amount?	
	Answer: **Liquidated damages amounts are established by the agencies, but must be in accordance with FAR guidelines. The exercise contains a table that provides the amounts to be calculated for the exercise.** **Based on the amounts indicated in the table and the phased completion schedule, the damages would be $1,000 per day for Phase I and $1,000 per day for Phase II. Damages to the Government may be higher in some types of construction. Therefore agencies sometimes provide special rates for other than normal construction. In this case a higher rate is applicable for dormitory type housing (Do not confuse the wage rate classification "Building" with the "housing", or "Dormitory" description which applies to Liquidated Damages.)**	

5. SELECT APPROPRIATE BID OPENING and SITE VISIT DATES

- **Question:**
  What are some of the matters you would consider in establishing a bid opening date?

  Answer:
  * **Number of days required to synopsize.**
  * **Elimination of calendar holidays.**
  * **Complexity and/or the size of the project.**
  * **Whether a prebid conference is held.**
  * **Availability and proximity of the site visit.**

- **Question:**
  What criteria is considered in establishing a site visit date?

  Answer:
  The site visit date is established based on the bid opening date, and the preference of the client or individuals responsible for escorting the prospective contractors during the site visit.

  It normally is established through the cooperation of the Project Manager, the client and the contracts office.

  On small projects the date should be established about midway between the date of issuing the solicitation and bid opening. In large complex projects, or those having prebid conferences, a larger span of time should be allowed between the conference and bid opening, allowing sufficient time for clarifications and distribution of conference notes to all prospective bidders.

T/R 2-33

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	6. IDENTIFY BONDING REQUIREMENTS	
?	• **Question** What are the bonding requirements in a construction contract?	
FAR 28. 101-l **T/R 2-37**	**Answer:** **The Miller Act requires performance and payment bonds for construction contracts exceeding $25,000. FAR states that whenever a performance and payment bond is required, a bid guarantee is also required. (Minimum amounts are shown in Exhibit 2-14.)**	

CE-2.4

MAGNITUDE OF THE CONSTRUCTION PROJECT

FAR 36.204

- Less than $ 25,000
- Between $ 25,000 and $ 100,000
- Between $ 100,000 and $ 250,000
- Between $ 250,000 and $ 500,000
- Between $ 500,000 and $ 1,000,000
- Between $ 1,000,000 and $ 5,000,000
- Between $ 5,000,000 and $ 10,000,000
- More than $ 10,000,000

Based on the Government estimate, establish the magnitude of the project by utilizing the chart above.

CE-2.4

GENERAL WAGE DECISION NO. CA90-2

State: **CALIFORNIA**

County(ies): Imperial, Inyo, Kern, Los Angeles, Mono, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara, and Ventura.

Construction Type: Building, Heavy Highway, Residential & Dredging.

Construction Description: Building Construction: Heavy construction (does not include TV/Grout work or water well drilling; and in Kern County, does not include oil well drilling); Highway construction; Residential construction; Residential construction (includes single family homes and apartments up to and including 4 stories (does not include Inyo and Mono counties); Dredging. This decision does not include hopper dredge work or the installation of solar energy systems.

	Basic Hourly Rates	Fringe Benefits
ASBESTOS WORKERS	24.29	5.87
BOILERMAKERS	24.60	4.80
BRICKLAYERS; STONEMASONS		
Area 1	20.00	4.95
Area 2	21.09	5.21
Area 3	23.16	5.12
Area 4:		
Bricklayers		
Note: On jobs performed at Fort Irwin Army Training Center, Twenty-Nine Palms Marine Base and the China Lake Naval Base, the minimum hourly wage rate will be $5.00 per hour higher.		
Area 5:		
Bricklayers: Stonemasons; Marble, Terrazzo and Tile Setters	23.00	5.05
Area 6	21.99	5.43
Area 7	23.50	4.57
Area 8	24.84	5.21
BRICK TENDERS	16.16	8.76
CARPENTERS:		

	AREA 1	AREA 2
Carpenters; Cabinet Installers and Insulation Installer	21.38	21.95
Shingler	21.51	22.08
Hardwood Floor worker and Acoustical Installer	21.58	22.15
Saw Filers	21.46	22.03
Table Power Saw Operator	21.48	22.05
Pneumatic Nailer or Power Stapler	21.63	22.20
Commercial fence builder	20.11	20.11
Roof loader of shingles (commercial)	15.29	15.68
Millwrights	22.45	22.45
Pile driver; Derrick barge; bridge or dock carpenter; Cable splicer; Rock slinger	22.08	22.08
Head rock slinger	22.18	

NOTE: For work at Vandenberg Air Force Base, Point Conception, Point Arguello, Camp Roberts, China Lake, Edwards Air Force Base, North Edwards Air Force Base, George Air Force Base, Fort Irwin, Nebo Marine Ballistic Base (Yermo), 20 Palms Marine Base, U.S. Naval Air Facility, El Centro; Mountain Warfare Training Center, Bridgeport, the hourly wage rate is $2.00 per hour more than the rate shown above, except for the following classifications: Millwright, Pile Driver Foreman, Pile Driver/Derrick Barge, Bridge or Dock Carpenter and Cable Splicer, Head Rockslinger, Rockslinger and Rock Barge or Scow person.

FRINGE BENEFITS: $3.95

	Basic Hourly Rates	Fringe Benefits
Work on single family homes and apartment up to and including 4 stories:		
Framer and Finish Carpenter	17.09	4.02
Insulation and weatherstripping Installer	15.50	2.86
Shingler	12.0-9	3.11
Concrete	18.17	4.02
Cabinet Installer	17.945	4.02
Residential wood fence builder	15.61	3.95
CEMENT MASONS:		
Area 1:		
Projects Over $4 million:		
Cement Mason	19.31	7.60
Cement Mason (Magnetite)	19.43	7.60
Cement Masons (Floating & Troweling Machine Operator)	19.56	7.60
Projects $4 million or less:		
Cement Mason	19.31	5.60
Cement Mason (Magnesite)	19.43	5.60
Cement Masons (Floating & Troweling Machine Operator)	19.56	5.60
Residential Cement Mason	17.26	5.45

NOTE: $2.00 per hour differential for work at Vandenberg Air Force Base, Point Arguello, Point Conception, China Lake, Camp Roberts, Edwards Air Force Base, North Edwards Air Force Base, Naval Ordinance Test Station, Marine Corps Supply, Fort Irvine, George Air Force Base, U.S. Naval Air Facility, El Centro, and 29 Palms Marine Base.

DIVERS:		
Diver, Wet	49.16	3.95
Diver, Stand-by	24.58	3.95
Diver, Tender	23.58	3.95
DRYWALL INSTALLERS/LATHER:		
Work on single family homes and apartments up to and including 3 stories (excluding Inyo, Kern and Mono Counties):		
Area 1	20.53	3.11
Area 2	18.53	3.11
All other construction:		
Area 1	25.235	3.95
Area 2	23.235	3.95
*ELECTRICIANS:		
Area 1:		
Electricians	19.70	3.80+ 3%
Cable Splicers	20.15	3.80+ 3%
Sound Installers	16.17	1.85+ 3%
Telephone interconnect technician	12.79	1.85+ 3%
Residential electrician	13.50	3.30+ 3%

	Basic Hourly Rates	Fringe Benefits
Area 2:		
Work on single family homes and apartments up to and including 3 stories:	12.25	2.35+ 4%
All other work:		
Electricians	19.40	4.90+ 4%
Cable Splicers	21.37	4.90+ 4%
Area 3:		
Electricians	23.75	5.24+ 3%
Cable Splicers	24.35	5.24+ 3%
Tunnel work:		
Electrician	26.13	5.54+ 3%
Cable Splicer	26.73	5.54+ 3%
Sound Technician	16.95	5.55+ 3%
Residential Electrician	14.30	2.86+ 3%
Utility Technicians (Covers the installation, maintenance, renovation and repair of street lighting and traffic signal work or systems, whether overhead or underground, including dusk to dawn lighting installations and ramps for access to or egress from freeways, but excluding installations of new freeway construction.)	24.00	6.24+3%
Area 4:		
Electrician	23.55	4.85+ 3%
Cable Splicer	24.63	4.85+ 3%
Alarm Technician	13.65	.10
Residential Electrician	14.50	1.45+ 3%
*Area 5:		
Electrician	21.73	5.36+ 3%
Electronic Technician	16.59	1.57+ 3%
Cable Splicers	22.23	5.36+ 3%
Residential Electrician (3 stories or less)	13.40	2.50+ 3%
*Area 6:		
Work on single family homes & apartments up to and including 3 stories)	13.50	1.95+ 3%
Sound Installer	16.59	1.57+ 3%
Electrical Contracts over $2 million:		
Electricians	21.15	6.23 + 3%
Cable Splicer	21.65	6.23+ 3%
Electrical Contracts $2 million and under:		
Electricians	20.39	6.23+ 3%
Cable Splicers	20.89	6.23+ 3%
Area 7:		
Work on single family homes and apartments up to & including 3 stories		
Electrical Contracts over $500,000:		
Electrician	23.70	4.11+ 4%
Cable Splicers	26.04	4.11+ 4%
Electrical Contracts over $375,000 with a main Electrical service over 1600 amps:		
Electricians	22.87	4.54+ 3%
Cable Splicers	24.37	4.54 + 3%

	Basic Hourly Rates	Fringe Benefits
Electrical Contracts of $375,000 or less with a main electrical service of 1600 amps or less:		
Electricians	20.05	4.54+ 3%
Cable Splicers	21.55	4.54+ 3%
Work on single family homes and apartments 3 stories or less:	12.70	3.17+ 3%
Area 9:		
Electricians	22.70	5.70+ 3%
Cable Splicers	24.97	5.70+ 3%
Groundman	17.25	5.70+ 3%
Area 10:		
Electrical Contracts over $375,000 with a main electrical service over 1600 amps:		
Electricians	26.62	4.54+ 3%
Cable Splicers	28.12	4.54+ 3%
Electrical Contracts of $375,000 or less with a main electrical service of 1600 amps or less:		
Electricians	23.80	4.54+ 3%
Cable Splicers	25.30	4.54+ 3%
Work on single family homes and apartments 3 stories or less:	12.70	3.17+ 3%
Area 11:		
Work on single family homes and apartments up to & including 3 stories	13.25	2.35+ 4%
All other work:		
Electrician	23.15	4.90+ 4%
Cable Splicers	25.12	4.90+ 4%
ELEVATOR CONSTRUCTORS		
Area 1:		
Mechanics	24.725	5.22+ a
Helpers	17.31	5.22+ a
Probationary Helpers	12.36	
Area 2:		
Mechanics	31.40	5.22+ a
Helpers	21.98	5.22+ a
Probationary Helpers	15.70	
GLAZIERS:		
Area 1:	20.59	6.37
Area 2:	21.27	3.81
Area 3:	19.38	4.74
IRONWORKERS:		
Excluding Vandenberg AFB:		
Fence Erectors	18.91	10.25
Ornamental, Reinforcing, Structural	19.80	10.25
Vandenberg AFB only:		
Fence Erectors	21.91	10.25
Ornamental, Reinforcing, Structural	22.80	10.25

LINE CONSTRUCTION:	Basic Hourly Rates	Fringe Benefits
Area 1:		
Commercial overhead line work; Catenary work: Line Technician, Heavy Equipment Operator	23.58	3.70+ 4%
Ground	18.07	3.70+ 4%
Ground/Truck Driver	12.50	3.70+ 4%
All other commercial underground line work:		
Line Technician: Heavy Equipment Operator	16.66	3.70+ 4%
Ground/ Ground/truck driver	12.35	3.70+ 4%
Area 2:		
Ground Man	14.74	4.90+ 4%
Line Worker; Heavy Equipment Operator	19.65	4.90+ 4%
Cable Splicers	21.62	4.90+ 4%
Area 3:		
Line Worker	23.75	6.49+ 3%
Cable Splicers	24.35	6.49+ 3%
Ground	14.25	6.49+ 3%
Area 4: Subcontracts under $2 million:		
Line technician	20.68	3%+ 6.19
Cable Splicers	21.18	3%+ 6.19
Ground person	15.51	3%+ 6.19
Subcontracts over $2 million		
Line technician	21.42	3%+ 6.19
Cable Splicers	21.92	3%+ 6.19
Ground person	16.44	3%+ 6.19
Area 5:		
Cable Splicer	20.93	4++ 5.10
Ground	15.32	4%+ 5.10
Line Worker	20.43	4%+ 5.10
Area 6:		
Ground	17.78	4.06+ 4%
Line Worker; Line truck and equipment operators	23.70	4.06+ 4%
Cable Splicers	26.07	4.06+ 4%
Area 7:		
Ground	17.44	6.15+ 3%
Line Worker	23.25	6.15+ 3%
Cable Splicers	25.58	6.15+ 3%
Area 8:		
Ground Driver	22.67	4.49+ 4%
Line Worker: Equipment Operator	24.17	4.49+ 4%
Cable Splicers	17.00	4.49+ 4%
Area 9:		
Ground Man	18.49	4.90+ 4%
Line Worker; Heavy Equipment Operator	23.40	4.90+ 4%
Cable Splicers	25.37	4.90+ 4%
Area 10:		
Line Worker: Equipment Operators	26.42	4.49+ 4%
Cable Splicers	27.92	4.49+ 4%
Ground; Ground driver	20.75	4.49+ 4%

MARBLE SETTERS	Basic Hourly Rates	Fringe Benefits
Area 1	22.40	3.00
Area 2	24.22	3.80
*MARBLE AND TILE FINISHERS;		
Area 1:	19.21	6.32
PAINTERS:		
Area 1:		
Brush, Painter Burner	21.16	5.56
Paperhangers	18.87	4.67
Sandblaster; Iron, Steel and Bridge (swing stage)	19.37	4.67
Sheet Rock Tapers	20.80	5.56
Brush (swing stage); Spray	18.62	4.67
Area 2:		
Brush	21.07	4.68
Sandblast, spray, steeplejack	22.07	4.68
Paperhanger; swing stage; Paste machine operator	21.32	4.68
Taper	22.16	4.69
Los Angeles County only: Work on wood frame structures used for human habitation, motels and convalescent homes	17.00	3.58
Area 3:		
Brush	17.95	3.32
Brush on roller (swing (stage): Paperhanger	18.45	3.32
Spray; Sandblaster; Taper	18.95	3.32
Spray and Sandblast (swing state); Special coaters; Tapers with tools	19.45	3.32
Steeplejack; Structural steel or pipe in place	19.95	3.32
Area 4:		
Work on single family homes and apartments up to and including 3 stories, and commercial work 3 stories and under:		
Painter	15.86	4.40
Spray painter	16.36	4.40
All other work:		
Drywall finishers:		
Taper	22.66	4.15
Spray texturer	22.91	4.15
Spray texturer tenders	9.50	4.15
Painter: Pot Tender; (brush)	19.83	4.40
Spray Painter; Sandblaster (non-steel); Waterblaster; Power cleaning (non-steel); Steam cleaning (non-steel)	20.33	4.40
Sign Painter	20.48	4.40
Steeplejack (non-steel)	20.83	4.40
High and Hazardous Pay:		
4th and 5th Stories:		
Painter	20.205	4.40
Spray Painter; Sandblaster; Waterblaster; Power cleaning; steam cleaning	20.705	4.40
Steeplejack (non-steel)	21.205	4.40

	Basic Hourly Rates	Fringe Benefits
6th to 10th Stories:		
Painter	20.58	4.40
Spray Painter; Sandblaster; Waterblaster; Power Cleaning; Steam Cleaning	21.08	4.40
Steeplejack	21.58	4.40
10 stories and over:		
Painter	21.08	4.40
Spray Painter; Sandblaster; Water Blaster; Power cleaning, Steam cleaning	21.58	4.40
Steeplejack (non-steel)	22.08	4.40
High Iron and Steel:		
Iron and Steel/brush; Pot tender/steel	21.08	4.40
Iron and Steel/spray; Iron and Steel Sandblast power clean	21.58	4.40
High Iron and Steel Construction - Bridges over 30':		
Painter/brush	22.58	4.40
Spray Painter; Sandblaster; Waterblaster; Power cleaning; Steam cleaning		
PARKING LOT STRIPING WORK AND/OR HIGHWAY MARKERS		
Group 1	17.18	3.80
Group 2	16.32	3.80
Group 3	14.60	3.80
Group 4	17.18	3.80
Slurry seal work:		
Sealer/mixer	15.58	3.80
Squeegee; applicator operator and shuttle	13.80	3.80
PLASTERERS:		
Area 1:		
Plasterers	24.18	4.41
Plasterers/Lathers working on single family homes and apartments up to and including 3 stories	19.23	
Area 2:		
Plasterers	25.40	4.41
Plasterers/Lathers working on single family homes and apartments up to and including 3 stories	22.40	
Area 3:	21.77	
Area 4:	18.07	3.35
Area 5:	20.74	6.72
Area 6:		
Plasterers	15.57	4.41
Nozzle operator	15.695	4.41

	Basic Hourly Rates	Fringe Benefits
PLASTERERS' TENDERS		
Area 1:		
Work on single family homes and apartments up to and including 3 stories:		
Plasterers Tenders	16.13	8.84
Plasterers Clean-up Laborers	12.79	8.84
All other work:		
Plasterers Tenders	19.13	8.84
Plasterers Clean-up Laborers	15.79	8.89
NOTE: Work at Fort Irwin, George Air Force Base, Marine Corps Air Station 29 Palms, Air Facility Seeley, Mountain Warfare Training Center & U.S. Marine Corps Pickle Meadows: $3.00 per hour differential		
Area 2:	14.63	7.26
Area 3:		
Plasterers Tenders	19.265	8.61
Plasterers Tenders working on single family homes and apartments up to and including 3 stories: $3.00 less per hour.		
Area 4:		
All work on single family homes and apartments up to and including 3 stories (does not apply to Vandenberg Air Force Base, Point Arguello, or Camp Roberts)	12.71	8.56
All other work	15.56	8.56
Area 5:		
Plasterers Tenders	16.56	8.56
Plasterers Tenders working on single family homes and apartments up to and including 3 stories		
Area 6:	18.31	7.26
Area 7:		
Work on single family homes and apartments not to exceed 2 stories in height.	16.54	8.56
All other work	18.54	8.56
PLUMBERS: STEAMFITTERS:		
Area 1:		
Plumbers:		
Zone 1:	21.88	9.02
Zone 2:	24.13	9.02
Zone 3:	25.38	9.02
Lawn Sprinkler trades person	18.05	7.40
Area 2	20.46	4.58
Area 3	225.46	4.58
PLUMBERS - LANDSCAPE AND IRRIGATION WORK:		
Area 1:	16.80	6.75
REFRIGERATION AND AIR CONDITIONING:		
Area 1:	21.19	5.90
Area 2:	19.55	5.78 + 1%

	Basic Hourly Rates	Fringe Benefits
ROOFERS:		
Area 1	18.70	2.63
Area 2	17.55	4.95
Area 3	18.15	6.03
Area 4:		
Roofer		
Preparer (duties limited to the following: tear-off and/or remove any type of roofing material or spudding, or sweeping and/or clean-up, and/or preloading, or in preparing the roof for application of roofing, damp and/or waterproofing material)	5.65	
Area 5:	16.75	3.60
SHEET METAL WORKERS:		
Area 1:		
Work on existing residential buildings, both single and multi-family where each unit is heated and/or cooled by a separate system: new single residential buildings including tracts; new multi-family residential buildings, not exceeding 5 stories of living space in height, provided each unit is heated or cooled by a separate system, not including hotels and motels; light commercial work, defined as being any sheet metal, heating and air conditioning work performed on a wood frame building up to and including 4 stories in height; and tilt-up or concrete block warehouses of any size. Hotels and motels are included in light commercial work provided they otherwise qualify by size and type of construction; tenant improvement work:	12.59	4.12
All other work:	20.98	7.08
Area 2:	24.30	7.38
Area 3:	21.09	4.37
Area 4:	22.10	6.53
Area 5:	21.10	6.87
Area 6:	21.96	6.58
Area 7:	20.31	6.81
SOFT FLOOR LAYERS:		
Area 1:	18.45	3.94
Area 2:	22.29	5.03
Area 3:	17.62	4.44
SPRINKLER FITTERS:		
Area 1:	24.18	4.25
Area 2	27.42	4.29
TERRAZZO FINISHERS:		
Area 1:	20.23	3.80
TERRAZZO WORKERS:		
Area 1:	22.40	3.00
Area 2:	24.22	3.80

	Basic Hourly Rates	Fringe Benefits
TILE SETTERS:		
Area 1:	22.40	3.00
Area 2:	23.65	5.50
Area 3-A:	22.53	5.42
Area 3-B:	23.01	5.42
Area 4-A:	17.40	2.90
Area 4-B:	20.40	2.90
Area 5:	23.00	5.05
LABORERS:		
Area 1:		
Group 1:	18.88	6.86
Group 2:	19.18	6.86
Group 3:	19.38	6.86
Group 4:	19.63	6.86
Tunnel Laborers:		
Group 1:	20.32	8.76
Group 2:	20.44	8.76
Group 3:	20.60	8.76
Group 4:	20.88	8.76
Work on single family homes and apartments up to and including 3 stories:		
Landscape laborers, clean-up, fencing (chain link and wood)	14.84	8.76
All other work on single family homes and apartments up to and including 3 stories		
Area 2:		
Group 1:	15.88	6.86
Group 2:	16.18	6.86
Group 3:	16.38	6.86
Group 4:	16.63	6.86
Tunnel Laborers:		
Group 1:	18.32	8.76
Group 2:	18.44	8.76
Group 3:	18.60	8.76
Group 4:	18.88	8.76
Work on single family homes and apartments up to and including 3 stories.		
Landscape laborers, clean-up, fencing (chain link and wood)	11.84	8.76
All other work on single family homes and apartments up to and including 3 stories	12.84	8.76
GUNNITE LABORERS:		
Areas 1 and 2:		
Group 1:	18.94	8.60
Group 2:	17.99	8.60
Group 3	15.98	8.60

	Basic Hourly Rates	Fringe Benefits
CONCRETE PUMPER:		
Group 1:	20.75	7.60
Group 2:	21.03	7.60
Group 3:	21.81	7.60
Group 4:	21.91	7.60
Group 5:	22.81	7.60
POWER EQUIPMENT OPERATORS:		
DREDGING:		
Hydraulic Suction Dredges:		
Lever Operator:	22.60	7.60
Deckmate; Watch Engineer; Welder	22.03	7.60
Winch (stern winch on dredge)	21.47	7.60
Bargehand; Deckhand; Firefighter; Oiler	20.93	7.60
Dozer	22.13	7.60
Clamshell Dredges:		
Lever Operator	22.60	7.60
Deckmate: Watch Engineer	22.02	7.60
Barge Mate	21.54	7.60
Bargehand; Deckhand; Firefighter, Oiler	20.93	7.60
POWER EQUIPMENT OPERATORS:		
Group 1:	20.75	7.60
Group 2:	21.03	7.60
Group 3:	21.32	7.60
Group 4:	21.46	7.60
Group 5:	22.56	7.60
Group 6:	21.68	7.60
Group 7:	22.78	7.60
Group 8:	21.79	7.60
Group 9:	22.89	7.60
Group 10:	21.91	7.60
Group 11:	23.01	7.60
Group 12:	22.08	7.60
Group 13:	22.18	7.60
Group 14:	22.21	7.60
Group 15:	22.29	7.60
Group 16:	22.41	7.60
Group 17:	22.58	7.60
Group 18:	22.68	7.60
Group 19:	22.79	7.60
Group 20:	22.91	7.60
Group 21:	23.08	7.60
Group 22:	23.18	7.60
Group 23:	23.29	7.60
Group 24:	23.41	7.60
Group 25:	23.58	7.60

CRANES, PILEDRIVING & HOISTING EQUIPMENT	Basic Hourly Rates	Fringe Benefits
Group 1:	20.75	7.60
Group 2:	21.03	7.60
Group 3:	21.32	7.60
Group 4:	21.46	7.60
Group 5:	21.68	7.60
Group 6:	21.79	7.60
Group 7:	21.91	7.60
Group 8:	22.08	7.60
Group 9:	22.25	7.60
Group 10:	23.25	7.60
Group 11:	24.25	7.60
Group 12:	25.25	7.60
Group 13:	26.25	7.60
TUNNEL GROUP:		
Group 1:	21.25	7.60
Group 2:	21.53	7.60
Group 3:	21.82	7.60
Group 4:	21.96	7.60
Group 5:	22.18	7.60
Group 6:	22.29	7.60
Group 7:	22.41	7.60
Group 8:	22.58	7.60
Group 9:	22.71	7.60
TRUCK CRANE OPERATORS:		
Group 1:	20.70	7.60
Group 2:	21.11	7.60
Group 3:	21.26	7.60
Group 4:	21.99	7.60
Group 5:	22.05	7.60
Group 6:	22.17	7.60
Group 7:	22.34	7.60
Group 8:	22.59	7.60
Group 9:	22.84	7.60
TRUCK DRIVERS:		
Group 1:	17.17	9.26
Group 2:	17.25	9.26
Group 3:	17.31	9.26
Group 4:	17.40	9.26
Group 5:	17.43	9.26
Group 6:	17.45	9.26
Group 7:	17.49	9.26
Group 8:	17.50	9.26
Group 9:	17.55	9.26
Group 10:	17.58	9.26
Group 11:	17.63	9.26
Group 12-A	17.65	9.26

	Basic Hourly Rates	Fringe Benefits
Group 12-B	17.68	9.26
Group 13	17.70	9.26
Group 14	17.95	9.26
Group 15	18.20	9.26
Group 16	18.30	9.26
Group 17	18.40	9.26
Group 18	18.70	9.26
Group 19	19.20	9.26

WELDERS: Receive rate prescribed for craft performing operation to which welding is incidental.

DIVERS: Shall receive a minimum of 8 hrs. pay for any day or part thereof.

FOOTNOTES:

a. Employer contributes 8% of basic hourly rates for over 5 years' service and 6% of basic hourly rate for 6 months' to 5 years' service as Vacation Pay Credit. Seven Paid Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day and Christmas Day.

AREA DESCRIPTIONS

BRICKLAYERS: STONEMASONS:

Area 1: Imperial County
Area 2: Inyo, Kern, and Mono Counties (excluding Edwards Air Force Base and China Lake Naval Weapons Center)
Area 3: Los Angeles County
Area 4: Riverside and San Bernardino Counties
Area 5: (Bricklayers; Stonemasons; Marble, Terrazzo and Tile Setters) San Luis Obispo and Santa Barbara Counties
Area 6: Ventura County
Area 7: Orange County
Area 8: Edwards Air Force Base and China Lake Naval Weapons Center, in Inyo and Kern Counties

CARPENTERS:

Area 1: Inyo, Kern, and Mono Counties
Area 2: Remaining Counties

DRYWALL INSTALLERS/LATHERS

Area 1: Vandenberg Air Force Base Point Arguello, Point Conception, Camp Roberts, U.S. Naval Air Facility, El Centro, George Air Force Base, Fort Irwin, Nebo Marine Ballistic Base (Yermo), 29 Palms Marine Base, China Lake Naval Weapons Center, Edwards Air Force Base, North Edwards Air Force Base, Mountain Warfare Training Center, Bridgeport
Area 2: Remaining Counties and parts of Counties

AREA DESCRIPTIONS
(Continued)

ELECTRICIANS:
Area 1: Imperial County
Area 2: Kern County (remainder of County)
Area 3: Los Angeles County
Area 4: Orange County
Area 5: Riverside County
Area 6: Inyo, Mono, and San Bernardino Counties
Area 7: San Luis Obispo County
Area 8: Santa Barbara (remainder of County)
Area 9: Ventura County
Area 10: Point Arguello and Vandenberg Air Force Base
Area 11: China Lake Naval Ordnance Test Station and Edwards Air Force Base

ELEVATOR CONSTRUCTORS:
Area 1: Imperial and Inyo Counties; Kern County (south of Tehachapi Range); Los Angeles, Mono, Orange, Riverside, San Bernardino, San Luis Obispo,Santa Barbara, and Ventura Counties
Area 2: Kern County (north of Tehachapi Range)

GLAZIERS:
Area 1: Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, and Ventura Counties
Area 2: Imperial County
Area 3: Inyo, Kern, Mono and San Luis Obispo Counties

LABORERS:
Area 1: Point Arguello, Camp Roberts, Edwards Air Force Base, Naval Ordnance Test Center, Inyo-Kerns, Vandenberg Air Force Base
Area 2: Remainder of Counties

LINE CONSTRUCTION:
Area 1: Imperial County
Area 2: Kern County (excluding Edwards Air Force Base and China Lake Naval Weapons Center)
Area 3: Los Angeles County
Area 4: Inyo, Mono, and San Bernardino Counties
Area 5: Riverside County
Area 6: San Luis Obispo County
Area 7: Santa Barbara (remainder of County)
Area 8: Point Arguello and Vandenberg Air Force Base
Area 9: Edwards Air Force Base and China Lake Naval Weapons Center
Area 10: Ventura County

MARBLE SETTERS:
Area 1: Imperial County
Area 2: Kern, Los Angeles, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara and Ventura Counties

AREA DESCRIPTIONS
(Continued)

*MARBLE AND TILE FINISHERS:
Area 1: Los Angeles, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara and Ventura Counties

PAINTERS
Area 1: Imperial, Orange, and Riverside Counties; Los Angeles County (Pomona area); San Bernardino County (excluding western portion)
Area 2: Inyo County; Los Angeles County (except Pomona area); Mono County; San Bernardino County (west of a line north of Trono including China Lake area, Johannesburg, Boron south including the Wrightwood area); Kern County (east of the Los Angeles Aqueduct)
Area 3: Kern County (except for the portion lying east of the Los Angeles Aqueduct)
Area 4: San Luis Obispo, Santa Barbara and Ventura Counties

PLASTERERS:
Area 1: Los Angeles, Orange, Riverside and San Bernardino Counties
Area 2: Imperial County
Area 3: San Luis Obispo County
Area 4: San Luis Obispo County
Area 5: Ventura County
Area 6: Inyo, Kern and Mono Counties

PLASTERERS TENDERS:
Area 1: Imperial, Inyo, Mono, Riverside, and San Bernardino Counties
Area 2: Kern County
Area 3: Los Angeles and Orange Counties
Area 4: San Luis Obispo County and Santa Barbara County (north part)
Area 5: Santa Barbara County (south part)
Area 6: China Lake Naval Ordnance Text Station and Edwards Air Force Base
Area 7: Ventura County

PLUMBERS: STEAMFITTERS:
Area 1: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara, and Ventura Counties
Zone Definitions:
Zone 1: Remainder of area
Zone 2: Camp Roberts, George AFB, Vandenberg AFB
Zone 3: Fort Irwin Army Base, Marine Corps Logistic Base at Nebo, Marine Corps Logistic Base at Yermo, San Nicholas Island, 29 Palms Marine Base
Area 2: Inyo, Kern, and Mono Counties
Area 3: China Lake Naval Weapons Center and Edwards Air Force Base

PLUMBERS - LANDSCAPE AND IRRIGATION WORK:
Area 1: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara and Ventura Counties

REFRIGERATION AND AIR CONDITIONING:
Area 1: Los Angeles and Orange Counties
Area 2: Riverside and San Bernardino Counties

AREA DESCRIPTIONS
(Continued)

ROOFERS:
Area 1: Imperial County
Area 2: Inyo, Kern, and Mono Counties
Area 3: Riverside and San Bernardino Counties
Area 4: Los Angeles, Orange, and Ventura Counties
Area 5: San Luis Obispo and Santa Barbara Counties

SHEET METAL WORKERS:
Area 1: Imperial County
Area 2: Kern County and all of Inyo and Mono Counties; Los Angeles County (that portion north of a straight line drawn between Gorman and Big Pines)
Area 3: Los Angeles County (remaining portion)
Area 4: Orange County
Area 5: Riverside and San Bernardino Counties
Area 6: San Luis Obispo, Santa Barbara, and Ventura Counties
Area 7: Edwards Air Force Base and China Lake Naval Weapons Base

SOFT FLOOR LAYERS:
Area 1: Imperial County
Area 2: Los Angeles, Orange, Riverside, Santa Barbara, San Luis Obispo, San Bernardino, and Ventura Counties
Area 3: Inyo, Kern and Mono Counties

SPRINKLER FITTERS:
Area 1: Imperial, Inyo, Kern and Mono Counties; Orange County (except Santa Ana), Riverside County, San Bernardino County (except Ontario); San Luis Obispo, Santa Barbara and Ventura Counties
Area 2: Los Angeles City and area within 25 miles and Pomona area; Orange County (Santa Ana); San Bernardino County (Ontario); and Ventura County (Santa Paula, Point Mugu and Port Hueneme)

TERRAZZO FINISHERS:
Area 1: Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino,San Luis Obispo, Santa Barbara and Ventura Counties

TERRAZZO WORKERS:
Area 1: Imperial County
Area 2: Remaining Counties

TILE SETTERS:
Area 1: Imperial County
Area 2: Los Angeles, Orange, and Ventura Counties
Area 3-A: Riverside and San Bernardino Counties (excluding China Lake Naval Base, the Fort Irwin Training Center, and 29 Palms Marine Base)
Area 3-B: China Lake Naval Weapons Center in San Bernardino County; and the Fort Irwin Training Center, and 29 Palms Marine Base
Area 4-A: Inyo, Kern and Mono Counties (excluding China Lake Naval Weapons Center and Edwards Air Force Base)

AREA DESCRIPTIONS
(Continued)

TILE SETTERS: (Continued)
Area 4-B: China Lake Naval Weapons Center in Inyo and Kern Counties, and Edwards Air Force Base
Area 5: San Luis Obispo and Santa Barbara Counties

TRUCK DRIVERS:
Area 1: Excluding all listed in Area 2
Area 2: Vandenberg AFB, Point Arguello, Point Conception, China Lake, Camp Roberts, Edwards AFB, Nebo Marine Ballistic Base (Yermo), Mountain Warfare Training Center, Bridgeport, For Irwin, George AFB, Naval Air Facility, El Centro, 29 Palms Marine Base.

DEFINITION OF GROUPS

ELECTRICIANS:

Area 1: Sound Technician: terminating, operating and performing final checkout
Sound Person B: Wirepulling, splicing, assembling and installing devices

Utility Technician #1: Installation of street lights and traffic signals, including electrical circuitry, programmable controller, pedestal mounted electrical meter enclosures and laying of pre-assembled cables in ducts. The layout of electrical systems and communications installation including proper position of trench depths, and radius at duct banks, location for manholes, street lights and traffic signals.

Utility Technician #2: Distribution of material at job site, installation of underground ducts for electrical, telephone, cable television, and communication systems. The setting, leveling, grounding, and racking of precast manholes, handholes and transformer pads.

LABORERS
Areas 1 and 2

Group 1: Cleaning and handling of Panels Forms; Concrete Screeding for rough strike-off; Concrete, water curing; Demolition Laborer, the cleaning of brick and lumber; Dry packing of concrete, plugging, filling of Sheet Bolt Holes; Fire Watcher, Limber, Brush Loaders, Pilers and Debris Handlers; Gas, oil and/or water pipeline Laborer; Laborer, general or construction; Laborer, general cleanup; Laborer, landscaping; Laborer, jetting, temporary water and air lines; Material Hose operator (walls, slabs, floors, and decks); Rigging and Signaling; Scaler; Slip Form Raisers;; On highways, slurry seal crews (Mixer Operator, Applicator Operator, Squeegee Operator, Shuttle, Top); Striper, Concrete or other paved road surfaces; Tar and Mortar; Tool Crib or Tool House Laborer on highways; Traffic Delineating Device Applicator; Window Cleaner; Wire Mesh, pulling all concrete pouring operations

LABORERS
Areas 1 and 2
(Continued)

Group 2: Asphalt Shoveler; Cement Dumper (on 1 yard or larger Mixer and handling bulk cement); Cesspool Digger and Installer; Chucktender; Chute Handler, pouring concrete, the handling of the Chute from Ready Mix Trucks, such as walls, slabs, decks, floors, foundations, footings, curb, gutters, and sidewalks; Concrete Curer, Impervious Membrane and Form Oiler; Cutting Torch Operator (demolition); Fine Grader, highways and street paving, airport, runways, and similar type heavy construction; Gas, oil and/or water Pipeline Wrapper; Pot Tender and Form; Guinea Chaser; Headerboard asphalt; Laborer, packing rod steel and pans; Power Broom Sweepers (small); Riprap Stonepaver, placing stone or wet sacked concrete; Roto Scraper and Tiller; Sandblaster (Pot Tender); Septic Tank Digger and Installer (Lead); Tank Scaler and Cleaner; Tree Climber, Faller, Chain Saw Operator, Pittsburgh Chipper and similar type Brush Shredders; Underground Laborer, including Caisson Bellower

Group 3: Asphalt Raker, Lute, Ironer and Asphalt Spreader Boxes (all types); Buggymobile; Concrete Core Cutter, Grinder or Sander; Concrete Cutting Torch; Concrete Saw, cutting, scouring old or new concrete; Driller, Jackhammer, 2 1/2 ft. drill steel or loner; Dri concrete; Dri Pak-it Machine; Gas, oil and/or water pipeline Wrapper, 6" pipe and over, by any method, inside and out; Hydro Seeder and similar type; Impact Wrench Multi-plate; Kettle, Pot and asphalt appliers, Laykold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operators of pneumatic, gas and electric tools; Vibrating Machines, Pavement Breakers, Air Blasting, Come-alongs, and similar mechanical tools not separately classified herein: Pipelayer's Backup, coating, grouting, making of joints, sealing, caulking, diapering and including Rubber Gasket Joints, pointing and any and all other services; Rock Slinger; Rotary Scarifier or Multiple Head Concrete Chipping Scarifier; Steel Headerboard and Guideline Setter; Tampers, Barko, Wacker, and similar type; Trenching Machine, hand propelled.

Group 4: Cribber, Shorer, Lagging, Sheeting and Trench Bracing, hand-guided Lagging Hammer; Head Rock Slinger; Over-size Concrete Vibrator Operator, 70 lbs. and over; Pipelayer, including water, sewage, solid, gas or air; Prefabricated Manhole Installer; Sandblaster (Nozzle, water blasting); Welding in connection with Laborers' work.

Group 5: Blaster Powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller; All power drills, excluding Jackhammer, whether Core, Diamond, Wagon, Track, Multiple Unit, and any and all types of mechanical drills.

GUNNITE

Group 1: Nozzle and Rod

Group 2: Gun

Group 3: Rebound

LABORERS - TUNNEL

Group 1: Batch Plant Laborers; Bull Gang Mucker, Track; Concrete Crew, including Rodders and Spreaders; Changehouse; Dump; Dump (outside); Swamper (Brake and Switch on Tunnel Work); Tunnel materials handling; Tool worker

Group 2: Cale Tender; Chuck Tender; Nipper; Steel Form Raiser and Setter's Tender; Vibrator operator, Jackhammer, pneumatic tools (except driller; loading and unloading Agitator Cars; Pot Tender, using mastic or other materials)

Group 3: Blaster, Driller, Powder; Chemical Grout Jet; Cherry Picker; Grout Gun; Grout Mixer; Grout Pump; Jackleg Miner; Jumbo; Kemper and other pneumatic concrete Placer Operator; Miner, tunnel (hand or machine); Powder (Primer House); Primer; Shotcrete; Steel Form Raiser and Setter; Timber; Retimer (wood or steel); Tunnel Concrete Finisher; Nozzle; Operating Troweling and/or Grouting Machine; Sandblaster

Group 4: Shaft, Raise Miner; Diamond Driller

PARKING LOT STRIPING WORK AND/OR HIGHWAY MARKERS

Group 1: Striper: layout and application of painted traffic stripes and marking; hot thermo plastic; tape traffic stripes and marking

Group 2: Traffic delineating device applicator; layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers; other traffic delineating devices; includes all related surface preparation (sandblasting, waterblasting, grinding) as part of the application process

Group 3: Traffic surface abrasive blaster: removal of traffic lines and markings; preparation of surface for coatings

Group 4: Traffic protective delineating systems installer: removes, relocates, installs; permanently affixed roadside and parking delineation barricades; fencing, guard rail, cable anchor, retaining walls, reference signs, monument markers

POWER EQUIPMENT OPERATORS - CONCRETE PUMPERS

Group 1: Compressor operator, Concrete pump operator (small portable, pea gravel), Engineer oiler, Heavy duty repairperson helper.

Group 2: Conveyor operator

Group 3: Heavy duty repairperson

Group 4: Heavy duty repairperson/welder

Group 5: Concrete pump operator (truck mounted), concrete pump and separate placing boom, concrete pump, large trailer type (large rock)

POWER EQUIPMENT OPERATORS

Group I: Bergemen, Brakemen, Compressor Operator (when more than five (5) 600 CFM or larger units, additional operator required), Ditch Winch, with seat or similar type equipment,Elevator Operator - inside, Engineer oiler, Generator Operator, Generator, Pump or Compressor Plant Operator, Heavy Duty Repairman Helper, Pump Operator, Signalman, Switchman

Group II: Concrete Mixer Operator - Skip Type, Conveyor Operator, Firefighter, Hydrostatic Pump Operator, Oiler Crusher (asphalt or concrete plant), Rotary Drill Helper (Oilfield), Skiploader (when wheel type up to 3/4 yd. without attachment), Soils Field Technician, Tar Pot Firefighter, Temporary Heating Plant Operator, Trenching Machine Operator

Group III: Equipment Greaser (rack), Ford Ferguson (with dragtype attachments),Helicopter Radioman (ground), Power Concrete curing machine operator, Power Concrete Saw Operator, Power - Driver Jumbo Form Setting Operator, Stationary Pipe Wrapping and Cleaning Machine Operator

Group IV: Asphalt Plant Fireman, Backhoe Operator (mini-max or similar type), Boring Machine Operator, Bx or Mixer (asphalt or concrete), Building Construction Inspector, Chip Spreading Machine Operator, Concrete Pump Operator (small portable), Drilling Machine Operator, Sall Auger Types (Texoma Super Economatic, or similar types - Hughes 100 or 200, or similar types - drilling depth of 30' maximum). Equipment Greaser (grease truck), Guard Rail Post Driver Operator, Highline Cableway Signalman, Hydra-Hammer-Aero Stomper, Power Sweeper Operator, Roller Operator (compacting), Screed Operator (asphalt or concrete), Trenching Machine Operator (up to 6 ft.)

Group V - Equipment Greaser (grease truck/multi shift)

Group VI - Asphalt Plant Engineer, Batch Plant Operator, Bit Sharpener, Concrete Joint Machine Operator (canal and similar type), Concrete Planner Operator, Deck Engine Operator, Derrickman (oilfield type), Drinning Machine Operator, Bucket or Auger Types (Caldwell 100 Bucket or similar types - Watson 1000 Auger or similar types - Texoma 330, 500 or 600 Auger or similar types - drilling depth of 45' maximum), Drilling Machine Operator (including water wells), Hydrographic Seeder Machine Operator (staw, pulp or seed), Jackson Track maintainer,or similar type, Kalamazoo Switch Tamper, or similar type, Machine Tools Operator, Maginnis Internal Full Slab Vibrator, Mechanical Berm, curb or gutter (concrete or asphalt), Mechanical Finisher Operator (concrete,Clary-Johnson-Bidwell or similar type), Pavement Breaker Operator (truck mounted, Oiler or Journeyman trainee required),Road Oil Mixing Machine Operator, Roller Operator (asphalt or finish), Rubber-Tired Earth Moving Equipment (single engine, up to and including 25 yds. struck), Self-Propelled Tar Pipelining Machine Operator, Skiploader Operator (crawler and wheel type, over 3/4 yd., and up to and including 1-1/2 yds.), Slip Form Pump Operator (power driven hydraulic lifting device for concrete forms), Tractor Operator - Bulldozer, Tamper-Scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types), Tugger Hoist Operator.

Group VII - Welder - General (multi-shift)

POWER EQUIPMENT OPERATORS
(Continued)

Group VIII: Asphalt or Concrete Spreading Operator (tamping or finishing), Asphalt Paving Machine Operator (Barber Greene or similar type), Backhoe Operator (up to and including 3/4 yd.) Small Ford, Case r similar, Cast in Place Pipe Laying Machine Operator, Combination Mixer and Compressor Operator (gunite work), Compactor Operator (self propelled), Concrete Mixer Operator Paving (Oiler or Journeyman trainee required); Crushing Plant Operator (Oiler or Journeyman trainee required), Drill Doctor, Drilling Machine Operator, Bucket or Auger Types (Caldwell 150 bucket or similar types - Watson 1500, 2000, 2500 Auger or similar types - Texoma 700, 800 Auger or similar types - drilling depth of 60' maximum), Elevating Grader Operator, Grade Checker, Gradall Operator (Oiler or Journeyman trainee required), Grouting Machine Operator, Heavy Duty Repairman, Kalamazoo Balliste Regulator or similar type, Kolman Belt Loader and similar type (additional employee required on two (2) or more, Le Tourneau Blob Compactor or similar type, Loader Operator (Athey, Euclid, Sierra and similar types), Pneumatic Concrete Placing Machine Operator (Hackley-Presswell or similar type), Pumpcrete Gen Operator, Rotary Drill Operator (excluding Caison type - Oiler or Journeyman trainee required),Rubber-Tired Earth Moving Equipment Operator (single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds. up to and including 50 cu yds. struck) Rubber-Tired Earth Moving Equipment Operator (multiple engine up to and including 25 yds struck), Rubber-Tired Scraper Operator (self loading paddle wheel type - John Deere, 1040 and similar single unit), Self-Propelled Curb and Gutter Machine Operator, Skipload Operator (crawler and wheel type over 1-1/2 yds., up to and including 6-1/2 yds.), Surface Heaters and Planner Operator, Tractor Compressor Drill Combination Operator, Tractor Operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar - Bulldozer, Tamper, Scraper and Push Tractor single engine), Tractor Operator (boom attachments), Traveling Pipe Wrapping, Cleaning and Bending Machine Operator, Trenching Machine Operator (over 6 ft. depth capacity, manufacturer's rating - Oiler and Journeyman trainee required)

Group IX: Heavy Duty Repairperson (multi-shift)

Group X - Drilling Machine Operator, Bucket or Auger Types (Caldwell 200 B Bucket or similar types - Watson 3000 or 5000 Auger or similar types - Texoma 900 Auger or similar types - drilling depth of 105' maximum), Dual Drum Mixer (Oiler or Journeyman trainee required), Heavy Duty Repair-Welder Combination, Monorail Locomotive Operator (diesel, gas or electric), Motor Patrol - Blade Operator (single engine), Multiple Engine Tractor Operator (Euclid and similar type - except Quad 9 Cat.), Rubber-Tired Earth Moving Equipment Operator (single engine - over 50 yds struck), Rubber-Tired Earth Moving Equipment Operator (multiple engine, Euclid, Caterpillar and similar over 25 yds. and up to 50 yds.), Tower Crane Repairman, Tractor Loader Operator (crawler and wheel type over 6-1/2 yds.) Woods Mixer Operator (and similar Pugmill equipment)

Group XI - Heavy Duty Repairperson - Welder Combination (multi-shift)

Group XII - Auto Grader Operator (grade checker and one (1) additional employee required), Automatic Slip Form Operator (Grade checker and one (1) additional employee required), Drilling Machine Operator, Bucket or Auger Types (Caldwell, Auger 200 CA or similar types - Watson Auger 6000 or similar types - drilling depth of 175' maximum). Hoe Ram or similar with Compressor, Mass Excavator Operator (less than 750 cu. yds. two (2) Operators and Oiler or Journeyman trainee required). Mechanical Finishing Machine Operator, Mobile Form Traveler Operator, Motor Patrol Operator (Multi-Engine) Pipe Mobile Machine Operator (two (2)

operators required; Rubber-Tired Earth Moving Equipment Operator (Multiple engine, Euclid, caterpillar and similar type, over 50 cu. yds. struck), Rubber-Tired Self-Loading Scraper Operator (paddle-wheel-auger type self loading - two (2) or more units)

Group XIII - Rubber-Tired Earth Moving Equipment Operator operating equipment with push-pull system, (single engine, up to and including 25 yds. struck)

Group XIV - Canal Line Operator (not less than 4) four employees - operator, Oiler, Welder, Mechanic, Grade Checker required), Remote Control Earth Moving Equipment Operator, Canal Trimmer Operator (Operator, Oiler, and (2) other employees covered by this agreement required), Remote Control Earth Moving Equipment Operator, Wheel Excavator Operator (over 750 cu. yds. per hour - two (2) Operators and one (1) Oiler or Journeyman-trainee, and two (2) Heavy Duty Repairmen required),

Group XV - Rubber-Tired Earth Moving Equipment Operator operating equipment with Push-Pull System (single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments of 25 yds. and up to and including 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating equipment with Push-Pull System, (multiple engine - up to and including 25 yds. struck)

Group XVI - Rubber-Tired Earth Moving Equipment operator, operating equipment with Push-Pull System (single engine, over 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating equipment with Push-Pull System (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

Group XVII - Rubber-Tired Earth Moving Equipment Operator, operating equipment with Push-Pull System (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck), Tandem Tractor Operator (operating crawler type tractors in tandem - Quad 9 and similar type)

Group XVIII - Rubber-Tired Earth Moving Equipment Operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

Group XIX - Concrete Pump Operator, truck mounter (Oiler required when boom over eighty-five feet), Rubber-Tired Earth Moving Equipment Operator, operating in Tandem, scrapers, belly dumps, and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon, and similar types with any and all attachments over 25 yds.. and up to and including 50 cu. yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating in Tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds.. struck)

Group XX - Rubber-Tired Earth Moving Equipment Operator, operating in tandem, (scrapers, belly dumps, and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck)

Group XXI - Rubber-Tired Earth Moving Equipment Operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 yds. struck)

POWER EQUIPMENT OPERATORS
(Continued)

Group XXII - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, up to and including 25 yds struck)

Group XXIII - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments of 25 yds. and up to and including 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating with the Tandem Push-Pull System (multiple engine, up to and including 25 yds. struck)

Group XXIV - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, over 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (multiple engine, Euclid, Caterpillar and similar over 25 yds. and up to 50 yds. struck)

Group XXV - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (Multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck

*POWER EQUIPMENT OPERATORS - CRANES, PILEDRIVING, AND HOISTING EQUIPMENT

Group 1: Engineer Oiler, Fork Lift Operator (under 5 tons capacity)

Group 2: Truck Crane Oiler

Group 3: A-frame or Winch Truck Operator, Ross Carrier Operator (jobsite)

Group 4: Bridge-Type Unloader and Turntable Operator, Helicopter Hoist Operator

Group 5: Stinger Crane (Austin-Western or similar type), Tugger Hoist Operator (1 drum)

Group 6: Bridge Crane Operator, Cretor Crane Operator, Forklift Operator (over 5 tons), Hoist Operator (Chicago Boom and similar type), Lift Mobile Operator, Lift Slab Machine Operator (Vagtborg and similar types), Material Hoist Operator, Shovel, Backhoe, Dragline, Clamshell Operator (over 3/4 yd. and up to 5 cu. yds. MRC), Tugger Hoist Operator

Group 7: Pedestal Crane Operator; Shovel, Backhoe, Dragline, Clamshell Operator (over 5 cu. yds. MRC), Tower Crane Repair, Tugger Hoist Operator (3 Drum)

Group 8: Crane Operator (up to and including 25 ton capacity), Crawler Transporter Operator, Derrick Barge Operator (up to and including 25 ton capacity), Hoist Operator, Staff Legs, Guy Derrick or similar type (up to and including 25 ton capacity), Shovel, Backhoe, Dragline, Clamshell Operator (over 7 cu. yds. MRC)

POWER EQUIPMENT OPERATORS
(Continued)

Group 9: Crane Operator (over 25 tons, and up to and including 50 ton MRC), Derrick Barge Operator (over 25 tons, up to and including 50 ton MRC). Highline Cableway Operator, Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 25 tons, up to and including 50 ton MRC), K-Crane Operator, Polar Crane Operator, Tower Crane Operator

Group 10: Crane Operator (over 50 tons, and up to and including 100 t on MRC), Derrick Barge Operator (over 50 tons, up to and including 100 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 50 tons, up to and including 100 ton MRC)

Group 11: Crane Operator (over 100 tons, and up to and including 200 ton MRC), Derrick Barge Operator (over 100 tons, up to and including 200 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 100 tons, up to and including 200 ton MRC),Mobile Tower Crane Operator (over 100 tons, up to and including 200 ton MRC).

Group 12: Crane Operator(over 200 tons, up to and including 300 ton MRC), Derrick Barge Operator (over 200 tons, up to and including 300 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 200 tons, up to and including 300 tn MRC), Mobile Tower Crane Operator (over 200 tons, up to and including 300 ton MRC.)

Group 13: Crane Operator (over 300 tons), Derrick Barge Operator (over 300 tons, Helicopter Pilot, Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 300 tons), Mobile Tower Crane Operator (over 300 tons).

POWER EQUIPMENT OPERATORS - TUNNEL GROUP

Group 1: Heavy Duty repair person helper or welder helper

Group 2: Truck crane oiler (25 tons and under)

Group 3: Truck crane oiler (over 25 tons)

Group 4: Heavy duty repairperson and/or welder

Group 5: Truck crane operator (up to and including 25 tons)

Group 6: Truck crane operator (over 25 tons capacity up to and including 80 ton MRC)

Group 7: Mobile tower crane

Group 8: Tunnel mole boring machine operator

*POWER EQUIPMENT OPERATORS - TRUCK CRANE OPERATOR

Group 1: Heavy duty repair person helper or welder helper

Group 2: Truck crane oiler (25 tons & under)

Group 3: Truck crane oiler (over 25 tons)

Group 4: Heavy duty repairperson and/or welder

Group 5: Truck crane operator (up to and including 25 tons)

Group 6: Truck crane operator (over 25 ton capacity up to _____.)

federal register

CLASSROOM EXERCISE
CE-2.4

Material to be used for purpose of classroom exercise only.

Part VIII

Department of Labor

Office of Federal Contract Compliance Programs

Construction Contractors, Affirmative Action Requirements; Construction Industry Goals for Minority Participation

FACSIMILE

Insert Hardcopy of“Federal Register Excerpt

CE-2.4

Liquidated Damages Schedule

Table 1: General Construction Projects

Estimated Project Cost		Liquidated Damages Per Calendar Day	Estimated Project Cost	Liquidated Damages Per Calendar Day
Up to	$2,000	$4	$10,000 to $50,000	$50
			$50,000 to $100,000	$100
	$5,000	$10	$100,000 to $500,000	$200
	$10,000	$20	Each additional $100,000, add	$50

Table 2: Dormitory Type Buildings

Type of Housing	Liquidated Damages Per Calendar Day Per Person	No. of Persons Per Building	Liquidated Damages Per Calendar Day Per Building
2 Room Unit	$10	x 100 =	$1000
1 Room Unit	$ 8	x 100 =	$ 800

JULIAN DATE CALENDAR

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DAY
1	001	032	060	091	121	152	182	213	244	274	305	335	1
2	002	033	061	092	122	153	183	214	245	275	306	336	2
3	003	034	062	093	123	154	184	215	246	276	307	337	3
4	004	035	063	094	124	155	185	216	247	277	308	338	4
5	005	036	064	095	125	156	186	217	248	278	309	339	5
6	006	037	065	096	126	157	187	218	249	279	310	340	6
7	007	038	066	097	127	158	188	219	250	280	311	341	7
8	008	039	067	098	128	159	189	220	251	281	312	342	8
9	009	040	068	099	129	160	190	221	252	282	313	343	9
10	010	041	069	100	130	161	191	222	253	283	314	344	10
11	011	042	070	101	131	162	192	223	254	284	315	345	11
12	012	043	071	102	132	163	193	224	255	285	316	346	12
13	013	044	072	103	133	164	194	225	256	286	317	347	13
14	014	045	073	104	134	165	195	226	257	287	318	348	14
15	015	046	074	105	135	166	196	227	258	288	319	349	15
16	016	047	075	106	136	167	197	228	259	289	320	350	16
17	017	048	076	107	137	168	198	229	260	290	321	351	17
18	018	049	077	108	138	169	199	230	261	291	322	352	18
19	019	050	078	109	139	170	200	231	262	292	323	353	19
20	020	051	079	110	140	171	201	232	263	293	324	354	20
21	021	052	080	111	141	172	202	233	264	294	325	355	21
22	022	053	081	112	142	173	203	234	265	295	326	356	22
23	023	054	082	113	143	174	204	235	266	296	327	357	23
24	024	055	083	114	144	175	205	236	267	297	328	358	24
25	025	056	084	115	145	176	206	237	268	298	329	359	25
26	026	057	085	116	146	177	207	238	269	299	330	360	26
27	027	058	086	117	147	178	208	239	270	300	331	361	27
28	028	059	087	118	148	179	209	240	271	301	332	362	28
29	029		088	119	149	180	210	241	272	302	333	363	29
30	030		089	120	150	181	211	242	273	303	334	364	30
31	031		090		151		212	243		304		365	31

Exhibit 9-16

TOPIC: **2.5 PREPARE PRESOLICITATION NOTICE**

Ref: Pages 2-36 and 2-37

Objective: Given a procurement request prepare a presolicitation notice.

* Determine if a notice is required.
* Publicize the notice in the CBD.

Time: 1:00 - 1:20

Method: Class Exercise, Independent

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.5 PREPARE PRESOLICITATION NOTICE	
FAR 36. 302	**<u>Read the following to the class</u>:** "Unless the requirement is waived by the Head of the Contracting Activity or a designee, the Contracting Officer shall send presolicitation notices to prospective bidders on any construction requirement when the proposed contract is expected to equal or exceed $100,000".	
	Introduction: This lesson is presented to emphasize the importance of the presolicitation notice in construction contracting, and the information that must be included in the notice in order to be effective.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** Ask the students to list the advantages of issuing presolicitation notices. **Some advantages are:** * **It notifies prospective contractors that the Government plans to issue a solicitation on a project.** * **It enables a contractor to decide whether he or she would like to participate without having its name removed from the bidder's list due to the failure to respond.** * **Saves money by issuing plans and specs to only persons that are interested in bidding or proposing.** * **Allows subcontractors to know when work in their community may be approaching, allowing them to get in touch with prime contractors and indicating their interest.** * **Keeps bidder's mailing lists updated and current.** * **Provides two notices in the CBD instead of one notice, providing more opportunity to attract the attention of prospective bidders.**	
?	• **Question:** Based on the criteria just discussed, is a presolicitation notice required on the "Repair and Alterations of Building 560" project that we have been studying in our class exercises? **Answer:** **Yes. Since the estimated dollar value of the project is $960,000, a presolicitation notice is required.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.5, "Preparing A Presolicitation Notice".	
	Time: 20 minutes. **Method:** Independent **Purpose:** The purpose of this exercise is designed to develop an understanding of what information is to be included in a presolicitation notice by actually using the FAR prescribed form SF 1417. **Instruction:** Ask the students to refer to the SF 1417 on page CE2-185 in their Classroom Exercise Book, which they are to complete independently.	
T/R 2-36	Using the information on page 2-36 of the Text/Reference and the procurement documents introduced earlier, as corrected, regarding the "Repair and Alterations of Building 560" project, each student is to complete blocks 10 through 13 of the SF 1417. If there is insufficient space, write on the back of the form. Inform the students that in the interest of saving time, some of the blocks have been filled in. **Upon completion of the time allotted for the exercise, ask one of the students to read what was entered on the form.**	

INSTRUCTOR'S KEY TO THE EXERCISE

PRE-SOLICITATION NOTICE (Construction Contract)	1. PROJECT NO.	2. DATE OF NOTICE	3. DATE SOLICITATION DOCUMENTS AVAILABLE	FORM APPROVED OMB NO.
	12-91-B487	07 SEP 91	01 OCT 91	9000-0037

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (VRS), Office of Federal Acquisition Policy and Regulatory Policy, GSA, Washington, D.C. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0037), Washington, DC 20503.

NOTE: The project number in Items 1 and 16 may be the same as the Invitation or Proposal Number.

4. OFFERS TO BE RECEIVED BY (at place specified for receipt of offers) ▶	A. TIME	B. DATE (Month, day, year)	5. TIME FOR COMPLETION (Calendar Days)
	2:30 A.M. / P.M	31 OCT 91	255

6A. ISSUING OFFICE (Name, Address, and ZIP Code)		7. PROJECT TITLE AND LOCATION
Contracts Office General Services Administration Seaside, CA 93043-5000		Various repairs and alterations to Building 560 at the Contracts Training Center, Seaside, CA 93043-5000
6B. ROOM NO.	6C. TELEPHONE NO. (Include area code) (805) 982-5573	

INSTRUCTIONS: A. Solicitation Documents will be issued upon receipt of your affirmative response to this Pre-Solicitation Notice by the DUE DATE set forth in Item 15b. If a charge is required under Item 8A, your affirmative response must include a check or money order in the applicable amount, made payable to Agency (shown in Item 9). Refund (when specified in Item 88) will be made upon your return of the documents in good condition, without marks, notes, or mutilations, with 20 calendar days after the final date for receipt of offers. c. The Issuing Office, at its discretion, may make bid documents available to plan rooms of the Associated General Contractors, Chambers of Commerce, Dodge Reports, and other similar contractors' commercial service facilities. c. Bid guarantee is required with any bid in excess of $25,000. Bid guarantee shall be in the amount of 20 percent of the amount of the bid, or $3,000,000, whichever is less. For bid guarantee purposes, the amount of the bid is the aggregate of the Lump Sum Base Bid, all Alternates (if any), and the product(s) of each unit price (if any), multiplied by the applicable number of units shown on the Bid Form. d. NOTE TO SMALL BUSINESS FIRMS: A program for the purpose of assisting qualified small business concerns in obtaining certain bid, payment, or performance bonds that are otherwise not obtainable is available through the Small Business Administration (SBA). For information concerning SBA's surety bond guarantee assistance, contract your SBA District Office.

8A. CHARGE FOR SOLICITATION DOCUMENTS	8B. IS THIS CHARGE REFUNDABLE?	9. MAKE CHECK PAYABLE TO:	
	☐ YES ☐ NO		
10. ESTIMATED COST RANGE OF PROJECT		11. OFFERS CONCERNING THE PROJECT RESTRICTED TO SMALL BUSINESS?	12. SUBCONTRACTING PLAN REQUIRED?
A. FROM $	B. TO $	☐ YES ☐ NO	☐ YES ☐ NO

13. DESCRIPTION OF WORK (Physical characteristics)

(If additional space is needed use reverse.)

IMPORTANT: FAILURE TO COMPLETE AND RETURN THIS PART OF THIS NOTICE TO THE ISSUING OFFICE, ON OR BEFORE THE DUE DATE SHOWN IN ITEM 15 MAY RESULT IN YOUR NAME BEING REMOVED FROM OUR MAILING LIST.

14. ACTION REQUESTED (Check applicable box)			15. DUE DATE
A. I AM INTERESTED IN BIDDING ON THIS PROJECT AS:		B. I AM INTERESTED INBIDDING ON THIS PROJECT. RETAIN MY NAME ON YOUR MAILING LIST.	
NO. OF SET(S) YOU REQUIRE OF SOLICITATION DOCUMENTS		C. REMOVE MY NAME FROM YOUR MAILING LIST.	16. PROJECT NO.

18. NAME, ADDRESS (City, State, Zip Code) and TELEPHONE NUMBER OF FIRM

19. SIGNATURE OF FIRM REPRESENTATIVE	19. SIGNATURE OF REPRESENTATIVE	20. DATE SIGNED

Facsimile

STANDARD FORM 1417 (REV. 12-88)
Prescribed by GSA - FAR (48 CFR)

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR'S KEY TO THE EXERCISE **(Key below is from page 2-36 of the T/R; a completed SF 1417 follows.)**	

PRESOLICITATION NOTICES - CONTENT

- Describe the proposed work in sufficient detail to disclose the nature and volume of work in terms of physical characteristics and estimated price range (i.e., magnitude of the project);
- State the location of the work;
- Include tentative dates for issuing invitations, opening of bids, and completing contract performance;
- State where plans will be available for inspection without charge;
- Specify a date by which requests for Invitation for Bids should be submitted;
- Notify recipients that if they do not submit a bid they should advise the issuing office as to whether they want to receive future Presolicitation Notices;
- State whether award is restricted to small businesses or a small disadvantaged business set aside;
- Specify the amount to be charged for solicitation documents, if any.

PRE-SOLICITATION NOTICE (Construction Contract)	1. PROJECT NO.	2. DATE OF NOTICE	3. DATE SOLICITATION DOCUMENTS AVAILABLE	FORM APPROVED OMB NO.
	12-91-B487	07 SEP 91	01 OCT 91	9000-0037

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (VRS), Office of Federal Acquisition Policy and Regulatory Policy, GSA, Washington, D.C. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0037), Washington, DC 20503.

NOTE: The project number in Items 1 and 16 may be the same as the Invitation or Proposal Number.

4. OFFERS TO BE RECEIVED BY (at place specified for receipt of offers) ▶	A. TIME	B. DATE (Month, day, year)	5. TIME FOR COMPLETION (Calendar Days)
	2:30 A.M. / P.M	31 OCT 91	255

6A. ISSUING OFFICE (Name, Address, and ZIP Code)	7. PROJECT TITLE AND LOCATION
Contracts Office General Services Administration Seaside, CA 93043-5000	Various repairs and alterations to Building 560 at the Contracts Training Center, Seaside, CA 93043-5000
6B. ROOM NO. / 6C. TELEPHONE NO. (Include area code): (805) 982-5573	

INSTRUCTIONS: A. Solicitation Documents will be issued upon receipt of your affirmative response to this Pre-Solicitation Notice by the DUE DATE set forth in Item 15b. If a charge is required under Item 8A, your affirmative response must include a check or money order in the applicable amount, made payable to Agency (shown in Item 9). Refund (when specified in Item 88) will be made upon your return of the documents in good condition, without marks, notes, or mutilations, with 20 calendar days after the final date for receipt of offers. c. The Issuing Office, at its discretion, may make bid documents available to plan rooms of the Associated General Contractors, Chambers of Commerce, Dodge Reports, and other similar contractors' commercial service facilities. c. Bid guarantee is required with any bid in excess of $25,000. Bid guarantee shall be in the amount of 20 percent of the amount of the bid, or $3,000,000, whichever is less. For bid guarantee purposes, the amount of the bid is the aggregate of the Lump Sum Base Bid, all Alternates (if any), and the product(s) of each unit price (if any), multiplied by the applicable number of units shown on the Bid Form. d. NOTE TO SMALL BUSINESS FIRMS: A program for the purpose of assisting qualified small business concerns in obtaining certain bid, payment, or performance bonds that are otherwise not obtainable is available through the Small Business Administration (SBA). For information concerning SBA's surety bond guarantee assistance, contract your SBA District Office.

8A. CHARGE FOR SOLICITATION DOCUMENTS	8B. IS THIS CHARGE REFUNDABLE?	9. MAKE CHECK PAYABLE TO:
N/A	☐ YES ☒ NO	N/A

10. ESTIMATE COST RANGE OF PROJECT		11. OFFERS CONCERNING THE PROJECT RESTRICTED TO SMALL BUSINESS?	12. SUBCONTRACTING PLAN REQUIRED?
A. FROM $ 500,000	B. TO $ 1,000,000	☐ YES ☒ NO	☐ YES ☒ NO

13. DESCRIPTION OF WORK (Physical characteristics)

The work includes the demolition, repair and replacement of existing architectural, mechanical, plumbing, security systems and telephone systems, and incidental related work within an existing two story cast-in-place concrete building. Walls to be demolished include metal stud and plaster, wood stud and gypsum bord, and very limited portions of an existing interio 10 inch thick concrete wall which surrounds the majority of the working area. A portion of the existing second floor concrete slab will be removed in order to make room for a spiral stair used for internal circulation.

(If additional space is needed use reverse.)

IMPORTANT: FAILURE TO COMPLETE AND RETURN THIS PART OF THIS NOTICE TO THE ISSUING OFFICE, ON OR BEFORE THE DUE DATE SHOWN IN ITEM 15 MAY RESULT IN YOUR NAME BEING REMOVED FROM OUR MAILING LIST.

14. ACTION REQUESTED (Check applicable box)			15. DUE DATE
A. I AM INTERESTED IN BIDDING ON THIS PROJECT AS:		B. I AM INTERESTED INBIDDING ON THIS PROJECT. RETAIN MY NAME ON YOUR MAILING LIST.	
NO. OF SET(S) YOU REQUIRE OF SOLICITATION DOCUMENTS		C. REMOVE MY NAME FROM YOUR MAILING LIST.	16. PROJECT NO.

18. NAME, ADDRESS (City, State, Zip Code) and TELEPHONE NUMBER OF FIRM

19. SIGNATURE OF FIRM REPRESENTATIVE	19. SIGNATURE OF REPRESENTATIVE	20. DATE SIGNED

Facsimile

STANDARD FORM 1417 (REV. 12-88)
Prescribed by GSA - FAR (48 CFR)

TOPIC: **2.6 PREPARE SOLICITATION USING THE CSI FORMAT**

Ref: Pages 2-38 to 2-54

Objective: Given a reviewed procurement request prepare a solicitation.

* Using the CSI Format.
* Select construction clauses/provisions.

Time: 1:20 - 2:20
2:20 - 2:40 BREAK

Method: Lecture, Group Exercise

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.6 PREPARE SOLICITATION USING THE CSI FORMAT	
	Introduction This lesson is designed to show the student how a solicitation package is put together using the CSI format, and selecting clauses that are appropriate by using the FAR Matrix. Inform the students that the entire presentation for this topic involves a class exercise. By referring to the guidance presented in the Text/Reference on the use of the CSI format, coupled with the materials presented, students will put together a procurement package.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** The clauses and provisions must be included in the package. How is it determined which clauses to use? **Answer:** **Most contracting offices have preprinted "boiler plate" clauses and provisions that will apply to the "run of the mill" construction procurement within a specific dollar range.** **If there are any special circumstances that apply to the requirement, special clauses and provisions may have to be implemented.** **Remind them that there are several distinctions in selecting the appropriate clauses and provisions that can be determined by consulting the FAR matrix.**	
? **T/R 2-53**	• **Question:** Explain what information can be obtained by consulting the FAR matrix? **Answer:** * **Whether it is considered a clause or a provision.** * **Whether or not it can be incorporated by reference.** * **Whether it is "required" or "applicable" at the Contracting Officer's discretion.** * **Clause Number and reference.** * **Contract type and or purpose of the contract.** **Refer the students to Exhibit 2-25 of the Text/Reference where they will find an example page from the FAR Matrix. It may also be found in the Classroom Exercise Material, CE-2.6.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.6, "Prepare Solicitation Using the CSI Format and the SF 1442"	
	Time: 30 minutes **Method:** Group **Purpose of the Exercise:** To allow students a hands-on opportunity to develop an understanding of how a solicitation package is put together, the format, and the information needed to prepare it for reproduction and issuance. **Instructions:** The exercise is to be accomplished in groups. Request that a spokesperson be appointed for the purpose of class discussions following the exercise. Each group must also appoint a person to play the part of Bill Gibson who will assume the role of the Contracting Officer. Tell the class that the CO will be responsible for making decisions in cases where there may be disagreement among the group in the decision making process. Instruct the students to refer to their Classroom Exercise Book CE-2.4, the scenario "Repair and Alteration of Building 560", and all of the Chapter 2 documents furnished in the CE-2 exercises thus far. The instructions in the Classroom Exercise Book contain information concerning the tasks to be accomplished. Go over the details with the class before beginning the exercise.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.6, "Prepare Solicitation Using the CSI Format and the SF 1442" (Continued)	
	Tell the students to complete the exercise based on the following information: * Solicitation will be issued as an unrestricted procurement. * Sealed bidding is the chosen means. Tell students that the deficiencies encountered earlier in a previous exercise, Reviewing Specifications and Drawings have been resolved as follows: * **There are no foreign made items.** * **Brand name or equal items have been changed to agree with FAR requirements.** * **Missing drawings and missing Divisions of the specification have been furnished.** * **Completion date has been clarified to read 255 days with phased completion, and all other corrections made to the satisfaction of the Contracting Officer, Bill Gibson.**	
	NOTE: Remind the students that if the solicitation were to be issued as a negotiated procurement, the proper clauses for negotiation would be utilized, the invitation to bid would become a request for proposal, etc. It would not change the format of the solicitation, or the CSI format in arrangement.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CLASS EXERCISE CE-2.6, "Prepare Solicitation Using the CSI Format and the SF 1442" (Continued)	
	Using all of the information gathered in the previous exercise CE-2.4 students are to complete the SF 1442 as follows::	

Block 1: Enter the solicitation number.
Block 2: Check whether sealed bidding or negotiation.
Block 3: Enter issue date of solicitation.
Block 4: Contract number.
Block 5: PR number.
Block 6: Project number.
Block 7: and 8 Enter the name of your activity and address.
Block 9: Enter POC's name and phone number.

Using the documents in Exercise CE-2.1 and CE-2.2, as well as your answer sheet from exercise CE-2.4 (pages CE2-145 and CE2-146), enter the following information in Block 10 of the SF 1442:

* **Magnitude of the Project**
* **Project Title**
* **Project Number**
* **Site Visit Date**

Block 11: Enter performance information.
Block 12: Enter bond information.
Block 13: Enter bid opening date and time.

INSTRUCTIONS

CLASSROOM EXERCISE
CE-2.6

Putting Together A Solicitation Using the CSI Format

Time: 20 minutes

Method: Group Exercise

Instruction: Students will break into groups and appoint a spokesperson and a person who will act as Bill Gibson, Contracting Officer.

The person assuming the role of Contracting Officer will be responsible for making decisions during the exercise in situations where there may be disagreement among the group, or in any matter of which the Contracting Officer would be expected to exercise a decision.

Refer to your Classroom Exercise Book, CE-2.1, which is the procurement request "Repair and Alteration of Building 560", and all of the Chapter 2 documents furnished in the chapter thus far.

You are to make the following assumptions:

a) There are no foreign made items in the solicitation. Those that were originally called for in the technical specification in Exercise CE-2.2 have been removed.

b) The Brand Name or Equal item(s) have been changed to agree with FAR requirements.

c) Missing drawings and technical specifications have been furnished.

d) The completion date has been clarified to read 255 days from the Notice to Proceed.

e) All other deficiencies have been corrected.

Also refer to your answer worksheet for CE-2.4. You will use these answers in completing the solicitation comprised of the documents furnished.

Following the guidelines below, enter the information called for:

1. Complete the SF 1442 as follows:

   Block 1: Enter the solicitation number.

   Block 2: Check if Sealed Bidding or Negotiated.

   Block 3: Enter issue date of solicitation, allowing for CBD time constraint of 45 days as a minimum.

CLASSROOM EXERCISE
CE-2.6
(Continued)

Block 4: Contract Number

Block 5: PR Number

Block 6: Project Number

Block 7 & 8: Enter the name and address of activity.

Block 9: Enter POC

Block 10: Using the documents in CE-2.1 and CE-2.2, as well as your answer sheet for CE-2.4, enter the following information:

Magnitude of the Project
Project Title
Project Number
Site Visit Date

Block 11: Enter performance information.

Block 12A: Enter bond information.

Block 13: Enter the Bid Opening date and time.

2. On page CE-2.200, under paragraph 3.02 (00120-6, Instructions to Bidders), enter the Small Business Size Standard and (SIC) code. (Refer to Exhibit 2-10 in your Text/Reference.)

3. Following the "Representations and Certifications" and "Labor Provisions," turn to the "Supplementary Conditions." From Paragraph 2.01, enter weather conditions at the site.

4. In Paragraph 4.01 Notice of Requirement For Affirmative Action to Ensure Equal Opportunity, enter the percentage of minority and female goals according to the Hometown Plan which applies to the project.

5. In Paragraph 7, enter the Liquidated Damages which apply to the project.

CLASSROOM EXERCISE
CE-2.6
(Continued)

"Arranging the Documents"

6. Using T/R Exhibit 2-24, Page 1 of the Exhibit, arrange the documents in accordance with the CSI format by unscrambling the following list into the proper categories (Pre-bid Provisions, Clauses, and Technical).

		Pre-Bid Provisions	Clauses	Technical
(a)	SF 1442	1. _____	_____	_____
	Continuation Sheet	2. _____	_____	_____
		3. _____	_____	_____
(b)	Instructions to Bidders	4. _____	_____	_____
(c)	Clauses	5. _____	_____	_____
(d)	Specification	6. _____	_____	_____
(e)	Drawings	7. _____	_____	_____
(f)	Labor Provisions	8. _____	_____	_____
(g)	Wage Rate	9. _____	_____	_____
(h)	Notice to Bidders, GSA Form 1903	10. _____	_____	_____
	Disclosure Form, GSA Form 527	11. _____	_____	_____
(i)	Representations and Certifications			
(j)	Bond Forms			
(k)	Certificate of Procurement Integrity			

CE-2.6

INSTRUCTOR KEY TO THE EXERCISE

Putting Together A Solicitation Using the CSI Format

Time: 20 minutes

Method: Group Exercise

Instruction: Students will break into groups and appoint a spokesperson and a person who will act as Bill Gibson, Contracting Officer.

The person assuming the role of Contracting Officer will be responsible for making decisions during the exercise in situations where there may be disagreement among the group, or in any matter of which the Contracting Officer would be expected to exercise a decision.

Refer to your Classroom Exercise Book, CE-2.1, which is the procurement request "Repair and Alteration of Building 560", and all of the Chapter 2 documents furnished in the chapter thus far.

* Enter all information gathered thus far on the solicitation documents in the appropriate places. (i.e. Magnitude of the Project, Wage Rate, Percentages in hiring minorities and females required in the Hometown Plan, Amount of Liquidated Damages, BOD, Site Visit Date, completion date, etc.)
* Using T/R Exhibit 2-24, Page 1 of the Exhibit, arrange the documents in accordance with the CSI format by unscrambling the following list into the proper categories (Pre-bid Provisions, Clauses, and Technical).

		Pre-Bid Documents	Clauses/ Provisions	Technical
(a)	SF 1442	1. (a)	(c)	(d)
	Continuation Sheet	2. (b)	(g	(e)
		3. (h)	(f)	_____
(b)	Instructions to Bidders and Information	4. (i))	_____	_____
(c)	Clauses	5. (j)	_____	_____
(d)	Specification	6. (k)	_____	_____
(e)	Drawings	7. _____	_____	_____
(f)	Labor Laws and Clauses	8. _____	_____	_____
(g)	Wage Rate	9. _____	_____	_____
(h)	Notice to Bidders, GSA Form 1903	10. _____	_____	_____
	Disclosure Form, GSA Form 527	11. _____	_____	_____

(i) Representations and Certifications
(j) Bond Forms
(k) Certificate of Procurement Integrity

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR KEY TO EXERCISE, CE-2.6	
	1. COMPLETE THE SF 1442: A copy of the SF 1442 with the appropriate information is provided following the Key to the Exercise. **2. Enter all of the necessary information in the proper place within the solicitation.** **(a)** On page CE2-200 (00120-6), Instructions to Bidders, enter the Small Business Size Standard SIC code which is **17** for this project. **(b)** Following the “Reps and Certs” and “Labor Clauses”, turn to the “Supplementary Conditions.” In paragraph 2.01, page CE2-252, enter weather conditions **expected at the construction site.** **(c) Completion Dates:** Locate the section titled "Supplementary Conditions", In paragraph 3.01 enter the following information: (a) "Commence work under this contract within **15** calendar days after the contractor receives the Notice to Proceed". (c) "Complete the entire work ready for use not later than **375** calendar days". Since the specification calls for phased completion dates you must also **enter the information concerning the phasing here**. (Refer to Specification 01011-4 and 5, pages CE 2-46, 47). **First Floor East, completion date 120 days from date of commencement.** **First Floor West, commencement date 135 days, with completion date 255 days, thereafter.** The information is also entered in Block # 11 on the face of the SF 1442.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR KEY TO EXERCISE, CE-2.6 (Continued)	
	(d) In the Supplementary Conditions, paragraph 4.01 (page CE2-255) "Notice of Requirement For Affirmative Action To Ensure Equal Employment Opportunity," enter the appropriate percentage goals for minorities and females as listed in the Hometown Plan. **Minority: 19.7% Female: 6.9%** Specify the covered Hometown area as: **Seaside, Santa Barbara County."** (Information obtained from the Description of Project.) **(e) Liquidated Damages:** The amount of liquidated damages was also established in Classroom Exercise 2.4 at **$1,000 per day** based on the chart provided. This amount will be entered in the section "Supplementary Conditions", paragraph 7, page CE2-259 If the contractor fails to complete the work within the time specified in the contract, or any extension thereof, the contractor shall pay to the Government as liquidated damages, the sum of $1,000 per day for each day of delay. This is applicable to Phase I and Phase II. **(f) Wage Rate:** The applicable wage rate was established in Classroom Exercise CE-2.4. It would be inserted in the solicitation in its entirety in a real-life situation. For purposes of this exercise it will be listed in order of placement.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR KEY TO EXERCISE, CE-2.6 (Continued)	
	(g) Establish Bid Opening Date: Students are allowed to establish their own date which will be entered on the face of the SF 1442, Block #13. (Assume it is established as Oct. 31, 1991.) **(h) Site Visit Date:** Students will select a date based on their established bid opening date. It should be near the mid-way point from the date the IFB was issued and the bid opening date. (Assume it is established as Oct. 31, 1991.) **(i) Bond Requirements:** Based on the project described in the exercise, bonds will be required. Check appropriate block, number 12a on the SF 1442, and provide the time frame. (10 days is considered reasonable).	
T/R 2-45	**3. RECOMMENDED ORDER OF DOCUMENTS:** (Based on suggested order found in the Text/ Reference, Page 1 of Exhibit 2-24) **Provisions** (1) SF 1442 with Continuation Sheet. (Bidding Schedule) (2) Instruction To Bidders. (3) Supplementary Conditions. (4) Notice to Bidders. (5) Representations and Certifications. (6) Forms **Clauses** (7) Labor Provisions. (8) Clauses. (Boilerplate) **Technical** (9) Specifications. (10) Drawings. (11) Wage Rates. (Some agencies place wage rates after the Labor clauses.)	
	NOTE: Since there is some agency flexibility in the arrangement of documents, students may not arrange them exactly as provided here. However, the "up front" material such as all of the bidder information, Instructions to Bidders, "Reps and Certs", Supplementary Conditions, provisions and special clauses should come first.	

INSTRUCTOR KEY TO THE EXERCISE

SOLICITATION, OFFER AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO.	2. TYPE OF SOLICITATION	3. DATE	PAGE OF PAGES
	47408-90-B-13-B487	[X] SEALED BID [ ] NEGOTIATED	Sept. 13, 1991	

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
47408-90-B487	12-91-B-487	P-138(a)

7. ISSUED BY CODE	8. ADDRESS OFFER TO
CONTRACTS OFFICE, ROOM 260 SEASIDE, CA 93046	CONTRACTS OFFICE, ROOM 260 SEASIDE, CA 93046

9. FOR INFORMATION CALL	A. NAME	B. TELEPHONE NO. (Include area code) (*NO COLLECT CALLS*)
	Joyce Reynolds (805)982-2222	TO OBTAIN BID RESULTS CALL 982-2990

SOLICITATION

NOTE: In sealed bid solicitations "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, Identifying no., date):

TITLE SOLICITATION NO. 47408-90-B487

Various Repairs and Alterations to
Bldg. 560

ESTIMATED COST: BETWEEN $500,000 and $1,000,000

PRE-BID SITE VISITATION DATE: October 15, 1991
Phone: (805) 982-4550
(See Para 5.02, Instructions to Bidders)

This solicitation is issued as unrestricted and subject to the Subcontracting Plan Requirements if awarded to Large Business.

11. The Contractor shall begin performance within 15 calendar days and complete it within 255 calendar days after receiving
[X] award, [ ] notice to proceed. This performance period is [X] mandatory, [ ] negotiable. *(See _____)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES", indicate within how many calendar days after award in Item 12B.) [X] YES [ ] NO	12B. CALENDAR DAYS
	15

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 2 copies to perform the work required are due at the place specified in Item 8 by 2:00 p.m. (hour) local time Oct. 31, 1991 (date). If this is sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee [X] is, [ ] is not required. **The offer guarantee is 20% of the bid price.**

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated into the solicitation in full text or by reference.

D. Offers providing less than 45 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

STANDARD FORM 1442 FRONT- FACSIMILE

INSTRUCTOR KEY TO THE EXERCISE

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*

15. TELEPHONE NO. *(Include area code)*

16. REMITTANCE ADDRESS *(Include only if different than Item 14)*

CODE FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation. If this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS ▶ Base Bid, Lump Sum
Item 1001: $ _____

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each.)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER

20B. SIGNATURE

20C. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise indicated)*

ITEM

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

☐ 10 U.S.C. 2304(C) ( ) ☐ 41 U.S.C. 253(C)

26. ADMINISTERED BY CODE

27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

28. NEGOTIATED AGREEMENT *(Contractor is required to sign the document and return ____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requisitions identified on this form and continuation sheets for the consideration stated in this contract. The rights and obligations of the parties in this contract shall be governed by (a) this contract award. (b) the solicitor, and (c) the clauses, representations, certifications and specifications incorporated by reference in or attached to this contract.

29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual documentation is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*

31A. NAME OF CONTRACTING OFFICER *(Type or print)*

30B. SIGNATURE **30C. DATE**

31C. UNITED STATES OF AMERICA **11C. AWARD DATE**

BY

STANDARD FORM 1442 BACK (REV.4-88) FACSIMILE

INSTRUCTOR KEY TO THE EXERCISE

SOLICITATION, OFFER AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO.	2. TYPE OF SOLICITATION ☐ SEALED BID ☐ NEGOTIATED	3. DATE	PAGE OF PAGES

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
7. ISSUED BY CODE		8. ADDRESS OFFER TO
9. FOR INFORMATION CALL ▶	A. NAME	B. TELEPHONE NO. (Include area code) (*NO COLLECT CALLS*)

SOLICITATION

NOTE: In sealed bid solicitations "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, Identifying no., date):

Estimated Cost: $ _____
(Magnitude)

This project prohibits foreign products.

PROJECT TITLE: _____

PROJECT NUMBER: _____

This project is issued as: Unrestricted

PRE-BID SITE VISITATION: _____ _____
Phone

11. The Contractor shall begin performance within ____ calendar days and complete it within _____ calendar days after receiving
☐ award, ☐ notice to proceed. This performance period is ☐ mandatory, ☐ negotiable. *(See _____)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES", indicate within how many calendar days after award in Item 12B.) ☐ YES ☐ NO	12B. CALENDAR DAYS

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and ____ copies to perform the work required are due at the place specified in Item 8 by _____ (hour) local time _____ (date). If this is sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☐ is, ☐ is not required. **"in amount of 20% of the bid price."**

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated into the solicitation in full text or by reference.

D. Offers providing less than _____ calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

STANDARD FORM 1442 FRONT- FACSIMILE

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NO. *(Include area code)*
	16. REMITTANCE ADDRESS *(Include only if different than Item 14)*
CODE FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation. If this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS ▶ Base Bid 001: $ _____

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each.)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER	20B. SIGNATURE	20C. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA
24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise indicated)* — ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(C) ( ) ☐ 41 U.S.C. 253(C)
26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

28. NEGOTIATED AGREEMENT *(Contractor is required to sign the document and return ____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requisitions identified on this form and continuation sheets for the consideration stated in this contract. The rights and obligations of the parties in this contract shall be governed by (a) this contract award. (b) the solicitor, and (c) the clauses, representations, certifications and specifications incorporated by reference in or attached to this contract.	29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual documentation is necessary.
30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*	**31A. NAME OF CONTRACTING OFFICER** *(Type or print)*
30B. SIGNATURE **30C. DATE**	**31C. UNITED STATES OF AMERICA** **11C. AWARD DATE** BY

STANDARD FORM 1442 BACK (REV.4-88) FACSIMILE

CONTINUATION SHEET REFERENCE NO. OF DOCUMENT BEING CONTINUED PAGE OF

READ THE FOLLOWING IN CONJUNCTION WITH INSTRUCTIONS TO BIDDERS

1. All contractual, technical, and/or written inquiries concerning any phase of this IFB, plans and specifications, prior to bid opening, shall be made in writing to the person listed in Block #9 of the SF 1442.

2. Contracts or purchase orders to be awarded as a result of this contract shall be assigned a D0-CC2 rating in accordance with the provisions of DPS Regulation 1 and/or DMS Regulation 1.

3. BONDS. See paragraph 18 of "INSTRUCTIONS TO BIDDERS."

4. NOTE THE AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION CLAUSE OF THIS SOLICITATION.

5. NOTE THE CERTIFICATION OF NONSEGREGATED FACILITIES IN THIS SOLICITATION. Bidders, offerors, and Applicants are cautioned to note the "Certification of Nonsegregated Facilities" in the solicitation. Failure of a bidder or offeror to agree to the certification will render his bid or offer nonresponsive to the terms of solicitations involving awards of contracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause (Apr 84).

6. AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA. Offerors should note that this solicitation includes a provision which will be included in the contract requiring the listing of employment openings with the local office of the State employment service system if the award is for $10,000 or more.

7. The requirement contained herein is subject to the Buy American provisions under the Clause entitled, "Buy American Act - Construction Materials (FAR 52.225-5). The contractor agrees that no foreign made equipment will be furnished and ONLY DOMESTIC construction materials will be used by the contractor, SUBCONTRACTOR AND SUPPLIERS IN THE performance of this contract.

DESCRIPTION OF WORK:

Various repairs and alterations to Bldg. 560 at the Contracts Training Center, Seaside, CA

INSTRUCTIONS TO BIDDERS

SECTION 1

1.01 EXPLANATION TO BIDDERS: Requests for clarification or interpretation of bid documents must be submitted not less than 10 calendar days prior to date for receipt of bids and in accordance with the requirements of the clause "Explanation to Prospective Bidders" as contained in Form 3501, "Solicitation Provisions (Sealed Bid)", or contained in Form 3502, "Solicitation Provisions (Negotiated)", as appropriate.

APPROPRIATE NUMBER OF DAYS, AND DELETE REFERENCE TO INAPPROPRIATE FORM IN LAST SENTENCE ABOVE.

2. BONDS AND INSURANCE:

2.01 BID GUARANTEE: Bid guarantee is required with any bid in excess of $25,000. Bid guarantee shall be in the amount of 20 percent of the amount of the bid, or $3,000,000, whichever is less. For Bid Guarantee purposes, the amount of the bid is the aggregate of the Lump Sum Base Bid, all Alternates (if any), and the product(s) of each unit price (if any) multiplied by the applicable number of units shown on the Bid Form.

2.03 INSURANCE: Refer to clause "Insurance - Work on Government Installation" Construction Contract Clauses (Fixed Price). The coverages specified below, pursuant to subpart 28.307 of the Federal Acquisition Regulations, are the minimum insurance required. NOTE: The clause "Insurance" requires that "the United States of America, acting by and through the General Services Administration" be named as an additional insured.

(a) Worker's compensation and employer's liability. Contractor's are required to comply with applicable Federal and State Worker's compensation and occupational disease statues. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when contract operations are so comingled with a contractor's commercial operations that it would not be practical to require this coverage. Employer's liability coverage of at least $100,000 shall be required except in States with exclusive or monopolistic funds that do not permit worker's compensation to be written by private carriers.

(b) General Liability. The Contractor shall provide bodily; injury liability insurance coverage written on the comprehensive form of policy of at least $500,000 per occurrence.

(c) Automobile Liability. The Contractor shall provide a automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least $200,000 per person and $500,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

THE ABOVE MAY CHANGE DEPENDING ON THE NATURE OF THE PROJECT AND MUST BE CLEARED THROUGH THE APPROPRIATE LEGAL COUNCIL.

3. SMALL BUSINESS SET-ASIDES AND SMALL BUSINESS-LABOR SURPLUS AREA SET ASIDES:

INCLUDE ONE OF THE FOLLOWING CLAUSES, AS APPROPRIATE.

NOTICE OF TOTAL SMALL BUSINESS-LABOR SURPLUS AREA SET ASIDE (JAN 1991)

(a) Definitions:

"Labor Surplus area," as used in this clause, means a geographical area identified by the Department of Labor as an area of labor surplus.

"Labor surplus area concern," as used in this clauses, means a concern that, together with its first-tier subcontractors, will perform substantially in labor surplus areas.

"Perform substantially in labor surplus areas," as used in this clause, means that the costs incurred under the contract on account of manufacturing, production, and performance of services in labor surplus areas exceed 50 percent of the contract price.

"Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, but not dominant in the field of operation is which it is bidding of Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) General

(l) Offers are solicited from small business concerns that are also labor surplus area concerns. Offers received from concerns that are not small business-labor surplus area concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business --labor surplus area concern.

(c) Agreement

(l) The Offeror agrees that, if awarded a contract as a small business -- labor surplus area concern, it will take the following actions:

(i) Perform the contract, or cause it to be performed, substantially in areas classified as labor surplus areas at the time of award or performance. However, if any area selected by the offeror is no longer classified as a labor surplus area at the time of performance, the offeror will make an effort to select another area for performance that is classified at the time as a labor surplus area.

(ii) If the contract exceeds the small purchase limitation, submit a report to the Contracting Offeror within 30 days after the date of award (or a longer period of time, if prescribed by the Contracting Officer) that contains the following information:

(A) The dollar amount of the contract.

(B) Identification of each labor surplus area in which contract (and first-tier subcontract) performance is taking or will take place.

C) The total costs incurred and the total costs to be incurred under the contract on account of manufacturing, production, and performance of services in each of the labor surplus areas by (l) the prime Contractor, and (2) first-tier subcontractors.

(D) The total dollar amount attributable to performance in labor surplus areas.

(2) A manufacturer or regular dealer submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns inside the United States, its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. However, this requirement does not apply in connection with construction or service contracts.

**** OR ****

3.01 FAR 52.219-6 -- NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (APR 1984):

(a) Definition

"Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) General

(I) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business concern.

(c) Agreement. A manufacturer or regular dealer submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns inside the United States, its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. However, this requirement does not apply in connection with construction or service contracts.

**** OR ****

3.01 FAR 52.220-2 -- NOTICE OF TOTAL LABOR SURPLUS AREA SET-ASIDE (APR 1984)

(a) General. Offers are solicited from concerns that will agree to perform as labor surplus area (LSA) concerns. This action is based on the Small Business Act (15 U.S.C. 644(d), (e), and (f)) and Defense Manpower Policy No. 4B (44 CFR 331). Offers received from concerns that do not agree to perform as LSA concerns will be considered nonresponsive.

(b) Labor surplus area," as used in this clause, means a geographical area identified by the Department of Labor in accordance with 20 CFK 654, Subpart A, as an area of concentrated unemployment or underemployment or an area of labor surplus.

"Labor surplus area concern," as used in this clause means a concern that together with its first-tier subcontractors will perform substantially in labor surplus areas. Performance is substantially in labor surplus areas if the costs incurred under the contract on account of manufacturing, production, or performance of appropriate services in labor surplus areas exceed 50 percent of the contract price.

(c) Agreement. The Offeror agrees that, if awarded a contract as an LSA concern, the offeror Will:

(l) Perform the contract, or cause it to be performed, substantially in areas classified as LSA's at the time of award of at the time of performance; and

(2) Submit to the Contracting Officer within 30 days after the award of the contract (if it exceeds the appropriate small purchase limitation in Part 13 of the Federal Acquisition Regulation) or such longer time as prescribed by the Contracting Officer, a report containing the following information:

REPORT ON PERFORMANCE IN LABOR SURPLUS AREAS

(a) Amount of the contract: $

(b) Costs incurred or to be incurred by the prime Contractor under the contract on account of production, manufacturing, or appropriate services performed in the following labor surplus areas:

Labor surplus area	Cost
(1) _____	$
(2) _____	$
(3) _____	$
(4) _____	$

(c) Costs incurred or to be incurred by first-tier subcontractors on account of production, manufacturing, or appropriate services performed in the following labor surplus areas:

Labor surplus area	Cost
(1) _____	$
(2) _____	$
(3) _____	$
(4) _____	$

(d) Total of (b) and (c):

NOTE: OFFEROR FILLS IN THE BLANKS ABOVE. IF THIS PROCUREMENT IS A SMALL BUSINESS SET-ASIDE; INCLUDE THE FOLLOWING PARAGRAPH.

3.02 SMALL BUSINESS SIZE STANDARDS: The certification in paragraph 1 of GSA Form 3503, Representations and Certifications, entitled "552.219-1, Small Business Concern Representation (AUG 1986) (DEVIATION FAR 52.219-1)" is supplemented as follows:

GSAR 552.219-70 STANDARD INDUSTRIAL CLASSIFICATION AND SMALL BUSINESS SIZE STANDARD (MAR 1987!

The Standard Industrial Classification Code applicable to the supplies/services being procured is No._____, and the applicable small business size standard is _____

3.03 NOTICE TO SMALL BUSINESS FIRMS. A program for the purpose of assisting qualified small business concerns is obtaining certain bids, payment, or performance bonds that are otherwise not obtainable is available through the Small Business Administration (SBA). For information concerning SBA's surety bond guarantee assistance, contract your SBA District Office.

4. BIDS

4.01 Base Bids: More than one lump sum is required. See SUMMARY section of Division 1, General Requirements, for scope of work for each lump sum bid. Lump sum bid shall not include any work for which unit price is required.

SELECT ONE OF THE ABOVE. COORDINATE WITH SUMMARY SECTION OF DIVISION 1.

4.02 Alternate Prices: Alternate prices are required for alternates scheduled in SUMMARY section of Division 1, General Requirements. State amount to be added or deducted for each alternate.

DELETE ABOVE IF NO ALTERNATES. DELETE ALL OF C., BELOW IF NO ELEVATORS OR IF OTHERWISE NOT APPLICABLE. SEE SPECIAL EDITING INSTRUCTIONS.

4.03 Maintenance Service Option:

A. A bid is required on Option 2 for full maintenance service of elevators, escalators, and dumbwaiters as specified in Division 14 of this specification for one year.

**** OR ****

A. A bid is required on Option 1 for full maintenance service of elevators, escalators, and dumbwaiters listed in the Schedule of Alternates in the SUMMARY section of this specification, and specified in Division 14 of this specification for one year.

SELECT ONE OR THE OTHER AS APPROPRIATE. SEE SPECIAL EDITING INSTRUCTIONS.

B. The Government reserves the right to exercise the option(s) at any time up to the commencement date of the guarantee period or up to acceptance and use by the Government of the first elevator(s) if acceptance is staggered.

4.04 Basis of Award - Construction Contract (AF 1985!:

A. The low bidder for purposes of award is the responsible bidder offering the lowest price for the base bid (consisting of the lump sum bid any any associated unit price bids extended by the applicable number of units shown on the bid form). See Standard Form, 1442, Solicitation, Offer, and Award and the provision entitled "Contract Award - Sealed Bid - Construction" or "Contract Award- Negotiated- Construction."

B . A bid may be rejected as nonresponsive if the bid is materially unbalanced as to bid prices. A bid is unbalanced when the bid is based on prices significantly less than cost for some work and significantly overstated for other work.

Alternate I

If the solicitation includes a base bid and options, the Contracting Officer shall delete paragraph (a) of the basic clause and insert paragraph (a) substantially as follows:

(a) The low bidder for purposes of award is the responsible bidder offering the lowest aggregate price for (l) the base bid (consisting of the lump sum bid and any associated unit price bids extended by the applicable number of units shown on the bid form) plus (2) all options designated to be evaluated. The evaluation of options will not obligate the Government to exercise the options. See Standard Form 1442, Solicitation, Offer, and Award and the provision entitled "Contract Award - Sealed Bidding."

Alternate II

If the solicitation includes a base bid and alternates, the Contracting Officer shall delete paragraph (a) of the basic clause and insert paragraphs (a), (c), and (d) substantially as follows:

(a) The low bidder for purposes of award is the responsible bidder offering the lowest aggregate price for (l) the base bid (consisting of the lump sum bid and any associated unit price bids extended by the applicable number of units shown on the bid form) plus (2) those alternates in the order of priority listed in the solicitation that provide the most features of work within the funds available at bid opening. See the provision entitled "Contract Award - Sealed Bidding."

(c) Alternates will be added to the base bid in the order listed in the solicitation (see Standard Form 1442, Solicitation, Offer, and Award). If the addition of an alternate would make all bids exceed the funds available at bid opening, that alternate shall be skipped and the next subsequent alternate in a lower amount shall be added, provided that the aggregate of base bid and the selected alternates does not exceed the funds available at bid opening. For example, when the amount available is $100,000 and a bidder's base bid is $85,000, with its separate bids on four successive alternates being $10,000, $8,000, $6,000, and $4,000, the aggregate amount of the bid for purposes of selecting the alternates would be $99,000 (base bid plus the first and fourth alternates). The second and third alternates are skipped because each of them would cause the aggregate of the base bid and alternates to exceed t he $100,000 amount available when considered with the first alternate. All bids shall be evaluate don the basis of the same alternates.

(d) After the low bidder has been determined in accordance with paragraph (a), an award may be made to that low bidder on the base bid, plus any combination of alternates for which funds are available at the time of award, but only if the award amount does not exceed the amount offered by any other responsible bidder. If the base bid plus the proposed combination of alternates exceeds the amount offered by any other responsible bidder for the same combination of alternates, the award cannot be made on that combination of alternates.

Alternate III

If the solicitation includes a base bid, alternates, and options, the Contracting Officer shall delete paragraph (a) of the basic clause and insert paragraphs (a), (c), and (d) substantially as follows:

(a) The low bidder for purposes of award is the responsible bidder offering the lowest aggregate price for (l) the base bid (consisting of the lump sum bid and any associated unit price bids extended by the applicable number of units shown on the bid form) plus (2) those alternates in the order of priority listed in the solicitation that provide the most features of work within the funds available at bid opening plus (3) all options designated to be evaluated except those options associated with alternates which are skipped during the selection process outlined in paragraph (c) below. The evaluation of options will not obligate the Government to exercise the options. See the provision entitled "Contract Award - Sealed Bidding."

(c) Alternates will be added to the base bid in the order listed in the solicitation (see Standard Form 1442, Solicitation, Offer, and Award). If the addition of an alternate would make all bids exceed the funds available at bid opening, that alternate shall be skipped and the next subsequent alternate in a lower amount shall be added, provided that the aggregate of base bid and the selected alternates does not exceed the funds available at bid opening. For example, when the amount available is $100,000 and a bidder's base bid is $85,000, with its separate bids on four successive alternates being $10,000, $8,000, $6,000, and $4,000, the aggregate amount of the bid for purposes of selecting the alternates would be $99,000 (base bid plus the first and fourth alternates). The second and third alternates are skipped because each of them would cause the aggregate of the base bid and alternates to exceed the $100,000 amount available when considered with the first alternate. All bids shall be evaluated on the basis of the same alternates.

(d) After the low bidder has been determined in accordance with paragraph (a), award may be made to that low bidder on the base bid and evaluated options plus any combination of alternates for which funds are available at the time of award, but only if that low bidder is still low on the sum thereof plus any previously unevaluated options designated to be evaluated which are associated with proposed alternates that were skipped during the selection under paragraph (c). If that low bidder is not still low, award cannot be made on the proposed combination of alternates.

For purposes of determining the relative standing of the bidders in making an award, there shall be added to the lump sum bid or deducted from (as appropriate):

(l) The Unit Price bid(s) extended by the applicable number of units shown on the bid form.

(2) The bid on the Maintenance Option, and (if applicable, the bid(s) on the Maintenance Options required in connection with any Alternate bid(s) as are accepted by the Government.

C. Bid Alternates will be evaluated as follows:

Where bid alternates are used, the base bid shall cover the minimum acceptable project specified and include one or more additive bid alternates which progressively add specific features of work in a stated order of priority. Deduct alternates should not be used. The provisions below shall be used:

GSAR 552.236-73 -- CONTRACT AWARD -- WITH ALTERNATES (APR 1984)

For bids that include additive or deductive alternates, the low bidder is the responsible bidder offering the lowest aggregate amount of the base bid, plus or minus those alternates (in the order listed in the solicitation) that provide the most features of work within the funds available at bid opening. If the addition of the next alternate in the order of priority would make all bids exceed the funds available at bid opening, that alternate shall be skipped and the next subsequent additional alternate in a lower amount shall be added if the bid thereon is within the funds available at bid opening. Accordingly, an award may be made to this bidder on the base bid, plus any combination of alternates for which funds are available at the time of award unless precluded by (l) the solicitation, o¢ (2) a restrictive limitation included by the bidder. However, if the combination of alternates exceed the amount offered by any other responsible bidder for the same combination of alternates, the award cannot be made on that combination of alternates. (See also the provision entitled "Contract Award Sealed Bid - Construction.")

D. Order of Priority of Bid Items: The order of priority in which the additive bid items (Bid Alternates) will be considered in aggregate with the BASE BID to determine the low bidder within funds available shall be as follows:

(l) List alternates in order of priority here. Coordinate with SUMMARY section and with bid form.

4.05 Separate Price: The amount included in the lump sum bid(s) for items scheduled under SEPARATE PRICE in the SUMMARY section of Division 1, General Requirements, shall be stated on the bid form. This information is required for accounting purposes only and won't form part of the basis of award.

COORDINATE ABOVE WITH SUMMARY SECTION AND INFORMATION ON BID FORM. SEE SPECIAL EDITING INSTRUCTIONS.

5. PRE-BID REQUIREMENTS AND NOTICES

5.01 Pre-Bid Conference:

A. A pre-bid conference will be held on:

INSERT DATE, HOUR, AND LOCATION OF PRE-BID CONFERENCE HERE.

B. Bidders are requested to notify _____, GSA, Contracts Division, Region 9, by telephone, the names of persons who will attend that conference. Notification should be made by _____, Telephone number is (415) 974-9399.

C. Bidders' participation is encouraged although attendance is not mandatory. The conference will provide opportunity for discussion of the nature of the work and problems that may be entailed, as well as to answer questions concerning contract provisions and requirements, including drawings and specifications. Bidders are requested to submit questions relative to the bidding documents in advance of the meeting so that the Contracting Officer may prepare responses.

D. No oral statement made by a Government representative during the pre-bid conference, nor any written record of such oral statements as may be made and subsequently furnished to the bider, will be deemed to have the effect of adding to, modifying, or otherwise varying from the written provisions of the invitation for bids (including, but not limited to specifications, drawings, and written amendments to the solicitation). In the event the discussion or questions raised during the pre-bid conference indicate a need to modify the invitation for bids, an amendment to the solicitation will be issued in writing; any such amendment to the solicitation must be acknowledged in the same manner and under the same conditions as all other written amendments to an invitation for bids.

INCLUDE ABOVE ARTICLE ON ALL NEW CONSTRUCTION PROJECTS COSTING $2 MILLION OR MORE; R&A PROJECTS COSTING $1 MILLION OR MORE, AND FOR R&A INDEFINITE QUANTITY (TERM) CONTRACTS COSTING $500,000 OR MORE. USUALLY INSERT A DATE MIDWAY IN THE BID PREPARATION PERIOD.

5.02 Visit to Site: To arrange for the site visit, contact the following persons:

THE ABOVE IS ESPECIALLY IMPORTANT WHERE HISTORICAL PRESERVATION IS INVOLVED. FILL IN NAME, ADDRESS, AND TELEPHONE NUMBER OF BUILDING MANAGER OR OTHER APPROPRIATE CONTACT.

6. COMPETENCY OF BIDDER (ELEVATOR):The bidder, or the subcontractor whom the bidder will use for performance of elevator work, shall meet the competency qualifications defined in Division 14 of this specifications. Proof of this competency, as required by Division 14 of this specification, shall be promptly submitted upon request of the Government. The bid may be rejected if the bidder or the elevator subcontractor has established on former jobs, either Government, municipal, or commercial, a record for unsatisfactory elevator installations, has repeatedly failed to complete contracts awarded to them within the contract time, or otherwise fails to meet the specified competency qualifications.

DELETE ABOVE IF NO ELEVATORS. SEE SPECIAL EDITING INSTRUCTION.

7 . AVAILABILITY OF REFERENCE DOCUMENTS:

7.01 FAR 52.210-1 -- AVAILABILITY OF SPECIFICATIONS LISTED IN THE GSA INDEX OF FEDERAL SPECIFICATION STANDARDS AND COMMERCIAL DESCRIPTIONS (JUN 1988):

(a) A single copy of each specification cited in this solicitation is available without charge from the GSA Specifications Unit, 7th & D Streets, SW, Washington, DC 20407 (Tel. 202-472-2205 or 472-2140), or from any of the General Services Administration Business Service Centers which are located in Boston, MA; New York, NY; Philadelphia, PA; Atlanta, GA; Chicago, IL; Kansas City, MO; Ft. Worth, TX; San Francisco, CA; Los Angeles, CA; and Auburn, WA. Additional copies may be purchased from the GSA Specifications Unit in Washington, DC. 20402.

7.02 AVAILABILITY OF OTHER REFERENCE DOCUMENTS: Other reference documents cited in this solicitation may be obtained from the organizations responsible for their preparation, maintenance, and publication. These are listed in the section, DEFINITIONS AND STANDARDS of the technical specification.

7.03 TELEGRAPHIC BIDS:

Insert the following provision in invitations for bids if the Contracting Officer decides to authorize telegraphic bids.

FAR 52.214-13 - TELEGRAPHIC BIDS (APR 1984)

(a) Bidders may submit telegraphic bids as responses to this solicitation. These responses must arrive at the place, and by the time, specified in the solicitation.

(b) Telegraphic bids shall refer to this solicitation and include the items or subitems, quantities, unit prices, time and place of delivery, all representations and other information required by this solicitation, and a statement of agreement with all the terms, conditions, and provisions of the invitation for bids.

(c) Telegraphic bids that fail to furnish required representations or information, that reject any of the terms, conditions, and provisions of this solicitation, may be excluded from consideration.

(d) Bidders must promptly sign and submit complete copies of the bids in confirmation of their telegraphic bids.

(e) The term "telegraphic bids," as used in this provision, includes mailgrams.

8. SERVICE OF PROTESTS (JUNE 1985)
DEVIATION FAR 52.233-2) (NOV 1988)

A copy of any protest, as defined in Section 33.101 of the Federal Acquisition Regulation, that is filed within the General Accounting Office (GAO) or the General Services Administration Board of Contract Appeals (GSBCA) shall be served on the Contracting Officer and the Assistant General Counsel (LB) by obtaining written and dated acknowledgement of receipt from the Contracting Officer located at the address shown in Block 7 of the SF 1442 which is included in this Solicitation, and from the GSA Office of the Assistant General Counsel (LB) located at the General Services Administration, Washington, DC 20405.

BID BOND (See Instructions on Reverse)	DATE BOND EXECUTED (Must be same or later as date of contract.)	FORM APPROVED OMB NO. 9000-0045

Public reporting burden for this collection of information is estimated to average 25 minutes per response, included the time for reviewing instructions, researching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretary (VRS), Office of Federal Acquisition Policy, GSA, Washington, DC. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0045), Washington, DC 20503.

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION ("X" answer) ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ JOINT VENTURE ☐ CORPORATION
	STATE OF INCORPORATION

SURETY(IES) (Name(s) and business address(s)

PENAL SUM OF BOND					BID IDENTIFICATION	
PERCENT OF BID PRICE	AMOUNT NOT TO EXCEED				BID DATE	INVITATION NO.
20	MILLION(S)	THOUSAND(S)	HUNDRED(S)	CENTS	FOR (Construction Supplies or Services)	

OBLIGATION:
We, the Principal and Surety(ies), are firmly bound to the United State of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and jointly and severally, However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purpose, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety, If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:
The principal has submitted the contract identified above.

THEREFORE:
The above obligations is void if the Principal - (a) upon acceptance by the Government of the bid identified above, within the period specified therein for acceptance (sixty (60) days if no period is specified), executes the further contractual documents and gives the bond(s) required by the terms of the bid as accepted within the time specified (ten(10) days if no period is specified) after receipt of the forms by the principal; or (b) in the event of failure to execute such further contractual documents and give such bonds, pays the Government for any cost of procuring the work which exceeds the amount of the bid.

Each Surety executing this instrument agrees that its obligation is not impaired by any extension(s) of the time for acceptance of the bid that the Principal may grant to the Government. Notice to the surety(ies) of extension(s) are waived. However, waiver of the notice applies only to extensions aggregating not more than sixty (60) calendar days in addition to the period originally allowed for acceptance of the bid.

WITNESS:
The Principal an Surety(ies) executed this performance bond and affixed their seals on the above date.

PRINCIPAL

SIGNATURE(S):	1. (Seal)	2. (Seal)	3. (Seal)	Corporate Seal
NAME(S) & TITLE(S) (Type)	1.	2.	3.	

INDIVIDUAL SURETY(IES)

SIGNATURE(S):	1. (Seal)	2. (Seal)
NAME(S) & TITLE(S) (Type)	1.	2.

CORPORATE SURETY(IES)

SURETY A	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(S) & TITLE(S) (Type)	1.	2.		

Facsimile

STANDARD FORM 24 (Rev 1-90)
Prescribed by GSA - FAR (48(CFR)93.220)

CE-2.6

CORPORATE SURETY(IES) (Continued)

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		

INSTRUCTIONS

1. This form is authorized for use when a bid guaranty is required. Any deviation from this form will require the written approval of the Administrator of General Services.

2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a memeber of the firm, partnership, or joint venture, or an officer of the corporation involved.

3. The bond may express penal sum as a percentage of the bid price. In these cases, the bond may state a maximum dollar limitation (e.g., 20% of the bid price but the amount not exceed _____ dollars).

4. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of the suretites.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.

5. Coporations executing the bond shall affix their coporate seals. Individuals shall execute the bond opposite the word "Corporate Seal", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

6. Type the name and title of each person signing this bond in the space provided.

7. In its application to negotiated contracts, the terms "bid" and "bidder" shall include "proposal" and "offeror".

PERFORMANCE BOND (See Instructions on Reverse)	DATE BOND EXECUTED (Must be same or later as date of contract.)	FORM APPROVED OMB NO.

Public reporting burden for this collection of information is estimated to average 25 minutes per response, include the time for reviewing instructions, researching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretary (VRS), Office of Federal Acquisition Policy, GSA, Washington, DC. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0045), Washington, DC. 20503.

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION ("X" answer) ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ JOINT VENTURE ☐ CORPORATION STATE OF INCORPORATION
SURETY(IES) (Name(s) and business address(s)	PENAL SUM OF BOND MILLION(S) / THOUSAND(S) / HUNDRED(S) / CENTS CONTRACT DATE / CONTRACT NO.

OBLIGATION:
We, the Principal and Surety(ies), are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:
The principal has entered into the contract identified above.

THEREFORE:
The above obligation is void if the Principal -
(a)(1) Performs and fulfills all the undertakings, covenants, terms, conditions, and agreements of the contract during the original terms of the contract and any extensions there of that are granted by the Government, with or without notice to the Surety(ies), and during the life of any guarantee required under the contract, and (2) performs and fulfills all of the undertakings, covenants, terms, conditions, and agreement of any and all duly authorized modifications of the contract that hereafter are made. Notice of those modifications to the Surety(ies) are waived.

(b) Pay to the Government the full amount of the taxes imposed by the Government, if the said contract is subject to the Miller Act, (40 U.S.C. 270a - 270e), which are collected, deducted, or withheld form wages paid by the Principal in carrying out the construction contract with respect to which this bond is furnished.

WITNESS:
The Principal and Surety(ies) executed this performance bond and affixed their seals on the above date.

PRINCIPAL

SIGNATURE(S):	1. (Seal)	2. (Seal)	3. (Seal)
NAME(S) & TITLE(S) (Type)	1.	2.	3.

INDIVIDUAL SURETY(IES)

SIGNATURE(S):	1. (Seal)	2. (Seal)
NAME(S) & TITLE(S) (Type)	1.	2.

CORPORATE SURETY(IES)

SURETY A	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $
	SIGNATURE(S):	1.	2.	
	NAME(S) & TITLE(S) (Type)	1.	2.	

Facsimile

STANDARD FORM 25 (Rev 1-90)
Prescribed by GSA - FAR (48(CFR)93.220)

CORPORATE SURETY(IES) (Continued)

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		

INSTRUCTIONS

1. This form is authorized for use in connection with Government contracts. Any deviation form this form will require the written approval of the Administrator of General Services.

2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

3. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.

4. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seals", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

5. Type the name and title of each person signing this bond in the space provided.

PAYMENT BOND (See Instructions on Reverse)	DATE BOND EXECUTED (Must be same or later as date of contract.)	FORM APPROVED OMB NO.

Public reporting burden for this collection of information is estimated to average 25 minutes per response, included the time for reviewing instructions, researching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any aspect of this collection information, including suggestions for reducing this burden, to the FAR Secretary (VRS), Office of Federal Acquisition Policy, GSA, Washington, DC. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0045), Washington, DC. 20503.

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION ("X" answer) ☐ INDIVIDUAL ☐ PARTNERSHIP ☐ JOINT VENTURE ☐ CORPORATION STATE OF INCORPORATION
SURETY(IES) (Name(s) and business address(s)	PENAL SUM OF BOND MILLION(S) / THOUSAND(S) / HUNDRED(S) / CENTS CONTRACT DATE / CONTRACT NO.

OBLIGATION:
We, the Principal and Surety(ies), are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally. However, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us. For all other purposes, each Surety binds itself, jointly and severally with the Principal, for the payment of the sum shown opposite the name of the Surety. If no limit of liability is indicated, the limit of liability is the full amount of the penal sum.

CONDITIONS:
The principal has entered into the contract identified above.

THEREFORE:
The above obligation is void if the Principal promptly makes payment to all persons having a direct relationship with the Principal or a subcontractor of the Principal for furnishing labor, material or both in the prosecution of the work provided for in the contract identified above, and any authorized modification of the contract that subsequently are made. Notice of those modifications to the Surety(ies) are waived.

WITNESS:
The Principal and Surety(ies) executed this payment bond and affixed their seals on the above date.

PRINCIPAL

SIGNATURE(S):	1. (Seal)	2. (Seal)	3. (Seal)	Corporate Seal
NAME(S) & TITLE(S) (Type)	1.	2.	3.	

INDIVIDUAL SURETY(IES)

SIGNATURE(S):	1. (Seal)	2. (Seal)
NAME(S) & TITLE(S) (Type)	1.	2.

CORPORATE SURETY(IES)

SURETY A	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(S) & TITLE(S) (Type)	1.	2.		

Facsimile

STANDARD FORM 25A (Rev 1-90)
Prescribed by GSA - FAR (48(CFR)93.220)

CORPORATE SURETY(IES) (Continued)

SURETY B	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY C	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY D	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY E	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY F	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		
SURETY G	NAME & ADDRESS		STATE OF INC.	LIABILITY LIMIT $	Corporate Seal
	SIGNATURE(S):	1.	2.		
	NAME(s) & TITLE(S) (Typed)	1.	2.		

BOND PREMIUM	RATE PER THOUSAND $	TOTAL $

INSTRUCTIONS

1. This form is authorized for use in connection with Government contracts. Any deviation form this form will require the written approval of the Administrator of General Services.

2. Insert the full legal name and business address of the Principal in the space designated "Principal" on the face of the form. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

3. (a) Corporations executing the bond as sureties must appear on the Department of the Treasury's list of approved sureties and must act within the limitation listed therein. Where more than one corporate surety is involved, their names and addresses shall appear in the spaces (Surety A, Surety B, etc.) headed "CORPORATE SURETY(IES)." In the space designated "SURETY(IES)" on the face of the form, insert only the letter identification of sureties.

(b) Where individual sureties are involved, a completed Affidavit of Individual Surety (Standard Form 28), for each individual surety shall accompany the bond. The Government may require the surety to furnish additional substantiating information concerning its financial capability.

4. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Corporate Seals", and shall affix an adhesive seal if executed in Maine, New Hampshire, or any other jurisdiction requiring adhesive seals.

5. Type the name and title of each person signing this bond in the space provided.

AFFIDAVIT OF INDIVIDUAL SURETY
(See instructions on reverse)

FORM APPROVED OMB NO.

9000-0001

Public reporting burden for this collection of information is estimated as average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (VRS), Office of Federal Acquisition Policy, GSA, Washington, DC. 20405; and to the Office of Management and Budget, Paperwork Reduction Project (90000-0001), Washington, DC. 20503.

STATE OF

COUNTY OF

$$

I, the undersigned, being duly sworn, depose and say that I am: (1) the surety to the attached bonds; (2) a citizen of the United States; and of full age and legally competent. I also depose and say that, concerning any stocks or bonds included in the assets listed below, that there are no restrictions on the resale of these securities pursuant to the registration provisions of Section 5 of the Securities Act of 1933. I recognize that statements contained herein concern a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious or fraudulent statement may render the maker subject to prosecution under Title 18, United States Code Sections 1001 and 4994. This affidavit is made to induce the United States of America to accept me as surety on the attached bond.

1. NAME (First, Middle, Last) (Type or Print)

2. HOME ADDRESS (Number, Street, City, State, Zip Code)

3. TYPE AND DURATION OF OCCUPATION

4. NAME AND ADDRESS OF EMPLOYER (If self-employed, so state)

5. NAME AND ADDRESS OF INDIVIDUAL SURETY BROKER USED (If any) (Number, Street, City, State, Zip Code)

6. TELEPHONE NUMBER

HOME -
BUSINESS -

7. THE FOLLOWING IS A TRUE REPRESENTATION OF THE ASSETS I HAVE PLEDGED TO THE UNITED STATES IN SUPPORT OF THE ATTACHED BOND:

A) Real estate (include a legal description, street address and other identifying description; the market value; attach supporting certified documents including recorded lien; evidence of title and the current tax assessment on the property. For market value approach, also provide a current appraisal.)

B) Assets other than real estate (describe the assets, the details of the escrow account, and attach certified evidence thereof).

8. IDENTIFY ALL MORTGAGES, LIENS, JUDGEMENTS, OR ANY OTHER ENCUMBRANCES INVOLVING SUBJECT ASSETS INCLUDING REAL ESTATE TAXES DUE AND PAYABLE.

9. IDENTIFY ALL BONDS, INCLUDING BID GUARANTEES, FOR WHICH THE SUBJECT ASSETS HAVE BEEN PLEDGED WITHIN 3 YEARS PRIOR TO THE DATE OF EXECUTION OF THIS AFFIDAVIT.

None

DOCUMENTATION OF THE PLEDGED ASSET MUST BE ATTACHED.

10. SIGNATURE

11. BOND AND CONTRACT TO WHICH THIS AFFIDAVIT RELATES (When appropriate)

12. SUBSCRIBED AND SWORN TO BEFORE ME AS FOLLOWS:

a) DATE OATH ADMINISTERED

MONTH DAY YEAR

b) CITY AND STATE (Or other jurisdiction)

c) NAME AND TITLE OF OFFICIAL ADMINISTERING OATH (Type or Print)

d) SIGNATURE

e) MY COMMISSION EXPIRES

STANDARD FORM 28 (REV. 1-90)
Facsimile - prescribed by GSA - FAR (48 CFR) 53.228(a)

INSTRUCTIONS

1. Individual sureties on bonds executed in connection with Government contracts, shall complete and submit this form with the bond. (See 48 CFR 28.203, 53.228(e)). The surety shall have the completed form notarized.

2. No corporation, partnership, or other unincorporated associations or firms, as such, are acceptable as individual sureties. Likewise members of a partnership are not acceptable as sureties on bonds which partnership or associations, or any co-partner or member thereof is the principal oligor. However, stockholders or corporate principals are acceptable provided (a) their qualifications are independent of their stockholdings or financial interest therein, and (b) that the fact is expressed in the affidavit of justification. An individual surety will not include any financial interest in assets connected with the principal on the bond which this affidavit supports.

3. United States citizenship is a requirement for individual sureties. However, only a permanent resident of the place of execution of the contract and bond is required for individual sureties in the following locations - any foreign country; the Commonwealth of Puerto Rico; the Virgin Islands; the Canal Zone; Guan; or any other territory or possession of the United States.

4. All signatures on the affidavit submitted must be originals. Affidavits bearing reproduced signatures are not acceptable. An authorized person shall sign the bond. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representatives not a member of a firm, partnership, or joint venture, or an officer of the corporation involved.

REPRESENTATIONS AND CERTIFICATIONS
CONSTRUCTION CONTRACT
(Sealed Bidding Procedures)

Solicitation No.: 47408-90-(C)-B-B487

Name and Address of Bidders: _____

_____

_____

DUNS Number:_____ CAGE Code No.: _____

Date of Bid: _____

The bidder makes the following representations and certifications, by completing the following paragraphs, as part of the bid identified above.

1. SIC CODE AND SMALL BUSINESS SIZE STANDARD (JAN 1991)

(a) The standard industrial classification (SIC) code for this acquisition is [ ].

(b) (1) The small business size standard is [ ].

(2) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(52.219-22)

2. SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (JUL 1991)

(a) Definition.

Emerging small business as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the standard industrial classification code assigned to a contracting opportunity.

(b) (Complete only if the Offeror has certified itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.)

The Offeror represents and certifies as part of its offer that it _____ is, _____ is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees	Avg. Annual Gross Revenues
____ 50 or fewer	____ $1 million or less
____ 51 - 100	____ $1,000,001 - $2 million
____ 101 - 250	____ $2,000,002 - $3.5 million
____ 251 - 500	____ $3,500,001 - $5 million
____ 501 - 750	____ $5,000,001 - $10 million
____ 751 - 1,000	____ $10,000,001 - $17 million
____ Over 1,000	____ Over $17 million

(52.219-19)

3. CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of ay Federal contracting, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recepients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(52.203-11)

4. RECOVERED MATERIAL CERTIFICATION (APR 1984)

The offeror certifies, by signing this offer, that recovered materials, as defined in section 23.402 of the Federal Acquisition Regulation, will be used as required by the applicable specifications.

(52.223-4)

5. CONTINGENT FEE REPRESENTATION AND AGREEMENT (APR 1984)

(a) Representation. The offeror represents that, except for full-time bona fide employees working solely for the offeror, the offeror -

(Note: The offeror must check the appropriate boxes. For interpretation of the representation, including the term bona fide employee, see subpart 3.4 of the Federal Acquisition Regulation.)

(1) [ ] has, [ ] has not employed or retained any person or company to solicit or obtain this contract; and

(2) [ ] has, [ ] has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer -

(1) A completed Standard Form 119, Statement of Contingent or Other Fees, (SF 119); or

(2) A signed statement indicating that the SF 119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF 119 applies to this offer or quotation.

(52.203-4)

6. TYPE OF BUSINESS ORGANIZATION - SEALED BIDDING (JUL 1987)

The offeror, by checking the applicable box, represents that -

(a) It operates as [ ] a corporation incorporated under the laws of the State of _____, [ ] an individual, [ ] a partnership, [ ] a nonprofit organization, or [ ] a joint venture; or

(b) If the bidder is a foreign entity, it operates as ___ an individual, ___ a partnership, ___ a nonprofit organization, ___ a joint venture, or ___ a corporation, registered for business in _____ (country).

(52.214-2)

7. CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that -

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered.

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory -

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above _____ [insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(52.203-2)

8. Reserved.

9. Reserved.

10. CERTIFICATION OF NONSEGREGATED FACILITIES (APR 1984)

(a) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will -

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

(52.222-21)

11. CLEAN AIR AND WATER CERTIFICATION (APR 1984)

The Offeror certifies that -

(a) Any facility to be used in the performance of this proposed contract is ___ , is not ___ listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the EPA, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

(52.223-1)

Small Disadvantaged Business Concern Representation. (FEB 1990)

As prescribed in 19.304(b), insert the following provision:

12. SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (FEB 1990)

(a) Representation. The offeror represents that it [ ] is, [ ] is not a small disadvantaged business concern.

(b) Definitions.

"Asian Pacific Americans," as used in this provision, means United States citizens whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, or the Federated States of Micronesia.

"Indian tribe," as used in this provision, means any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation as defined in 13 CFR 124.100 which is recognized as eligible for the special programs and services provided by the U.S. to Indians because of their status as Indians, or which is recognized as such by the State in which such tribe, band, nation, group, or community resides.

"Native Americans," as used in this provision, means American Indians, Eskimos, Aleuts, and native Hawaiians.

"Native Hawaiian Organization," as used in this provision, means any community service organization serving Native Hawaiians in, and chartered as a not-for-profit organization by, the State of Hawaii, which is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR part 121.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (a) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR part 124.

"Subcontinent Asian Americans," as used in this provision, means United States citizens whose origins are in India, Pakistan, Bangladesh, Sri Lanka, Bhutan, or Nepal.

(c) Qualified groups. The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other individuals found to be qualified by SBA under 13 CFR 124. The offeror shall presume that socially and economically disadvantaged entities also include Indian tribes and Native Hawaiian Organizations.

(52.219-2)

13. <u>REPRESENTATION OF EXTENT OF TRANSPORTATION OF SUPPLIES BY SEA (JAN 1990)</u>

The Offeror represents that it does not anticipate that supplies, as defined in the clause at 252.247-7203, Transportation of Supplies by Sea, will be transported by sea in the performance of any contract or subcontract resulting from this solicitation. If the Offeror represents that it will not use ocean transportation, the clause at 252.247-7204 will also be inserted in the resulting contract.

(Agency Specific)

14. WOMEN-OWNED SMALL BUSINESS REPRESENTATION (APR 1984)

(a) Representation. The offeror represents that it [ ] is, [ ] is not a women-owned small business concern.

(b) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned," as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(52.219-3)

15. PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984)

The offeror represents that -

(a) It [ ] has, [ ] has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It [ ] has, [ ] has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(52.222-22)

16. TAXPAYER IDENTIFICATION (SEP 1992)

(a) Definitions.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to reporting requirements described in 4.903, the failure or refusal by the offeror to furnish the information may result in a 20 percent reduction of payments otherwise due under the contract.

(c) Taxpayer Identification Number (TIN).

___ TIN: _____.

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of a Federal, state or local government;

___ Other. State basis. _____

(d) Corporate Status.

___ Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

___ Other corporate entity;

___ Not a corporate entity;

___ Sole proprietorship

___ Partnership

___ Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

___ Name and TIN of common parent:

Name _____

TIN _____

(52.204-3)

17. CERTIFICATION REGARDING A DRUG-FREE WORKPLACE (JUL 1990)

(a) Definitions. As used in this provision,

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. Directly engaged is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) By submission of its offer, the offeror, if other than an individual, who is making an offer that equals or exceeds $25,000, certifies and agrees, that with respect to all employees of the offeror to be employed under a contract resulting from this solicitation, it will - no later than 30 calendar days after contract award (unless a longer period is agreed to in writing), for contracts of 30 calendar days or more performance duration; or as soon as possible for contracts of less than 30 calendar days performance duration, but in any case, by a date prior to when performance is expected to be completed -

(1) Publish a statement notifying such employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about -

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this provision;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this provision that, as a condition of continued employment on the contract resulting from this solicitation, the employee will -

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 calendar days after such conviction;

(5) Notify the Contracting Officer in writing within 10 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee; and

(6) Within 30 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Take appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this provision.

(c) By submission of its offer, the offeror, if an individual who is making an offer of any dollar value, certifies and agrees that the offeror will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of the contract resulting from this solicitation.

(d) Failure of the offeror to provide the certification required by paragraph (b) or (c) of this provision, renders the offeror unqualified and ineligible for award. (See FAR 9.104-1(g) and 19.602-1(a)(2)(i).)

(e) In addition to other remedies available to the Government, the certification in paragraphs (b) or (c) of this provision concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under title 18, United States Code, section 1001.

(52.223-5)

18. REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY (NOV 1990)

(a) Definitions. The definitions set forth at FAR 3.104 are hereby incorporated in this provision.

(b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the Contracting Officer in connection with the execution of any modification of this contract.

CERTIFICATE OF PROCUREMENT INTEGRITY

(1) I, _____ (Name of certifier) am the officer or employee responsible for the preparation of this offer and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsection 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement _____ (solicitation number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of _____ (Name of Offeror) who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity-Modification (Continuation Sheet), ENTER NONE IF NONE EXIST)

_____

_____

_____

_____

(4) I agree that, if awarded a contract under this solicitation, the certifications required by subsection 27(e)(1)(B) of the Act shall be maintained in accordance with paragraph (f) of this provision.

_____

(Signature of the officer or employee responsible for the offer and date)

_____

(Typed name of the officer or employee responsible for the offer and date)

* Subsections 27 (a), (b), and (d) are effective on December 1, 1990. Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(c) (1) For procurements using sealed bidding procedures, the signed certifications shall be submitted by each bidder with the bid submission except for procurements using two-step sealed bidding procedure (see Subpart 14.5). For those procurements, the certifications shall be submitted with submission of the two step sealed bids. A certificate is not required for indefinite delivery contracts (see Subpart 16.5) unless the total estimated value of all orders eventually to be placed under the contract is expected to exceed $100,000.

(2) For contracts and contract modifications which include options, a certificate is required when the aggregate value of the contract or contract modification and all options(see 3.104-4(e)) exceeds $100,000.

(3) Failure of a bidder to submit the signed certificate with its bid shall render the bid nonresponsive.

(d) Pursuant to FAR 3.104-9(d), the Offeror may be requested to execute additional certifications at the request of the Government. Failure of an Offeror to submit the additional certifications shall cause its offer to be rejected.

(e) A certification containing a disclosure of a violation or possible violation will not necessarily result in the withholding of award under this solicitation. However, the Government, after evaluate of the disclosure, may cancel this procurement or take any other appropriate actions in the interests of the Government, such as disqualification of the Offeror.

(f) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to the suspension of section 27 (i.e., prior to December 1, 1989), the Contractor shall ensure that an individual who has so certified is notified that section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the contractor.

(g) Certifications under paragraphs (b) and (d) of this provision are material representations of fact upon which reliance will be placed in awarding a contract.

(End of clause)

19. COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (OCT 1987)

In the block with its name and address, the Offeror should supply the CAGE code applicable to that name and address. The CAGE code should be preceded by "CAGE:". If the Offeror does not have a CAGE code, the Offeror may request the Contracting Officer to initiate a DD Form 2051. The Contracting Activity will complete Section A and the Offeror must complete Section B of the DD Form 2051. A CAGE code will be assigned when a completed DD Form 2051 is received by the Defense Logistics Services Center, Attn: DLSC-FBA, Federal Center, 74 N. Washington, Battle Creek, MI 49017-3084. No Offeror should delay the submission of its offer pending receipt of its CAGE code.

(DFAR 252.204-7007)

20. CERTIFICATION OR DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT THAT SUPPORTS TERRORISM (NOV 1987)

(a) "Significant interest" as used in this provision means--

(1) Ownership of or beneficial interest in five percent (5%) or more of the firm's or subsidiary's securities. Beneficial interest includes holding five percent (5%) or more of any class of the firm's securities in "nominee shares", "street names", or some other method of holding securities that does not disclose the beneficial owner;

(2) Holding a management position in the firm such as director or officer;

(3) Ability to control or influence the election, appointment, or tenure of directors or officers of the firm;

(4) Ownership of ten percent (10%) or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(5) Holding fifty percent (50%) or more of the indebtedness of a firm.

(b) Unless paragraph (c) below has been completed, the Offeror, by submission of its offer, certifies, to the best of its knowledge and belief, that no government of a foreign country, or agent or instrumentality of a foreign country, listed below, has, directly or indirectly, a significant interest in the Offeror or, if the Offeror is a subsidiary, in the firm that owns or controls, directly or indirectly, the Offeror. Such countries currently include:

(1) Cuba;
(2) Iran;
(3) Libya;
(4) Syria, and
(5) South Yemen.

(c) If the Offeror is unable to certify in accordance with (b) above, the Offeror represents that the following country or countries (listed in (b) above) or an agent or instrumentality of such country or countries, have a significant interest in the Offeror's firm:

Country _____

Significant Interest _____

(252.209-7000)

21. CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(52.203-11)

22. LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JAN 1990)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(a) The awarding of any Federal contract.

(b) The making of any Federal grant.

(c) The making of any Federal loan.

(d) The entering into of any cooperative agreement.

(e) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(a) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.

(b) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.

(c) A special Government employee, as defined in section 202, title 18, United States Code.

(d) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions. (1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action -

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services. (A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of -

(A) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(B) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(C) For purposes of subdivision (b)(3)(ii)(A) of this clause, professional and technical services shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable.

Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her clients proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal

are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(D) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(E) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(F) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes -

(i) A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or received any subcontract exceeding $100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(52.203-12)

23. REQUIREMENT FOR A CERTIFICATE OF PROCUREMENT INTEGRITY - MODIFICATION (NOV 1990)

(a) Definitions. The definitions set forth at FAR 3.104 are hereby incorporated in this provision.

(b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the Contracting Officer in connection with the execution of any modification of this contract.

(c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY - MODIFICATION (NOV 1990)

(1) I, _____ (Name of certifier) am the officer or employee responsible for the preparation of this offer and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsection 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C. 423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement _____ (solicitation number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of _____ (Name of Offeror) who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity-Modification (Continuation Sheet), ENTER NONE IF NONE EXIST)

_____

_____

_____

_____

_____
(Signature of the officer or employee responsible for the offer and date)

_____
(Typed name of the officer or employee responsible for the offer and date)

* Subsections 27 (a), (b), and (d) are effective on December 1, 1990. Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(d) In making the certification in paragraph (2) of the certificate, the offeror or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to the suspension of Section 27(i.e.,prior to December 1, 1989), the Contractor shall ensure that an individual who has so certified is notified that Section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends, or an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the contractor.

(e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

(52.203-9)

24. <u>PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (SEP 1990)</u>

(a) The Government, at its election, may reduce the price of a fixed-price type contract or contract modification and the total cost and fee under a cost-type contract or contract modification by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or his or her designee determines that there was a violation of subsection 27(a) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in the FAR. In the case of a contract modification, the fee subject to reduction is the fee specified in the particular contract modification at the time of execution, except as provided in subparagraph (b)(5) of this clause.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be -

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract.

(3) For cost-plus-award-fee contracts -

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may -

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts or contract modifications, by 10 percent of the initial contract price; 10 percent of the contract modification price; or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award or modification.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(52.203-10)

LABOR STANDARDS (CONSTRUCTION CONTRACTS)

(Applicable to construction contracts in excess of $2,000)

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1. FAR 52.222-1 Notice to the Government of Labor Disputes. (APR 1984)

As prescribed in 22.103-5(a), insert the following clause in solicitations and contracts that involve programs or requirements that have been designated under 22.101-1(e):

NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (APR 1984)

(a) If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

(b) The Contractor agrees to insert the substance of this clause, including this paragraph (b), in any subcontract to which a labor dispute may delay the timely performance of this contract; except that each subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify the next higher tier subcontractor or the prime Contractor, as the case may be, of all relevant information concerning the dispute.

(End of clause)

2. FAR 52.222-3 Convict Labor. (APR 1984)

As prescribed in 22.202, insert the following clause in solicitations and contracts when the contract is to be performed in any State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, or the Trust Territory of the Pacific Islands; unless -

(a) The contract will be subject to the Walsh-Healey Public Contracts Act (see subpart 22.6), which contains a separate prohibition against the employment of convict labor;

(b) The supplies or services are to be purchased from Federal Prison Industries, Inc. (see subpart 8.6); or

(c) The acquisition involves the purchase, from any State prison, of finished supplies that may be secured in the open market or from existing stocks, as distinguished from supplies requiring special fabrication.

CONVICT LABOR (APR 1984)

The Contractor agrees not to employ any person undergoing sentence of imprisonment in performing this contract except as provided by 18 U.S.C. 4082(c)(2) and Executive Order 11755, December 29, 1973.

(End of clause)

3. FAR 52.222-4 Contract Work Hours and Safety Standards Act - Overtime Compensation. (MAR 1986)

As prescribed in 22.305, insert the following clause:

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION (MAR 1986)

(a) Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics (see Federal Acquisition Regulation (FAR) 22.300) shall require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(b) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in paragraph (a) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanics employed in violation of the provisions set forth in paragraph (a) of this clause in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without pay-ment of the overtime wages required by provisions set forth in paragraph (a) of this clause.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same Prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same Prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.

(d) Payrolls and basic records.

(1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of 3 years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit such representatives to interview employees during working hours on the job.

(e) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the provisions set forth in paragraphs (a) through (e) of this clause and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the provisions set forth in paragraphs (a) through (e) of this clause.

(End of clause)

4. FAR 52.222-6 Davis-Bacon Act. (NOV 1992)

As prescribed in 22.407(a), insert the following clause:

DAVIS-BACON ACT (NOV 1992)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each class-ification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b) (1) The Contracting Officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) Except with respect to helpers, as defined in section 22.401 of the Federal Acquisition Regulation, the work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(iv) With respect to helpers, such a classification prevails in the area in which the work is performed.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for Determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

5. FAR 52.222-7 Withholding of Funds. (FEB 1988)

As prescribed in 22.407(a), insert the following clause:

WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full

amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

6. FAR 52.222-8 Payrolls and Basic Records. (FEB 1988)

As prescribed in 22.407(a), insert the following clause:

PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b) (1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a Statement of Compliance, signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify -

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the Statement of Compliance required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

7. FAR 52.222-9 Apprentices and Trainees. (FEB 1988)

As prescribed in 22.407(a), insert the following clause:

APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's

level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, and 29 CFR part 30.

(End of clause)

8. FAR 52.222-10 Compliance With Copeland Act Requirements. (FEB 1988)

As prescribed in 22.407(a), insert the following clause:

COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR part 3, which are hereby incorporated by reference in this contract.

(End of clause)

9. FAR 52.222-11 Subcontracts (Labor Standards). (FEB 1988)

As prescribed in 22.407(a), insert the following clause:

SUBCONTRACTS (LABOR STANDARDS) (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act - Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination - Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b) (1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

10. FAR 52.222-12 Contract Termination - Debarment. (2-88)

As prescribed in 22.407(a), insert the following clause:

CONTRACT TERMINATION - DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act - Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance With Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

11. FAR 52.222-13 Compliance with Davis-Bacon and Related Act Regulations. (2-88)

As prescribed in 22.407(a), insert the following clause:

COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and, 5 are hereby incorporated by reference in this contract.

(End of clause)

12. FAR 52.222-14 Disputes Concerning Labor Standards. (2-88)

As prescribed in 22.407(a), insert the following clause:

DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

13. FAR 52.222-15 Certification of Eligibility. (2-88)

As prescribed in 22.407(a), insert the following clause:

CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

NOTICE TO BIDDER
(Construction Contract)

IMPORTANT - *PLEASE READ CAREFULLY*

To insure the submission of complete bids and to avoid omissions that could result in your bid being nonresponsive, please check each of the following:

SPECIAL ATTENTION - BIDDERS

1. **Have you rechecked your estimate? Are all items and amounts included?** ☐
2. **Is bid amount entered in proper space provided on the SF 1442, Solicitation, Offer and Award (Construction, Alteration, or Repair)?** ☐
3. **Have you completed all Alternates, Separated Prices and Unit Prices (if any) on the SF 1442?** ☐
4. **Have you acknowledged, on the SF 1442, receipt of all amendments (if any) issued to the specifications?** ☐
5. **Have you properly completed and checked the appropriate box of each bidder representation and certification on GSA Form 3503, Representations and Certifications?** ☐
6. **Have you properly completed the supplements to SF 1442, including the Competency of Bidder Certification (where required)?** ☐
7. **Do your subcontractors meet all applicable eligibility and qualifications?** ☐
8. **Does your bid guarantee conform to the requirements of SF 1442?** ☐
9. **Have you read the Stop Work/Termination Clauses of GSA Form 3506, and Liquidated Damages Clause in the Special Conditions Section of the specifications?** ☐

   Submission and acceptance of your bid commits you to complete your contract within the time specified. The contract may provide for assessment of liquidated damages for each day's delay beyond the contract time, for which a time extension is not granted. ☐
10. **Have you read the "Equal Opportunity" clause, GSA Form 3506, and do you fully understand your obligations regarding this requirement?** ☐
11. **Have you familiarized yourself with the applicable contracting provisions covering Utilization of Small Business Concerns and Small Disadvantaged Business Concerns?** ☐
12. **Have you properly complied with the appendixes to SF 1442, included (if appended) the Notice of Requirements for Submission of Affirmative Action Plan to Ensure Equal Employment Opportunity?** ☐
13. **Have you familiarized yourself with the regulations issued by the Secretary of Labor (see Clause No. 2 of GSA Form 3505, pursuant to section 107 of the Contract Work Hours and Safety Standards Act, entitled: "Safety and Health Regulations for Construction," (29 Code of Federal Regulations, Part 1926 and Occupational Safety and Health Standards 29 Code of Federal Regulations, Part 1910)?** ☐
14. **CAUTION - LATE BIDS - See GSA Form 3501, Solicitation Provisions (Advertised), clause entitled "Late Submissions, Modifications, and Withdrawal of Bids" which provides that late bids and modifications or withdrawals thereof sent through the mails ordinarily will be considered only if timely mailed by REGISTERED MAIL or by CERTIFIED MAIL for which a POSTMARKED RECEIPT has been obtained.** ☐

CE-2.6

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action

☐ a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance.

2. Status of Federal Action:

☐ a. bid/offer/application
b. initial award
c. post-award

3. Report Type

☐ a. initial filing
b. material change
For Material Change Only
year _____ quarter _____
date of last report

4. Name and Address of Reporting Entity:

Prime Subawardee
Tier _____, *if known:*

Congressional District, *if known:*

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

Congressional District, *if known:*

6. Federal Department/Agency:

7. Federal Program Name/Description

CFDA Number, *if applicable:* _____

8. Federal action Number, ***if known:***

9. Award Amount, ***if known::***

$

10. a. Name and Address of Lobbying Entity:

b. Individuals Performing Services ***(including address if different from No. 10a) (last name, first name, MI):***

(attach continuation sheet(s) SF-LLL-A, if necessary)

11. Amount of Payment ***(check all that apply)*****:**

$ _____ ☐ actual ☐ planned

12. Form of Payment ***(check all that apply)*****:**

☐ a. cash
☐ b. in-kind; specify: nature _____
value _____

13. Type of Payment (check all that apply):

☐ a. retainer
☐ b. one-time fee
☐ c. commission
☐ d. contingent fee
☐ e. deferred
☐ f. other; specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment indicated in Item 11:

(attach continuation sheet(s) SF-LLL-A, if necessary)

15. Continuation Sheet(s) SF-KKK-A attached: ☐ Yes ☐ No

16. **Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact which reliance was place by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi--annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.**

Signature:

Print Name

Title:

Telephone No.: Date:

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INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employer of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organization level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal Identifying number available or the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/ proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-0001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal Officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.

15. Check whether or not a SF-LLL-A Continuation Sheet is attached.

16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Reporting Entity: _____ **Page** ____ **of** ____

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CONTRACTOR'S QUALIFICATIONS AND FINANCIAL INFORMATION

FORM APPROVED OMB NO. 3090-0007

SECTION I - GENERAL INFORMATION

1. NAME AND ADDRESS *(Street, City, State and Zip Code)*

2. TYPE OF ORGANIZATION
- SOLE PROPRIETORSHIP
- PARTNERSHIP
- CORPORATION
- OTHER *(Specify)*

2a. DATE ORGANIZATION ESTABLISHED

STATE OF INCORPORATION *(IF applicable)*

1a. LOCATION OF BRANCHES *(Specify City and State)*

3. KIND OF BUSINESS
- MANUFACTURER
- RETAILER
- JOBBER
- OTHER *(Specify)*
- CONTRACTOR
- WHOLESALER

4. OWNERSHIP INFORMATION - GENERAL PARTNERS -PRINCIPAL STOCKHOLDERS - PARENT

NAME	TITLE *(If Director so state)*	% BUSINESS OWNED

5. NAME AND ADDRESS OF PARENT *(If applicable)*

6. KIND OF PRODUCT OR SERVICE PROVIDED

SECTION II - SUPPLIERS AND BANKING INFORMATION

1. PRINCIPAL MERCHANDISE OR RAW MATERIAL SUPPLIERS *(Not less than*

NAME	TELEPHONE NUMBER	CONTACT PERSON	ADDRESS *(City, State, Zip Code)*	AMOUNT NOW OWING	LARGEST AMT OWING PAST 12 MONTHS

2. BANKING RELATIONS *(including Finance Companies)*

3. ARE YOU NOW IN, OR PENDING DEFAULT ON ANY OBLIGATION TO BANKS OR OTHER FINANCIAL INSTITUTIONS?

☐ YES ☐ NO *(If "YES", provide detailed information, Section VII, Remarks on page 4)*

4. PROSPECTIVE CONTRACTOR'S FINANCIAL ARRANGEMENTS *(Check appropriate boxes)*

A. USE OF OWN RESOURCES ☐ YES ☐ NO

B. USE OF BANK CREDITS ☐ YES ☐ NO

C. OTHER *(Specify)*

SECTION III - GOVERNMENT FINANCIAL AID AND INDEBTEDNESS

1. TO BE REQUESTED IN CONNECTION WITH PERFORMANCE OF PROPOSED CONTACT *(Check)*

	YES	NO
a. PROGRESS PAYMENT		
b. GUARANTEED LOAN		
c. ADVANCE PAYMENTS		

2. EXPLAIN ANY "YES" ANSWERS TO ITEMS 1a, b, and c

3. FINANCIAL AID CURRENTLY OBTAINED FROM THE GOVERNMENT

a. IS GOVERNMENT FINANCING BEING RECEIVED BY YOU AT PRESENT	b. IS LIQUIDATION CURRENT?	c. AMOUNT OF UNLIQUIDATED PROGRESS PAYMENT OUTSTANDING
☐ YES ☐ NO	☐ YES ☐ NO	$

DOLLAR AMOUNTS	(a) AUTHORIZED	(b) IN USE
1. GUARANTEED LOANS	$	$
2. ADVANCE PAYMENTS	$	$

3d. LIST GOVERNMENT AGENCIES INVOLVED	3b. GIVE APPLICABLE CONTRACT NOS.

4. INDEBTEDNESS TO THE U.S. GOVERNMENT - DELINQUENT *(OMB Circular A-129)*

4a. LIST THE GOVERNMENT AGENCIES INVOLVED	4b. SHOW THE APPLICABLE CONTRACT NOS.

SECTION IV - BALANCE SHEET

BALANCE SHEET AS OF	FISCAL YEAR ENDS
_____ , 19____	_____ , 19____

ASSETS			LIABILITIES AND OWNERS EQUITY	
Current assets			Current liabilities	
Cash and short term cash investments		$	Accounts payable	$
Accounts receivable, less allowance for doubtful accounts of	$	$	Notes payable (current)	
Inventories			Current portion of long term debt	
			Accrued expenses	
			Accrued taxes on income/excess profits	
List your current assets *(Itemize)*			Other current liabilities *(Itemize)*	
Total current Assets			Total Current Liabilities	
Property, plant and equipment			Other liabilities	
Land			Mortgages	
Buildings and Equipment			Bonds	
Leasehold Improvements			Deferred Income taxes	
Less accumulated depreciation and amortization			Other long term debt	
Total property, plant, and equipment			Total other liabilities	
Other Assets			Total liabilities	
Investments in and Advancements to affiliated company			Minority Interest in subsidiary	
Goodwill, less amortization			Stockholder/owners equity	
Due from officers, employees			Preferred Stock	
Other *(Itemize)*			Common Stock	
			Additional paid-in capital	
			Retained earnings	
			Less Treasury stock	
			Total stockholders/owners equity	
Total other assets				
TOTAL ASSET			**TOTAL LIABILITIES AND OWNERS EQUITY**	

2. INVENTORY VALUATION METHOD *(Check)*

☐ FIFO ☐ LIFO ☐ AVERAGE COST ☐ OTHER *(Specify)*

3. PAST DUE ACCOUNTS		4. CONTINGENT LIABILITIES
	ACCOUNTS PAYABLE $	
	ACCOUNTS RECEIVABLE $	5. JUDGEMENTS OF PENDING SUITS *(If "yes" explain on Page 4)* ☐ Yes ☐ No

6. HAVE YOU OR ANY OF YOUR AFFILIATES EVER FILED FOR BANKRUPTCY? IF YES, PLEASE EXPLAIN IN SECTION VIII OF PAGE 4. ☐ Yes ☐ No

7. LOANS SECURED BY COMPANY'S ASSETS - REAL AND PERSONAL PROPERTY

SECURED PARTY (a)	SECURING ASSETS *(Specify by balance sheet category)* (b)	DUE DATE (C)	MONTHLY PAYMENT (d)

(e) Are any of the assets shown on the Balance Sheet pledged, mortgaged or otherwise hypothecated, except as stated above? ☐ Yes ☐ No.

If "yes" explain on page 4. If applicant is a partnership or sole proprietorship , are the individual liabilities of the proprietor(s) for Federal and State income an/or excess profit taxes included on the balance sheet? ☐ Yes ☐ No. If "no" what is the total liability?

$_____

SECTION V - INCOME STATEMENT

1. FROM TO .19

Net Sales	$
COST AND EXPENSES	
Cost of products and services sold excluding depreciation and amortization	
Depreciation and Amortization	
Selling, general and administrative expense	
Interest Expense	
Other expenses (Itemize)	
Minority interests in earnings of subsidiaries	
Total costs expenses	
EARNINGS BEFORE TAXES ON INCOME	
Taxes on income	
Income before extraordinary items	
Extraordinary gains (losses) net of taxes	
NET INCOME	

2. SALES BACKLOG AND SALES FORECAST

CATEGORY *(PRIME AND SUBCONTRACT)*	CURRENT DOLLAR BACKLOG OF SALES	ANTICIPATED ADDITIONAL DOLLAR SALES FORECAST FOR NEXT 18 MONTHS
a. GOVERNMENT	$	$
b. COMMERCIAL	$	$
TOTAL	$	$

3. When financial statements are prepared or certified to by independent accountants are transcribed to this form, please furnish the name and address of accountant or accounting firm.

Name _____

Address _____

City, State and Zip Code _____

If transcribed statements differ from independent accountants, please describe adjustments.

SECTION VI - CONSTRUCTION/SERVICE CONTRACTS INFORMATION *(PBS ONLY)*

1. CONTRACTS IN FORCE

LOCATION (a)	OWNER'S NAME AND ADDRESS (b)	BRANCH OF WORK (c)	CONTRACT AMOUNT (d)	% COMP. (e)	EST. COMP. DATE (f)

2. LIST THE FIVE LARGEST JOBS YOU HAVE COMPLETED IN THE LAST FIVE YEARS

LOCATION	OWNER'S NAME AND ADDRESS	BRANCH OF WORK	CONTRACT AMOUNT	AMOUNT SUBLET

3. LIST COMPANIES FROM WHOM YOU OBTAIN SURETY BONDS

NAME	TELEPHONE NO.	CONTRACT PERSON	ADDRESS *(Street, City, ZIP Code)*

4. CHECK PROPER BOX *(Explain each "YES" under Remarks)*

A. HAVE YOU, DURING THE PAST TWO YEARS BEEN CHARGED WITH A FAILURE TO MET THE CLAIMS OF YOURS SUBCONTRACTORS OR SUPPLIERS?

☐ YES ☐ NO

B. HAS YOUR APPLICATION FOR SURETY BOND EVER BEEN DECLINED?

☐ YES ☐ NO

SECTION VIII - REMARKS

1. REMARKS *(Cite these sections of the form relating to your remarks. If additional space is required attach additional sheets).*

CERTIFICATION

For the purpose of establishing financial responsibility with or procuring credit form the General Services Administration, we furnish the above as true and correct statement of our financial condition on _____, 19____ and further certify that all other statements are true and correct. There has been no material change in the applicant's financial condition since the date of the above statement. We agree to notify you immediately in writing of any materially unfavorable change in our financial condition. In the absence of such notice or of a new and full financial statement, this is to be considered as a continuing statement.

NAME OF BUSINESS	DATE	BY *(Signature of authorized official)*
		TITLE

GSA FORM 527 PAGE 4 (REV. 3-87)

SECTION - SUPPLEMENTARY CONDITIONS

1. GENERAL:

1.01 **GENERAL CONDITIONS**: Whenever the term "General Conditions" is used in the specification, it refers to Form 3506 ended "Construction Contract Clauses (Fixed Price)."

1.02 **CLAUSES AND PROVISIONS:** The designation FAR and Agency clauses and provisions refer to the sources of the clauses which provide for their use. FAR refers to the Federal Acquisition Regulations and GSAR refers to the General Services Administration Acquisition Regulations. The FAR is published in Tide 48 of the Code of Federal Regulations. The FAR is published in Title 48 of the Code of Federal Regulations, Chapter 1 (48 CFR 1). Occasionally, the term "Alternate" appears in a title. This term reflects the selected alternate wording of the particular clause or provision which appears in the FAR or Agency clause.

INSERT THE FOLLOWING IF THE CONTRACT WILL BE CHARGEABLE TO FUNDS OF THE NEW FISCAL YEAR AND CONTRACTING ACTION IS TO BE INITIATED BEFORE FUNDS ARE AVAILABLE.

1.03 **FAR 52.232-18 - AVAILABILITY OF FUNDS (APR 1984):** Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

2. SITE CONDITIONS:

INSERT THE FOLLOWING CLAUSE IN SOLICITATIONS AND CONTRACTS WHEN A FIXED-PRICE CONSTRUCTION CONTRACT IS CONTEMPLATED AND PHYSICAL DATA (E.G., TEST BORINGS, HYDROGRAPHIC, WEATHER CONDITIONS DATA) WILL BE FURNISHED OR MADE AVAILABLE TO OFFERERS. ALL INFORMATION TO BE FURNISHED OR MADE AVAILABLE TO OFFERERS BEFORE AWARD THAT PERTAINS TO THE PERFORMANCE OF THE WORK SHOULD BE IDENTIFIED IN THE CLAUSE. WHEN SUBPARAGRAPHS ARE NOT APPLICABLE, THEY MAY BE DELETED.

2.01 FAR 52.236-4 . PHYSICAL DATA (APR 1984): Data and information furnished or referred to below is for the Contractors information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of investigations by:

INSERT A DESCRIPTION OF INVESTIGATION METHODS USED, SUCH AS SURVEYS, AUGER BORINGS, CORE BORINGS, TEST PITS, PROBES, TEST TUNNELS.

(b) Weather Conditions.

INSERT A SUMMARY OF WEATHER CONDITIONS AND WARNINGS.

(c) Transportation Facilities:

INSERT A SUMMARY OF TRANSPORTATION FACILITIES INCLUDING ACCESS FROM THE SITE, INCLUDING INFORMATION ABOUT TRANSPORTATION FACILITY AVAILABILITY AND LIMITATIONS.

(d)

INSERT OTHER PERTINENT INFORMATION

3. PERFORMANCE

3.01 FAR 52.212-03 - COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK (APR 1984): The Contractor shall be required to:

(a) Commence work under this contract within _ calendar days after the contractor receives notice to proceed,

INSERT NUMBER OF DAYS.

(b) Prosecute the work diligently, and

(c) Complete the entire work ready for use not later than ____calendar days. The time stated for completion shall include final cleanup of the premises.

SPECIFY THE NUMBER OF DAYS AFTER THE CONTRACTOR RECEIVES NOTICE TO PROCEED, IF (c) ABOVE IS USED. THE COMPLETION DATE IS EXPRESSED AS A SPECIFIC CALENDAR DATE, USE "c" BELOW AND ALSO ADD THE WORD "ALTERNATE I" AFTER "WORK" IN THE CLAUSE TITLE. INSERT BOTH DATES.

(c) Complete the entire work ready for use not later than ____calendar days. The time stated for completion shall include final cleanup of the premises. The completion date is based on the assumption that the successful offerer will receive notice to proceed by _____. The completion date will be extended by the number of calendar days after the above date that the Contractor receives the notice to proceed except to the extent that the delay in issuance of the notice to proceed results from failure of the Contractor to execute the contract and give the required performance and payment bonds within the time specified in the offer.

3.02 **FAR 52.236-01 - PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984):** The Contractor shall perform on the site, ad with its own organization, work equivalent to at least:

INSERT THE APPROPRIATE NUMBER IN WORDS FOLLOWED
BY NUMERALS IN PARENTHESIS:

percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to the contract, if, during performance of the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

4. EMPLOYMENT PRACTICES:

INSERT THE FOLLOWlNG PROVISION IN SOLICITATIONS FOR CONSTRUCTION WHEN A CONTRACT IS CONTEMPLATED THAT WILL INCLUDE THE CLAUSE AT FAR 52.222-26, EQUAL OPPORTUNITY, AND THE AMOUNT IS EXPECTED TO BE IN EXCESS OF $10,000,000.

4.01 52.222-23 - NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (APR 1984):

(a) The offer's attention is called to the Equal Opportunity Clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractors aggregate workforce in each trade on all construction work in the covered area, are as follows:

HOMETOWN PLAN

Goals for minority participation for each trade	Goals for female participation for each trade

These goals are applicable to an the Contractors construction work performed in the covered area If the Contractor performs construction work in a geographical area located outside the covered area the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any office of Federal Contract Compliance Programs Office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be base don (1) its implementation of the Equal Opportunity Clause, (2) specific affirmative action obligations required by the clauses entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority of female employees or trainees from Contractor to Contractor or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed

(d) The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs, within 10 working days following award of any construction subcontract in excess of $10.000 and at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

(l) Name, address, and telephone number of the subcontractor;

(i) Employer identification number of the subcontractor,

(2) Estimated dollar amount of the subcontract;

(3) Estimated starting and completion dates of the subcontract; and

(4) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is:

INSERT DESCRIPTION OF GEOGRAPHICAL AREAS WHERE CONTRACT IS TO BE PERFORMED, GIVING STATE, COUNTY, AND ClTY.

5. REPORTING REQUIREMENTS OF ALL PROJECTS OVER $10,000: DOL FORM CC-257: MONTHLY EMPLOYMENT UTILIZATION REPORT

All prime contractors and subcontractors performing work on federally-funded projects are required to complete Department of Labor Form CC-257, listing their aggregate work force in each trade, on project~ both federally-funded and non-funded in the covered area. Each prime and subcontractor must also attach a listing of all projects (both federal and nonfederal in the covered area included herein). The accompanying list must provide the following information:

1. Name and location of project,
2. Owner of project (city, county, private)
3. Project number, if any.
4. Percent complete.
5 Dollar amount of contract.
6. Estimate date of completion.

Prime contractors are responsible for collecting the Form CC-257 and listing all projects (both federal and non-federal in excess of $10.000) from each of their subcontractors performing work on this project. The prime contractors will then forward their form CC-257 and all of their subcontractors' Form CC-257 and project list information to:

Area Director
U.S. Department of Labor
Office of Federal Contract Compliance Programs

_____

_____

PLEASE NOTE:

Failure to submit the Form CC-257 by the fifth day of each month constitutes noncompliance with Executive Order 11246. Noncompliance is grounds for the issuance of a legal show cause Notice for an informal hearing, authorized by OFCC Rules and Regulations 41 CFR Part 60 1.7. Such a hearing could result in cancellation, termination, or suspension of the contract.

The prime contractor shall provide written notification to the:

Area Director
U.S. Department of Labor
Office of Federal Contract Compliance Programs

_____
_____

within ten (10) working days of award of any construction subcontract in excess of $10.000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the following:

1. Name of Contractor
2. Address
3. Telephone Number
4. Employer's Identification Number
5. Estimated dollar amount of subcontract
6. Estimated starting and completion dates
7. Geographical area in which the contract is to be performed; i.e., city, county, state, etc.

6. SUBCONTRACTING:

SEE SPECIAL EDITING INSTRUCTIONS FOR WHEN TO INCLUDE THE FOLLOWING:

LIST SUBCONTRACTS.

AS PRESCRIBED IN 22.801(g) INSERT THE FOLLOWING CLAUSE IN SOLICITATIONS AND CONTRACTS WHEN THE AMOUNT OF THE CONTRACT IS EXPECTED TO BE FOR $1 MILLION OR MORE AND INCLUDES THE CLAUSE AT FAR 52.244-1.

6.02 **FAR 52.222-28 - EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS (APR 1984):** Notwithstanding the clause of this contract entitled "Subcontractors", the Contractor shall not enter into a first-tier subcontract for an estimated or actual amount of $1 million or more without obtaining in writing from the Contracting Officer a clearance that the proposed subcontractor is in compliance with equal opportunity requirements and therefore is eligible for award.

INSERT THE FOLLOWING CLAUSE 7.01 WHEN THE CONTRACT AMOUNT IS EXPECTED TO EXCEED THE SMALL PURCHASE LIMITATION

7. FAR 52.212-5 - LIQUIDATED DAMAGES - CONSTRUCTION (APR 1984)

(a) If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum of _____for each day of delay.

(b) If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increase costs occasioned the Government in completing the work.

(c) If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

INSERT AMOUNT IF DIFFERENT COMPLETION DATES ARE SPECIFIED IN CONTRACT FOR SEPARATE PARTS OR STAGES OF THE WORK, REVISE PAR. "A" ABOVE TO STATE AMOUNT OF LIQUIDATED DAMAGES FOR DELAY OF EACH SEPARATE PART OF STAGE OF THE WORK, AND ADD THE WORD "ALTERNATE I" TO THE TITLE BETWEEN "CONSTRUCTION" AND "(APR 1984)". INSERT THE FOLLOWING CLAUSE IN ONLY SOLICITATIONS AND CONTRACTS FOR CONSTRUCTION IN WHICH THE CLAUSE AT 52.215-5, LIQUIDATED DAMAGES -- CONSTRUCTION, IS USED WITH ITS ALTERNATE I.

7.03 **FAR 52.212-11 - VARIATION IN ESTIMATED QUANTITY (APR 1984)**: If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary far completion, the Contractor may request, in writing, an extension of time, to be received by the Contracting Officer within 10 days from the beginning of the delay, or within such further period as may be granted by the Contracting Officer before the date of final settlement of the contract. Upon receipt of a written request for an extension, the Contracting Officer shall ascertain the facts and make an adjustment for extending the completion date as, the judgement of the Contracting Officer, is justified.

AS PRESCRIBED IN 36.516, THE CONTRACTING OFFICER MAY INSERT THE FOLLOWING CLAUSE IN SOLICITATIONS AND CONTRACTS WHEN A FIXED-PRICE CONSTRUCTION CONTRACT PROVIDING FOR UNIT PRICING OF ITEMS AND FOR PAYMENT BASED ON QUANTITY SURVEYS IS CONTEMPLATED.

7.04 <u>FAR 52.236-16 - QUANTITY SURVEYS (APR 1984):</u>

(a) Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

(b) The Government shall conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance.

(c) Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

IF IT IS DETERMINED AT A LEVEL ABOVE THAT OF THE CONTRACTING OFFICER THAT IT IS IMPRACTICABLE FOR GOVERNMENT PERSONNEL TO PERFORM THE ORIGINAL AND FINAL SURVEYS, AND THE GOVERNMENT WISHES THE CONTRACTOR TO perform THESE SURVEYS, SUBSTITUTE THE FOLLOWING PARAGRAPH (b) FOR PARAGRAPH (b) OF THE BASIC CLAUSE AND ADD ALTERNATE "I" TO THE CLAUSE TITLE AFTER "SURVEYS.~

(d) The Contractor shall conduct the original and final surveys and surveys for any periods far which progress payments are requested. All these surveys shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. The Government shall make such computations as are necessary to determine the quantities of work performed or finally in place. The Contractor shall make the computations based on the surveys for any periods for which progress payments are requested.

INSERT THE FOLLOWING CLAUSE IN SOLICITATIONS AND CONTRACTS FOR SUPPLES OR SERVICES WHICH REQUIRE THE SUBMISSION OF INVOICES AND FILL IN THE APPROPRIATE NUMBER OF COPIES.

8. GSAR 552.222-81 APPLICABLE MINIMUM HOURLY WAGES OF WAGES (OCT 1988)

(a) The wage determination decision of the Secretary of Labor in this contract specifies the minimum hourly rates of wages which shall be paid to laborers and mechanics employed or working upon the site of the work. These rates have been determined by the Secretary of Labor under the Davis-Bacon Act, laborers and mechanics employed on contracts of a similar character in the locality where this work is to be performed. THESE MINIMUM HOURLY RATES OF WAGES SHALL APPLY ONLY IF THE CONTRACT IS OVER $2,000.

(b) While the wage rates given in the decision are the minimum rates required to be paid during the life of the contract, it is the responsibility of offerers to inform themselves as to local labor conditions such as the prevailing wage rates, the length of the work available day and work week, overtime compensation, fringe benefits payments, available labor supply, and prospective changes or adjustments of wage rates. The Contractor shall abide by and conform to an applicable laws, Executive Orders and rules, regulations and orders of the Secretary of Labor. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed in the contract wage determination decision.

(c) The wage determination decision of the Secretary of Labor in the contract is solely for the purpose of setting forth the minimum hourly wage rates required to be paid during the life of the contract and is not to be accepted as a guarantee, warranty, or representation as to the wage rates indicated.

9. PROMPT PAYMENT:

(a) The contract shall attend payment meetings each month, as scheduled herein, with the designated Government representative, prior to the submission of the contractor's progress payment invoice (payment request). These may be held in conjunction with the progress meetings held pursuant to Section 01200, Project Meetings, or the coordination meetings held under Section 01205, Procedures and Controls, as applicable. The payment meetings will enable payments to be made promptly and within the dates established in the contract. The purpose of the payment meetings is to enable the contractor and the Government representative to discuss the amount of the prospective payment and the supporting documentation required, and to reach agreement on the amount thereof. Inspections by all parties will be completed prior to or during the meeting, thus ensuring timely substantiation and agreement on payment amounts. The schedule for payment meetings are as follows:

A schedule will be determined at the pre construction conference.

(b) The contractor shall submit the original invoice to the contracting officer, with a copy to the COR or, if a contract is being administered with the assistance of a CQM or CM contractor, a copy to such contractor, as follows (separate payment requests shall be submitted for progress payments, payments, payments of retainage, and partial and final payments):

Contracting Officer (CO)

_____

Address

_____

Contracting Officer's Representative (COR):

_____

_____

(c) Payment requests shall not be submitted until the scheduled payment meetings are held. If the contractor fails to attend a payment meeting, the Government will make payment on the Contractors payment request based upon the results of the Government inspection, in an amount of no more than the Government's estimate of the amount due. The balance of the Contractor's payment request will remain in dispute and will not be subject to any late payment penalty until such time that an invoice including the disputed amount is resubmitted and agreement is reached with the contracting officer on any payment amount being due.

(d) Payment due dates are based upon the receipt of a proper invoice by the Contracting Officer. If the invoice is defective (see FAR clause 52.232-27, Prompt Payment for Construction Contracts, and Agency clause 552.232-72, Invoice Requirements), it will be returned to the contractor for appropriate action. If there is a disagreement over the payment amount, the contracting officer may pay the portion of the requested payment that is not in dispute.

(e) Any inquiries on payments are to be directed to the Contracting Officer, or designated representative.

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CONSTRUCTION CONTRACT CLAUSES

NOTE: THE CLAUSES PROVIDED HEREIN ARE BOTH FAR AND AGENCY SPECIFIC, ARRANGED BY SUBJECT MATTER. THE EXAMPLE PROVIDED IS ONE UTILIZING GSAR SUPPLEMENTAL CLAUSES. YOUR AGENCY CLAUSES WOULD BE USED IN LIEU OF THOSE PRESENTED.

CONSTRUCTION CONTRACT CLAUSES (FIXED PRICE)

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CE-2.6

FEDERAL ACQUISITION REGULATIONS

CONSTRUCTION RELATED CLAUSES (FIXED PRICE)

GENERAL BIDDING

1. FAR 52.202-1 Definitions. (SEPT 1991) -- Alternate I (APR 1984)

If the contract is for personal services; construction; architect-engineer services; or dismantling, demolition, or removal of improvements, delete paragraph (c) of the basic clause.

DEFINITIONS (SEPT 1991) -- ALTERNATE I (APR 1984)

(a) "Head of the agency" (also called "agency head") or "Secretary" means the Secretary (or Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, including any deputy or assistant chief official of the agency; and the term “authorized representative” means any person, persons, or board (other than the Contracting Officer) authorized to act for the head of the agency or Secretary.

(b) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(End of clause)

2. GSAR 552.236-70 Definitions. (APR 1984)

As prescribed in 536.570-1, insert the following clause:

DEFINITIONS (APR 1984)

The terms "Administration" and "Service" as used in this contract shall mean the General Services Administration (GSA) and the Public Buildings Service (PBS), respectively.

(End of Clause)

3. GSAR 552.236-71 Authorities and Limitations. (APR 1984)

As prescribed in 536.570-2, insert the following clause:

AUTHORITIES AND LIMITATIONS (APR 1984)

(a) All work shall be performed under the general direction of the Contracting Officer, who alone shall have the power to bind the Government and to exercise the rights, responsibilities, authorities and functions vested in him by the contract documents, except that he shall have the right to designate authorized representatives to act for him. Wherever any provision in this contract specifies an individual (such as, but not limited to, Construction Engineer, Resident Engineer, Inspector or Custodian) or organization, whether Governmental or private, to perform any act on behalf of or in the interests of the Government, that individual or organization shall be deemed to be the Contracting Officer's authorized representative under this contract but only to the extent so specified. The Contracting Officer may, at any time during the performance of this contract, vest in any such authorized representatives additional power and authority to act for him or designate additional representatives, specifying the extent of their authority to act for him; a copy of each document vesting additional authority in an authorized representative or designating an additional authorized representative shall be furnished to the Contractor.

(b) The Contractor shall perform the contract in accordance with any order (including but not limited to instruction, direction, interpretation or determination) issued by an authorized representative in accordance with his authority to act for the Contracting Officer; but the Contractor assumes all the risk and consequences of performing the contract in accordance with any order (including but not limited to instruction, direction, interpretation or determination) of anyone not authorized to issue such order.

(End of Clause)

4. GSAR 552.203-70 Restriction on Advertising. (DEC 1990)

As prescribed in 503.570-2, insert the following clause:

RESTRICTION ON ADVERTISING (DEC 1990)

The Contractor shall not refer to this contract in commercial advertising or similar promotions in such a manner as to state or imply that the product or service provided is endorsed or preferred by the White House, the Executive Office of the President, or any other element of the Federal Government, or is considered by these entities to be superior to other products or services. Any advertisement by the Contractor, including price-off coupons, that refers to a military resale activity shall contain the following statement: "This advertisement is neither paid for nor sponsored, in whole or in part, by any element of the United States Government."

(End of clause)

5. GSAR 552.252-6 Authorized Deviations or Variations in Clauses. (JUL 1985)

As prescribed in 552.107(b), insert the following clause:

AUTHORIZED DEVIATIONS OR VARIATIONS IN CLAUSES (DEVIATION FAR 52.252-6) (JUL 1985)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation or variation is indicated by the addition of "(Deviation)" or "(Variation)" after the date of the clause, if the clause is not published in the General Services Administration Acquisition Regulation (48 CFR Chapter 5). The use in this solicitation of any Federal Acquisition Regulation (FAR) clause with an authorized deviation or variation that is published in the General Services Administration Acquisition Regulation is indicated by the addition of "(Deviation (FAR clause no.))" or "(Variation (FAR clause no.))" after the date of the clause.

(b) The use in this solicitation of any General Services Administration Acquisition Regulation clause with an authorized deviation or variation is indicated by the addition of "(Deviation)" or "(Variation)" after the date of the clause.

(c) Changes in wording of clauses that are prescribed for use on a "substantially the same as" basis are not considered deviations. Therefore, when such clauses are not worded exactly the same as the FAR or GSAR clause, they are identified by the word "(Variation)."

(End of Clause)

6. GSAR 552.236-72 Specialist. (APR 1984)

As prescribed in 536.570-3, insert the following clause:

SPECIALIST (APR 1984)

The term "Specialist," as used in the contract specification, shall mean an individual or firm of established reputation (or, if newly organized, whose personnel have previously established a reputation in the same field), which is regularly engaged in, and which maintains a regular force of workmen skilled in either (as applicable) manufacturing or fabricating items required by the contract, installing items required by the contract, or otherwise performing work required by the contract. Where the contract specification requires installation by a specialist, that term shall also be deemed to mean either the manufacturer of the item, an individual or firm licensed by the manufacturer, or an individual or firm who will perform the work under the manufacturer's direct supervision.

(End of Clause)

7. GSAR 552.236-82 Subcontracts. (APR 1984)

As prescribed in 536.570-13, insert the following clause:

SUBCONTRACTS (APR 1984)

(a) Nothing contained in the contract shall be construed as creating any contractual relationship between any subcontractor and the Government. The divisions or sections of the specifications are not intended to control the Contractor in dividing the work among subcontractors, or to limit the work performed by any trade.

(b) The Contractor shall be responsible to the Government for acts and omissions of his own employees and of subcontractors and their employees. He shall also be responsible for the coordination of the work of the trades, subcontractors and suppliers.

(c) The Government will not undertake to settle any differences between or among the Contractor, subcontractors, or suppliers.

(End of Clause)

8. GSAR 552.210-70 Standard references. (MAY 1989)

As prescribed in 510.011(a), insert the following clause:

STANDARD REFERENCES (MAY 1989)

(a) All documents and publications (such as, but not limited to, manuals, handbooks, codes, standards and specifications) cited in this contract for the purpose of establishing requirements applicable to equipment, materials or workmanship under this contract, shall be deemed to be incorporated herein as fully as if printed and bound with the specifications of this contract, in accordance with the following:

(1) Wherever reference is made to Standard Specifications of the Public Buildings Service, Interim Federal Specifications, Interim Amendments to Federal Specifications, Interim Federal Standards, or Interim Amendments to Federal Standards, the Contractor shall comply with the requirements set out in the issue or edition identified in this contract.

(2) Wherever reference is made to any such document other than those specified in subparagraph (1) of this clause, the Contractor shall comply with the requirements set out in the edition specified in this contract, or if not specified, the latest edition or revision thereof, as well as the latest amendment or supplement thereto, in effect on the date of the solicitation on this project, except as modified by, as otherwise provided in, or as limited to type, class or grade, by the specifications of this contract.

(b) Federal Specifications, Federal Standards, Standard Specifications of the Public Buildings Service and Public Buildings Service Standard Methods of Test may be obtained from the Business Service Center at any GSA Regional Office. Inquiries regarding "Commercial Standards", "Product Standards" and "Simplified Practice Recommendations" should be addressed to the Standard Development Service Section, National Bureau of Standards, Washington, DC, 20234. Publications of Associations referred to in the specifications may be obtained directly from the Associations.

(c) Upon request the Contractor shall make available at the job site within a reasonable time, a copy of each trade manual and standard which is incorporated by reference in this contract and which governs quality and workmanship.

(End of Clause)

9. FAR 52.236-8 Other Contracts. (APR 1984)

As prescribed in 36.508, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

10. FAR 52.225-14 Inconsistency Between English Version and Translation of Contract. (AUG 1989)

As prescribed at 25.902, insert the following clause:

INCONSISTENCY BETWEEN ENGLISH VERSION AND TRANSLATION OF CONTRACT (AUG 1989)

In the event of inconsistency between any terms of this contract and any translation thereof into another language, the English language meaning shall control.

(End of clause)

11. FAR 52.236-7 Permits and Responsibilities. (NOV 1991)

As prescribed in 36.507, insert the following clause:

PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

OFFICIALS NOT TO BENEFIT

12. FAR 52.203-1 Officials Not to Benefit. (APR 1984)

As prescribed in 3.102-2, insert the following clause in solicitations and contracts, except those related to agriculture that are exempted by 41 U.S.C. 22:

OFFICIALS NOT TO BENEFIT (APR 1984)

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit arising from it. However, this clause does not apply to this contract to the extent that this contract is made with a corporation for the corporation's general benefit.

(End of clause)

13. FAR 52.203-3 Gratuities. (APR 1984)

As prescribed in 3.202, insert the following clause in solicitations and contracts, except those for personal services and those between military departments or defense agencies and foreign governments that do not obligate any funds appropriated to the Department of Defense:

GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative -

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) above, the Government is entitled -

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

14. FAR 52.203-5 Covenant Against Contingent Fees. (APR 1984)

As prescribed in 3.404(c), insert the following clause in all solicitations and contracts.

COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee", as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

15. FAR 52.203-7 Anti-Kickback Procedures. (OCT 1988)

As prescribed in 3.502-3, insert the following clause:

ANTI-KICKBACK PROCEDURES (OCT 1988)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c) (1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under under this contract.

(End of clause)

BONDS AND INSURANCE

16. FAR 52.228-1 Bid Guarantee. (APR 1984)

As prescribed in 28.101-3(b), insert the following clause in solicitations and contracts.

BID GUARANTEE (APR 1984)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The offeror (bidder) shall furnish a bid guarantee in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or give a bond(s) as required by the solicitation within the time specified, the Contracting Officer may terminate the contract for default.

(d) Unless otherwise specified in the bid, the bidder will (1) allow 60 days for acceptance of its bid and (2) give bond within 10 days after receipt of the forms by the bidder.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of clause)

17. GSAR 552.228-70 Bid Guarantee and Bonds. (MAY 1989)

As prescribed in 528.101-3(a) and 528.102-3, insert a clause substantially the same as follows:

BID GUARANTEE AND BONDS (MAY 1989)

A bid guarantee is required as provided in Standard Form 1442, Solicitation, Offer and Award (Construction, Alteration, or Repair).

(a) If the contract price is more than $25,000, the Contractor shall furnish a performance bond in a penal amount of 100 percent of the contract price, and payment bond in a penal amount as follows:

(1) Fifty percent of the contract price if the contract price is more than $25,000 but not more than $1,000,000; or

(2) Forty percent of the contract price if the contract price is more than $1,000,000 but not more than $5,000,000; if the contract price is over $5,000,000, then forty percent of the contract price or $2,500,000, whichever is less.

(b) If offers on one or more alternate and/or unit price offers were accepted in awarding the contract, contract price as used above shall mean the aggregate of the lump sum amount plus the product of each unit price accepted multiplied by the applicable number of units specified in the bid form, plus or minus such alternate bids as were accepted.

(c) Performance and payment bonds shall be submitted within the time specified on the Standard Form 1442, Solicitation, Offer, and Award, for this contract.

(d) The Contractor shall not lose the right to receive any payment due or to become due under the contract unless and until the surety has made payment in settlement of claims by suppliers of labor or material in accordance with the requirements of the surety's undertaking under the payment or performance bond and has notified the Contracting Officer of the claims and amount so paid.

(End of Clause)

18. FAR 52.228-2 Additional Bond Security. (APR 1984)

As prescribed in 28.106-4, insert the following clause in solicitations and contracts when bonds are required:

ADDITIONAL BOND SECURITY (APR 1984)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if -

(a) Any surety upon any bond furnished with this contract becomes unacceptable to the Government;

(b) Any surety fails to furnish reports on its financial condition as required by the Government; or

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer.

(End of clause)

19. FAR 52.228-5 Insurance - Work on a Government Installation. (SEP 1989)

As prescribed in 28.310, insert the following clause:

INSURANCE - WORK ON A GOVERNMENT INSTALLATION (SEP 1989)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall certify to the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

20. GSAR 552.228-75 Workmen's compensation laws. (APR 1984)

As prescribed in 528.310, insert the following clause:

WORKMEN'S COMPENSATION LAWS (APR 1984)

The Act of June 25, 1936, 49 Stat. 1938 (40 U.S.C. 290) authorizes the constituted authority of the several States to apply their workmen's compensation laws to all lands and premises owned or held by the United States.

(End of Clause)

SITE CONDITIONS

21. FAR 52.236-2 Differing Site Conditions. (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

DIFFERING SITE CONDITIONS (APR 1984)

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

22. FAR 52.236-3 Site Investigation and Conditions Affecting the Work. (APR 1984)

As prescribed in 36.503, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

23. GSAR 552.236-76 Measurements. (APR 1984)

As prescribed in 536.570-7, insert the following clause:

MEASUREMENTS (APR 1984)

All dimensions shown of existing work and all dimensions required for work that is to connect with work now in place, shall be verified by the Contractor by actual measurement of the existing work. Any discrepancies between the contract requirements and the existing conditions shall be referred to the Contracting Officer before any work affected thereby has been performed.

(End of Clause)

SPECIFICATIONS AND DRAWINGS

24. FAR 52.236-21 Specifications and Drawings for Construction. (APR 1984)

As prescribed in 36.520, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (APR 1984)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by", or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements and (2) the installation (i.e., form, fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(h) This clause shall be included in all subcontracts at any tier.

(End of clause)

25. GSAR 552.236-77 Specifications and Drawings. (APR 1984)

As prescribed in 536.570-8, insert the following clause:

SPECIFICATIONS AND DRAWINGS (APR 1984)

The requirements of the clause entitled "Specifications and Drawings" at FAR 52.236-21, are supplemented as follows:

(a) In case of difference between small and large-scale drawings, the large-scale drawings shall govern. Schedules on any contract drawing shall take precedence over conflicting information on that or any other contract drawing. On any of the drawings where a portion of the work is detailed or drawn out and the remainder is shown in outline, the parts detailed or drawn out shall apply also to all other like portions of the work.

(b) Where the word "similar" occurs on the drawings, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the work.

(c) Standard Details or Specification Drawings are applicable when listed, bound with the specifications, noted on the drawings or referenced elsewhere in the specifications. Where the notes on the drawings indicate modifications, such modifications shall govern.

(d) In case of difference between Standard Details or Specification Drawings and the specifications, the specifications will govern. In case of difference between the Standard Details or Specification Drawings and the drawings prepared specifically for this contract, the later shall govern.

(End of Clause)

26. GSAR 552.236-78 Shop drawings, coordination drawings, and schedules. (APR 1984)

As prescribed in 536.570-9, insert the following clause:

SHOP DRAWINGS, COORDINATION DRAWINGS, AND SCHEDULES (APR 1984)

The requirements, of the clause entitled "Specifications and Drawings" at FAR 52.236-21, are supplemented as follows:

(a) The Contractor shall submit shop drawings, coordination drawings, and schedules for approval as required by the specifications or requested by the Contracting Officer as follows:

(b) Shop drawings shall include fabrication, erection and setting drawings, schedule drawings, manufacturers' scale drawings, wiring and control diagrams, cuts or entire catalogs, pamphlets, descriptive literature, and performance and test data.

(c) Drawings and schedules, other than catalogs, pamphlets and similar printed material, shall be submitted in reproducible form with two prints made by a process approved by the Contracting Officer. Upon approval, the reproducible form will be returned to the Contractor who shall then furnish the number of additional prints, not to exceed 10, required by the specifications. The Contractor shall submit shop drawings in catalog, pamphlet and similar printed form in a minimum of four copies plus as many additional copies as the Contractor may desire or need for his use or use by subcontractors.

(d) Before submitting shop drawings on the mechanical and electrical work, the Contractor shall submit and obtain the Contracting Officer's approval of such lists of mechanical and electrical equipment and materials as may be required by the specifications.

(e) Each shop drawing or coordination drawing shall have a blank area 5 by 5 inches, located adjacent to the title block. The title block shall display the following:

Number and title of drawing

Date of drawing or revision

Name of project building or facility

Name of contractor and (if appropriate) name of subcontractor submitting drawing

Clear identity of contents and location on the work

Project title and contract number

(f) Unless otherwise provided in this contract, or otherwise directed by the Contracting Officer, shop drawings, coordination drawings and schedules shall be submitted to the Contracting Officer, with a letter in triplicate, sufficiently in advance of construction requirements to permit no less than 10 working days for checking and appropriate action.

(g) Approval of drawings and schedules will be general and shall not be construed as permitting any departure from the contract requirements, or as approving departures from full-size details furnished by the Contracting Officer.

(End of Clause)

SCHEDULES

27. FAR 52.236-15 Schedules for Construction Contracts. (APR 1984)

As prescribed in 36.515, the contracting officer may insert the following clause in solicitations and contracts when a fixed-price construction contract is contemplated, the contract amount is expected to exceed the small purchase limitation, and the period of actual work performance exceeds 60 days. This clause may be inserted in such contracts when work performance is expected to last less than 60 days and an unusual situation exists that warrants impositions of the requirements. This clause should not be used in the same contract with clauses covering other management approaches for ensuring that a contractor makes adequate progress.

SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

28. 52.212-6 Time Extensions. (APR 1984)

As prescribed in 12.204(c), insert the following clause in solicitations and contracts for construction in which the clause at 52.212-5, Liquidated Damages - Construction, is used with its Alternate I:

TIME EXTENSIONS (APR 1984)

Notwithstanding any other provisions of this contract, it is mutually understood that the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages under the new completion schedule.

(End of clause)

PERFORMANCE

29. FAR 52.236-1 Performance of Work by the Contractor. (APR 1984)

As prescribed in 36.501(b), insert the following clause in solicitations and contracts when a fixed-price construction contract is contemplated and the contract amount is expected to exceed $1,000,000. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction contract is contemplated and the contract amount is expected to be $1,000,000 or less. Complete the clause by inserting the appropriate percentage consistent with the complexity and magnitude of the work and customary or necessary specialty subcontracting (see 36.501(a)).

PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least [ ] [insert the appropriate number in words followed by numerals in parentheses] percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction ☛ would be to the advantage of the Government. **NOTE: The percentage is determined by the agency and is normally preprinted with the clause.**

(End of clause)

30. FAR 52.236-6 Superintendence by the Contractor. (APR 1984)

As prescribed in 36.506, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the work a competent superintendent who is satisfactory to the Contracting Officer and has authority to act for the Contractor.

(End of clause)

31. FAR 52.236-5 Material and Workmanship. (APR 1984)

As prescribed in 36.505, insert the following clause:

MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

32. GSAR 552.236-79 Samples. (APR 1984)

As prescribed in 536.570-10, insert the following clause:

SAMPLES (APR 1984)

(a) After the award of the contract, the Contractor shall furnish for the approval of the Contracting Officer samples required by the specifications or by the Contracting Officer. Samples shall be delivered to the Contracting Officer or to the Architect as specified or as directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in the work until approved in writing by the Contracting Officer.

(b) Each sample shall have a label indicating:
(1) Name of project building or facility, project title and contract number.
(2) Name of Contractor and, if appropriate, name of subcontractor.
(3) Identification of material or equipment with specification requirement.
(4) Place of origin.
(5) Name of producer and brand (if any).

Samples of finished materials shall have additional markings that will identify them under the finish schedules.

(c) The Contractor shall mail under separate cover a letter in triplicate submitting each shipment of samples and containing the information required in paragraph (b) of this clause. He shall enclose a copy o representative of the project. Approval of a sample shall be only for the characteristics or use name in such approval and shall not be construed to change or modify any contract requirement. Substitutions will not be permitted unless they are approved in writing by the Contracting Officer.

(d) Approved samples not destroyed in testing will be sent to the Government representative at the project. Approved samples of hardware in good condition will be marked for identification and may be used in the work. Materials and equipment, incorporated in the work shall match the approved samples. Other samples not destroyed in testing or not approved will be returned to the Contractor at his expense if so requested at time of submission.

(e) Failure of any material to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material or equipment which previously has proved unsatisfactory in service.

(f) Samples of various materials or equipment delivered on the site or in place may be taken by the Government representative for testing. Samples failing to meet contract requirements will automatically void previous approvals of the items tested. The Contractor shall replace such materials or equipment found not to have met contract requirements, or there shall be a proper adjustment of the contract price as determined by the Contracting Officer.

(g) Unless otherwise specified, when tests are required only one test of each sample proposed for use will be made at the expense of the Government. Samples which do not meet specification requirements will be rejected. Testing of additional samples will be made by the Government at the expense of the Contractor.

(End of Clause)

33. FAR 52.236-17 Layout of Work. (APR 1984)

As prescribed in 36.517, insert the following clause in solicitations and contracts when a fixed-price construction contract is contemplated and use of this clause is appropriate due to a need for accurate work layout and for siting verification during work performance:

LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government-established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(End of clause)

34. FAR 52.236-14 Availability and Use of Utility Services. (APR 1984)

As prescribed in 36.514, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated, the contract is to be performed on Government sites when the contracting officer decides (a) that the existing utility system is adequate for the needs of both the Government and the contractor, and (b) furnishing it is in the Government's interest. When this clause is used, the contracting officer shall list the available utilities in the contract.

AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

(a) The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

(End of clause)

35. GSAR 552.236-75 Use of premises. (APR 1984)

As prescribed in 536.570-6, insert the following clause:

USE OF PREMISES (APR 1984)

(a) If the premises are occupied, the Contractor, his subcontractors, and their employees shall comply with the regulations governing access to, operation of, and conduct while in or on the premises and shall perform the work required under this contract in such a manner as not to unreasonably interrupt or interfere with the conduct of Government business.

(b) Any request received by the Contractor from occupants of existing buildings to change the sequence of work shall be referred to the Contracting Officer for determination.

(c) If the premises are occupied, the Contractor, his subcontractors and their employees shall not have access to or be admitted into any building outside the scope of this contract except with official permission.

(End of Clause)

36. FAR 52.236-10 Operations and Storage Areas. (APR 1984)

(Text not included.)

37. GSAR 552.236-80 Heat. (APR 1984)

As prescribed in 536.570-11, insert the following clause:

HEAT (APR 1984)

Unless otherwise specified or unless already provided by the Government the Contractor shall:

(a) Provide heat, as necessary to protect all work, materials, and equipment against injury from dampness and cold;

(b) Protect, cover and/or heat as may be necessary, to produce and maintain a temperature of not less than 50 degrees Fahrenheit (1) in the concrete during the placing, setting and curing of concrete, and (2) in the plaster during the application, setting and curing of plaster; and

(c) Provide heat as necessary in the area where work is to be done to provide the minimum temperature recommended by the supplier or manufacturer of the material, but in no case less than 50 degrees Fahrenheit, for a period beginning 10 days before placing of interior finishes and finish materials and continuing until completion or beneficial occupancy of the area, whichever is earlier.

(End of Clause)

38. GSAR 552.236-74 Working hours. (APR 1984)

As prescribed in 536.570-5, insert the following clause:

WORKING HOURS (APR 1984)

(a) It is contemplated that all work will be performed during the customary working hours of the trades involved unless otherwise specified in this contract. Work performed by the Contractor at his own volition outside such customary working hours shall be at no additional expense to the Government.

(b) Any requests received by the Contractor from occupants of existing buildings to change the hours of work shall be referred to the Contracting Officer for determination.

(End of Clause)

39. FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements. (APR 1984)

As prescribed in 36.509, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

40. FAR 2.236-13 Accident Prevention.

As prescribed in 36.513, insert the following clause:

ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will (1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities; (2) avoid interruptions of Government operations and delays in project completion dates; and (3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall—

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when

delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

Alternate I (NOV 1991). If the contract will involve (a) work of a long duration or hazardous nature, or (b) performance on a Government facility that on the advice of technical representatives involves hazardous materials or operations that might endanger the safety of the public and/or Government personnel or property, add the following paragraph (f) to the basic clause:

(f) Before commencing the work, the Contractor shall—

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

41. FAR 52.236-12 Cleaning Up. (APR 1984)

As prescribed in 36.512, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The contracting officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

42. FAR 52.236-16 Quantity Surveys. (APR 1984)

As prescribed in 36.516, the contracting officer may insert the following clause in solicitations and contracts when a fixed-price construction contract providing for unit pricing of items and for payment based on quantity surveys is contemplated:

QUANTITY SURVEYS (APR 1984)

(a) Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

(b) The Government shall conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance.

(c) Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

(End of clause)

GOVERNMENT FURNISHED PROPERTY

43. FAR 52.245-3 Identification of Government-Furnished Property. (APR 1984)

As prescribed in 45.106(c), insert the following clause, in addition to the clause at 52.245-2, Government Property (Fixed-Price Contracts), in solicitations and contracts when a fixed-price construction contract is contemplated under which the Government is to furnish Government property f.o.b. railroad cars at a specified destination or f.o.b. truck at the project site. The contract Schedule shall specify the point of delivery and may include special terms and conditions covering installation, preparation for operation, or equipment testing by the Government or by another contractor.

IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY (APR 1984)

(a) The Government will furnish to the Contractor the property identified in the Schedule to be incorporated or installed into the work or used in performing the contract. The listed property will be furnished f.o.b. railroad cars at the place specified in the contract Schedule or f.o.b. truck at the project site. The Contractor is required to accept delivery, pay any demurrage or detention charges, and unload and transport the property to the job site at its own expense. When the property is delivered, the Contractor shall verify its quantity and condition and acknowledge receipt in writing to the Contracting Officer. The Contractor shall also report in writing to the Contracting Officer within 24 hours of delivery any damage to or shortage of the property as received. All such property shall be installed or incorporated into the work at the expense of the Contractor, unless otherwise indicated in this contract.

(b) Each item of property to be furnished under this clause shall be identified in the Schedule by quantity, item, and description.

(End of clause)

44. 52.245-1 Property Records. (APR 1984)

As prescribed in 45.106(a), insert the following clause in solicitations and contracts when the conditions in 45.105(b) exist and the Government maintains the Government's official Government property records:

PROPERTY RECORDS (APR 1984)

The Government shall maintain the Government's official property records in connection with Government property under this contract. The Government Property clause is hereby modified by deleting the requirement for the Contractor to maintain such records.

(End of clause)

45. 52.245-2 Government Property (Fixed-Price Contracts). (DEC 1989)

As prescribed in 45.106(b)(1), insert the following clause:

GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS) (DEC 1989)

(a) Government-furnished property.

(1) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications together with any related data and information that the Contractor may request and is reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(2) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use (except for property furnished "as-is") will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.

(3) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt of it, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either repair, modify, return, or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(4) If Government-furnished property is not delivered to the Contractor by the required time, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice, (i) decrease the Government-furnished property provided or to be provided under this contract, or (ii) substitute other Government-furnished property for the property to be provided by the Government, or to be acquired by the Contractor for the Government, under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by such notice.

(2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make the property available for performing this contract and there is any -

(i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or

(ii) Withdrawal of authority to use this property, if provided under any other contract or lease.

(c) Title in Government property.

(1) The Government shall retain title to all Government-furnished property.

(2) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. However, special tooling accountable to this contract is subject to the provisions of the Special Tooling clause and is not subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.

(3) Title to each item of facilities and special test equipment acquired by the Contractor for the Government under this contract shall pass to and vest in the Government when its use in performing this contract commences or when the Government has paid for it, whichever is earlier, whether or not title previously vested in the Government.

(4) If this contract contains a provision directing the Contractor to purchase material for which the Government will reimburse the Contractor as a direct item of cost under this contract -

(i) Title to material purchased from a vendor shall pass to and vest in the Government upon the vendor's delivery of such material; and

(ii) Title to all other material shall pass to and vest in the Government upon -

(A) Issuance of the material for use in contract performance;

(B) Commencement of processing of the material or its use in contract performance; or

(C) Reimbursement of the cost of the material by the Government, whichever occurs first.

(d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

(1) The Contractor shall be responsible and accountable for all Government property provided under this contract and shall comply with Federal Acquisition Regulation (FAR) subpart 45.5, as in effect on the date of this contract.

(2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound industrial practice and the applicable provisions of subpart 45.5 of the FAR.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(4) The Contractor represents that the contract price does not include any amount for repairs or replacement for which the Government is responsible. Repair or replacement of property for which the Contractor is responsible shall be accomplished by the Contractor at its own expense.

(f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) Risk of loss. Unless otherwise provided in this contract, the Contractor assumes the risk of, and shall be responsible for, any loss or destruction of, or damage to, Government property upon its delivery to the Contractor or upon passage of title to the Government under paragraph (c) of this clause. However, the Contractor is not responsible for reasonable wear and tear to Government property or for Government property properly consumed in performing this contract.

(h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for -

(1) Any delay in delivery of Government-furnished property;

(2) Delivery of Government-furnished property in a condition not suitable for its intended use;

(3) A decrease in or substitution of Government-furnished property; or

(4) Failure to repair or replace Government property for which the Government is responsible.

(i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property (including any resulting scrap) not consumed in performing this contract or delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid to the Government as the Contracting Officer directs.

(j) Abandonment and restoration of Contractor's premises. Unless otherwise provided herein, the Government -

(1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and

(2) Has no obligation to restore or rehabilitate the Contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or upon contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

(k) Communications. All communications under this clause shall be in writing.

(l) Overseas contracts. If this contract is to be performed outside of the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished", respectively.

(End of clause)

USE AND POSSESSION

46. FAR 52.236-11 Use and Possession Prior to Completion. (APR 1984)

As prescribed in 36.511, insert the following clause in solicitations and contracts when a fixed-price construction contract is contemplated and the contract award amount is expected to exceed the small purchase limitation. This clause may be inserted in solicitations and contracts when the contract amount is expected to be within the small purchase limitation.

USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled Permits and Responsibilities. If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

47. GSAR 552.236-81 Use of equipment by the government. (APR 1984)

As prescribed in 536.570-12, insert the following clause:

USE OF EQUIPMENT BY THE GOVERNMENT (APR 1984)

(a) The Government may take over and operate, with Government employees, such equipment as is necessary for heating or cooling such areas of the building as require the service, as soon as the installation is sufficiently complete.

(b) The Contracting Officer will advise the Contractor by letter, prior to the use of equipment, which items of equipment will be operated, and the date and time such operation will begin.

(c) Government operation of equipment will not relieve the Contractor of the one-year guarantee on materials and workmanship elsewhere provided for in this contract.

(d) The guarantee period, elsewhere provided for in this contract, for each piece of equipment shall be in accordance with the "Guarantees" clause of this contract.

(End of Clause)

INSPECTION OF CONSTRUCTION

48. FAR 52.246-12 Inspection of Construction. (JUL 1986)

As prescribed in 46.312, insert the following clause in solicitations and contracts for construction when a fixed-price contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The clause may be used in such solicitations and contracts when the contract amount is expected to be within the small purchase limitation and its use is in the Government's interest.

INSPECTION OF CONSTRUCTION (JUL 1986)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) below.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

49. GSAR 552.246-71 Final Inspection and Tests. (MAY 1989)

As prescribed in 546.312, insert the following clause.

FINAL INSPECTION AND TESTS (MAY 1989)

The Contractor shall give written notice to the Contracting Officer at least 10 calendar days before the date the work will be completed and ready for final inspection and tests. Final inspection and tests will begin within 10 calendar days after the date specified in the Contractor's notice unless the Contracting Officer determines that the work is not ready for final inspection and so informs the Contractor.

(End of Clause)

WARRANTY AND GUARANTEES

50. FAR 52.246-21 Warranty of Construction. (APR 1984) -- Alternate I (APR 1984)

If the Government specifies in the contract the use of any equipment by "brand name and model," the contracting officer may add a paragraph substantially the same as the following paragraph (k) to the basic clause:

WARRANTY OF CONSTRUCTION (APR 1984) -- ALTERNATE I (APR 1984)

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (j) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall -

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(k) Defects in design or manufacture of equipment specified by the Government on a brand name and model basis, shall not be included in this warranty. In this event, the Contractor shall require any subcontractors, manufacturers, or suppliers thereof to execute their warranties, in writing, directly to the Government.

(End of clause)

51. GSAR 552.246-75 Guarantees. (MAY 1989)

As prescribed in 546.710(b), insert the following clause:

GUARANTEES (MAY 1989)

(a) Unless otherwise provided in the specifications, the Contractor guarantees all work to be in accordance with contract requirements and free from defective or inferior materials, equipment, and workmanship for 1 year after the date of final acceptance or the date the equipment or work was placed in use by the Government, whichever occurs first.

(b) (1) If, within any guarantee period, the Contracting Officer finds that guaranteed requires repair or change because of defective or inferior materials, equipment, or workmanship or is not in accordance with contract requirements, the Contracting Officer shall notify the Contractor in writing. The Contractor shall promptly, and without additional expense to the Government, correct;

(i) All guaranteed work;

(ii) All damage to equipment, the site, the building or its contents resulting from the unsatisfactory guaranteed work; and

(iii) Any work, materials, and equipment that are disturbed in fulfilling the guarantee, including any disturbed work, materials, and equipment that may have been guaranteed under another contract.

(2) If the Contractor fails to proceed promptly in accordance with the guarantee, the Government may have such work performed at the expense of the Contractor.

(c) Any special guarantees that may be required under the contract will be subject to paragraphs (a) and (b), insofar as they do not conflict with special guarantees.

(d) The Contractor shall furnish to the Government: (1) Each transferable guarantee or warranty of equipment, materials, or installation furnished by any manufacturer, supplier, or installer in the ordinary course of business; (2) All information required to make such guarantee or warranty legally binding and effective; and (3) The information and the guarantee or warranty in sufficient time to permit the Government to meet any time limit specified in the guarantee or warranty or, if no time limit is specified, prior to completion and acceptance of all work under this contract.

(End of Clause)

BUY AMERICAN

52. FAR 52.225-5 Buy American Act - Construction Materials. (MAY 1992)

As prescribed in 25.205, insert the following clause in solicitations and contracts for construction inside the United States:

BUY AMERICAN ACT - CONSTRUCTION MATERIALS (MAY 1992)

(a) The Buy American Act (41 U.S.C. 10) provides that the Government give preference to domestic construction material.

"Components," as used in this clause, means those articles, materials, and supplies incorporated directly into construction materials.

"Construction materials," as used in this clause, means an article, material, or supply brought to the construction site for incorporation into the building or work.

Construction material also includes an item brought to the construction site pre-assembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm , and audio evacuation systems which are discrete systems incorporated into a public building or work and which are produced as a complete system, shall be evaluated as a single and distinct construction material regardless of when or how the individual parts or components of such systems are delivered to the construction site.

"Domestic construction material," as used in this clause, means (1) an unmanufactured construction material mined or produced in the United States, or (2) a construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as the construction materials determined to be unavailable pursuant to subparagraph 25.202(a)(3) of the Federal Acquisition Regulation (FAR) shall be treated as domestic.

(b) The Contractor agrees that only domestic construction material will be used by the Contractor, subcontractors, materialmen, and suppliers in the performance of this contract, except for foreign construction materials, if any, listed in this contract.

(The foregoing requirements are administered in accordance with Executive Order No. 10582, dated December 17, 1954, as amended, and subpart 25.2 of the FAR).

(End of clause)

53. GSAR 552.225-75 Buy American Act notice - construction materials. (MAY 1989)

As prescribed in 525.205, insert the following provision:

BUY AMERICAN ACT NOTICE - CONSTRUCTION MATERIALS (MAY 1989)

(a) The Buy American Act (41 U.S.C. 10) generally requires that only domestic construction material be used in performing this contract (See the clause entitled "Buy American Act - Construction Materials"). This requirement does not apply to the excepted construction material or components listed below:

[(List applicable excepted materials or indicate "none").

(b) Offers based on the use of other foreign construction material may be acceptable for award if the Government determines that -

(1) Comparable domestic construction material in sufficient and reasonably available quantities, of a satisfactory quality, is unavailable; or

(2) Use of comparable domestic construction material is impracticable or would unreasonably increase the cost of this contract.

(c) Any offer based on the use of one or more other foreign construction materials shall include current data, based on a reasonable canvass of suppliers, in the format listed in paragraph (h) of this clause, clearly demonstrating that the cost of each foreign construction material, plus 6 percent, is less than the cost of each comparable domestic construction material. The cost of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate may be issued).

(d) For evaluation purposes, the Government will add to the offer, 6 percent of the cost of foreign construction material that qualifies for acceptance under paragraph (c) of this clause.

(e) When offering foreign construction material, offerors may also offer, at stated prices, any available comparable domestic construction material to avoid the possibility that failure of a foreign construction material to be acceptable, under (c) of this clause, will cause rejection of the entire offer.

(f) If any foreign construction material does not qualify for acceptance under paragraph (c) of this clause, the Government will evaluate the offer on the basis of the stated price for comparable domestic construction material, and the Offeror shall be required to furnish such domestic construction material at that price. If the Offeror does not state a price for a comparable domestic construction material, and the foreign construction material does not qualify for acceptance under paragraph (c) of this clause, the offer will be rejected in sealed bid procurements and may be rejected in negotiated procurements.

(g) If the foregoing procedure results in a tie between a foreign offer as evaluated and a domestic offer, award shall be made on the domestic offer. In such case, offers proposing to use any foreign construction material will be considered to be foreign offers.

(h) For evaluation purposes under paragraph (c) of this clause, the following information and any applicable supporting data based on the canvass of suppliers shall be included in the offer for the use of one or more foreign construction materials:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS COST COMPARISON

Construction material description	Unit of measure	Quantity	Cost (dollars) *
Item 1:			
Foreign construction material.....	_____	_____	$_____
Comparable domestic construction material.	._____	_____	$_____
Item 2:			
Foreign construction material...	_____	_____	$_____
Comparable domestic construction material.	_____	_____	$_____

* Include all delivery costs to the construction site and any applicable duty.

(End of Provision)

54. FAR 52.225-15 Buy American Act — Construction Materials under European Community Agreement. (May 1993)

As prescribed in 25.205(b), insert the following clause in RFPs over $6,500,000:

BUY AMERICAN ACT—CONSTRUCTION MATERIALS UNDER EUROPEAN COMMUNITY AGREEMENT (MAY 1993)

(a) *Definitions.* As used in this clause—

"Components" means those articles, materials, and supplies incorporated directly into construction materials.

"Construction material" means an article, material, or supply brought to the construction site for incorporation into the building or work. Construction material also includes an item brought to the site pre-assembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, which are discrete systems incorporated into a public building or work and which are produced as a complete system, shall be evaluated as a single and distinct construction material regardless of when or how the individual parts or components of such systems are delivered to the construction site.

"Domestic construction material" means (1) an unmanufactured construction material mined or produced in the United States, or (2) a construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as the construction materials determined to be unavailable pursuant to subparagraph 25.202(a)(3) of the Federal Acquisition Regulation (FAR) shall be treated as domestic.

"European Community (EC) construction material" means a construction material that (a) is wholly the growth, product, or manufacture of an EC country or (b) in the case of a construction material which consists in whole or in part of materials from another country or instrumentality, has been substantially transformed in an EC country into a new and different construction material distinct from the materials from which it was transformed.

"EC country" means Belgium, Denmark, Federal Republic of Germany, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.

(b) The Buy American Act (41 U.S.C. 10) provides that the Government give preference to domestic material. In addition, the Memorandum of Understanding between the United States of America and the European Economic Community on Government Procurement provides that EC construction materials are exempted from application of the Buy American Act.

(c) The Contractor agrees that only domestic construction materials or EC construction materials will be used by the Contractor, subcontractors, materialmen and suppliers in the performance of this contract, except for other foreign construction materials, if any, listed in this contract. (The foregoing requirements are administered in accordance with Executive

Order No. 10582, dated December 17, 1954, as amended, and Subpart 25.1 of the Federal Acquisition Regulation and Executive Order No. 12849.)

(End of clause)

55. FAR 52.208-1 Required Sources for Jewel Bearings and Related Items. (APR 1984)

As prescribed in 8.203-1(a), insert the following clause in solicitations and contracts that may involve items (or any subassembly, component, or part of such items) in the Federal supply classes and groups listed in 8.203-1(b), except as provided in 8.203-1(a)(1) through (3):

REQUIRED SOURCES FOR JEWEL BEARINGS AND RELATED ITEMS (APR 1984)

(a) This clause applies only if supplies furnished under this contract contain jewel bearings or related items.

(b) "Jewel bearing," as used in this clause, means a piece of synthetic corundum (sapphire or ruby) of any shape, except a phonograph needle, that has one or more polished surfaces to provide supporting surfaces or low-friction contact areas for revolving, oscillating, or sliding parts in an instrument, mechanism, subassembly, or part. A jewel bearing may be unmounted or may be mounted into a ring or bushing. Examples are watch holes - olive, watch holes - straight, pallet stones, roller jewels (jewel pins), endstones (caps), vee (cone) jewels, instrument rings, cups, and double cups.

"Plant," as used in this clause, means the Government-owned, contractor-operated William Langer Plant, Rolla, ND 58367 (Phone: 701-477-3193).

"Price list," as used in this clause, means the U.S. Government Jewel Bearing Price List, published periodically by the General Services Administration for jewel bearings produced by the Plant.

"Related item," as used in this clause, means a piece of synthetic corundum (sapphire or ruby), other than a jewel bearing, that (1) is made from material produced by the Verneuil flame fusion process, (2) has a geometric shape up to a maximum of 1 inch in any dimension, (3) requires extremely close tolerances and highly polished surfaces identical to those involved in manufacturing jewel bearings, and (4) is either mounted in a retaining or supporting structure or unmounted. Examples are window, nozzle, guide, knife edge, knife edge plate, insulator domed pin, slotted insulator, sphere, ring gauge, spacer, disc, valve seat, rod, vee groove, D-shaped insulator, and notched plate.

(c) All jewel bearings and related items required for the supplies to be furnished under this contract (or an equal quantity of the same type, size, and tolerances) shall be acquired from the following sources: jewel bearings from the Plant, unless the Plant declines or rejects the order; and related items from domestic manufacturers, including the Plant, if the items can be obtained from those sources. Sources other than the foregoing may be used if the foregoing sources decline or reject the order.

(1) Orders may be placed with the Plant for individual contracts, for a combination of contracts, or for stock. If the order is for an individual contract, the prime contract number shall be placed on it.

(2) Orders, and any supplements to orders, for items listed in the price list shall refer to the most recent price list and its date.

(3) Requests for quotations for items not listed in the price list should be accompanied by drawings and forwarded to the Plant as soon as possible to ensure prompt quotation or rejection of the order.

(d) At its option, the Plant may decline or reject all or part of a Contractor's or subcontractor's order. If the order is declined or rejected, the Contractor shall notify the contract administration office cognizant of this contract promptly in writing, enclosing a copy of the rejection notice. Unless the declination or rejection has been caused by current excessive and overdue Contractor indebtedness to the Plant as determined by the Plant, the Contracting Officer shall evaluate the impact and make an equitable adjustment in the contract price, in the delivery schedule, or in both, if one is warranted. This procedure shall also apply to orders for related items rejected by any other domestic manufacturer.

(e) The Contractor agrees to insert this clause, including this paragraph (e), and the prime contract number in every subcontract unless the Contractor has positive knowledge that the subassembly, component, or part being purchased does not contain jewel bearings or related items.

(End of clause)

56. FAR 52.247-63 Preference for U.S.-Flag Air Carriers. (APR 1984)

As prescribed in 47.405, insert the following clause:

PREFERENCE FOR U.S.-FLAG AIR CARRIERS (APR 1984)

(a) "International air transportation," as used in this clause, means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.

"United States," as used in this clause, means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, and possessions of the United States.

"U.S.-flag air carrier," as used in this clause, means an air carrier holding a certificate under section 401 of the Federal Aviation Act of 1958 (49 U.S.C. 1371).

(b) Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 1517) (Fly America Act) requires that all Federal agencies and Government contractors and subcontractors use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.

(c) The Contractor agrees, in performing work under this contract, to use U.S.-flag air carriers for international air transportation of personnel (and their personal effects) or property to the extent that service by those carriers is available.

(d) In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a certification on vouchers involving such transportation essentially as follows:

CERTIFICATION OF UNAVAILABILITY OF U.S.-FLAG AIR CARRIERS

I hereby certify that international air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons (see section 47.403 of the Federal Acquisition Regulation): (State reasons):

_____

(End of certification)

(e) The Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract or purchase under this contract that may involve international air transportation.

(End of clause)

57. FAR 52.247-64 Preference for Privately Owned U.S.-Flag Commercial Vessels. (APR 1984)

As prescribed in 47.507(a), insert the following clause in solicitations and contracts that may involve ocean transportation of supplies subject to the Cargo Preference Act of 1954. (For application of the Cargo Preference Act of 1954, see 47.502(a)(3), 47.503(a), and 47.504.)

PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS (APR 1984)

(a) The Cargo Preference Act of 1954 (46 U.S.C. 1241(b)) requires that Federal departments and agencies shall transport in privately owned U.S.-flag commercial vessels at least 50 percent of the gross tonnage of equipment, materials, or commodities that may be transported in ocean vessels (computed separately for dry bulk carriers, dry cargo liners, and tankers). Such transportation shall be accomplished when any equipment, materials, or commodities, located within or outside the United States, that may be transported by ocean vessel are -

(1) Acquired for a U.S. Government agency account;

(2) Furnished to, or for the account of, any foreign nation without provision for reimbursement;

(3) Furnished for the account of a foreign nation in connection with which the United States advances funds or credits, or guarantees the convertibility of foreign currencies; or

(4) Acquired with advance of funds, loans, or guaranties made by or on behalf of the United States.

(b) The Contractor shall use privately owned U.S.-flag commercial vessels to ship at least 50 percent of the gross tonnage involved under this contract (computed separately for dry bulk carriers, dry cargo liners, and tankers) whenever shipping any equipment, materials, or commodities under the conditions set forth in paragraph (a) above, to the extent that such vessels are available at rates that are fair and reasonable for privately owned U.S.-flag commercial vessels.

(c) (1) The Contractor shall submit one legible copy of a rated on-board ocean bill of lading for each shipment to both (i) the Contracting Officer and (ii) the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590. Subcontractor bills of lading shall be submitted through the Prime Contractor.

(2) The Contractor shall furnish these bill of lading copies (i) within 20 working days of the date of loading for shipments originating in the United States, or (ii) within 30 working days for shipments originating outside the United States. Each bill of lading copy shall contain the following information:

(A) Sponsoring U.S. Government agency.
(B) Name of vessel.
(C) Vessel flag of registry.
(D) Date of loading.
(E) Port of loading.
(F) Port of final discharge.
(G) Description of commodity.
(H) Gross weight in pounds and cubic feet if available.
(I) Total ocean freight revenue in U.S. dollars.

(d) Except for small purchases as described in 48 CFR 13, the Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts or purchase orders under this contract.

(e) The requirement in paragraph (a) does not apply to -

(1) Small purchases as defined in 48 CFR 13;

(2) Cargoes carried in vessels of the Panama Canal Commission or as required or authorized by law or treaty;

(3) Ocean transportation between foreign countries of supplies purchased with foreign currencies made available, or derived from funds that are made available, under the Foreign Assistance Act of 1961 (22 U.S.C. 2353); and

(4) Shipments of classified supplies when the classification prohibits the use of non-Government vessels.

(f) Guidance regarding fair and reasonable rates for privately owned U.S.-flag commercial vessels may be obtained from the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, Phone: 202-426-4610.

(End of clause)

ENVIRONMENTAL PROTECTION

58. FAR 52.223-2 Clean Air and Water. (APR 1984)

As prescribed in 23.105(b), insert the following clause in solicitations and contracts to which subpart 23.1 applies (see 23.101) if (a) the contract is expected to exceed $100,000; (b) the contracting officer believes that orders under an indefinite quantity contract in any year will exceed $100,000; or (c) a facility to be used has been the subject of a conviction under the applicable portion of the Air Act (42 U.S.C. 7413(c)(1)) or the Water Act (33 U.S.C. 1319(c)) and is listed by EPA as a violating facility; and (d) the acquisition is not otherwise exempt under 23.104.

CLEAN AIR AND WATER (APR 1984)

(a) "Air Act", as used in this clause, means the Clean Air Act (42 U.S.C. 7401 et seq.).

"Clean air standards," as used in this clause, means -

(1) Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738;

(2) An applicable implementation plan as described in section 110(d) of the Air Act (42 U.S.C. 7410(d));

(3) An approved implementation procedure or plan under section 111(c) or section 111(d) of the Air Act (42 U.S.C. 7411(c) or (d)); or

(4) An approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 7412(d)).

"Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency (EPA) or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).

"Compliance", as used in this clause, means compliance with -

(1) Clean air or water standards; or

(2) A schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency (EPA), or an air or water pollution control agency under the requirements of the Air Act or Water Act and related regulations.

"Facility," as used in this clause, means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a Contractor or subcontractor, used in the performance of a contract or subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the Environmental Protection Agency (EPA) determines that independent facilities are collocated in one geographical area.

"Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251 et seq.).

(b) The Contractor agrees -

(1) To comply with all the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, and all regulations and guidelines issued to implement those acts before the award of this contract;

(2) That no portion of the work required by this prime contract will be performed in a facility listed on the EPA List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing;

(3) To use best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed; and

(4) To insert the substance of this clause into any nonexempt subcontract, including this subparagraph (b)(4).

(End of clause)

EMPLOYMENT PRACTICES

59. FAR 52.222-26 Equal Opportunity. (APR 1984)

As prescribed in 22.810(e), insert the following clause in solicitations and contracts (see 22.802) unless all of the terms of the clause are exempt from the requirements of EO 11246 (see 22.807(a)):

EQUAL OPPORTUNITY (APR 1984)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of $10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.

(8) The Contractor shall permit access to its books, records, and accounts by the contracting agency or the Office of Federal Contract Compliance Programs (OFCCP) for the purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

60. FAR 52.222-35 Affirmative Action for Special Disabled and Vietnam Era Veterans. (APR 1984)

As prescribed in 22.1308, insert the following clause in solicitations and contracts when the contract is for $10,000 or more or is expected to amount to $10,000 or more (see 22.1308(a) for exceptions):

AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS (APR 1984)

(a) Definitions.

"Appropriate office of the State employment service system," as used in this clause, means the local office of the Federal-State national system of public employment offices assigned to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

"Openings that the Contractor proposes to fill from within its own organization," as used in this clause, means employment openings for which no one outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) will be considered and includes any openings that the Contractor proposes to fill from regularly established recall lists.

"Openings that the Contractor proposes to fill under a customary and traditional employer-union hiring arrangement," as used in this clause, means employment openings that the Contractor proposes to fill from union halls, under their customary and traditional employer-union hiring relationship.

"Suitable employment openings," as used in this clause -

(1) Includes, but is not limited to, openings that occur in jobs categorized as -
(i) Production and nonproduction;
(ii) Plant and office;
(iii) Laborers and mechanics;
(iv) Supervisory and nonsupervisory;
(v) Technical; and
(vi) Executive, administrative, and professional positions compensated on a salary basis of less than $25,000 a year; and

(2) Includes full-time employment, temporary employment of over 3 days, and part-time employment, but not openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement, nor openings in an educational institution that are restricted to students of that institution.

(b) General.

(1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a special disabled or Vietnam Era veteran. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled and Vietnam Era veterans without discrimination based upon their disability or veterans' status in all employment practices such as -

(i) Employment;
(ii) Upgrading;
(iii) Demotion or transfer;
(iv) Recruitment;
(v) Advertising;
(vi) Layoff or termination;
(vii) Rates of pay or other forms of compensation; and
(viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings.

(1) The Contractor agrees to list all suitable employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of $10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service.

(3) The listing of suitable employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(5) Under the most compelling circumstances, an employment opening may not be suitable for listing, including situations when (i) the Government's needs cannot reasonably be supplied, (ii) listing would be contrary to national security, or (iii) the requirement of listing would not be in the Government's interest.

(d) Applicability.

(1) This clause does not apply to the listing of employment openings which occur and are filled outside the 50 States, the District of Columbia, Puerto Rico, Guam, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

(2) The terms of paragraph (c) above of this clause do not apply to openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of its own organization or employer-union arrangement for that opening.

(e) Postings.

(1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified special disabled and Vietnam Era veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

(End of clause)

61. FAR 52.222-37 Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era. (JAN 1988)

As prescribed in 22.1308(b), insert the following clause:

EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1988)

(a) The contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workplace of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1 of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

62. FAR 52.222-36 Affirmative Action for Handicapped Workers. (APR 1984)

As prescribed in 22.1408, insert the following clause in solicitations and contracts that exceed $2,500 or are expected to exceed $2,500. See 22.1408(a) for exceptions.

AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (APR 1984)

(a) General.

(1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental handicap. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as:

(i) Employment;
(ii) Upgrading;
(iii) Demotion or transfer;
(iv) Recruitment;
(v) Advertising;
(vi) Layoff or termination;
(vii) Rates of pay or other forms of compensation; and
(viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings.

(1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped individuals and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified physically and mentally handicapped individuals.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of $2,500 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

(End of clause)

63. 52.222-27 Affirmative Action Compliance Requirements for Construction. (APR 1984)

As prescribed in 22.810(f), insert the following clause in solicitations and contracts for construction that will include the clause at 52.222-26, Equal Opportunity, and the amount of the contract is expected to be in excess of $10,000:

AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (APR 1984)

(a) Definitions.

"Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Director," as used in this clause, means Director, Office of Federal Contract Compliance Programs (OFCCP), United States Department of Labor, or any person to whom the Director delegates authority.

"Employer identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means -

(1) American Indian or Alaska Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of $10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) above.

(6) Disseminate the Contractor's equal employment policy by -

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all onsite supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16). The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16), provided the Contractor -

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) above, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Director shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to -

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

(o) Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

SUBCONTRACTING

64. FAR 52.209-6 Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment. (NOV 1992)

As prescribed in 9.409(b), insert the following clause:

PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (NOV 1992)

(a) The Government suspends or debars Contractors to protect the Government's interests. Contractors shall not enter into any subcontract equal to or in excess of the small business limitation at FAR 13.000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so. If a Contractor intends to subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the list of Parties Excluded from Procurement Programs), a corporate officer or designee of the Contractor shall notify the Contracting Officer, in writing, before entering into such subcontract. The notice must include the following:

(1) The name of the subcontractor;

(2) The Contractor's knowledge of the reasons for the subcontractor being on the list of Parties Excluded from Procurement Programs;

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the list of Parties Excluded from Procurement Programs; and

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(b) The Contractor's compliance with the requirements of 52.209-6 will be reviewed during Contractor Purchasing System Reviews (see FAR subpart 44.3).

(End of clause)

65. FAR 52.219-16 Liquidated Damages-Small Business Subcontracting Plan. (AUG 1989)

As prescribed in 19.708(b)(2), insert the following clause:

LIQUIDATED DAMAGES-SMALL BUSINESS SUBCONTRACTING PLAN (AUG 1989)

(a) "Failure to make a good faith effort to comply with the subcontracting plan," as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled Small Business and Small Disadvantaged Business Subcontracting Plan, or willful or intentional action to frustrate the plan.

(b) If, at contract completion, or in the case of a commercial products plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled Small and Small Disadvantaged Business Subcontracting Plans, the Contractor shall pay the Government liquidated damages in an amount stated. The amount of damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal or, in the case of a commercial products plan, that portion of the dollar amount allocable to Government contracts by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial products plans, i.e., company-wide or division-wide subcontracting plans approved under paragraph (g) of the clause in this contract entitled, Small Business and Small Disadvantaged Business Subcontracting Plan, the Contracting Officer of the agency that originally approved the plan will exercise the functions of the Contracting Officer under this clause on behalf of all agencies that awarded contracts covered by that commercial products plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may leave.

(End of clause)

66. FAR 52.219-13 Utilization of Women-Owned Small Businesses. (AUG 1986)

As prescribed in 19.902, insert the following clause in solicitations and contracts:

UTILIZATION OF WOMEN-OWNED SMALL BUSINESSES (AUG 1986)

(a) "Women-owned businesses," as used in this clause, means small business concerns that are at least 51 percent owned by women who are United States citizens and who also control and operate the business.

"Control," as used in this clause, means exercising the power to make policy decisions.

"Operate," as used in this clause, means being actively involved in the day-to-day management of the business.

"Small business concern," as used in this clause, means a concern including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) It is the policy of the United States that women-owned small businesses shall have the maximum practicable opportunity to participate in performing contracts awarded by any Federal agency.

(c) The Contractor agrees to use its best efforts to give women-owned small businesses the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with the efficient performance of its contract.

(d) The Contractor may rely on written representations by its subcontractors regarding their status as women-owned small businesses.

(End of clause)

67. FAR 52.220-3 Utilization of Labor Surplus Area Concerns. (APR 1984)

As prescribed in 20.302(a), insert the following clause in solicitations and contracts when it is estimated that the contract will exceed the appropriate small purchase limitation in part 13. See 20.302(a)(1) through (2) for exceptions:

UTILIZATION OF LABOR SURPLUS AREA CONCERNS (APR 1984)

(a) Applicability. This clause is applicable if this contract exceeds the appropriate small purchase limitation in part 13 of the Federal Acquisition Regulation.

(b) Policy. It is the policy of the Government to award contracts to concerns that agree to perform substantially in labor surplus areas (LSA's) when this can be done consistent with the efficient performance of the contract and at prices no higher than are obtainable elsewhere. The Contractor agrees to use its best efforts to place subcontracts in accordance with this policy.

(c) Order of preference. In complying with paragraph (b) above and with paragraph (c) of the clause of this contract entitled Utilization of Small Business Concerns and Small Disadvantaged Business Concerns, the Contractor shall observe the following order of preference in awarding subcontracts: (1) small business concerns that are LSA concerns, (2) other small business concerns, and (3) other LSA concerns.

(d) Definitions. "Labor surplus area," as used in this clause, means a geographical area identified by the Department of Labor in accordance with 20 CFR part 654, subpart A, as an area of concentrated unemployment or underemployment or an area of labor surplus.

"Labor surplus area concern," as used in this clause, means a concern that together with its first-tier subcontractors will perform substantially in labor surplus areas. Performance is substantially in labor surplus areas if the costs incurred under the contract on account of manufacturing, production, or performance of appropriate services in labor surplus areas exceed 50 percent of the contract price.

(End of clause)

68. FAR 52.220-4 Labor Surplus Area Subcontracting Program. (APR 1984)

As prescribed in 20.302(b), insert the following clause in solicitations and contracts that (a) may exceed $500,000, (b) contain the clause at 52.220-3, Utilization of Labor Surplus Area Concerns, and (c) in the opinion of the contracting officer, offer substantial subcontracting possibilities. In addition, the contracting officer shall urge contractors, that will receive negotiated contracts that may not exceed $500,000 but that meet the criteria in (b) and (c) above, to accept this clause:

LABOR SURPLUS AREA SUBCONTRACTING PROGRAM (APR 1984)

(a) See the Utilization of Labor Surplus Area Concerns clause of this contract for applicable definitions.

(b) The Contractor agrees to establish and conduct a program to encourage labor surplus area (LSA) concerns to compete for subcontracts within their capabilities when the subcontracts are consistent with the efficient performance of the contract at prices no higher than obtainable elsewhere. The Contractor shall -

(1) Designate a liaison officer who will (i) maintain liaison with authorized representatives of the Government on LSA matters, (ii) supervise compliance with the Utilization of Labor Surplus Area Concerns clause, and (iii) administer the Contractor's labor surplus area subcontracting program;

(2) Provide adequate and timely consideration of the potentialities of LSA concerns in all make-or-buy decisions;

(3) Ensure that LSA concerns have an equitable opportunity to compete for subcontracts, particularly by arranging solicitations, time for the preparation of offers, quantities, specifications, and delivery schedules so as to facilitate the participation of LSA concerns;

(4) Include the Utilization of Labor Surplus Area Concerns clause in subcontracts that offer substantial LSA subcontracting opportunities; and

(5) Maintain records showing (i) the procedures adopted and (ii) the Contractor's performance, to comply with this clause. The records will be kept available for review by the Government until the expiration of 1 year after the award of this contract, or for such longer period as may be required by any other clause of this contract or by applicable law or regulations.

(c) The Contractor further agrees to insert in any related subcontract that may exceed $500,000 and that contains the Utilization of Labor Surplus Area Concerns clause, terms that conform substantially to the language of this clause, including this paragraph (c), and to notify the Contracting Officer of the names of subcontractors.

(End of clause)

PATENTS, DATA, AND COPYRIGHTS

69. FAR 52.227-1 Authorization and Consent. (APR 1984)

As prescribed at 27.201-2(a), insert the following clause:

AUTHORIZATION AND CONSENT (APR 1984)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed $25,000 (however, omission of this clause from any subcontract, under or over $25,000, does not affect this authorization and consent.)

(End of clause)

70. FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement. (APR 1984)

As prescribed at 27.202-2, insert the following clause:

NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (APR 1984)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

71. FAR 52.227-4 Patent Indemnity - Construction Contracts. (APR 1984)

As prescribed at 27.203-5, insert the following clause:

PATENT INDEMNITY - CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(End of clause)

TAXES

72. FAR 52.229-3 Federal, State, and Local Taxes. (JAN 1991)

As prescribed in 29.401-3, insert the following clause:

FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds $250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

73. FAR 52.229-5 Taxes - Contracts Performed in U.S. Possessions or Puerto Rico. (APR 1984)

As prescribed in 29.401-5, insert the following clause in solicitations and contracts that include the clause at 52.229-3, Federal, State, and Local Taxes, or 52.229-4, Federal, State, and Local Taxes (Noncompetitive Contract):

TAXES - CONTRACTS PERFORMED IN U.S. POSSESSIONS OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

(End of clause)

ADJUSTMENTS

74. FAR 52.243-4 Changes. (AUG 1987)

As prescribed in 43.205(d), insert the following clause. The 30-day period may be varied according to agency procedures.

CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes -

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) In the Government-furnished facilities, equipment, materials, services, or site; or

(4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating (1) the date, circumstances, and source of the order and (2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after (1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

75. GSAR 552.243-71 Equitable adjustments. (APR 1984)

As prescribed in 543.205(b), insert the following clause in solicitations and contracts for (a) dismantling, demolition, or removal of improvements; and (b) construction, when a fixed-price contract is contemplated and the contract amount is expected to exceed the small purchase limitation:

EQUITABLE ADJUSTMENTS (APR 1984)

(a) The provisions of the "Changes" clause prescribed by FAR 52.243-4 are supplemented as follows:

(1) Upon written request, the Contractor shall submit a proposal, in accordance with the requirements and limitations set forth in the "Equitable Adjustments" clause, for work involving contemplated changes covered by the request. The proposal shall be submitted within the time limit indicated in the request or any extension of such time limit as may be subsequently granted. The Contractor's written statement of the monetary extent of a claim for equitable adjustment shall be submitted in the following form:

(i) Proposals totaling $5,000 or less shall be submitted in the form of a lump sum proposal with supporting information to clearly relate elements of cost with specific items of work involved to the satisfaction of the Contracting Officer, or his/her authorized representative.

(ii) For proposals in excess of $5,000, the claim for equitable adjustment shall be submitted in the form of a lump sum proposal supported with an itemized breakdown of all increases and decreases in the contract in at least the following detail:

Direct Costs

Material quantities by trades and unit costs (Manufacturing burden associated with material fabrication performed will be considered to be part of the material costs of the fabricated item delivered to the job site.)

Labor breakdown by trades and unit costs (Identified with specific item of material to be placed or operation to be performed.)

Construction equipment exclusively necessary for the change.

Costs of preparation and/or revision to shop drawings resulting from the change.

Workmen's Compensation and Public Liability Insurance.

Employment taxes under FICA and FUTA.

Bond Costs - when size of change warrants revision.

Overhead, Profit and Commission

(2) The allowable overhead shall be determined in accordance with the contract cost principles and procedures in Part 31 of the Federal Acquisition Regulation (48 CFR Part 31) in effect on the date of this contract. The percentages for profit and commission shall be negotiated and may vary according to the nature, extent and complexity of the work involved, but in no case shall exceed the following unless the contractor demonstrates entitlement to a higher percentage:

Overhead	Profit	Commission
To Contractor on work performed by other than his own forces		10%
To first tier subcontractor on work performed by his subcontractors		10%
To Contractor and/or the subcontractors for that portion of the work performed with their respective forces	To be Negotiated	10%

Not more than four percentages will be allowed regardless of the number of tier subcontractors. The Contractor shall not be allowed a commission on the commission received by a first tier subcontractor. Equitable adjustments for deleted work shall include credits for overhead, profit and commission. On proposals covering both increases and decreases in the amount of the contract, the application of overhead and profit shall be on the net change in direct costs for the Contractor or subcontractor performing the work.

(3) The Contractor shall submit with the proposal his request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the contract in its entirety.

(4) In considering a proposal, the Government shall make check estimates in detail, utilizing unit prices where specified or agreed upon, with a view to arriving at an equitable adjustment.

(5) After receipt of a proposal the Contracting Officer shall act thereon, within 30 days; provided however, that when the necessity to proceed with a change does not allow time properly to check a proposal or in the event of failure to reach an agreement on a proposal, the Government may order the Contractor to proceed on the basis of price to be determined at the earliest practicable date. Such price shall not be more than the increase or less than the decrease proposed.

(6) If a mutually acceptable agreement cannot be reached, the Contracting Officer may determine the price unilaterally.

(b) The provisions of the "Differing Site Conditions" clause prescribed by FAR 52.236-2 are supplemented as follows: The Contractor shall submit all claims for equitable adjustment in accordance with, and subject to the requirements and limitations set out in paragraph (a) of this "Equitable Adjustments" clause.

(End of Clause)

76. GSAR 552.243-70 Pricing adjustments. (APR 1989)

As prescribed in 543.205(a), insert the following clause:

PRICING OF ADJUSTMENTS (APR 1984)

When costs are a factor in any determination of a contract price adjustment, such costs shall be in accordance with the contract cost principles and procedures in Part 31 of the Federal Acquisition Regulation (48 CFR Part 31) in effect on the date of this contract.

(End of Clause)

AUDITS

77. FAR 52.214-26 Audit - Sealed Bidding. (APR 1985)

As prescribed in 14.201-7(a), insert the following clause:

AUDIT - SEALED BIDDING (APR 1985)

(a) Cost or pricing data. If the Contractor has submitted cost or pricing data in connection with the pricing of any modification to this contract, unless the pricing was based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contracting Officer or a representative who is an employee of the Government shall have the right to examine and audit all books, records, documents, and other data of the Contractor (including computations and projections) related to negotiating, pricing or performing the modification, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data. In the case of pricing any modification, the Comptroller General of the United States or a representative who is an employee of the Government shall have the same rights.

(b) Availability. The Contractor shall make available at its office at all reasonable times the materials described in paragraph (a) above, for examination, audit, or reproduction, until 3 years after final payment under this contract, or for any other period specified in Subpart 4.7 of the Federal Acquisition Regulation (FAR). FAR Subpart 4.7, Contractor Records Retention, in effect on the date of this contract, is incorporated by reference in its entirety and made a part of this contract.

(1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement.

(2) Records pertaining to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to the performance of this contract shall be made available until disposition of such appeals, litigation, or claims.

(c) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (c), in all subcontracts over $10,000 under this contract, altering the clause only as necessary to identify properly the contracting parties and the contracting office under the Government prime contract.

(End of clause)

78. FAR 52.214-27 Price Reduction for Defective Cost or Pricing Data - Modifications - Sealed Bidding. (DEC 1991)

As prescribed in 14.201-7(b), insert the following clause:

PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - MODIFICATIONS - SEALED BIDDING (DEC 1991)

(a) This clause shall become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, of more than $100,000, or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, except that this clause does not apply to any modification for which the price is -

(1) Based on adequate price competition;
(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
(3) Set by law or regulation.

(b) If any price, including profit, negotiated in connection with any modification under this clause, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) above.

(c) Any reduction in the contract price under paragraph (b) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which (1) the actual subcontract or (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d) (1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense-

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted;

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer;

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract; or

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2) (i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if-

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if-

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

(2) For Department of Defense contracts only, a penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

(End of clause)

79. FAR 52.214-28 Subcontractor Cost or Pricing Data - Modifications - Sealed Bidding. (DEC 1991)

As prescribed in 14.201-7(c), insert the following clause in solicitations and contracts:

SUBCONTRACTOR COST OR PRICING DATA - MODIFICATIONS - SEALED BIDDING (DEC 1991)

(a) The requirements of paragraphs (b) and (c) of this clause shall (1) become operative only for any modification to this contract involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, and (2) be limited to such modifications.

(b) Before awarding any subcontract expected to exceed $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, when entered into, or pricing any subcontract modification involving aggregate increases and/or decreases in costs, plus applicable profits, expected to exceed $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless the price is -

(1) Based on adequate price competition;
(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
(3) Set by law or regulation.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in subsection 15.804-4 of the Federal Acquisition Regulation that, to the best of its knowledge and belief, the data submitted under paragraph (b) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(d) The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that exceeds $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, when entered into.

(End of clause)

80. FAR 52.215-22 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (1-91)

As prescribed in 15.804-8(a), insert the following clause:

PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (JAN 1991)

(a) If any price, including profit or fee, negotiated in connection with this contract, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction.

(b) Any reduction in the contract price under paragraph (a) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which (1) the actual subcontract or (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(c) (1) If the Contracting Officer determines under paragraph (a) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense-

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted;

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer;

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract; or

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2) (i) Except as prohibited in subdivision (c)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if-

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if-

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

(d) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

(2) For Department of Defense contracts only, a penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

(End of clause)

81. FAR 52.215-24 Subcontractor Cost or Pricing Data. (DEC 1991)

As prescribed in 15.804-8(c), insert the following clause in solicitations and contracts when the clause:

SUBCONTRACTOR COST OR PRICING DATA (DEC 1991)

(a) Before awarding any subcontract expected to exceed $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, when entered into, or before pricing any subcontract modification involving a pricing adjustment expected to exceed $100,000 or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, more than $500,000, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless the price is -

(1) Based on adequate price competition;
(2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
(3) Set by law or regulation.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in Subsection 15.804-4 of the Federal Acquisition Regulation (FAR) that, to the best of its knowledge and belief, the data submitted under paragraph (a) above were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds $100,000 or for the Department of Defense, the National Aeronautic and Space Administration, and the Coast Guard, more than $500,000, when entered into, the Contractor shall insert either -

(1) The substance of this clause, including this paragraph (c), if paragraph (a) above requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-25, Subcontractor Cost or Pricing Data - Modifications.

(End of clause)

82. FAR 52.215-1 Examination of Records by Comptroller General. (FEB 1993)

As prescribed in 15.106-1(b), insert the following clause:

EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (FEB 1993)

(a) This clause applies if this contract exceeds the small purchase limitation in Part 13 of the Federal Acquisition Regulation (FAR) and was entered into by negotiation.

(b) The Comptroller General of the United States or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under this contract or for any shorter period specified in Federal Acquisition Regulation (FAR) subpart 4.7, Contractor Records Retention, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract.

(c) The Contractor agrees to include in first-tier subcontracts under this contract a clause to the effect that the Comptroller General or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under the subcontract or for any shorter period specified in FAR subpart 4.7, have access to and the right to examine any of the subcontractor's directly pertinent books, documents, papers, or other records involving transactions related to the subcontract. Subcontract, as used in this clause, excludes (1) purchase orders not exceeding the FAR Part 13 small purchase limitation, and (2) subcontracts or purchase orders for public utility services at rates established to apply uniformly to the public, plus any applicable reasonable connection charge.

(d) The periods of access and examination in paragraphs (b) and (c) above for records relating to (1) appeals under the Disputes clause, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Comptroller General or a duly authorized representative from the General Accounting Office has taken exception shall continue until such appeals, litigation, claims, or exceptions are disposed of.

(End of clause)

83. GSAR 552.215-70 Examination of records by GSA. (APR 1984)

As prescribed in 515.106-70 and 514.201-7(b), insert the following clause:

EXAMINATION OF RECORDS BY GSA (APR 1984)

The Contractor agrees that the Administrator of General Services or any duly authorized representatives shall, until the expiration of 3 years after final payment under this contract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of the Contractor involving transactions related to this contract or compliance with any clauses thereunder. The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Administrator of General Services or any authorized representatives shall, until the expiration of 3 years after final payment under the subcontract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of such subcontractor involving transactions related to the subcontract or compliance with any clauses thereunder. The term "subcontract" as used in this clause excludes (a) purchase orders not exceeding $10,000 and (b) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

(End of Clause)

PAYMENT

84. FAR 52.232-5 Payments under Fixed - Price Construction Contracts. (APR 1989)

As prescribed in 32.111(a)(5), insert the following clause:

PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (APR 1989)

(a) The Government shall pay the Contractor the contract price as provided in this contract.

(b) The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer. The Contractor shall furnish a breakdown of the total contract price showing the amount included therein for each principal category of the work, which shall substantiate the payment amount requested in order to provide a basis for determining progress payments, in such detail as requested by the Contracting Officer. In the preparation of estimates the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration if -

(1) Consideration is specifically authorized by this contract; and

(2) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Along with each request for progress payments, the contractor shall furnish the following certification, or payment shall not be made:

I hereby certify, to the best of my knowledge and belief, that -

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) Payments to subcontractors and suppliers have been made from previous payments received under the contract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code; and

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract.

_____
(Name)

_____
(Title)

_____
(Date)

(d) If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the unearned amount), the Contractor shall -

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in 31 U.S.C. 3903(c)(1)) equal to interest on the unearned amount from the date of receipt of the unearned amount until -

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be construed as -

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) above shall not apply to that portion of progress payments attributable to bond premiums.

(h) The Government shall pay the amount due the Contractor under this contract after -

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A contract action is any action resulting in a contract, as defined in FAR subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(End of clause)

85. FAR 52.232-17 Interest. (JAN 1991)

As prescribed in 32.617(a) and (b), insert the following clause:

INTEREST (JAN 1991)

(a) Notwithstanding any other clause of this contract, all amounts, except amounts that are repayable and which bear interest under a Price Reduction for Defective Cost or Pricing Data clause, that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.

(b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

86. FAR 52.232-23 Assignment of Claims. (JAN 1986)

As prescribed in 32.806(a)(1), insert the following clause:

ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

87. FAR 52.232-27 Prompt Payment for Construction Contracts. (APR 1989)

As prescribed in 32.908(b), insert the following clause:

(a) As authorized in 32.905(c)(1), the Contracting Officer may modify the date in subdivision (a)(1)(i)(A) of the clause to specify a period longer than 14 days if required to afford the Government a reasonable opportunity to adequately inspect the work and to determine the adequacy of the Contractor's performance under the contract.

(b) As authorized in 32.905(c)(5), the Contracting Officer may modify the date in subdivision (a)(4)(i) of the clause to specify a period longer than 7 days for constructive acceptance or constructive approval if required to afford the Government a reasonable opportunity to inspect and test the property furnished or evaluate the services performed.

(c) If applicable, as authorized in 32.906(a) and only as allowed under agency policies and procedures, the Contracting Officer may insert in paragraph (b) of the clause a period shorter than 30 days (but not less than 7 days) for making contract financing payments.

PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (APR 1989)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. Definitions of pertinent terms are set forth in 32.902. All days referred to in this clause are calendar days, unless otherwise specified. The term "foreign vendor" means an incorporated concern not incorporated in the United States or an unincorporated concern having its principal place of business outside the United States.

(a) Invoice Payments.

(1) For purposes of this clause, there are several types of invoice payments which may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project:

(A) The due date for making such payments shall be 14 days after receipt of the payment request by the designated billing office. However, if the designated billing office fails to annotate the payment request with the actual date of receipt, the payment due date shall be deemed to be the 14th day after the date the Contractor's payment request is dated, provided a proper payment request is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, shall be as specified in the contract or, if not specified, 30 days after approval for release to the Contractor by the Contracting Officer.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract):

(A) The due date for making such payments shall be either the 30th day after receipt by the designated billing office of a proper invoice from the Contractor, or the 30th day after Government acceptance of the work or services completed by the Contractor, whichever is later. However, if the designated billing office fails to annotate the invoice with the date of actual receipt, the invoice payment due date shall be deemed to be the 30th day after the date the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) On a final invoice where the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance shall be deemed to have occurred on the effective date of the contract settlement.

(2) An invoice is the Contractor's bill or written request for payment under the contract for work or services performed under the contract. An invoice shall be prepared and submitted to the designated billing office. A proper invoice must include the items listed in subdivisions (a)(2)(i) through (a)(2)(ix) of this clause. If the invoice does not comply with these requirements, the Contractor will be notified of the defect within 7 days after receipt of the invoice at the designated billing office. Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor in the manner described in subparagraph (a)(4) of this clause:

(i) Name and address of the Contractor.

(ii) Invoice date.

(iii) Contract number of other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., prompt payment discount terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in event of a defective invoice.

(viii) For payments described in subdivision (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Any other information or documentation required by the contract.

(3) An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the conditions listed in subdivisions (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. An interest penalty shall not be paid on contracts awarded to foreign vendors outside the United States for work performed outside the United States.

(i) A proper invoice was received by the designated billing office.

(ii) A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority. This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice payment amount and be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(2) of this clause, then the due date on the corrected invoice will be adjusted by subtracting the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties, if requested by the Contractor.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in subdivision (a)(1)(ii) of this clause, Government acceptance or approval shall be deemed to have occurred constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. In the event that actual acceptance or approval occurs within the constructive acceptance or approval period, the determination of an interest penalty shall be based on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The following periods of time will not be included in the determination of an interest penalty:

(A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days.

(B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.

(iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than $1.00 need not be paid.

(iv) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(5) An interest penalty shall also be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.

(6) If this contract was awarded on or after October 1, 1989, a penalty amount, calculated in accordance with regulations issued by the Office of Management and Budget, shall be paid in addition to the interest penalty amount if the Contractor -

(i) Is owed an interest penalty;

(ii) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and

(iii) Makes a written demand, not later than 40 days after the date the invoice amount is paid, that the agency pay such a penalty.

(b) Contract Financing Payments.

(1) For purposes of this clause, if applicable, contract financing payments means a Government disbursement of monies to a Contractor under a contract clause or other authorization prior to acceptance of supplies or services by the Government, other than progress payments based on estimates of amount and value of work performed. Contract financing payments include advance payments and interim payments under cost-type contracts.

(2) If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the (insert day as prescribed by Agency head; if not prescribed, insert 30th day) day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified. For advance payments, loans, or other arrangements that do not involve recurrent submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) A payment clause which obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under the contract.

(2) An interest penalty clause obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause -

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligations to pay an interest penalty.

(3) A clause requiring each subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in subparagraphs (c)(1) and (c)(2) of this clause in each of its subcontracts, and to require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) The clauses required by paragraph (c) of this clause shall not be constructed to impair the right of Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions which -

(1) Permit the Contractor of a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Permit the Contractor or subcontractor to make determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Permit such withholding without incurring any obligation to pay a late payment penalty if -

(i) A notice conforming to the standards of paragraph (g) of this clause has been previously furnished to the subcontractor, and

(ii) A copy of any notice issued by a Contractor pursuant to subdivision (d)(3)(i) of this clause has been furnished to the Contracting Officer.

(e) If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall -

(1) Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to subparagraph (e)(1) of this clause;

(3) Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under subparagraph (e)(1) of this clause;

(4) Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and -

(i) Make such payment within -

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under subdivision (e)(5)(i)) of this clause); or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notify the Contracting Officer upon -

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying -

(A) The amounts withheld under subparagraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until -

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under subdivision (e)(5)(i) of this clause.

(f) (1) If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a "second-tier subcontractor") a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, then the Contractor may, without incurring an obligation to pay an interest penalty under subparagraph (e)(6) of this clause -

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under subdivision (f)(1)(i) of this clause.

(2) As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall pay the amount withheld under subdivision (f)(1)(ii) of this clause to such first-tier subcontractor, or shall incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) A written notice of any withholding shall be issued to a subcontractor (with a copy to the Contracting Officer of any such notice issued by the Contractor), specifying -

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the United States is a party. The United States may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k)The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the United States for such interest penalty. A cost reimbursement claim may not include any amount for reimbursement of such interest penalty.

(End of clause)

88. FAR 52.232-28 Electronic Funds Transfer Payment Methods. (APR 1989)

As prescribed in 32.908(d), insert the following clause:

ELECTRONIC FUNDS TRANSFER PAYMENT METHODS (APR 1989)

Payments under this contract will be made by the Government either by check or electronic funds transfer (through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH), at the option of the Government. After award, but no later than 14 days before an invoice or contract financing request is submitted, the Contractor shall designate a financial institution for receipt of electronic funds transfer payments, and shall submit this designation to the Contracting Officer or other Government official, as directed.

(a) For payment through FEDLINE, the Contractor shall provide the following information:

(1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.

(2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communications System.

(3) Payee's account number at the financial institution where funds are to be transferred.

(4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and American Bankers Association identifying number for the correspondent institution.

(b) For payment through ACH, the Contractor shall provide the following information:

(1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ("C" for checking, "S" for savings).

(4) If the Contractor is a new enrollee to the ACH system, a "Payment Information Form," SF 3881, must be completed before payment can be processed.

(c) In the event the Contractor, during the performance of this contract, elects to designate a different financial institution for the receipt of any payment made using electronic funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.

(d) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Contractor official authorized to provide it, as well as the Contractor's name and contract number.

(e) Contractor failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.

(End of clause)

VALUE ENGINEERING

89. FAR 52.248-3 Value Engineering - Construction. (MAR 1989)

As prescribed in 48.202, insert the following clause:

VALUE ENGINEERING - CONSTRUCTION (MAR 1989)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any instant contract savings realized from accepted VECP's, in accordance with paragraph (f) below.

(b) Definitions. "Collateral costs," as used in this clause, means agency costs of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistic support. The term does not include the normal administrative costs of processing the VECP.

"Instant contract savings," as used in this clause, means the estimated reduction in Contractor cost of performance resulting from acceptance of the VECP, minus allowable Contractor's development and implementation costs, including subcontractors' development and implementation costs (see paragraph (h) below).

"Value engineering change proposal (VECP)" means a proposal that -

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the contract price or estimated cost without impairing essential functions or characteristics; provided, that it does not involve a change -

(i) In deliverable end item quantities only; or

(ii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (h) below.

(4) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(5) A prediction of any effects the proposed change would have on collateral costs to the agency.

(6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Resident Engineer at the worksite, with a copy to the Contracting Officer.

(e) Government action.

(1) The Contracting Officer shall notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer shall notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer shall notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause. The Contracting Officer may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The Contracting Officer's decision to accept or reject all or part of any VECP shall be final and not subject to the Disputes clause or otherwise subject to litigation under the Contract Disputes Act of 1978 (41 U.S.C. 601-613).

(f) Sharing.

(1) Rates. The Government's share of savings is determined by subtracting Government costs from instant contract savings and multiplying the result by (i) 45 percent for fixed-price contracts or (ii) 75 percent for cost-reimbursement contracts.

(2) Payment. Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a modification to this contract to -

(i) Accept the VECP;

(ii) Reduce the contract price or estimated cost by the amount of instant contract savings; and

(iii) Provide the Contractor's share of savings by adding the amount calculated to the contract price or fee.

(g) Collateral savings. If a VECP is accepted, the instant contract amount shall be increased by 20 percent of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings shall not exceed (1) the contract's firm-fixed-price or estimated cost, at the time the VECP is accepted, or (2) $100,000, whichever is greater. The Contracting Officer shall be the sole determiner of the amount of collateral savings, and that amount shall not be subject to the Disputes clause or otherwise subject to litigation under 41 U.S.C. 601-613.

(h) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of $50,000 or more and may include one in subcontracts of lesser value. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Government under this contract, but shall exclude any value engineering incentive payments to a subcontractor. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that these payments shall not reduce the Government's share of the savings resulting from the VECP.

(i) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering - Construction clause of contract [], shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms unlimited rights and limited rights are defined in part 27 of the Federal Acquisition Regulation.)

SUSPENSION/STOP WORK/TERMINATION

90. FAR 52.212-12 Suspension of Work. (APR 1984)

As prescribed in 12.505(a), insert the following clause in solicitations and contracts when a fixed-price construction or architect-engineer contract is contemplated:

SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

(c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

91. GSAR 552.212-74 Non-compliance with contract requirements. (APR 1984)

As prescribed in 512.104(b), insert the following clause:

NON-COMPLIANCE WITH CONTRACT REQUIREMENTS (APR 1984)

In the event the Contractor, after receiving written notice from the Contracting Officer of non-compliance with any requirement of this contract, fails to initiate promptly such action as may be appropriate to comply with the specified requirement within a reasonable period of time, the Contracting Officer shall have the right to order the Contractor to stop any or all work under the contract until the Contractor has complied or has initiated such action as may be appropriate to comply within a reasonable period of time. The Contractor will not be entitled to any extension of contract time or payment for any costs incurred as a result of being ordered to stop work for such cause.

(End of Clause)

92. FAR 52.249-2 Termination for Convenience of the Government (Fixed-Price). (APR 1984) -- Alternate I (APR 1984)

If the contract is for construction, substitute the following paragraph (f) for paragraph (f) of the basic clause:

TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (APR 1984) -- ALTERNATE I (APR 1984)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (6) above; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) After expiration of the plant clearance period as defined in subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(d) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(e) Subject to paragraph (d) above, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (e) or paragraph (f) below, exclusive of costs shown in subparagraph (f)(3) below, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be amended, and the Contractor paid the agreed amount. Paragraph (f) below shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(f) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (e) above:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of -

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (i) above; and

(iii) A sum, as profit on (i) above, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including -

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(g) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (f) above, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(h) The cost principles and procedures of part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(i) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (d), (f), or (k), except that if the Contractor failed to submit the termination settlement proposal within the time provided in paragraph (d) or (k), and failed to request a time extension, there is no right of appeal. If the Contracting Officer has made a determination of the amount due under paragraph (d), (f), or (k), the Government shall pay the Contractor (1) the amount determined by the Contracting Officer if there is no right of appeal or if no timely appeal has been taken, or (2) the amount finally determined on an appeal.

(j) In arriving at the amount due the Contractor under this clause, there shall be deducted -

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(k) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(l) (1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(m) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

93. FAR 52.249-10 Default (Fixed-Price Construction). (APR 1984)

As prescribed in 49.504(c)(1), insert the following clause in solicitations and contracts for construction when a fixed-price contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The clause may also be used when the contract amount is not expected to exceed the small purchase limitation, if appropriate (e.g., if completion dates are essential).

DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if -

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (i) acts of God or of the public enemy, (ii) acts of the Government in either its sovereign or contractual capacity, (iii) acts of another Contractor in the performance of a contract with the Government, (iv) fires, (v) floods, (vi) epidemics, (vii) quarantine restrictions, (viii) strikes, (ix) freight embargoes, (x) unusually severe weather, or (xi) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

(d) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

94. GSAR 552.236-83 Furnishing information and records. (APR 1984)

As prescribed in 536.570-14, insert the following clause:

FURNISHING INFORMATION AND RECORDS (APR 1984)

(a) If the Contractor or any subcontractor under this contract or the officers or agents of the Contractor or any subcontractor, refuses, except as provided by the terms of this contract, to furnish to any Government agency or any establishment in the legislative or judicial branch of the Government information or records reasonably pertinent to this contract. The following actions may be taken:

(1) In the case of a refusal by the Contractor, its officers or agents, the Government may, after affording an opportunity to explain or justify such refusal, terminate the Contractor's right to proceed with the work. The rights and remedies provided in this clause are in addition to those outlined in paragraph (a) of the Default (Fixed-Price Construction) clause of FAR 52.249-10, paragraph (b) of the Liquidated Damages - Construction clause at FAR 52.212-5 and to any other rights and remedies provided by law or under this contract;

(2) In the case of a refusal by a subcontractor, its officers or agents, the Government may, after affording an opportunity to explain or justify such refusal, require the Contractor to terminate the subcontract without cost to the Government, or if the Contractor fails or refuses to effect such termination, the Government may terminate the Contractor's right to proceed with the work under this contract and thereupon the Government may avail itself of the rights and remedies referred to in subparagraph (a)(1) of this clause.

(b) The term "subcontract" as used in this paragraph means any contract entered into or any purchase order issued by a prime contractor under a contract with the Government in connection with the performance of the prime contractor's obligations this contract.

(c) The term "subcontractor" as used in this paragraph means a party to a subcontract other than the prime contractor under this contract.

(End of Clause)

DISPUTES

95. FAR 52.233-1 Disputes. (DEC 1991)

As prescribed in 33.215, insert the following clause:

DISPUTES (DEC 1991)

(a) This contract is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding $50,000 is not a claim under the Act until certified as required by subparagraph (d)(2) below. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d) (1) A claim by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2) For Contractor claims exceeding $50,000, the Contractor shall submit with the claim a certification that -

(i) The claim is made in good faith;

(ii) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and

(iii) The amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(3) (i) If the Contractor is an individual, the certification shall be executed by that individual.

(ii) If the Contractor is not an individual, the certification shall be executed by -

(A) A senior company official in charge at the Contractor's plant or location involved; or

(B) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(e) For Contractor claims of $50,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over $50,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(h) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

PROTESTS

96. FAR 52.233-3 Protest After Award. (AUG 1989)

As prescribed in 33.106(b), insert the following clause:

PROTEST AFTER AWARD (AUG 1989)

(a) Upon receipt of a notice of protest (as defined in 33.101 of the FAR) the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if -

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(End of clause)

97. FAR 52.226-1 Utilization of Indian Organizations and Indian-Owned Economic Enterprises

As prescribed in 26.104, insert the following clause:

UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (AUG 1991)

(a) This clause applies only in the contract includes a subcontracting plan incorporated under the terms of the clause, entitled Small Disadvantaged Business Subcontracting Plan. It does not apply to contracts awarded based on a subcontracting plan submitted and approved under paragraph (g) of the clause at 52.219-9.

(b) Definitions. As used in this clause:
"Indian organization" means the governing body of any Indian tribe (as defined by 25 U.S.C. 145(c)) or entity established or recognized by the governing body for the purpose of 25 U.S.C., chapter 17.
"Indian-owned economic enterprise" means any Indian owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership shall constitute not less than 51 percent of the enterprise.

(c) The Contractor agrees to use its best efforts to give Indian organizations and Indian-owned economic enterprises the (25 U.S.C. 1544) maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contractor may rely on the written representation of the Indian organization or Indian-owned economic enterprise.

(2) If the cost of subcontracting with an Indian organization or Indian-owned economic enterprise exceeds the cost of acquiring the supplies or services from a non-Indian source, the Contractor may request an adjustment to the following:

(i) The estimated cost of a cost-type contract;

(ii) The target cost of a cost-plus-incentive-fee prime contract;

(iii) The target cost and ceiling price of a fixed-price incentive prime contract; or

(iv) The price of a firm-fixed-price prime contract.

(3) The amount of the equitable adjustment to the prime contract shall be the lesser of-

(i) The difference between the estimated cost, target cost or firm-fixed-price included in the subcontract initially awarded to the Indian organization or enterprise and the corresponding estimated cost, target cost or firm-fixed-price which would have been included in a subcontract with the otherwise low, non-Indian offeror; or

(ii) Five percent of the estimated cost, target cost or firm-fixed-price included in the subcontract initially awarded to the Indian organization or enterprise.

(4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(d) The Contracting Officer shall decide the amount of the adjustment and modify the contract accordingly. The Contracting Officer's decision is final and not subject to the Disputes clause of this contract

(End of clause)

TOPIC: **2.7 DETERMINE EXTENT OF MARKETING NEEDED**

Ref: Pages 2-55 and 2-56

Objective: Given a completed solicitation determine the extent of marketing needed to assure fair and reasonable prices are obtained and what types of marketing are effective.

Time: 2:40 - 2:50

Method: Lecture, Discussions

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.7 DETERMINE EXTENT OF MARKETING NEEDED	
	Introduction This lesson is designed to show the student the practical side of the benefits of marketing. It will describe the methods other than the Commerce Business Daily in advertising the Government's requirements. The students will discuss ways and means of accomplishing the objective.	
?	• **<u>Question</u>:** Begin by asking the students to identify the various ways of advertising other than the CBD. As the students respond, list their responses on the blackboard or VAP board for emphasis.	
T/R 2-56	**<u>Answer</u>:** **Compare to Exhibit 2-26 to be sure all of the alternatives are covered. Allow time for discussion as they are listed.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES

OTHER METHODS OF PUBLICIZING CONSTRUCTION CONTRACTS

* Display of the solicitation, such as a bulletin board, located in a public place at the contracts office. This requirement is mandatory for contract actions between $10,000 and $25,000. Construction contractors who attend bid openings are afforded an opportunity to obtain information on future projects. All bulletin board displays are important in construction bids because of the number of subcontractors which serve the prime. It is often impossible for the subcontractors to determine what disciplines are needed without requesting copies of the specification and drawings. Bulletin boards afford easy access to this information.

* Providing local trade union halls a copy of the solicitation for display purposes. This provides a good source of advertising, as many of them will notify their members of the requirement by means of local newsletters and bulletins.

* Providing the local Small Administration Office copies of all solicitations. May attract interest of 8(a) or small businesses.

* By making brief announcements of proposed construction projects to local newspapers, trade journals, trade magazines, or other communications media for publication without cost to the Government.

* By participation in trade fairs pertaining to construction (i.e. equipment). The Small Business Administration frequently holds seminars for small business construction contractors. This is a good way to contact prospective bidders.

* Using means of paid advertising of proposed construction projects in newspapers and local media. This requires approval in accordance with agency procedures.

* By unsolicited announcements in the Dodge Report. The Dodge Report is an excellent source with nationwide coverage. (See Glossary at the end of the text reference for a full description of the Dodge Report).

* Since the objective is to “spread the word” about the project at hand so that maximum competition is achieved, you may want to consider telephone solicitation of local trade unions, requesting that they notify all of their members about your project. This is especially effective when hard to find specialty construction disciplines are needed to perform on the project.

Exhibit 2-26.

NOTE: *By studying Exhibit 2-26 you would find the answer to the question asked by Sondra in the scenario, "Why does a review have to be performed?"*

TOPIC: **2.8 ISSUE THE SOLICITATION**

Ref: Pages 2-57 through 2-60

Objective: Given a solicitation ready to be issued

* Establish Plan Holders List
* Determine Whether To Charge For Issuing Plans And Specs
* Determine Number of Bid Sets Needed

Time: 2:50 - 3:00

Method: Lecture, Discussions

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.8 ISSUE THE SOLICITATION	
	Introduction This lesson is designed to offer practical solutions to problems in issuing plans and specifications.	
?	• **<u>Question</u>:** Begin the short lesson on this topic by asking the students to describe how a construction plan holder's list is compiled, and why is it called a "plan holder's" list? **<u>Answer</u>:** **On solicitations $100,000 or more that require a notice to be issued, the plan holder's list will be made up of all of those firms who responded to the notice that they were interested. On those under $100,000 in which a notice was not required, the list will consist of the firms comprising the Bidder's Mailing List for the type of solicitation being issued.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **Question:** How does the construction bidder's mailing list differ from that of a supply contract bidder's mailing list? *This same question appeared in the scenario at the beginning of the Chapter.* ***Remember?*** **Answer:** **It differs in the following ways:** *** Firms are listed by types of construction.** *** Prime contractors and subcontractors are identified as such.** *** Lists are available upon request. (Allows subcontractors to identify prime contractors so that they may offer quotations).**	
?	• **Question:** Who determines whether to charge for issuing plans and specs? **Answer:** **Agency policy, or local policy. FAR does not specify.**	
	Discuss the advantages and disadvantages of charging for plans and specs. List them on the VAP or blackboard.	
	Advantages: *** "Weeds out" bid shoppers and the curious.** *** Eliminates requests for bid sets when there is no intent to submit a bid.** *** Reimbursement of some of the administrative costs for printing and distributing of bid sets.** *** Fewer bid sets need to be prepared.** **Disadvantages:** *** Difficult to keep records.** *** Administrative burden attached to handling money.** *** Cost may discourage potential bidders from bidding.**	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
?	• **<u>Question:</u>** What is the magic formula for determining how many bid sets to make available for distribution? **<u>Answer:</u>** **No magic formula. It is a matter of best judgement and common sense. Use as an example a dredging contract.** **There are less than a handful of dredging contractors available to bid in any one area. Therefore it would not make sense to have 200 bid sets available. In the interest of saving time, paper work and cost (Cost is a big factor in printing and distribution), each solicitation should be considered independently, based on the facts, current market trends, and the situation at hand.**	
T/R 2-60	**Exhibit 2-28 lists some of the considerations. See how many the students can come up with, listing them briefly on the blackboard or VAP board. Then ask them to turn to their Text/Reference, review Exhibit 2-28, and identify any that were not listed.**	

FACTORS FOR DETERMINING NUMBER OF BID SETS

- Historical data may provide a clue concerning the response based on similar projects performed in the same area.
- The number of responses received as a result the Presolicitation Notice.
- Remember that the dollar value of the project is not always an accurate measurement (i.e. a dredging contract with an estimated cost of several million dollars will not result in issuing more than a handful of bids). Dredging is a highly specialized field with a limited number of contractors available to respond.
- The geographical location of the project. It could be located in a remote area where there are a limited number of local contractors who would be likely to respond.
- The extent to which you are marketing the project.
- Time allowed for submission of bids.
- Set-asides for small business, emerging small business, 8(a) competitive, or a small disadvantaged business will have an impact on the number of copies needed. An unrestricted bid will usually generate a greater demand.
- Whether there is a charge for the bid sets. (A charge will most likely eliminate all but the serious minded in bidding.)
- The number of copies to be mailed to each bidder. (Normally an original and l or 2 copies of the bid, with one complete set of drawings).
- Projects with a large number of diversified subcontracting opportunities will usually result in a larger number of requests. Subcontractors, when reading the CBD, cannot always determine if their trade is involved and may request a copy of the bid set in order to examine it for possible opportunities.
- The number needed for internal use, file copies, and award distribution.
- You should also maintain a reasonable number of copies on hand so that all of your needs will be filled, as well as providing for a number of additional requests on a “first come-first-served” basis.

Exhibit 2-28.

TOPIC: **2.9 AMEND OR CANCEL A SOLICITATION**

Ref: Pages 2-61 and 2-62

Objective: Given a change in Government requirement, or a change in wage rates after solicitation is issued but before bid opening.

Time: 3:00 - 3:30
3:30 - 4:30 BREAK

Method: Case Study

LESSON PLAN

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	2.9 AMEND OR CANCEL A SOLICITATION	
	Introduction Wage rates are frequently amended by the Department of Labor. This lesson is expressed in terms of a case study entitled "To Amend Or Not To Amend", which presents a problem peculiar to construction contracts because it deals with the Department of Labor Davis Bacon Wage Rates. The presentation on this objective will be accomplished by a case study which is designed to demonstrate the decision making process when faced with an amendment of a DOL wage decision received after issuing a solicitation, but prior to bid opening.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	CASE STUDY CE-2.9, **"To Amend or Not to Amend"** **Time:** 20 minutes **Method:** Independent	
FAR 22.404-6	**Purpose:** To reinforce the familiarity of the FAR requirement concerning amending the solicitation to incorporate a wage rate change when the DOL amendment is received after issuing the solicitation, but before bid opening is held.	
T/R 2-61	**Instructions:** Ask the students to turn to CE-2.9, p.CE 2-379 in their Classroom Exercise book and read the scenario entitled, "To Amend Or Not To Amend". After reviewing the wage determination, apply the criteria described in Exhibit 2-29 of the Text/Reference, and make a recommendation to the Contracting Officer as to whether the solicitation should be amended and bid postponed, or amended without postponement, or that no action be taken. After the students have been provided the opportunity to read the case study, consult their text, review the wage determination modification and have made their decisions, ask for a show of hands as to what the recommendation should be. Provide the correct answer as shown in the Instructor's key to the exercise.	

CASE STUDY CE-2.9

'To Amend or Not to Amend'

Bill Gibson breathed a big sigh of relief. The Contracts Training Center Complex has "been on the street" for some time now and everything seems to be running smoothly. No questions from the construction contractors have been raised about the technical specifications (a sign of a good clean spec), no protests, and the bidding climate seems to be good. He glanced up at the calendar. "As a matter of fact, the bid is due to be opened just 7 days from today (Oct. 31, 1991)," he thought as he closed his office for the day.

As it turned out, his positive outlook was shortlived. The next morning as he arrived in the office he was handed a note from Joyce, the contract specialist, telling him that a DOL wage rate modification had been received that may affect the CTC bid opening.

Using the wage rate modification which is provided, and based on the following facts, should Bill Gibson take any action? If so, what would be your recommendation:?

FACTS:

* Bid opening date is established at Oct. 31, 1991, 10 days from the effective date of the publication of the change in the Federal Register.

* Bid opening date is established at 7 days from the receipt of the modification by the Contracting Officer.

* The requirement is of a high priority and delay of the bid opening would be detrimental to the agency.

After studying the facts, the DOL Wage Determination Modification, and the information contained in the Text/Reference, my recommendation to the Contracting Officer is:

_____

_____

_____

_____

Rationale:

_____

_____

_____

U. S. DEPARTMENT OF LABOR

MODIFICATION TO GENERAL WAGE DECISION NO. CA90-2

Modification to General Wage Decision No. CA90-2, effective 21 Oct 1991.

State: **CALIFORNIA**

County(ies): Imperial, Inyo, Kern, Los Angeles, Mono, Orange, Riverside, San Bernardino, San Luis Obispo, Santa Barbara, and Ventura.

Construction Type: Building, Heavy Highway, Residental & Dredging.

Construction Description: Building Construction: Heavy construction (does not include TV/Grout work or water well drilling; and in Kern County, does not include oil well drilling); Hi8ghw construction; Residential construction; Residential construction (includes single family homes and apartments up to and including 4 stories) (does not include Inyo and Mono counties); Dredging. This decision does not include hopper dredge work or the installation of solar energy systems.

Modification Record No.	Publication Data Feb 2, 1990	Page No(s).
1	Feb. 2, 1990	42, 44-54, 56, 58, 60-66b
2	Mar. 30, 1990	42-
3	Apr. 13, 1990	47
4	May 4, 1990	42-66a
5	May 1, 1990	42, 44-52
6	June 22, 1990	46 -49, 54

NOTE: ELECTRICIANS WAGES ARE DETERMINED BY THE DOLLAR VALUE OF THE CONTRACT.

POWER EQUIPMENT OPERATORS
(Continued)

Group XXII - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, up to and including 25 yds struck)

Group XXIII - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments of 25 yds. and up to and including 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating with the Tandem Push-Pull System (multiple engine, up to and including 25 yds. struck)

Group XXIV - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (single engine, over 50 yds. struck), Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (multiple engine, Euclid, Caterpillar and similar over 25 yds. and up to 50 yds. struck)

Group XXV - Rubber-Tired Earth Moving Equipment Operator, operating equipment with the Tandem Push-Pull System (Multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck

*POWER EQUIPMENT OPERATORS - CRANES, PILEDRIVING, AND HOISTING EQUIPMENT

Group 1: Engineer Oiler, Fork Lift Operator (under 5 tons capacity)

Group 2: Truck Crane Oiler

Group 3: A-frame or Winch Truck Operator, Ross Carrier Operator (jobsite)

Group 4: Bridge-Type Unloader and Turntable Operator, Helicopter Hoist Operator

Group 5: Stinger Crane (Austin-Western or similar type), Tugger Hoist Operator (1 drum)

Group 6: Bridge Crane Operator, Cretor Crane Operator, Forklift Operator (over 5 tons), Hoist Operator (Chicago Boom and similar type), Lift Mobile Operator, Lift Slab Machine Operator (Vagtborg and similar types), Material Hoist Operator, Shovel, Backhoe, Dragline, Clamshell Operator (over 3/4 yd. and up to 5 cu. yds. MRC), Tugger Hoist Operator

CE-2.9

Wage Determination Modification

POWER EQUIPMENT OPERATORS
(Continued)

Group 7: Pedestal Crane Operator; Shovel, Backhoe, Dragline, Clamshell Operator (over 5 cu. yds. MRC), Tower Crane Repair, Tugger Hoist Operator (3 Drum)

Group 8: Crane Operator (up to and including 25 ton capacity), Crawler Transporter Operator, Derrick Barge Operator (up to and including 25 ton capacity), Hoist Operator, Staff Legs, Guy Derrick or similar type (up to and including 25 ton capacity), Shovel, Backhoe, Dragline, Clamshell Operator (over 7 cu. yds. MRC)

Group 9: Crane Operator (over 25 tons, and up to and including 50 ton MRC), Derrick Barge Operator (over 25 tons, up to and including 50 ton MRC). Highline Cableway Operator, Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 25 tons, up to and including 50 ton MRC), K-Crane Operator, Polar Crane Operator, Tower Crane Operator

Group 10: Crane Operator (over 50 tons, and up to and including 100 t on MRC), Derrick Barge Operator (over 50 tons, up to and including 100 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 50 tons, up to and including 100 ton MRC)

Group 11: Crane Operator (over 100 tons, and up to and including 200 ton MRC), Derrick Barge Operator (over 100 tons, up to and including 200 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 100 tons, up to and including 200 ton MRC),Mobile Tower Crane Operator (over 100 tons, up to and including 200 ton MRC).

Group 12: Crane Operator(over 200 tons, up to and including 300 ton MRC), Derrick Barge Operator (over 200 tons, up to and including 300 ton MRC), Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 200 tons, up to and including 300 tn MRC), Mobile Tower Crane Operator (over 200 tons, up to and including 300 ton MRC.)

Group 13: Crane Operator (over 300 tons), Derrick Barge Operator (over 300 tons, Helicopter Pilot, Hoist Operator, Stiff Legs, Guy Derrick or similar type (over 300 tons), Mobile Tower Crane Operator (over 300 tons).

CE-2.9

Wage Determination Modification

POWER EQUIPMENT OPERATORS
(Continued)

POWER EQUIPMENT OPERATORS - TUNNEL GROUP

Group 1: Heavy Duty repair person helper or welder helper

Group 2: Truck crane oiler (25 tons and under)

Group 3: Truck crane oiler (over 25 tons)

Group 4: Heavy duty repairperson and/or welder

Group 5: Truck crane operator (up to and including 25 tons)

Group 6: Truck crane operator (over 25 tons capacity up to and including 80 ton MRC)

Group 7: Mobile tower crane

Group 8: Tunnel mole boring machine operator

*POWER EQUIPMENT OPERATORS - TRUCK CRANE OPERATOR

Group 1: Heavy duty repair person helper or welder helper

Group 2: Truck crane oiler (25 tons & under)

Group 3: Truck crane oiler (over 25 tons)

Group 4: Heavy duty repairperson and/or welder

Group 5: Truck crane operator (up to and including 25 tons)

Group 6: Truck crane operator (over 25 ton capacity)

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR KEY TO THE EXERCISE CASE STUDY CE-9 **"To Amend or Not to Amend"**	
FAR 22. 404-6	**FAR provides the procedures to follow when the Department of Labor issues an amendment to a Wage Rate.** * **The need for inclusion of a modification in a solicitation which has been issued, but bids have not been opened are based on time of receipt:** **Either: Date of Publication in the Federal Register, OR:** **<u>Date of Receipt in the contracting office,</u>** **<u>WHICHEVER OCCURS FIRST.</u>** The scenario describes the receipt of the modification as occurring 10 days prior to the bid opening date, based on publication of the Federal Register, or 7 days from date of receipt of the wage rate modification at the contracts office. Therefore the effective date is the date that the modification was printed in the Federal Register. In sealed bidding, an amendment must be issued modifying a wage rate if it is received by the contracting agency, or notice of the modification is published in the Federal Register, 10 or more calendar days before the date of bid opening, OR It is received or published LESS than 10 days before date of bid opening, unless the Contracting Officer finds that there is not reasonable time for the contractors to make the changes. If the Contracting Officer does not issue an amendment, the file must be documented with a determination that the CO does not believe there is sufficient time for the prospective bidders to incorporate the changes prior to bid opening and there is sufficient reasons not to delay bid opening.	

REF	STEPS IN PRESENTING THE TOPIC	INSTRUCTOR NOTES
	INSTRUCTOR KEY TO THE EXERCISE CASE STUDY CE-9 (Continued)	
	• **QUESTION:** *In the scenario Joyce had some doubt as to what must be done on a DOL Wage Rate change that was received before bid opening. What criteria would she use to decide?* **ANSWER:** **Joyce would use the same criteria that we are using in this exercise.** **By issuing an amendment to incorporate the wage changes, the bid opening must be postponed, if necessary,** **HOWEVER;** **If the modification does not change the wage rates and would not warrant amending the bid opening date, the Contracting Officer shall amend the solicitation by including the number and date of the modification only. The modification is not applicable to Santa Barbara County where the project is located. (Note the cover page of the Wage Rate.). In addition note that the trades included in the modification are not any of those used in our case study. Therefore it would not affect the solicitation.** **Based on the FAR criteria contained above, the student's recommendation to the Contracting Officer should be to issue an amendment citing only the wage rate modification number, as the disciplines covered in the amendment do not affect the instant project.**	

APPENDIX

GUIDE SPECIFICATION

Not available electronically yet - copy from master sheets