

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

1 1

2. AMENDMENT/MODIFICATION NO.

3. EFFECTIVE DATE

4. REQUISITION/PURCHASE REQ. NO.

5. PROJECT NO. (If applicable)

R0008

04/15/04

6. ISSUED BY CODE

J4P0000

7. ADMINISTERED BY (If other than Item 6)

CODE

DACA85

US ARMY ENGINEER DISTRICT, AK
CEPOA-CT (W911KB)
PO BOX 6898
ELMENDORF AFB, AK 99506-6898

US ARMY ENGINEER DISTRICT, AK
CEPOA-CO-SAO
PO BOX 6898
ELMENDORF AFB, ALASKA 99506-6898

MARGIE JACKSON (907)753-2836

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

(X) 9A. AMENDMENT OF SOLICITATION NO.

X DACA85-03-B-0006

9B. DATED (SEE ITEM 11)

03/01/04

10A. MODIFICATION OF CONTRACT/ORDER NO.

10B. DATED (SEE ITEM 13)

CODE 089C4

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 0 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If required)

PROJECT TITLE AND LOCATION: Construct to Add/Alter Ops Ofc's Hangar 3 and 15, Elmendorf AFB, Alaska

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

BID OPENING DATE IS 21 APR 04, 2:00 PM, local time, at the US Army Corps of Engineers-Alaska District, 2204 Third St, Elmendorf AFB, Alaska

NOTICE TO OFFERORS: PLEASE MARK OUTSIDE OF ENVELOPE IN WHICH BID IS SUBMITTED TO SHOW AMENDMENTS RECEIVED. YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS AMENDMENT ON THE REVERSE SIDE OF STANDARD FORM 1442.

IMPORTANT NOTE: Keep in mind that the base is still under tight security measures and access to non-DOD personnel is limited or restricted and requires extra time to process through the Boniface Gate.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

16A. NAME AND TITLE OF SIGNER (Type or print)

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

(Signature of person authorized to sign)

(Signature of Contracting Officer)

CONTINUATION SHEET

Amendment No. R0008

Page: 2

a. The following drawings are substituted for the superseded drawings. The identifier "AM #8" appears before and after the revised drawings listed in SECTION 00800 SPECIAL CONTRACT REQUIREMENTS, SCR-5.

ELM265 A1.02 SECOND FLOOR PLAN
A1.08 DOOR SCHEDULES, TYPES & DETAILS

b. The following revised documents are substituted for the superseded documents. The identifier "AM #8" appears before and after new and revised material, except as noted below.

PROJECT TABLE OF CONTENTS
BID SCHEDULE (BS)
SECTION 00800 SPECIAL CONTRACT REQUIREMENTS

TECHNICAL SPECIFICATIONS (including submittal registers):

SECTION 06100 ROUGH CARPENTRY (including submittal register)

SECTION 08710 DOORS HARDWARE (including submittal register)

NOTE: Revisions within the following documents do not contain the above referenced identifiers.

SUBMITTAL REGISTERS

c. The following sections (including submittal registers) are deleted.

NONE

d. The following section is added.

SECTION 09650 RESILIENT FLOORING (including submittal register)

e. The following item is added:

Questions for Clarification

f. NOTICE TO BIDDERS: PLEASE MARK OUTSIDE OF ENVELOPE IN WHICH BID IS SUBMITTED TO SHOW AMENDMENTS RECEIVED. YOU ARE REQUIRED TO ACKNOWLEDGE RECEIPT OF THIS AMENDMENT ON YOUR COMPANY/FIRM COVER LETTER.

SUBJECT: Solicitation Number DACA85-03-B-0006, Operation Vaults, Hangers 3, and 15 on Elmendorf AFB, Alaska. Amendment #8

AMENDMENT OF SOLICITATION CONTINUATION SHEET

1. If you do not have a pass, e-mail me at Margie.j.jackson@poa02.usace.army.mil, 48 hours before the 21 April 2004.

2. Minutes of the Pre-Bid Conference/Site Visit on 19 March 2004, at the Education Building, Elmendorf AFB, Alaska, for ELM265/266 Operation Vaults Hangers 3 and 15 are attached. The following corrections are made to the minutes.

a. Change line numbers 3 & 4 to:

I am leaving ~~Jean Reebuck's~~ June Wohlbach's –she's my team leader and my contracting officer

b. Change line number 9 to:

And please come to the ~~H-Room~~ Atrium.

c. Change line numbers 10 thru 15 to:

We've been having folks floating all over the different buildings, so it's getting sort of hard to find you. Please come to the ~~H-Room~~ Atrium; that way we can centrally locate everybody. It would make it so much easier if you come to the ~~H-Room~~ Atrium and we can pick you up at one time.

0006

OPERATIONS VAULT, HANGAR 3 AND HANGAR 15

ELMENDORF AFB, ALASKA

<u>Item No.</u>	<u>Description</u>	<u>Estimated Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
BASE ITEMS					
0001.	Construct the Operations Vault (Building Extension) of Hangar 3 within the building extensions' 5-foot lines, complete.	1	Lump sum	\$ _____	\$ _____
0002.	Construct the Operations Vault (Building Extension) of Hangar 15 within the building extensions' 5-foot lines, complete.	1	Lump sum	\$ _____	\$ _____
0003.	Construct site work and utilities beyond Hangar 3 extensions 5-foot lines, complete.	1	Lump sum	\$ _____	\$ _____

AM#8...Text Deleted

Total of Base Items 0001 thru 0003
\$ _____

...AM#8

OPTIONAL ITEMS FOR HANGAR 15

0005.	Option 1: Install carpets on areas that are not already included in the base bid including the removal of asbestos containing materials (floor tiles) in these areas, complete.	1	Lump sum	\$ _____	\$ _____
0006.	Option 2: Skim, coat existing wall finish with finishing plaster and paint to match new finishes replace electrical outlets and covers, this work to be done in rooms that are not already included in the base bid, complete.	1	Lump sum	\$ _____	\$ _____
0007.	Option 3: Install additional A/C for the Flight Simulator, complete.	1	Lump sum	\$ _____	\$ _____

Total of Optional Items 0005 thru 0007 (Option 1 thru 3)
\$ _____

Total of Base and Optional Items (0001 thru 0007)
\$ _____

1. EVALUATION OF BIDS: Award will be made to the low, responsive, responsible bidder on total of all items.
2. EVALUATION OF OPTIONS. See FAR Clause 52.217-5.
3. INCOMPLETE BIDS. Failure to submit a bid on all items in the schedule will result in an incomplete bid and the bid will be rejected. Unit prices must be shown for each item within the schedule.
4. AWARD: Notwithstanding any other provisions of this Invitation for Bids concerning method of award, award will be made as a whole to the low, responsive, responsible bidder.

--End of Bidding Schedule --

SECTION 00800
SPECIAL CONTRACT REQUIREMENTS

SCR-1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984) (FAR 52.211-10):

The Contractor will be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the Notice to Proceed (NTP), (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 01 December 2004. The completion date is based on the assumption that the successful bidder will receive the Notice to Proceed by 05 April 2004. 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 of the issuance of the Notice to Proceed results from the failure of the Contractor to execute the contract and give the required performance and payment of bonds within the time specified in the bid. The time stated for completion shall include the final clean up of the premises of Hangars 3 and 15.

SCR-2 NOT USED

SCR-3 LIQUIDATED DAMAGES-CONSTRUCTION (SEP 2000) (FAR 52.211-12):

(a) The contractor must complete the required Hangar 15 exterior works (i.e., clearing staging area, removing equipment and other associated exterior works) by 01 September 2004. If the Contractor fails to complete the work that they can perform during the period from 15 May 2004 to 01 September 2004 as stipulated in SCR 1, the Contractor shall pay liquidated damages to the Government in the amount of \$480.00 for each calendar day until the work is completed or accepted.

(b) If the Contractor fails to complete the entire work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$1,627.00 for each calendar day of delay until the work is completed or accepted.

(c) Hangar 3: If the Contractor fails to complete all connections including testing and certification to the new security panel within 72 hours after cutting the 2nd floor door for penetration or any other penetration to the existing vault as specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$75.00 per hour of delay until work is completed or accepted.

(d) If the government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

SCR-4 NOT USED

SCR-5 CONTRACT DRAWINGS AND SPECIFICATIONS (Aug 2000) (DFARS 252.236-7001):

(a) The Government will provide the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall --

- (1) Check all the drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general -

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the mis-description of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

DRAWINGS FOR ELM265 (OPERATIONS VAULT, HANGAR 3)

Drawing No.	Sheet No.	Title	Rev. No.	Date
		<u>GENERAL</u>		
NONE	G1.01	COVER SHEET	NONE	20 FEBRUARY 2004
"	G1.02	INDEX SHEET	"	"
AF-16-06-4298	LV-1	LOCATION VICINITY MAP	"	"
		<u>CIVIL</u>		
AF 39-01-149	C1.01	GENERAL SITE & UTILITIES	"	"
"	C1.02	DEMOLITION	"	"
"	C1.03	EXCAVATION	"	"
"	C1.04	PAVEMENT & WATER DETAILS	"	"
"	C1.05	MISCELLANEOUS DETAILS	"	"

Drawing No.	Sheet No.	Title	Rev. No.	Date
AF 39-01-149	C1.06	FENCE DETAILS	NONE	20 FEBRUARY 2004
		<u>HAZARDOUS MATERIALS</u>		
"	H1.01	HAZARDOUS MATERIALS	"	"
		<u>ARCHITECTURAL</u>		
"	A0.01	CODE ANALYSIS SHEET	4	26 MARCH 2004
"	A0.02	DEMOLITION PLAN	"	"
"	A1.01	FIRST FLOOR PLAN	"	"
AM#8...				
"	<u>A1.02</u>	<u>SECOND FLOOR PLAN</u>	"	<u>15 APRIL 2004</u>
				...AM#8
"	A1.03	ELEVATIONS	NONE	20 FEBRUARY 2004
"	A1.04	SECTIONS	"	"
"	A1.05	DETAILS	"	"
"	A1.06	ROOF PLAN & DETAILS	"	"
"	A1.07	WALL SECTIONS	4	26 MARCH 2004
AM#8...				
"	<u>A1.08</u>	<u>DOOR SCHEDULES, TYPES & DETAILS</u>	"	<u>15 APRIL 2004</u>
				...AM#8
"	A1.09	REFLECTED CEILING PLAN	"	26 MARCH 2004
"	A2.01	STAIR DETAILS	NONE	20 FEBRUARY 2004
"	A2.02	ROOM FINISH SCHEDULES & COLUMN DETAILS	"	"
"	A2.03	INTERIOR ELEVATIONS & WALL TYPES	"	"
"	A2.04	COVERED ENTRY SECTIONS & DETAILS	"	"
"	A2.05	MISC. DETAILS	"	"
		<u>STRUCTURAL</u>		
"	S1.01	GENERAL NOTES & ABBREVIATIONS	"	"
"	S1.02	FLOOR LAYOUT & SLAB PLAN & DETAILS	"	"
		<u>MECHANICAL</u>		
"	M1.01	MECHANICAL LEGEND AND SCHEDULE	"	"
"	M1.02	MECHANICAL DEMOLITION PLAN	"	"

Drawing No.	Sheet No.	Title	Rev. No.	Date
AF 39-01-149	M1.03	FIRST FLOOR HEATING AND VENTILATION PLAN	NONE	20 FEBRUARY 2004
"	M1.04	SECOND FLOOR HEATING AND VENTILATION PLAN	4	26 MARCH 2004
"	M1.05	MECHANICAL SECTIONS, ROOF PLAN, & CONTROLS	NONE	20 FEBRUARY 2004
"	M1.06	HYDRONIC PIPING ISOMETRIC DIAGRAM	"	"
"	M1.07	MECHANICAL DETAILS	"	"
		ELECTRICAL		
"	E1.01	LEGENDS, ABBREVIATION	"	"
"	E1.02	EXISTING/DEMOLITION ELECTRICAL PLAN	4	26 MARCH 2004
"	<u>E1.03</u>	<u>NEW LIGHTING PLAN</u>	"	"
"	E1.04	POWER PLAN	NONE	20 FEBRUARY 2004
"	E1.05	POWER ONE LINE DIAGRAM	"	"
"	E1.06	SECURITY SYSTEM PLAN	"	"
"	E1.07	COMMUNICATIONS PLAN	"	"
"	E1.08	COMMUNICATIONS DETAILS	"	"
"	E1.09	ELECTRICAL/COMM DETAILS	"	"
"	E1.10	COMMUNICATIONS DETAILS	"	"
"	E1.11	PANEL SCHEDULE	"	"
"	E1.12	LIGHTING SCHEDULE	"	"
"	E1.13	COMMUNICATIONS DETAILS	"	"
		FIRE PROTECTION		
"	F1.01	FIRE ALARM PLAN	"	"
		<u>EXHIBIT</u>		
NONE	EXH 1	EXHIBIT 1	NONE	NONE
NONE	EXH 2	EXHIBIT 2	NONE	NONE
"	EXH 3	EXHIBIT 3	"	"

Drawing No.	Sheet No.	Title	Rev. No.	Date
"	EXH 4	EXHIBIT 4	"	"

DRAWINGS FOR ELM266 (OPERATIONS VAULT, HANGAR 15)

Drawing No.	Sheet No.	Title	Rev. No.	Date
		<u>GENERAL</u>		
NONE	G1.01	COVER SHEET	NONE	20 FEBRUARY 2004
NONE	G1.02	INDEX SHEET	"	"
		<u>LOCATION AND VICINITY MAP</u>		
AF 16-06-4299	LV-1	LOCATION VICINITY MAP	"	"
		<u>CIVIL</u>		
AF 39-01-150	C1.01	GENERAL SITE & UTILITIES PLAN	"	"
"	C1.02	DEMOLITION PLAN & EXCAVATION SECTION	"	"
"	C1.03	DETAILS	"	"
		<u>HAZARDOUS MATERIALS</u>		
"	H1.01	HAZARDOUS MATERIALS	"	"
		<u>ARCHITECTURAL</u>		
"	A1.00	CODE ANALYSIS	4	26 MARCH 2004
"	A1.01	DEMOLITION PLAN	"	"
"	A1.02	1ST FLOOR PLAN	"	"
"	A1.03	BUILDING ELEVATION	NONE	20 FEBRUARY 2004
"	A1.04	BUILDING SECTIONS	"	"
"	A1.05	ROOF PLAN	"	"
"	A1.06	DETAILS	"	"
"	A1.07	WALL SECTIONS	"	"
"	A1.08	DOOR SCHEDULE AND DETAILS	"	"
"	A1.09	DEMO/EXISTING REFLECTED CEILING PLAN	"	"

Drawing No.	Sheet No.	Title	Rev. No.	Date
AF 39-01-150	A1.10	WINDOW DETAILS	NONE	20 FEBRUARY 2004
"	A1.11	INTERIOR ELEVATIONS	"	"
"	A1.12	PLAN DETAILS AND WALL TYPES	"	"
"	A1.13	REFLECTED CEILING PLAN	"	"
"	A1.14	FINISH SCHEDULE	"	"
		<u>STRUCTURAL</u>		
"	S1.01	GENERAL NOTES & ABBREVIATIONS	"	"
	S1.02	FLOOR LAYOUT & SLAB PLAN & DETAILS	"	
"	S1.03	DETAILS	"	"
		<u>MECHANICAL</u>		
"	M1.01	MECHANICAL LEGEND AND SCHEDULE	"	"
"	M1.02	EXISTING MECHANICAL AND DEMOLITION PLANS	"	"
"	M1.03	NEW HVAC PLAN	"	"
"	M1.04	NEW PIPING PLAN	"	"
"	M1.05	MECHANICAL ROOF PLAN	"	"
"	M1.06	MECHANICAL SECTIONS	"	"
"	M1.07	MECHANICAL DETAILS	"	"
		<u>ELECTRICAL</u>		
"	E1.01	LEGENDS, ABBREVIATION	"	"
"	E1.02	EXISTING/DEMOLITION ELECTRICAL PLAN	"	"
"	E1.03	NEW LIGHTING PLAN	"	"
"	E1.04	NEW POWER PLAN	"	"
	E1.05	POWER ONE LINE DIAGRAM	"	"
"	E1.06	NEW DATA/TELEPHONE PLAN	"	"
"	E1.07	LIGHTING AND PANEL SCHEDULE	"	"

Drawing No.	Sheet No.	Title	Rev. No.	Date
AF 39-01-150	E1.08	SECURITY SYSTEM PLAN	NONE	20 FEBRUARY 2004
"	E1.09	COMMUNICATIONS DETAILS	"	"
"	E1.10	DATA/TELEPHONE DETAILS	"	"
<u>FIRE PROTECTION</u>				
"	F1.01	FIRE ALARM PLAN	"	"
<u>EXHIBIT</u>				
NONE	EXH 1	EXHIBIT 1	NONE	NONE
"	EXH 2	EXHIBIT 2	"	"
"	EXH 3	EXHIBIT 3	"	"

SCR-6 BRAND NAME OR EQUAL (Aug 1999) (FAR 52.211-6) :

(a) If an item in this solicitation is identified as "brand name or equal," the purchase description reflects the characteristics and level of quality that will satisfy the Government's needs. The salient physical, functional, or performance characteristics that "equal" products must meet are specified in the solicitation.

(b) To be considered for award, offers of "equal" products, including "equal" products of the brand name manufacturer, must-

(1) Meet the salient physical, functional, or performance characteristic specified in this solicitation;

(2) Clearly identify the item by-

- (i) Brand name, if any; and
- (ii) Make or model number;

(3) Include descriptive literature such as illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modifications the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modifications.

(c) The Contracting Officer will evaluate "equal" products on the basis of information furnished by the offeror or identified in the offer and reasonably available to the Contracting Officer. The Contracting Officer is not responsible for locating or obtaining any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an "equal" product, the offeror shall provide the brand name product referenced in the solicitation.

SCR-7 CERTIFICATES OF COMPLIANCE:

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in 3 copies. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

SCR-8 SUBMITTALS (ER 415-1-10, 30 May 1995):

Within 30 days after receipt of Notice to Proceed, the Contractor shall complete and submit to the Contracting Officer, in triplicate, submittal register ENG Form 4288 listing all submittals and dates. In addition to those items listed on ENG Form 4288, the Contractor shall furnish submittals for any deviation from the plans or specifications. The scheduled need dates must be recorded on the document for each item for control purposes. In preparing the document, adequate time (minimum of 30 days) shall be allowed for review and, only when stipulated, approval and possible resubmittal. Scheduling shall be coordinated with the approved progress schedule. The Contractor's Quality Control representative shall review the listing at least every 30 days and take appropriate action to maintain an effective system. Copies of updated or corrected listing shall be submitted to the Contracting Officer at least every 60 days in the quantity specified. Payment will not be made for any material or equipment which does not comply with contract requirements.

Section 01330 includes an ENG Form 4288 listing technical items the Contractor shall submit to the Contracting Officer, as indicated in the contract requirements.

SCR-9 IDENTIFICATION OF GOVERNMENT-FURNISHED PROPERTY (APR 1984) (FAR 52.245-3):

(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 to the contractor 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 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.

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Location</u>	<u>Available Data</u>
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1	Core by Best	19	Elmendorf AFB	During Construction
2	CD-X09 Combination Deadbolt Device by Kaba Mas	1	Elmendorf AFB	During Construction

SCR-10 ELMENDORF AFB PHYSICAL DATA (APR 1984): Data and information furnished or referred to below are furnished for the Contractor's 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 site investigation.

b. Location: Elmendorf AFB is located on the north edge of Anchorage, Alaska.

c. Transportation:

(1) Water: Anchorage is a port of call for scheduled and unscheduled commercial and military deep and shallow draft vessels in the Alaska trade.

(2) Air: Scheduled and charter commercial airline service is available from airports in Anchorage.

(3) Land: Anchorage is connected to the primary and secondary state highway system and is accessible from the lower 48 states via the Alaska Highway.

(4) Railroad: The Alaska Railroad offers freight service from the 48 contiguous states and Canada via rail barge and trainship through Whittier, and from Seward, to Anchorage and Fairbanks. In addition to the freight service, scheduled passenger service and express service between Anchorage and Fairbanks, and passenger service between Anchorage and Whittier are also available. Fairbanks (including Eielson AFB and Ft. Wainwright) is the northern terminus, and Seward and Whittier are the southern terminals of the Alaska Railroad.

d. Communications: The Contractor shall make all arrangements for required communication service directly with the Alaska Communications Systems (ACS) located at 10491 Necrason Avenue, Elmendorf AFB. The Government does not guarantee the adequacy or efficiency of the service or the number of telephones that can be assigned to the Contractor.

e. Weather Data: A Climatological Summary for Elmendorf AFB is attached to the end of this section.

SCR-11 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984) (FAR 52.236-14):

(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.

SCR-12 IDENTIFICATION OF EMPLOYEES AND MILITARY REGULATIONS:

(a) The Contractor shall be responsible for compliance with all regulations and orders of the Commanding Officer of the Military Installation, respecting identification of employees, movements on installation, parking, truck entry, and all other military regulations which may affect the work.

(b) The work under this contract is to be performed at an operating Military Installation with consequent restrictions on entry and movement of non-military personnel and equipment.

SCR-13 INSURANCE - WORK ON A GOVERNMENT INSTALLATION (JAN 1997) (FAR 52.228-5):

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the following kinds and minimum amounts of insurance:

(1) Workman's Compensation and Employers' Liability Insurance: \$100,000.00.

(2) General Liability Insurance: A Bodily Injury, Comprehensive policy which provides \$500,000.00 per occurrence.

(3) Automobile Liability Insurance: A comprehensive policy which provides \$200,000.00 per person and \$500,000.00 per occurrence for bodily injury and \$20,000.00 per occurrence for property damage, covering the operation of its automobiles used in connection with the performance of the contract.

(4) Aircraft Public and Passenger Liability Insurance: Where aircraft are used in connection with the performance of the contract; \$200,000.00 per person, \$500,000.00 per occurrence for bodily injury, other than passenger liability, and \$200,000.00 per occurrence for property damage; \$200,000.00 per person for passenger liability bodily injury aggregate equal to the total number of seats or number of passengers, whichever is greater.

(5) Vessel Collision Liability and Protection and Indemnity Liability Insurance: Where vessels are used in connection with the performance of the contract.

(b) Before commencing the work under this contract, the Contractor shall notify 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 above. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

SCR-14 SPECIAL SAFETY REQUIREMENTS:

The Safety and Health Requirements Manual referenced in paragraph Accident Prevention of the Contract Clauses is amended as indicated below. Copies of the manual can be ordered from the Superintendent of Documents, Government Printing Office, Washington DC, phone 202-512-1800, FAX 202-512-2250.

a. Paragraph 01.A: Add new paragraph 01.A.12 Safety Engineer.

(1) Full-time, on-site, safety coverage by Contractors will be required when the contract work is specifically designated by the Contracting Officer as high hazard or requires full-time safety personnel due to size or complexity.

(2) If full-time safety personnel are required, the following conditions shall be met:

(a) The Contractor shall employ at the project site, to cover all hours of work, at least one Safety and Occupational Health person to manage the Contractor's accident prevention program. Duties which are not germane to the safety program shall not be assigned to the Safety and Health person(s). The principal safety person shall report to and work directly for the Contractor's on-site top manager, higher level official, or corporate safety office. The Safety and Health person(s) shall have the authority to take immediate steps to correct unsafe or unhealthful conditions. The presence of a Safety and Health person will not abrogate safety responsibilities of other personnel.

(b) Qualifications for Safety and Health person(s):

(1) Shall have a degree in engineering or safety in at least a four year program from an accredited school; or

(2) Shall have legal registration as a Professional Engineer or a Certified Safety Professional and, in addition, shall have been engaged in safety and occupational health for at least one (1) year of experience, no time being credited to this one (1) year unless at least fifty (50) percent of the time was devoted to safety and occupational health; or

(3) Shall have a degree other than that specified in (1) above and, in addition, shall have been engaged in safety and occupational health for at least three (3) years, no time being credited to these three (3) years unless at least fifty (50) percent of the time each year was devoted to safety and occupational health; or

(4) In lieu of a degree, shall have been engaged in safety and occupational health for at least five (5) years, no time being credited to these five (5) years unless at least fifty (50) percent of the time each year was devoted to safety and occupational health;

(5) First aid work is not creditable experience.

(c) The name and qualifications of the nominated safety person(s) shall be furnished to the Contracting Officer for acceptability and a functional description of duties shall be provided prior to the pre-work conference.

b. Paragraph 05.A.01: Add new paragraph 05.A.01 d.

d. Employers shall make reasonable efforts to accommodate employees with religious beliefs that may conflict with PPE requirements. However, when reasonable efforts to accommodate the employee's religious beliefs do not provide the necessary safe working environment (without PPE), then the employer shall require the employee to use the appropriate PPE or the employee will not be allowed to work in the area where he/she will be exposed to a hazard requiring such protection.

c. Paragraph 16.C: Add new paragraphs 16.C.21 and 16.C.22.

16.C.21. During personnel handling operations, load and boom hoist drum brakes, swing brakes, and locking devices such as pawls or dogs shall be engaged when the occupied platform is in a stationary working position.

16.C.22. During personnel handling operations, the load hoist drum shall have a system or device on the power train other than the load hoist brake, which regulates the lowering rate of speed of the hoist mechanism (controlled load lowering). Free fall is prohibited.

d. Paragraph 21.A.15: Add new paragraph 21.A.15 d.

d. Standard guardrails shall be installed on all intermediate floors and roofs, including flat roof areas more than 6 feet above adjacent areas, during construction or rehabilitation of the buildings. The use of safety nets and safety belts with life lines may be substituted on pitched roofs.

SCR-15 AIRFIELD SAFETY PRECAUTIONS (DEC 1991) (DFARS 252.236-7005):

(a) Definitions.

As used in this clause--

(1) "Landing Areas" means--

(i) The primary surfaces, comprising the surface of the runway, runway shoulders, and lateral safety zones. The length of each primary surface is the same as the runway length. The width of each primary surface is 2,000 feet (1,000 feet on each side of the runway centerline);

(ii) The "clear zone" beyond the ends of each runway, i.e., the extension of the primary surface for a distance of 1,000 feet beyond each end of each runway;

(iii) All taxiways, plus the lateral clearance zones along each side for the length of the taxiways (the outer edge of each lateral clearance zone is laterally 250 feet from the far or opposite edge of the taxiway, e.g., a 75-foot-wide taxiway would have a combined width of taxiway and lateral clearance zones of 425 feet); and

(iv) All aircraft parking aprons, plus the area 125 feet in width extending beyond each edge all around the aprons.

(2) "Safety precaution areas" means those portions of approach-departure clearance zones and transitional zones where placement of objects incident to contract performance might result in vertical projections at or above the approach-departure clearance, or the transitional surface.

(i) The "approach-departure clearance surface" is an extension of the primary surface and the clear zone at each end of each runway, for a distance of 50,000 feet, first along an inclined (glide angle) and then along a horizontal plane, both flaring symmetrically about the runway centerline extended.

(A) The inclined plane (glide angle) begins in the clear zone 200 feet past the end of the runway (and primary surface) at the same elevation as the end of the runway. It continues upward at a slope of 50:1 (1 foot vertically for each 50 feet horizontally) to an elevation of 500 feet above the established airfield elevation. At that point the plane becomes horizontal, continuing at that same uniform elevation to a point 50,000 feet longitudinally from the beginning of the inclined plane (glide angle) and ending there.

(B) The width of the surface at the beginning of the inclined plane (glide angle) is the same as the width of the clear zone. It then flares uniformly, reaching the maximum width of 16,000 feet at the end.

(ii) The "approach-departure clearance zone" is the ground area under the approach-departure clearance surface.

(iii) The "transitional surface" is a sideways extension of all primary surfaces, clear zones, and approach-departure clearance surfaces along the inclined planes.

(A) The inclined plane in each case begins at the edge of the surface.

(B) The slope of the inclined plane is 7:1 (1 foot vertically for each 7 feet horizontally). It continues to the point of intersection with the--

(1) Inner horizontal surface (which is the horizontal plane 150 feet above the established airfield elevation); or

(2) Outer horizontal surface (which is the horizontal plane 500 feet above the established airfield elevation), whichever is applicable.

(iv) The "transitional zone" is the ground area under the transitional surface. (It adjoins the primary surface, clear zone and approach-departure clearance zone.)

(b) General.

(1) The Contractor shall comply with the requirements of this clause while--

(i) Operating all ground equipment (mobile or stationary);

(ii) Placing all materials; and

(iii) Performing all work, upon and around all airfields.

(2) The requirements of this clause are in addition to any other safety requirements of this contract.

(c) The Contractor shall--

(1) Report to the Contracting Officer before initiating any work;

(2) Notify the Contracting Officer of proposed changes to locations and operations;

(3) Not permit either its equipment or personnel to use any runway for purposes other than aircraft operation without permission of the Contracting Officer, unless the runway is--

(i) Closed by order of the Contracting Officer; and

(ii) Marked as provided in paragraph (d) (2) of this clause;

(4) Keep all paved surfaces, such as runways, taxiways, and hardstands, clean at all times and, specifically, free from small stones which might damage aircraft propellers or jet aircraft;

(5) Operate mobile equipment according to the safety provisions of this clause, while actually performing work on the airfield. At all other times, the Contractor shall remove all mobile equipment to locations--

(i) Approved by the Contracting Officer;

(ii) At a distance of at least 750 feet from the runway centerline, plus any additional distance; and

(iii) Necessary to ensure compliance with the other provisions of this clause; and

(6) Not open a trench unless material is on hand and ready for placing in the trench. As soon as practicable after material has been placed and work approved, the Contractor shall backfill and compact trenches as required by the contract. Meanwhile, all hazardous conditions shall be marked and lighted in accordance with the other provisions of this clause.

(d) Landing areas.

The Contractor shall--

(1) Place nothing upon the landing areas without the authorization of the Contracting Officer;

(2) Outline those landing areas hazardous to aircraft, using (unless otherwise authorized by the Contracting Officer) red flags by day, and electric, battery-operated low-intensity red flasher lights by night;

(3) Obtain, at an airfield where flying is controlled, additional permission from the control tower operator every time before

entering any landing area, unless the landing area is marked as hazardous in accordance with paragraph (d) (2) of this clause;

(4) Identify all vehicles it operates in landing areas by means of flag on a staff attached to, and flying above, the vehicle. The flag shall be 3 feet square, and consist of a checkered pattern of international orange and white squares of 1 foot on each side (except that the flag may vary up to ten percent from each of these dimensions);

(5) Mark all other equipment and materials in the landing areas, using the same marking devices as in paragraph (d) (2) of this clause; and

(6) Perform work so as to leave that portion of the landing area which is available to aircraft free from hazards, holes, piles of material, and projecting shoulders that might damage an airplane tire.

(e) Safety precaution areas.

The Contractor shall--

(1) Place nothing upon the safety precaution areas without authorization of the Contracting Officer;

(2) Mark all equipment and materials in safety precaution areas, using (unless otherwise authorized by the Contracting Officer) red flags by day, and electric, battery-operated, low-intensity red flasher lights by night; and

(3) Provide all objects placed in safety precaution areas with a red light or red lantern at night, if the objects project above the approach-departure clearance surface or above the transitional surface.

SCR-16 LAYOUT OF WORK (APR 1984) (FAR 52.236-17):

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 the Contractor.

SCR-17 THRU SCR-19 NOT USED

SCR-20 CONTRACTOR-PREPARED NETWORK ANALYSIS SYSTEM (NAS) (1990 MAR HQ USACE) (ER 1-1-11 JUN 1995):

1. The progress chart to be prepared by the Contractor pursuant to the Contract Clause entitled "Schedule for Construction Contracts" shall consist of a network analysis system (NAS) as described below. The scheduling of construction is the responsibility of the Contractor and Contractor management personnel shall actively participate in development of the network logic diagram so that intended sequences and procedures are clearly

understood. The Contractor shall provide the NAS in either Arrow Diagram Method (ADM) or Precedence (PDM) format. The network diagram required at the initial schedule submission shall depict the order and interdependence of activities and the method by which the work is to be accomplished. Conditions of submittal are:

a. The diagram shall show a continuous activity flow from left to right. The activity or event numbers, description, duration, and value shall be shown on the diagram.

b. Dates shall be shown on the diagram for start of the project, any milestones required by the contract, and contract completion.

c. The critical path shall be clearly identified.

d. Submittal, review, procurement, fabrication, delivery, installation, start-up, and testing of special or long lead-time materials and equipment shall be included in the NAS diagram.

e. Government and other agency activities shall be shown. These include but are not limited to: Notice to Proceed, submittals/approvals, inspections, and utility tie in for phasing requirements.

2. A preliminary network diagram, defining the Contractor's planned operations for the first 60 days shall be provided within 10 calendar days after Notice to Proceed is acknowledged. The approved preliminary schedule shall be used for payment not to exceed 60 days after Notice to Proceed.

3. The initial NAS shall be submitted within 40 calendar days after Notice to Proceed. It shall provide (1) a reasonable sequence of activities which represent work through the entire project and (2) a reasonable level of activity detail. The schedule interval shall extend from Notice to Proceed through the contract duration specified in "COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK" to contract completion date. Completion of the last activity in the schedule shall be constrained by the contract completion date such that if the projected finish of the last activity falls after the contract completion, then the float calculation shall reflect negative float. Interim milestone dates specified shall be so constrained also. Progress payments will be withheld until the Contractor submits an approvable schedule.

4. The Contractor shall submit a reproducible and five copies of the network diagram at the initial submittal and three copies of the specified reports at the initial and every monthly update throughout the life of the project. The format of the reports shall contain: Activity Number(s), Activity Description, Original Duration, Remaining Duration, Early Start Date, Late Start Date, Early Finish Date, Late Finish Date, and Total Float. Precedence schedule reports shall include and display preceding and succeeding activities. Cost and/or Earned Value reports shall contain Estimated Earned Value, Percent Complete (based on cost), and Earnings to Date. Report formats are as follows:

a. Logic Report: This report shall list all activities sorted according to activity number. Activities shall be printed in ascending order of activity number. Any standard report which lists activities including restraints in this manner is acceptable.

b. Criticality Report: This report shall list all activities sorted in ascending order of total float. Activities which have equal values of total float shall be listed in ascending order of Early Starts.

c. Cost or Earned Value Report: This report shall compile the Contractor's total earned value on the project from the Notice to Proceed until the most recent monthly progress meeting based on agreed progress between the Contractor and the Contracting Officer. Provided that the Contractor has submitted a complete schedule update, this report shall serve as the basis for determining Contractor payment. Activities shall be grouped by bid item and then sorted by activity number(s). This report shall subtotal all activities in a bid item and provide a bid item percent complete and then total all bid items to provide a total project percent complete.

d. Other sorted reports or curves may be required as project requirements dictate; however, the total number should be limited.

5. A monthly meeting shall be conducted on site attended by the Contractor's project manager and appropriate Contracting Officer's representatives. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the NAS required to reflect the current status of the project. The Contracting Officer's representative shall approve activity progress, proposed revisions and adjustments, and the use of any optional calculations. The following shall be addressed:

a. The actual start and actual finish dates for all activities in progress or completed as appropriate.

b. The estimated remaining duration for each activity in progress. Progress calculations must be based on remaining duration for each activity and be in an approved calculation mode.

c. The earned value for each activity started but not completed. Payment shall be based on cost of completed activities plus cost to date of in-progress activities.

d. All logic changes pertaining to change orders on which a Notice to Proceed has been issued, Contractor proposed changes in activity sequence or durations, and corrections to schedule logic to avoid out of sequence progress.

6. Following the monthly progress meeting, a complete update of the NAS based on the approved progress, revisions, and adjustments agreed upon at the meeting shall be computed and submitted not later than 10 working days after the meeting. This update shall be subject to approval of the accurate entry of information agreed upon at the meeting. Actual starts and finishes, remaining duration, or percent complete shall not be automatically updated by default dates contained in the many CPM scheduling software systems, except that early start for an activity which could start prior to the update but has no actual start shall default to the data date of the update. Activities which have posted progress without predecessor activities being completed shall be allowed only on a case by case approval of the Contracting Officer's representative who may require logic changes to correct all such out of sequence progress.

7. A narrative report shall be provided with each update of the NAS. This report shall include (1) a description of activities and progress along the four most critical paths, (2) a description of current and anticipated problem areas or delaying factors and their impact, and (3) an explanation of

the corrective actions taken. Only modifications that have been authorized and approved by the Contracting Officer shall be included in the schedule submission. The narrative report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes. This report, along with the progress update above, shall provide the basis for the Contractor's progress payment request and the Contractor shall be entitled to progress payments determined from the currently approved NAS update. If the Contractor fails or refuses to furnish the information and NAS data which, in the sole judgement of the Contracting Officer, is necessary for verifying the Contractor's progress, the Contractor shall be deemed not to have provided a progress payment estimate and progress payment will not be made.

8. The Contractor shall prepare proposed NAS revisions for all contract changes and submit them to the Contracting Officer's representative. These shall include a narrative listing the affected activities, a statement of the expected overall impact of the change proposed, and a sub-network of the affected diagram area. When agreed upon by the Contracting Officer's representative, the change logic and durations shall be utilized in analysis of the overall project and the appropriate impact of the change determined for inclusion of time impact for a modification. When Notice to Proceed with changes must be issued prior to settlement of price and/or time, the Contractor shall submit the same revisions for concurrence by the Contracting Officer's representative prior to inclusion in the NAS. If the Contractor fails to submit or include such revisions within 30 days of the Notice to Proceed, the Contracting Officer's representative will furnish to the Contractor suggested logic and/or revised durations to be entered in the NAS until the Contractor submits revisions, and final changes and impact have been negotiated. If the Contractor has any objections to the data furnished by the Contracting Officer, it shall advise the Contracting Officer promptly of its objections and written counterplan; however, it shall continue to use the revisions by the Contracting Officer until such time as alternate data is approved. If the Contractor fails to submit its alternative plan within 20 days after the date such suggested revisions were furnished by the Contracting Officer, the Contractor will be deemed to have concurred with the Contracting Officer's suggested logic/duration time changes. The changes then will be the basis for equitable adjustment for performance of the work.

9. In the event the Contractor requests an extension of the contract completion date for any other contractual reason, it shall furnish such justification as the Contracting Officer may deem necessary for a determination of the Contractor's right to an extension of time under the provisions of the contract. In such event, the schedule revisions must clearly display that the Contractor has used in full all available float time for the work involved with the request. Actual delays that are found to be caused by the Contractor's own actions or lack of action, and which result in the extension of the projected contract completion date shall not be a cause for extension of the contract completion date. The Contracting Officer may find cause to extend the contract completion date under the contract in the absence of a request by the Contractor when, in the Contracting Officer's judgement, it is equitable.

10. Float available in the schedule at any time shall not be considered as for exclusive use by either the Contractor or the Government. Extensions of time for performance of work required under Contract Clauses entitled "CHANGES", "DIFFERING SITE CONDITIONS", "DEFAULT (FIXED-PRICE CONSTRUCTION)", or "SUSPENSION OF WORK" will be granted only to the extent that equitable time adjustments for affected activities exceed the total float along their paths.

SCR-21 NOT USED

SCR-22 SALVAGE MATERIALS AND EQUIPMENT (JAN 1965):

The Contractor shall maintain adequate property control records for all materials or equipment specified to be salvaged. These records may be in accordance with the Contractor's system of property control, if approved by the property administrator. The Contractor shall be responsible for the adequate storage and protection of all salvaged materials and equipment and shall replace, at no cost to the Government, all salvage materials and equipment which are broken or damaged during salvage operations as the result of its negligence, or while in its care.

SCR-23 THRU SCR-24 NOT USED

SCR-25 COMMUNICATION SECURITY:

All communications with DOD organizations are subject to COMSEC review. Contractor personnel shall be aware that telecommunications networks are continually subject to intercept by unfriendly intelligence organizations. The DOD has authorized the military departments to conduct COMSEC monitoring and recording of telephone calls originating from or terminating at DOD organizations. Therefore, civilian Contractor personnel are advised that any time they place a call to or receive a call from Alaska District offices or Resident Engineer offices located on military installations, they are subject to COMSEC procedures. The Contractor will assume the responsibility for ensuring wide and frequent dissemination of the above information to all employees dealing with official DOD information.

SCR-26 THRU SCR-28 NOT USED

SCR-29 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (1999 JUNE HQ USACE) (EFARS 52.231-5000):

(a) This statement shall become operative only for negotiated contracts where cost or pricing data is requested, and for modifications to sealed bid or negotiated contracts where cost or pricing is requested. This clause does not apply to terminations. See 52.231-5001, Basis for settlement of proposals, and FAR Part 49.

(b) Allowable cost for construction and equipment in sound workable condition owned or controlled and furnished by a Contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the Contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the Contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region IX. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the Contracting Officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply. (Individual copies of the regional schedules are available from the Superintendent of Documents, U.S.

Government Printing Office, Washington, D.C. 20402. Any schedule can be ordered by telephoning (202) 512-1800. The cost is \$33.00 each (Vol. 9 is stock no. 008-022-00292-8) or is obtained from this website:

[http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1110-1-8\(vol9\)/toc.htm](http://www.usace.army.mil/inet/usace-docs/eng-pamphlets/ep1110-1-8(vol9)/toc.htm)

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d) (ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the Contracting Officer shall request the Contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

SCR-30 THRU SCR-32 NOT USED

SCR-33 PAYMENT FOR MATERIALS DELIVERED OFF-SITE (1995 MAR HQ USACE) (EFARS 52.232-5000):

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed-Price Construction Contracts, materials delivered to the Contractor at locations other than the site of work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the Contract Clauses are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the Technical Specifications; or (2) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with cancelled check showing title to the items in the prime Contractor and including the value of materials and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to the following items:

Building materials such as doors and windows, lumber, gypsum board, carpet and other finish materials, paving and masonry products, structural steel, roofing materials, paint, insulation, cabinets, appliances, and prefabricated panels.

Mechanical equipment and materials including piping; heating air conditioning and ventilation equipment; ductwork, tanks, air compressors, and pumps.

Electrical equipment and materials including wire, conduit, lighting fixtures, controls and alarms, panels, and generator sets.

SCR-34 THRU SCR-35 NOT USED

SCR-36 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (ER 415-1-15, 31 Oct 1989):

1. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause entitled "DEFAULT (FIXED PRICE CONSTRUCTION)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

a. The weather experienced at the project site during the contract period must be found to be unusually severe; that is, more severe than the adverse weather anticipated for the project location during any given month.

b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

2. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

Monthly Anticipated Adverse Weather Delay Work Days Based on a 5-Day Work Week

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
22	20	14	0	0	0	4	3	4	1	20	22

3. Upon acknowledgement of the Notice to Proceed and continuing throughout the contract, the Contractor shall record on the daily CQC report, the occurrence of adverse weather and the resultant impact to normally scheduled work. Actual adverse weather delays days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled workday. The number of actual adverse weather days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day in each month, and be recorded as full days. If the number of actual adverse weather days exceeds the number of days anticipated in Paragraph 2, above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather workdays, and issue a modification in accordance with the Contract Clause entitled "DEFAULT (FIXED-PRICE CONSTRUCTION)".

SCR-37 NOT USED

SCR-38 YEAR 2000 COMPLIANCE (OCT 1997) (FAR 39.106):

In accordance with FAR 39.106, the Contractor shall ensure that with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. Specifically, the Contractor shall:

(1) Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order which may be affected by the Year 2000 compliance requirement.

(2) Indicate whether each component is currently Year 2000 compliant or

requires an upgrade for compliance prior to Government acceptance.

SCR-39 TRU SCR-44 NOT USED

SCR-45 SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1, U.S. ARMY CORPS OF ENGINEERS:

EM 385-1-1 and its changes are available at: <http://www.hq.usace.army.mil>
(at the HQ homepage, select Safety and Occupational Health).

The Contractor shall be responsible for complying with the current edition and all changes posted on the web (see web address above) as of the effective date of this solicitation and shall comply with the version in effect on the contract award date. This EM 385-1-1 shall remain in effect throughout the life of the contract.

SCR-46 THRU SCR-111 NOT USED

SCR-112 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999) (FAR 52.222-23):

(a) The offeror'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 Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

<u>Goals for Minority Participation</u>	<u>Goals for Female Participation</u>
8.7 (Anchorage, AK)	6.9 (Alaska)
15.1 (Locations outside city of Anchorage)	

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 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 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 Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the:

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract;

and

(5) 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 Alaska.

SCR-113 THRU SCR-114 NOT USED

ATTACHMENT: CLIMATOLOGICAL SUMMARY

CLIMATOLOGICAL SUMMARY

ELMENDORF (Period of record exceeds 25 years)

MEANS AND EXTREMES FOR PERIOD OF RECORD

Temperature	Mean Annual	35.1°	
	Highest Recorded	86°	
	Lowest Recorded	-43°	
	Maximum Freezing Index	3003° Days (1950-51)	
	Maximum Thawing Index	4040° 1958	
Precipitation	Mean Annual	16.3"	
	Mean Annual Snowfall	69.5"	
	Maximum Monthly	6.25" Sep 1961	
	Maximum Monthly Mean	2.61" Sep	
	Maximum Rainfall During 24 hr Period	1.67"	
	Maximum Snowfall During 24 hr Period	14.6" Nov 1956	
	Maximum Monthly Snowfall	40.1" Feb 1955	
Wind	Mean Hourly Speed	4.6 mph	
	Prevailing Direction	North	
	Maximum Velocity	115 mph April 1945	
	Direction Maximum Velocity	NE	
Annual Mean Number of Days	Sunrise to Sunset	Clear	73
		Partly Cloudy	60
		Cloudy	232
	Precipitation 0.01 inch or more		109
	Snow, Sleet, or Hail 1.0 inch or more		45
	Heavy Fog		7
	Thunderstorms		Less than 1 per year
	Max Temp	IV 70°	17
		III 32°	104
	Min Temp	III 32°	199
II Zero		41	

NPA Form 3
AUG 1958

SUBJECT: Solicitation Number DACA85-03-B-0006, Operation Vaults, Hangars 3, and 15. Amendment #8

Questions for Clarification:

All these questions are concerning **Hangar 3** Ops Vault received 8 April 2004

Question 1. Are the exterior wall to be constructed as indicated on Drawing A1.07, Section 1 (E.I.F.S. on 2" insulation board, 5/8" cementations sheeting, 6" metal studs fill voids w/batt insulation, vapor retarder, 5/8" GWB), or, is it to be constructed per Section 13120 also as indicated (Metal building with metal siding)? Response:

Yes the exterior walls for Hangar 3 must be bid as shown in the contract documents/ Sec: 07240

Question 2. The door numbers in Section 08710 are not all the same as those indicated in the Drawings, and the hardware for the second floor appears to be missing. Please clarify. Response:

Door # 002 first floor is an existing door no new hardware required. Doors 100,101,102 all have the same hardware set HW#4 /Sec 08710 pg 13.

Question 3. We are unable to locate a specification for the sound insulation. Please provide direction. Response:

See Sec 6100 para 2.3.1. Acoustical Batt Insulation

Question 4. We are unable to locate a specification for the rubber base and stair treads. Please provide direction. Response:

See Sec 09650 Resilient Flooring para 2.3,2.4

All these questions are concerning **Hangar 15** Ops Vault received 8 April 2004

Question 1. Note 2 on Drawing A1.09 indicate to remove and replace all ceiling tile. Does this include the ceiling grid? Response:

Yes the new Mechanical layout requires a new grid system being installed.

Question 2. Drawing H1.01 indicates removal of the wall between DOW and Briefing RM #1. The floor plan on Drawings A1.01 and A1.02 indicate this wall to be in existed. Please Clarify. Response:

Drawing H1.01 is not a demolition, drawing follow A1.01 and A1.02.

Question 3. We are unable to locate the existing covering in RM 120. Please provide.
Response:

The main briefing room # 120 does have an existing finish / paint on GWB.

Question 4. Is there any electrical or any other wiring connected to the seating in RM
120? Response:

No.

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SECTION 06100

ROUGH CARPENTRY

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)

AF&PA T101 (1991; Supple 1993; Addenda Apr 1997; Supple T02) National Design Specification for Wood Construction

AF&PA T11 (1988) Manual for Wood Frame Construction
**

AMERICAN HARDBOARD ASSOCIATION (AHA)

AHA A194.1 (1985) Cellulosic Fiber Board

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)

AITC 111 (1979) Recommended Practice for Protection of Structural Glued Laminated Timber During Transit, Storage and Erection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 307 (2000) Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength

ASTM C 1136 (1995) Flexible, Low Permeance Vapor Retarders for Thermal Insulation

ASTM C 1177/C 1177M (2001) Glass Mat Gypsum Substrate for Use as Sheathing

ASTM C 1289 (1998) Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board

ASTM C 208 (1995); (R 2001) Cellulosic Fiber Insulating Board

ASTM C 516 (1980; R 1996e1) Vermiculite Loose Fill Thermal Insulation

ASTM C 518 (1998) Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow

Meter Apparatus

ASTM C 549	(1981; R 1995e1) Perlite Loose Fill Insulation
ASTM C 552	(2000) Cellular Glass Thermal Insulation
ASTM C 553	(2000) Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications
ASTM C 578	(2001) Rigid, Cellular Polystyrene Thermal Insulation
ASTM C 591	(2001) Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation
ASTM C 612	(2000a) Mineral Fiber Block and Board Thermal Insulation
ASTM C 665	(2001e1) Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
ASTM C 726	(2000, Rev A) Mineral Fiber Roof Insulation Board
ASTM C 739	(2000) Cellulosic Fiber (Wood-Base) Loose-Fill Thermal Insulation
ASTM C 764	(1999) Mineral Fiber Loose-Fill Thermal Insulation
ASTM C 79/C 79M	(2001) Standard Specification for Treated Core and Non treated Core Gypsum Sheathing Board
ASTM D 2898	(1994; R 1999) Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing
ASTM E 154	(1988; R 1999) Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
ASTM E 84	(2001) Surface Burning Characteristics of Building Materials
ASTM E 96	(2000e1) Water Vapor Transmission of Materials
ASTM F 547	(1977; R 1995) Definitions of Terms Relating to Nails for Use with Wood and Wood-Based Materials

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

AWPA C20	(1999) Structural Lumber Fire-Retardant Pressure Treatment
----------	--

AWPA C27 (1999) Plywood - Fire-Retardant Pressure Treatment

AWPA C9 (1997) Plywood - Preservative Treatment by Pressure Processes

AWPA M4 (1999) Standard for the Care of Preservative-Treated Wood Products

AWPA P5 (2000) Standards for Waterborne Preservatives

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

APA EWS R540C (1996) Builder Tips Proper Storage and Handling of Glulam Beams

APA E445R (1980; Rev Jan 1996) Performance Standards and Policies for Structural-Use Panels

FACTORY MUTUAL ENGINEERING AND RESEARCH (FM)

FM LPDS 1-49 (1995) Loss Prevention Data Sheet - Perimeter Flashing

NATIONAL HARDWOOD LUMBER ASSOCIATION (NHLA)

NHLA Rules (1994) Rules for the Measurement & Inspection of Hardwood & Cypress

NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION (NELMA)

NELMA Grading Rules (1997) Standard Grading Rules for Northeastern Lumber

REDWOOD INSPECTION SERVICE (RIS)

RIS Grade Use (1997) Grades of California Redwood Lumber

SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION (SCMA)

SCMA Spec (1986; Supple No. 1, Aug 1993) Standard Specifications for Grades of Southern Cypress

SOUTHERN PINE INSPECTION BUREAU (SPIB)

SPIB 1003 (1994; Supple 8 thru 11) Standard Grading Rules for Southern Pine Lumber

U.S. DEPARTMENT OF COMMERCE (DOC)

PS1 (1995) Construction and Industrial Plywood

PS2 (1993) Wood-Base Structural-Use Panels

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

16 CFR 1209

Interim Safety Standard for Cellulose
Insulation

WEST COAST LUMBER INSPECTION BUREAU (WCLIB)

WCLIB 17

(1996; Supp. VII & VIII) Standard Grading
and Dressing Rules for Douglas Fir,
Western Hemlock, Western Red Cedar, White
Fir, Sitka Spruce Lumber

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)

WWPA Grading Rules

(1999) Western Lumber Grading Rules 95

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be

submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-07 Certificates

Grading and Marking.

Manufacturer's certificates (approved by an American Lumber Standards approved agency) attesting that lumber and material not normally grade marked meet the specified requirements. Certificate of Inspection for grade marked material by an American Lumber Standards Committee (ALSC) recognized inspection agency prior to shipment.

Insulation.

Certificate attesting that the cellulose, perlite, glass and mineral fiber, glass mat gypsum roof board, polyurethane, or polyisocyanurate insulation furnished for the project contains recovered material, and showing an estimated percent of such recovered material.

1.3 DELIVERY AND STORAGE

Materials shall be delivered to the site in undamaged condition, stored off ground in fully covered, well ventilated areas, and protected from extreme changes in temperature and humidity. Laminated timber shall be handled and stored in accordance with AITC 111 or APA EWS R540C.

PART 2 PRODUCTS

2.1 LUMBER AND SHEATHING

2.1.1 Grading and Marking

2.1.1.1 Lumber Products

Solid sawn and finger-jointed lumber shall bear an authorized gradestamp

or grademark recognized by ALSC, or an ALSC recognized certification stamp, mark, or hammerbrand. Surfaces that are to be exposed to view shall not bear grademarks, stamps, or any type of identifying mark. Hammer marking will be permitted on timbers when all surfaces will be exposed to view.

2.1.1.2 Plywood and Other Sheathing Products

Materials shall bear the grademark or other identifying marks indicating grades of material and rules or standards under which produced, including requirements for qualifications and authority of the inspection organization. Except for plywood and wood structural panels, bundle marking will be permitted in lieu of marking each individual piece. Surfaces that are to be exposed to view shall not bear grademarks or other types of identifying marks.

2.1.2 Sizes

Lumber and material sizes shall conform to requirements of the rules or standards under which produced. Unless otherwise specified, lumber shall be surfaced on four sides. Unless otherwise specified, sizes indicated are nominal sizes, and actual sizes shall be within manufacturing tolerances allowed by the standard under which the product is produced.

2.1.3 Treatment

Exposed areas of treated wood that are cut or drilled after treatment shall receive a field treatment in accordance with AWPA M4. Items of all-heart material of cedar, cypress, or redwood will not require preservative treatment, except when in direct contact with soil. Except as specified for all-heart material of the previously mentioned species, the following items shall be treated:

- a. Wood members in contact with or within 18 inches of soil.
- b. Wood members in contact with water.
- c. Wood members exposed to the weather and those used in roofing systems or as nailing strips or nailers over fiberboard or gypsum-board wall sheathing as a base for wood siding.
- d. Wood members set into concrete regardless of location, including flush-with-deck wood nailers for roofs.
- e. Wood members in contact with concrete that is in contact with soil or water or that is exposed to weather.

2.1.3.1 Plywood

Plywood shall be treated in accordance with AWPA C9 with waterborne preservatives listed in AWPA P5 to a retention level as follows:

- a. 0.25 pcf intended for above ground use.
- b. 0.40 pcf intended for ground contact and fresh water use.

2.1.4 Moisture Content

At the time lumber and other materials are delivered and when installed in the work their moisture content shall be as follows:

- a. Treated and Untreated Lumber Except Roof Planking: 4 inches or less, nominal thickness, 19 percent maximum. 5 inches or more, nominal thickness, 23 percent maximum in a 3 inch perimeter of the timber cross-section.
- b. Roof Planking: 15 percent maximum.
- c. Materials Other Than Lumber: In accordance with standard under which product is produced.

2.1.5 Fire-Retardant Treatment

Fire-retardant treated wood shall be pressure treated in accordance with AWPA C20 for lumber and AWPA C27 for plywood. Material use shall be defined in AWPA C20 and AWPA C27 for Interior Type A and B and Exterior Type. Treatment and performance inspection shall be by an independent and qualified testing agency that establishes performance ratings. Each piece or bundle of treated material shall bear identification of the testing agency to indicate performance in accordance with such rating. Treated materials to be exposed to rain wetting shall be subjected to an accelerated weathering technique in accordance with ASTM D 2898 prior to being tested for compliance with AWPA C20 or AWPA C27.

2.1.6 Sheathing

Sheathing shall be fiberboard, gypsum board, plywood, wood structural panels, or wood for wall sheathing; and plywood, wood structural panels, or wood for roof sheathing.

2.1.6.1 Fiberboard

Fiberboard shall conform to ASTM C 208, Type IV, Grade 2, Structural Grade, or AHA A194.1, Type IV, Grade 2 asphalt impregnated or asphalt coated to be water-resistant but vapor permeable.

2.1.6.2 Gypsum Sheathing Board

Glass mat gypsum sheathing shall conform to ASTM C 79/C 79M and ASTM C 1177/C 1177M. Gypsum board shall conform to ASTM C 79/C 79M, 1/2 inch thick, 4 feet wide with straight edges for supports 16 inches on center without corner bracing of framing or for supports 24 inches on center with corner bracing of framing; 2 feet wide with V-tongue and groove edges for supports 16 or 24 inches on center with corner bracing of framing.

2.1.6.3 Plywood

Plywood shall conform to PS1, APA E445R or PS2, Grade C-D or sheathing grade with exterior glue. Sheathing for roof and walls without corner bracing of framing shall have a span rating of 16/0 or greater for supports 16 inches on center and a span rating of 24/0 or greater for supports 24 inches on center.

2.1.6.4 Wood

Species and grade shall be in accordance with TABLE I at the end of this section. Wall sheathing shall be 1 inch thick for supports 16 or 24 inches on center without corner bracing of framing provided sheathing is applied diagonally. Roof sheathing shall be 1 inch thick for supports 16 or 24 inches on center.

2.1.7 Underlayment

Underlayment shall conform to one of the following:

2.1.7.1 Plywood

Plywood shall conform to PS1, underlayment grade with exterior glue, or C-C (Plugged) exterior grade 11/32 inch thick, 4 feet wide.

2.1.8 Miscellaneous Wood Members

2.1.8.1 Nonstress Graded Members

Members shall include bridging, corner bracing, furring, grounds, and nailing strips. Members shall be in accordance with TABLE I for the species used. Sizes shall be as follows unless otherwise shown:

Member	Size (inch)
Bridging	1 x 3 or 1 x 4 for use between members 2 x 12 and smaller; 2 x 4 for use between members larger than 2 x 12.
Corner bracing	1 x 4.
Furring	1 x 2 .
Grounds	Plaster thickness by 1-1/2.
Nailing strips	1 x 3 or 1 x 4 when used as shingle base or interior finish, otherwise 2 inch stock.

2.1.8.2 Wood Bumpers

Bumpers shall be of the species and grade in accordance with TABLE II at the end of this section, size as shown.

2.1.8.3 Sill Plates

Sill plates shall be standard or number 2 grade.

2.1.8.4 Blocking

Blocking shall be standard or number 2 grade.

2.1.8.5 Rough Bucks and Frames

Rough bucks and frames shall be straight standard or number 2 grade.

2.2 ACCESSORIES AND NAILS

Markings shall identify both the strength grade and the manufacturer. Accessories and nails shall conform to the following:

2.2.1 Anchor Bolts

ASTM A 307, size as indicated, complete with nuts and washers.

2.2.2 Bolts: Lag, Toggle, and Miscellaneous Bolts and Screws

Type, size, and finish best suited for intended use. Finish options include zinc compounds, cadmium, and aluminum paint impregnated finishes.

2.2.3 Clip Angles

Steel, 3/16 inch thick, size best suited for intended use; or zinc-coated steel or iron commercial clips designed for connecting wood members.

2.2.4 Expansion Shields

Type and size best suited for intended use.

2.2.5 Joist Hangers

Steel or iron, zinc-coated, size to fit members where used, sufficient strength to develop the full strength of supported member, complete with any special nails required.

2.2.6 Metal Bridging

Optional to wood bridging; zinc-coated steel, size and design to provide rigidity equivalent to specified wood bridging.

2.2.7 Nails and Staples

ASTM F 547, size and type best suited for purpose; staples shall be as recommended by the manufacturer of the materials to be joined. For sheathing and subflooring, length of nails shall be sufficient to extend 1 inch into supports. In general, 8-penny or larger nails shall be used for nailing through 1 inch thick lumber and for toe nailing 2 inch thick lumber; 16-penny or larger nails shall be used for nailing through 2 inch thick lumber. Nails used with treated lumber and sheathing shall be galvanized. Nailing shall be in accordance with the recommended nailing schedule contained in AF&PA T11. Where detailed nailing requirements are not specified, nail size and spacing shall be sufficient to develop an adequate strength for the connection. The connection's strength shall be verified against the nail capacity tables in AF&PA T101. Reasonable judgement backed by experience shall ensure that the designed connection will not cause the wood to split. If a load situation exceeds a reasonable limit for nails, a specialized connector shall be used.

2.3 INSULATION

Thermal resistance of insulation shall be not less than the R-values shown. R-values shall be determined at 75 degrees F in accordance with ASTM C 518. Contractor shall comply with EPA requirements in conformance with SECTION 01670 RECYCLED / RECOVERED MATERIALS. Insulation shall be the standard product of a manufacturer and factory

marked or identified with manufacturer's name or trademark and R-value. Identification shall be on individual pieces or individual packages. Materials containing more than one percent asbestos will not be allowed.

2.3.1 **AM #8...Acoustical Batt Insulation...AM #8**

AM #8...

Acoustical Batt Insulation shall conform to ASTM C 665, TYPE I unfaced thickness as shown on drawings....AM #8

2.3.1.1 Glass Fiber Batts and Rolls

Glass fiber batts and rolls shall conform to ASTM C 665, Type I unfaced insulation Class A , having a UL rating of 25 and a smoke developed rating of 150 or less when tested in accordance with ASTM E 84. Insulation shall have a 10 mil thick, white, puncture resistant woven-glass cloth with vinyl facing on one side. Width and length shall suit construction conditions.

2.3.1.2 Mineral Fiber Batt

Mineral fiber batt shall conform to ASTM C 665, Type I unfaced insulation .

2.3.1.3 Mineral Fiber Blanket

Mineral fiber blanket shall conform to ASTM C 553, Type I, Class 6. Blankets shall be sized to suit construction conditions, resilient type for use below and above ambient temperature to 350 degrees F. Blankets shall have a factory applied vapor-barrier facing on one side with 2 inch nailing tabs on both edges. Vapor barriers shall be fire retardant, high vapor transmission, and aluminum foil laminated to crepe paper type conforming to ASTM C 1136, Type II. Nominal density shall be 0.75 pcf.

2.3.2 Loose Fill or Granular Fill

2.3.2.1 Vermiculite

Vermiculite shall conform to ASTM C 516, Type II.

2.3.2.2 Perlite

Perlite shall conform to ASTM C 549, Type II with minimum recovered material content of 50 percent by weight of core material.

2.3.2.3 Mineral Fiber

Mineral fiber shall conform to ASTM C 764, Type II. Blown-in mineral fiber insulation shall conform to ASTM C 764, Type I, Category 1, one percent or less loss on ignition .

2.3.2.4 Cellulosic or Wood Fiber

Cellulosic or wood fiber shall conform to ASTM C 739 or 16 CFR 1209 with minimum recovered material content of 50 percent by weight of core material.

2.3.3 Sill Sealer

Mineral wool, 1 inch thick and compressible to 1/32 inch, width of sill, designed to perform as an air, dirt, and insect seal in conformance with ASTM C 665, Type I.

2.3.4 Rigid Insulation

2.3.4.1 Polystyrene Board

Polystyrene board shall be extruded and conform to ASTM C 578, Type IV.

2.3.4.2 Polyurethane or Polyisocyanurate Board

Polyurethane or polyisocyanurate board shall have a minimum recovered material content of 50 percent by weight of core material in the polyurethane or polyisocyanurate portion. Unfaced preformed polyurethane shall conform to ASTM C 591. Faced polyisocyanurate shall conform to ASTM C 1289.

2.3.4.3 Glass Fiber or Insulation Board

Glass mat gypsum roof board shall conform to ASTM C 1177/C 1177M, flame spread 0, smoke developed 0, psi 500, water resistant. Glass fiber or insulation board shall conform to ASTM C 612, Type 1A with a minimum recovered material content of 50 percent by weight of glass fiber core material.

2.3.4.4 Mineral Fiber Block and Board

Mineral fiber block and board shall conform to ASTM C 612 or ASTM C 726 with a minimum recovered material content of 50 percent by weight of mineral fiber core material.

2.3.4.5 Cellular Glass

Cellular glass shall conform to ASTM C 552.

2.4 VAPOR RETARDER

Vapor retarder shall be polyethylene sheeting conforming to ASTM E 154 or other equivalent material. Vapor retarder shall have a maximum vapor permeance rating of 0.5 perms as determined in accordance with ASTM E 96, unless otherwise specified.

2.5 AIR INFILTRATION BARRIER

Air infiltration barrier shall be building paper meeting the requirements of ASTM C 1136, Type IV, style optional or a tear and puncture resistant olefin building wrap (polyethylene or polypropylene) with a moisture vapor transmission rate of 125 g per square meter per 24 hours in accordance with ASTM E 96, Desiccant Method at 23 degrees C or with a moisture vapor transmission rate of 670 g per square meter per 24 hours in accordance with ASTM E 96, Water Method at 23 degrees C.

PART 3 EXECUTION

3.1 Installation of Framing

3.1.1 General

General framing shall be in accordance with AF&PA T11. Members shall be

closely fitted, accurately set to required lines and levels, and rigidly secured in place. Members shall be framed for passage of ducts. Members shall be cut, notched, or bored in accordance with applicable requirements of AF&PA T101 for the passage of pipes, wires, or conduits.

Rafters, purlins, and joists shall be set with crown edge up. When joists, beams, and girders are placed on masonry or concrete, a wood base plate shall be positioned and leveled with grout. The joist, beam, or girder shall then be placed on the plate. When joists, beams, and girders are set into masonry or concrete, a pocket shall be formed into the wall. The joist, beam, or girder shall then be placed into the pocket and leveled with a steel shim.

3.1.2 Partition and Wall Framing

Unless otherwise shown, studs shall be spaced 16 inches on centers. Studs shall be doubled at openings. Unless otherwise indicated, headers for

openings shall be made of two pieces of stud material set on edge or solid lumber of equivalent size, and corners shall be constructed of not less than three full members. End studs of partitions abutting concrete or masonry shall be anchored thereto with expansion bolts, one near each end of each stud and at intermediate intervals of not more than 4 feet. Plates of partitions resting on concrete floors shall be anchored in place with expansion bolts, one near each end of each piece and at intermediate intervals of not more than 6 feet between bolts. In lieu of expansion bolts, anchoring into concrete may be accomplished with powder-driven threaded studs of suitable type and size and spaced at 3 feet on center. Walls and load bearing partitions shall be provided with double top plates with members lapped at least 2 feet and well spiked together.

3.2 INSTALLATION OF SHEATHING

3.2.1 Fiberboard

Sheathing shall be applied with edges 1/8 inch apart at joints, fitted snugly at abutting frames of openings, and nailed or stapled in accordance with the manufacturer's approved instructions. Sheets shall be applied vertically, extended over top and bottom plates, and with all vertical and horizontal joints over supports.

3.2.2 Gypsum Board

Sheathing shall be applied with edges in light contact at joints and nailed in accordance with the manufacturer's approved instructions. Sheets 2 feet wide shall be applied horizontally with tongued edge up, with vertical joints over supports, and with vertical joints staggered. Sheets 4 feet wide shall be applied vertically, extended over top and bottom plates, and with all vertical and horizontal joints over supports.

3.2.3 Plywood and Wood Structural Panels

Sheathing shall be applied with edges 1/8 inch apart at side and end joints, and nailed at supported edges at 6 inches on center and at intermediate supports 12 inches on center unless otherwise shown. Nailing of edges shall be 3/8 inch from the edges. Wall sheathing shall extend over top and bottom plates, and if applied horizontally the vertical joints shall be made over supports and staggered. Wall

sheathing over which wood shingles are to be applied shall be applied horizontally. Roof sheathing shall be applied with long dimension at right angles to supports, end joints made over supports, and end joints staggered.

3.2.4 Wood

Sheathing end joints shall be made over framing members and so alternated that there will be at least two boards between joints on the same support. Each board shall bear on at least three supports. Boards shall be nailed at each support using two nails for boards 6 inches and less in width and three nails for boards more than 6 inches in width. Roof sheathing shall not be installed where roof decking is installed.

3.3 INSTALLATION OF UNDERLAYMENT

3.3.1 Plywood

Underlayment shall be applied with edges 1/32 inch apart at joints and nailed at edges 6 inches on center and at 8 inches on center throughout remainder of panel for panels 11/32 inch and thicker. Thinner panels shall be nailed at edges 3 inches on center and at 6 inches on center throughout remainder of panel. Nailing at edges shall be 3/8 inch from edges. A clearance of 1/4 inch shall be provided at walls. Joints of underlayment shall not be located directly over parallel joints of subflooring. Power-driven wire staples of lengths recommended by the underlayment manufacturer may be used in lieu of nails. When plywood combination subfloor-underlayment is used in lieu of separate layers, it shall be installed as specified for plywood subfloor, except all joints shall be made over supports with edge and joints spaced 1/8 inch apart. When plywood combination subfloor-underlayment is tongued and grooved, only end joints shall require support. Tongued and grooved combination subfloor-underlayment shall be applied with joints spaced 1/8 inch apart. Any surface roughness at nail heads or joints shall be lightly sanded to blend with the undisturbed surface. For floors receiving a vinyl finish flooring, a separate layer of fully-sanded underlayment shall be installed as provided for above over combination subfloor-underlayment panels.

3.4 INSTALLATION OF MISCELLANEOUS WOOD MEMBERS

3.4.1 Bridging

Wood bridging shall have ends accurately bevel-cut to afford firm contact and shall be nailed at each end with two nails. Metal bridging shall be installed as recommended by the manufacturer. The lower ends of bridging shall be driven up tight and secured after subflooring or roof sheathing has been laid and partition framing installed.

3.4.2 Corner Bracing

Corner bracing shall be installed when required by type of sheathing used or when siding, other than panel siding, is applied directly to studs. Corner bracing shall be let into the exterior surfaces of the studs at an angle of approximately 45 degrees, shall extend completely over wall plates, and shall be secured at each bearing with two nails.

3.4.3 Blocking

Blocking shall be provided as necessary for application of siding, sheathing, subflooring, wallboard, and other materials or building items, and to provide firestopping. Blocking for firestopping shall ensure a

maximum dimension of 8 feet for any concealed space. Blocking shall be cut to fit between framing members and rigidly nailed thereto.

3.4.4 Nailers and Nailing Strips

Nailers and nailing strips shall be provided as necessary for the attachment of finish materials. Nailers used in conjunction with roof deck installation shall be installed flush with the roof deck system. Stacked nailers shall be assembled with spikes or nails spaced not more than 18 inches on center and staggered. Beginning and ending nails shall not be more than 6 inches for nailer end. Ends of stacked nailers shall be offset approximately 12 inches in long runs and alternated at corners. Anchors

shall extend through the entire thickness of the nailer. Strips shall be run in lengths as long as practicable, butt jointed, cut into wood framing members when necessary, and rigidly secured in place. Nailers and nailer installation for Factory Mutual wind uplift rated roof systems specified in other Sections of these specifications shall conform to the recommendations contained in FM LPDS 1-49.

3.4.5 Wood Grounds

Wood grounds shall be provided as necessary for attachment of trim, finish, and other work to plaster. Grounds shall be run in lengths as long as practicable, butt jointed, and rigidly secured in place.

3.4.6 Furring Strips

Furring strips shall be provided at the locations shown. Furring strips shall be installed at 16 inches on center unless otherwise shown, run in lengths as long as practicable, butt jointed and rigidly secured in place.

3.4.7 Rough Bucks and Frames

Rough bucks shall be set straight, true, and plumb, and secured with anchors near top and bottom of each wood member and at intermediate intervals of not more than 3 feet. Anchors for concrete shall be expansion bolts, and anchors for masonry shall be 3/16 x 1-1/4 inch steel straps extending not less than 8 inches into the masonry and turned down 2 inches into the masonry.

3.4.8 Wood Bumpers

Wood bumpers shall be bored, countersunk and securely bolted in place.

3.4.9 Sill Plates

Sill plates shall be set level and square and anchor bolted at not more than 6 feet on centers and not more than 12 inches from end of each piece. A minimum of two anchors shall be used for each piece.

3.5 INSTALLATION OF INSULATION

Insulation shall be installed after construction has advanced to a point that the installed insulation will not be damaged by remaining work. For thermal insulation the actual installed thickness shall provide the R-values shown. For acoustical insulation the installed thickness shall be as shown. Insulation shall be installed on the weather side of such items as electrical boxes and water lines. Unless otherwise specified, installation shall be in accordance with the manufacturer's recommendation.

3.6 INSTALLATION OF VAPOR RETARDER

Vapor retarder shall be applied to provide a continuous barrier at window and door frames, and at all penetrations such as electrical outlets and switches, plumbing connections, and utility service penetrations. Joints in the vapor retarder shall be lapped and sealed according to the manufacturer's recommendations.

3.7 SPECIAL INSPECTION AND TESTING FOR SEISMIC-RESISTING SYSTEMS

Special inspections and testing for seismic-resisting systems and components shall be done in accordance with SECTION 01452 SPECIAL INSPECTION FOR SEISMIC-RESISTING SYSTEMS.

3.8 INSTALLATION OF AIR INFILTRATION BARRIER

Air infiltration barrier shall be installed in accordance with the manufacturer's recommendations.

3.9 TABLES

TABLE I. SPECIES AND GRADE

Subflooring, Roof Sheathing, Wall Sheathing, Furring

Grading Rules	Species	Const Standard	No. 2 Comm	No. 2 Board Comm	No. 3 Comm
NHLA Rules	Cypress			X	
NELMA Grading Rules	Northern White Cedar				X
	Eastern White Pine	X			
	Northern Pine	X			
	Balsam Fir				X
	Eastern Hemlock-Tamarack				X
RIS Grade Use	Redwood		X		
SCMA Spec	Cypress			X	
SPIB 1003	Southern Pine		X		
WCLIB 17	Douglas Fir-Larch	X			
	Hem-Fir	X			
	Sitka Spruce	X			
	Mountain Hemlock	X			
	Western Cedar	X			
WWPA Grading Rules	Douglas Fir-Larch	X			
	Hem-Fir	X			
	Idaho White Pine	X			
	Lodgepole Pine			X	
	Ponderosa Pine			X	
	Sugar Pine			X	
	Englemann Spruce			X	
	Douglas Fir South			X	
	Mountain Hemlock			X	
	Subalpine Fir			X	
	Western Cedar			X	

TABLE II. SPECIES AND GRADE

Wood Bumpers

Grading Rules	Species	No. 1	No. 2
NHLA Rules	Red Oak	X	

TABLE II. SPECIES AND GRADE

Wood Bumpers

Grading Rules	Species	No. 1	No. 2
NELMA Grading Rules	Northern Pine		X
	Eastern Hemlock- Tamarack		X
SPIB 1003	Southern Pine	X	
WCLIB 17	Douglas Fir-Larch		X
	Hem-Fir		X
WWPA Grading Rules	Douglas Fir-Larch		X
	Hem-Fir		X
	Douglas Fir-South		X

-- End of Section --

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SECTION 08710
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SECTION 08710

DOOR HARDWARE

PART 1 GENERAL

1.1 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 E 283 (1991) Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

BHMA A156.1 (1997) Butts and Hinges (BHMA 101)
BHMA A156.2 (1996) Bored and Preassembled Locks and Latches (BHMA 601)
BHMA A156.3 (1994) Exit Devices (BHMA 701)
BHMA A156.4 (1992) Door Controls - Closers (BHMA 301)
BHMA A156.5 (1992) Auxiliary Locks & Associated Products
BHMA A156.6 (1994) Architectural Door Trim (BHMA 1001)
BHMA A156.7 (1988) Template Hinge Dimensions
BHMA A156.13 (1994) Mortise Locks & Latches
BHMA A156.16 (1997) Auxiliary Hardware
BHMA A156.18 (1993) Materials and Finishes (BHMA 1301)
BHMA A156.21 (1996) Thresholds

DOOR AND HARDWARE INSTITUTE (DHI)

ANSI/DHI A115.1G (1994) Installation Guide for Doors and Hardware

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 80 (1999) Fire Doors and Fire Windows
NFPA 101 (1997; Errata 97-1; TIA 97-1) Life Safety

Code

STEEL DOOR INSTITUTE (SDOI)

SDI 100 (1991) Standard Steel Doors and Frames

UNDERWRITERS LABORATORIES (UL)

UL Bld Mat Dir (2003) Building Materials Directory

1.2 SUBMITTALS

Submit the following in accordance with SECTION 01330 SUBMITTAL PROCEDURES.

SD-02 Shop Drawings

Detail drawings for hardware devices for electrical hardware devices showing complete wiring and schematic diagrams and other details required to demonstrate the proper function of units.

Hardware schedule; G.

Keying system.

SD-03 Product Data

Manufacturer's descriptive data, technical literature, catalog cuts, and installation instructions. Spare parts data for locksets exit devices, closers, and electric strikes after approval of the detail drawings, and not later than 1 month prior to the date of the beneficial occupancy. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.

Hardware items; G.

Door Closing Devices; G.

SD-08 Manufacturer's Instructions

Installation.

SD-10 Operation and Maintenance Data

Hardware Schedule items, Data Package 1; G.

SD-11 Closeout Submittals

Key bitting

1.3 HARDWARE SCHEDULE

Prepare and submit hardware schedule in the following form:

Hard- ware Item	Quan- tity	Size	Reference Publi- cation Type No.	Finish	Mfr. Name and Catalog No.	Key Con- trol Symbols	UL Mark (If fire rated and listed)	BHMA Finish Desig- nation
-----	-----	-----	-----	-----	-----	-----	-----	-----

1.4 KEY BITTING CHART REQUIREMENTS

Submit key bitting charts to the Contracting Officer prior to completion of the work. Include:

- a. Complete listing of all keys (AA1, AA2, etc.).
- b. Complete listing of all key cuts (AA1-123456, AA2-123458).
- c. Tabulation showing which key fits which door.
- d. Copy of floor plan showing doors and door numbers.
- e. Listing of 20 percent more key cuts than are presently required in each master system.

1.5 QUALITY ASSURANCE

1.5.1 Hardware Manufacturers and Modifications

Provide, as far as feasible, locks, hinges, and closers of one lock, hinge, or closer manufacturer's make. Modify hardware as necessary to provide features indicated or specified.

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver hardware in original individual containers, complete with necessary appurtenances including fasteners and instructions. Mark each individual container with item number as shown in hardware schedule. Deliver permanent keys to the Contracting Officer, either directly or by certified mail. Deliver construction master keys with the locks.

1.6.1 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a one year period shall be provided.

1.6.2 OPERATION AND MAINTENANCE MANUALS

Six complete copies of maintenance instructions listing routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guides.

PART 2 PRODUCTS

2.1 TEMPLATE HARDWARE

Hardware to be applied to metal or to prefinished doors shall be made to template. Promptly furnish template information or templates to door and frame manufacturers. Template hinges shall conform to BHMA A156.7. Coordinate hardware items to prevent interference with other hardware.

2.2 HARDWARE FOR FIRE DOORS AND EXIT DOORS

Provide all hardware necessary to meet the requirements of NFPA 80 for fire doors and NFPA 101 for exit doors, as well as to other requirements specified, even if such hardware is not specifically mentioned under paragraph entitled "Hardware Schedule." Such hardware shall bear the

label of Underwriters Laboratories, Inc., and be listed in UL Bld Mat Dir or labeled and listed by another testing laboratory acceptable to the Contracting Officer.

2.3 HARDWARE ITEMS

Hinges, pivots, locks, latches, exit devices, bolts, and closers shall be clearly and permanently marked with the manufacturer's name or trademark where it will be visible after the item is installed. For closers with covers, the name or trademark may be beneath the cover.

2.3.1 Hinges

Hinges shall conform to BHMA A156.1. Hinges on metal doors and frames shall also conform to BHMA A156.7. Except as otherwise specified, hinge sizes shall conform to the hinge manufacturer's printed recommendations.

2.3.1.1 Hinges for Reverse Bevel Doors with Locks

Hinges for reverse bevel doors with locks shall have pins that are made nonrenewable by means such as set screw in the barrel, or safety stud, when the door is in the closed position.

2.3.1.2 Contractor's Option

Hinges with antifriction bearings may be furnished in lieu of ball bearing hinges, except where prohibited for fire doors by the requirements of NFPA 80.

2.3.2 Pivots Hinges

Pivot hinges shall conform to BHMA A156.4 and shall be suitable for a maximum door weight of 250 pounds.

2.3.3 Top Pivot

Top pivot shall have a removable pin, suitable bearings, non-ferrous material, and be mortised into frame.

2.3.4 Intermediate Pivot

Intermediate pivot shall have ball, roller, or combination of bearings for radial thrust loads. Vertical adjustments shall be minimum 1/8 inch. Pivot shall be cast or forged bronze, and be mortised in door frame. Intermediate pivot shall be manufactured for use with top and bottom pivots furnished and shall increase the maximum allowable door weight to 300 pounds.

2.3.4.1 Bottom Pivot

The bottom pivot shall be floor mounted and have suitable bearings, non-ferrous material, and be mortised in the door. Pivot shall have 1/8 inch vertical adjustment without removal of the door.

2.3.4.2 Locks and Latches

To the maximum extent possible, locksets, latchsets, deadlocks and all components thereof, except cylinders, shall be the products of a single manufacturer and shall accept Base Master Cylinders with removable cores.

2.3.4.3 Bored Locks and Latches

Bored lock, latchsets, and strikes shall conform to BHMA A156.2, Series 4000, Grade 1. Bored type locks and latches for doors 1-3/8 inches thick and over shall have adjustable bevel fronts or otherwise conform to the shape of the door.

2.3.4.4 Electric Strikes

Electric strikes shall conform to BHMA A156.5, Electric strikes shall be unlocked from a remote location in fail secured mode. Electric strike for rated openings shall be fail secured.

2.3.4.5 Lock Trim

Lock trim shall be cast, forged, or heavy wrought construction of commercial plain design. In addition to meeting the test requirement of BHMA A156.2 or BHMA A156.13, knobs, roses, and escutcheons shall be 0.050 inch thick, if unreinforced. If reinforced, the outer shell shall be 0.035 inch thick and combined thickness shall be 0.070 inch except that knob shanks shall be 0.060 inch thick. Knob diameter shall be 2-1/8 to 2-1/4 inches.

2.3.4.6 Auxiliary Locks

BHMA A156.5, Grade 1.

2.3.4.7 Combination Locks

Heavy-duty, mechanical combination lockset with five pushbuttons, standard-sized knobs, 3/4 inch deadlocking latch, 2 3/4 inch backset. Lock shall be operated by pressing two or more of the buttons in unison or individually in the proper sequence. Inside knob shall always operate the latch. Provide a keyed cylinder on the interior to permit setting the combination. Provide a thumb turn on the interior to activate passage set function, so that outside knob operates latch without using the combination.

2.3.5 Exit Devices

Exit devices and exit device accessories shall conform to BHMA A156.3, Grade 1. Trim shall be wrought construction and commercial plain design with straight, beveled, or smoothly rounded sides corners, and edges. Adjustable strikes shall be provided for rim type devices. Touch bars shall be provided in lieu of conventional crossbars and arms. Escutcheons shall be provided not less than 7 by 2-1/4 inches. Escutcheons shall be cut to suit cylinders with interchangeable cores.

2.3.6 Keying

Locks shall be furnished with the manufacturer's standard construction keying system. Construction cores shall be delivered to Contracting Officer at the completion of the project to be keyed by the government.

2.3.7 Lock Cylinders

Lock cylinders shall comply with BHMA A156.5 lock cylinder shall have not less than seven pins. Cylinders shall have key removable type

cores. The cylinders shall be by Best Lock Co. and shall be compatible with existing locks that have a Base Master System interchangeable core keyway. Construction interchangeable cores shall be provided. Disassembly of knob or lockset shall not be required to remove core lockset. All locksets or lockable exit devices shall accept same cylinders and interchangeable cores.

2.3.8 Door Closing Devices

Door closing devices shall conform to BHMA A156.4 Grade 1. Closing devices shall be products of one manufacturer for each type specified. The opening resistance of closing devices shall not exceed 15 lbs applied at the latch stile or exceed 5 lbs where low opening resistance is scheduled.

2.3.9 Surface Type Closers

Surface type closers shall be Grade 1 Series CO2000 Standard Cover with options PT-4H, size 1 or 2 through size 6 and PT-4D with back check option valve. Except as otherwise specified, sizes shall conform to the manufacturer's recommendations. Closers for outswinging exterior doors shall have parallel arms or be top jamb mounted. Closers for doors close to a wall shall be of a narrow projection so as not strike the wall at the 90 degree open position.

2.3.9.1 ARCHITECTURAL DOOR TRIM

Architectural door trim shall conform to BHMA A156.6.

2.3.9.2 Door Protection Plates

Kick Plates shall be type J106 plastic, black in color. Width of plates shall be 2 inches less than door width for single doors. Height shall be 10 inches, except where the bottom rail is less than 10 inches the plate shall extend to within 1/2 inch of the panel mold or glass bead. Edges of plates shall be beveled.

2.3.9.3 Push Bars

Push bars shall be Category J400, brass, of plain modern design.

2.3.10 Pull Bars

Pull bars shall be Category J500, brass, of plain modern design.

2.3.11 Auxiliary Hardware

Door stops shall conform to BHMA A156.16. Lever extension flush bolts shall be type L14081. Dust-proof strikes shall be type L04011.

2.3.12 Metal Thresholds

Thresholds shall conform to BHMA A156.21. Thresholds for exterior doors shall be extruded aluminum of the type indicated and shall provide proper clearance and effective seal with specified weather stripping. Where required, thresholds shall be modified to receive protecting bolts or flush bolts. Air leakage rate of weatherstripped shall not exceed 0.5 cubic feet per minute per lineal foot of crack when tested in accordance with ASTM E 283 with standard test conditions.

2.3.12.1 Rain Drips

Extruded aluminum, not less than 0.07 inch thick, bronze anodized. Door sill rain drips shall be 1-1/2 inches to 1-3/4 inches high by 5/8 inch projection with vinyl sweep insert. Overhead rain drips shall extend 2 inches on either side of the door opening.

2.3.13 Aluminum Housed Type Weather Seals

Weatherseal of the type indicated shall consist of extruded aluminum retainers not less than 0.007 inch wall thickness with vinyl, neoprene, silicone rubber, polyurethane or vinyl brush inserts. Aluminum shall be bronze anodized. Weatherseal material shall be of industrial/commercial grade. Seals shall remain functional through all weather and temperature conditions. Air leakage rate of weatherstripped shall not exceed 0.5 cubic feet per minute per lineal foot of crack when tested in accordance with ASTM E 283 at standard test conditions.

2.3.14 Astragal Seals

Astragal seals shall consist of a pair of extruded aluminum retainers not less than 0.07 inch wall thickness with neoprene inserts. Aluminum shall be bronze anodized. Seal material shall be of an industrial / commercial grade. Seals shall remain functional through all weather and temperature conditions.

2.3.15 Fastenings

Fastenings of proper type, size, quantity, and finish shall be supplied with each article of hardware. Machine screws and expansion shields shall be used for attaching hardware to concrete or masonry. Fastenings exposed to the weather in the finished work shall be of brass, bronze, or stainless steel. Sex bolts, through bolts, or machine screws or other approved tamperproof screws. Screws for the jamb leaf of the half-mortise and full-surface hinges attached to structural steel frames shall be one-way or other approved tamperproof type.

2.3.16 Finishes

Unless otherwise specified, finishes shall conform to those identified in be BHMA A156.18. Where painting of primed surfaces is required, painting is specified in SECTION 09900 PAINTS AND COATINGS

2.3.17 Hardware for Fire Doors

Hardware for fire doors shall conform to the requirements of NFPA 80 and NFPA 101.

PART 3 EXECUTION

3.1 INSTALLATION

Application shall be in accordance with DHI ANSI/DHI A115.1G. Door control devices for exterior doors such as closers and holders, shall be attached to doors with thru bolts and nuts or sex bolts. Alternate fastening methods may be approved by the Contracting Officer when manufacturer's documentation is submitted to verify that the fastening devices and door reinforcements are adequate to resist wind induced

stresses. Electric hardware items shall be installed in accordance with accordance with manufacturer's printed installation procedures.

3.1.1 Weather Stripping Installation

Handle and install weather stripping so as to prevent damage. Provide full contact, weather-tight seals. Doors shall operate without binding.

3.1.1.1 Stop-Applied Weather Stripping

Fasten in place with color-matched sheet metal screws not more than 9 inches o.c. after doors and frames have been finish painted.

3.1.1.2 Interlocking Type Weather Stripping

Provide interlocking, self-adjusting type on heads and jambs and flexible hook type at sills. Nail weather stripping to door one inch o.c. and to heads and jambs at 4 inches o.c.

3.1.2 Threshold Installation

Extend thresholds the full width of the opening and notch end for jamb stops. Set thresholds in a full bed of sealant and anchor to floor with cadmium-plated, countersunk, steel screws in expansion sleeves.

3.2 FIRE DOORS AND EXIT DOORS

Install hardware in accordance with NFPA 80 for fire doors, NFPA 101 for exit doors. Exit devices installed on fire doors shall have a visible label bearing the marking "Fire Exit Hardware". Other hardware installed on fire doors, such as locksets, closures, and hinges shall have a visible label or stamp indicating that hardware items have been approved by an approved testing agency for installation on fire-rated doors.

3.3 Door Closing Devices

SDI 100, unless indicated or specified otherwise.

- a. Kick and Armor Plates: Push side of single-acting doors. Both sides of double-acting doors.
- b. Door closing devices shall be installed and adjusted in accordance with the requirements of the templates and printed instructions supplied by the manufacturer of the devices. Doors opening to or from halls and corridors shall have closer mounted on the room side of the door.

3.4 Auxiliary Hardware

Lever extension flush bolts shall be installed at the top of the inactive leaf of pairs of doors. The bottom bolt shall operate into dust-proof floor strike or threshold.

3.5 Thresholds

Thresholds shall be secured with a minimum of three fasteners per single door width and six fasteners per double door width with a maximum spacing of 12 inches. Exterior thresholds shall be installed in a bed

of sealant with expansion anchors and stainless steel screws. Minimum of 3/4 inch thread engagement into the floor or anchoring device used.

3.6 Rain Drips

Door sill rain drips shall align with the bottom edge of the door. Overhead rain drips shall align with the bottom edge of the door frame rabbet. Drips shall be set in sealant and fastened with stainless steel screws.

3.6.1 Weatherseal

Weatherseal shall be located snug to the door face and fastened in place with metal screws to match the prefinished color of the door frame.

3.6.2 Operational Test

Prior to acceptance of any electrical hardware system, operational test shall be performed to determine if devices are operating as intended by the specifications. Wiring shall be tested for correct voltage, current carrying capacity, and proper grounding. Stray voltages in lock wiring shall be eliminated to prevent locking devices shall be eliminated to prevent locking devices from releasing in critical situations.

3.6.3 Field Quality Control

After installation, protect hardware from paint, stains, blemishes, and other damage until acceptance of work. Submit notice of testing 15 days before scheduled, so that testing can be witnessed by the Contracting Officer. Adjust hinges, locks, latches, bolts, holders, closers, and other items to operate properly. Demonstrate that permanent keys operate respective locks, and give keys to the Contracting Officer. Correct, repair, and finish, as directed, errors in cutting and fitting and damage to adjoining work.

3.6.4 Hardware Sets

Hardware for aluminum doors shall be provided under this section. Deliver hardware templates and hardware, except field-applied hardware to the aluminum door frame manufacturer for use in fabricating the doors and frames.

HANGAR 3

HW-1	DOORS	#001		
1 SET	PIVOTS	CO7121		613
1 EA.	INTER. PIVOT	CO7321		613
1 EA.	CYLINDER	1E72 (BEST)		613
1 EA.	EXIT DEVICE	TYPE 1-08-GRADE 1 (LESS CYL)		613
1 EA.	CLOSER	CO2021 PT4D,H		690
1 EA.	PULL	J402 OFFSET (1"BAR STOCK)		613
1 EA.	THRESHOLD			
1 EA.	DOOR BOTTOM			
1 EA.	O.H. RAIN DRIP			
1 EA.	WHEATHERSTRIPPING			

AM #8...

HW-1a	DOORS	#004		
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1 SET	PIVOTS	CO7121	613
1 EA.	INTER. PIVOT	CO7321	613
1 EA.	CYLINDER	1E72 (BEST)	613
1 EA.	EXIT DEVICE	TYPE 1-08-GRADE 1 (LESS CYL)	613
1 EA.	CLOSER	CO2021 PT4D,H	690
1 EA.	PULL	J402 OFFSET (1"BAR STOCK)	613

...AM #8

HW-2 DOORS #003

3 EA.	HINGES	A2112	612
1 EA.	CYLINDER	1E74 (BEST)	613
1 EA.	LOCKSET	F86- GRADE 1 (LESS CYL)	612
1 EA.	FLOOR STOP	L12141	
3 EA.	SILENCERS	L03011	

HW-3 DOORS #005

3 EA.	HINGES	A2111 x NRP	612
1 EA.	EXIT DEVICE	TYPE 1 -01 -GRADE 1	612
1 EA.	CLOSER	C02061-PT4D,G,H	691
1 EA.	SILL RAIN DRIP		
1 EA.	THRESHOLD		
1 EA.	O.H. RAIN DRIP		
1 EA.	DOOR BOTTOM		
1 EA.	WHETHERSTRIPPING		

EXIT ONLY- NO PULL SIDE OPERATION SOUND SEALS BY SOUND RATED DOOR AND FRAME SUPPLIER.

AM #8...

HW-4 DOORS #100, 101, and 102

3 EA.	HINGES	A2112	612
1 EA.	CYLINDER	1E74 (BEST)	613
1 EA.	LOCKSET	F86- GRADE 1 (LESS CYL)	612
1 EA.	CLOSER	C02011 - PT4D,H	691
1 EA.	WALL STOP	L22251	

...AM #8

HW-4a DOORS #006

1 EA.	PULL	KT174DCB (DULL CHROME)	
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HANGAR 15

HW-5 DOORS # D2, D3, D4, D5, D8, D9, D10, D11, & D12

3 EA.	HINGES	A2112	612
1 EA.	CYLINDER	1E74 (BEST)	613

1 EA.	LOCKSET	F86-GRADE-1 (LESS CYL)
612		
1 EA.	CLOSER	C02011 PT4D,H
612		
1 EA.	WALL STOP	L22251

HW-5a DOORS #D15

3 EA.	HINGES	A2112
612		
1 EA.	CYLINDER	1E74 (BEST)
613		
1 EA.	LOCKSET	F86-GRADE-1 (LESS CYL)
612		
1 EA.	CLOSER	C02011 PT4D,H
612		
1 EA.	WALL STOP	L22251
1 EA.	FLOOR SWEEP	368CN (PEMKO)
1 EA.	CIPHER LOCK	KABA/ILLCO L-1000

HW-6 DOORS# D1

3 EA.	HINGES	A2111 x NRP
612		
1 EA.	EXIT DEVICE	TYPE 1 -01 GRADE 1
612		
1 EA.	AUTOMATIC SURFACE CLOSER	
1 EA.	ELECT. STRIKE	6211-FAIL SECURE (VON DUPRIN)
612		
1 EA.	POWER SUPPLY	PS861 (VON DUPRIN)
1 EA.	FLOOR SWEEP	AMWELD SERIES 15LE AUTOMATIC

EXIT ONLY- NO PULL SIDE OPERATION SOUND SEALS BY SOUND RATED DOOR AND FRAME SUPPLIER.

HW-6a DOORS# D14

3 EA.	HINGES	A2111 x NRP
612		
1 EA.	EXIT DEVICE	TYPE 1 -01 GRADE 1
612		
1 EA.	AUTOMATIC SURFACE CLOSER	
1 EA.	PULL	J402 OFFSET (1"BAR STOCK)
613		
1 EA.	FLOOR SWEEP	368CN (PEMKO)

HW-7 DOORS# D16 & D17

3 EA.	HINGES	A2112
612		
1 EA.	CYLINDER	1E74 (BEST)
613		
1 EA.	LOCKSET	MAS-HAMILTON X-09 COMBO LOCK
612		
1 EA.	CLOSER	C02011 PT4D,H

612
 1 EA. WALL STOP L22251
 1 EA. CARD READER W/ KEYPAD SEE ELECTRICAL
 1 EA. FLOOR SWEEP AMWELD SERIS 15LE AUTOMATIC
 1 EA. ELECT. STRIKE 6211-FAIL SECURE (VON DUPRIN)
 612
 1 EA. POWER SUPPLY PS861 (VON DUPRIN)

HW-8 DOORS# D7

3 EA. HINGES A2112
 612
 1 EA. CYLINDER 1E74 (BEST)
 613
 1 EA. LOCKSET F86-GRADE-1 (LESS CYL)
 612
 1 EA. AUTOMATIC SURFACE CLOSER
 1 EA. WALL STOP L22251
 1 EA. FLOOR SWEEP 368CN (PEMKO)
 1 EA. CIPHER LOCK KABA/ILLCO L-1000
 1 EA. EXIT DEVICE TYPE 1 -01 GRADE 1
 612

HW-9 DOORS# D13

1 SET PIVOTS CO7121 613
 1 EA. INTER. PIVOT CO7321 613
 1 EA. CYLINDER 1E72 (BEST) 613
 1 EA. EXIT DEVICE TYPE 1-08-GRADE 1 (LESS CYL) 613
 1 EA. CLOSER CO2021 PT4D,H 690
 1 EA. PULL J402 OFFSET (1"BAR STOCK) 613
 1 EA. SILL RAIN DRIP
 1 EA. THRESHOLD
 1 EA. DOOR BOTTOM
 1 EA. O.H. RAIN DRIP
 1 EA. WHEATHERSTRIPPING

HW-10 DOORS# D6

3 EA. HINGES A2112
 612
 1 EA. CYLINDER 1E74 (BEST)
 613
 1 EA. LOCKSET MAS-HAMILTON X-09 COMBO LOCK
 612
 1 EA. CLOSER C02061 PT4D,H
 691
 1 EA. WALL STOP L22251
 1 EA. CARD READER W/ KEYPAD SEE ELECTRICAL
 1 EA. FLOOR SWEEP AMWELD SERIS 15LE AUTOMATIC
 1 EA. ELECT. STRIKE 6211-FAIL SECURE (VON DUPRIN)
 612
 1 EA. POWER SUPPLY PS861 (VON DUPRIN)
 1 EA. EXIT DEVICE TYPE 1 -01 GRADE 1
 612

-- End of Section --

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DIVISION 09 - FINISHES

SECTION 09650

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SECTION 09650

AM #8...RESILIENT FLOORING...AM #8

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2240	(2000) Rubber Property - Durometer Hardness
ASTM D 4078	(1992; R 1996) Water Emulsion Floor Polish
ASTM E 648	(2000) Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
ASTM E 662	(1997) Specific Optical Density of Smoke Generated by Solid Materials
ASTM F 1861	(2000) Resilient Wall Base

1.2 FIRE RESISTANCE REQUIREMENTS

Flooring in corridors and exits shall have a minimum average critical radiant flux of 0.45 watts per square centimeter when tested in accordance with ASTM E 648. The smoke density rating shall be less than 450 when tested in accordance with ASTM E 662.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Resilient Flooring and Accessories.

Manufacturer's descriptive data and installation instructions including cleaning and maintenance instructions.

SD-04 Samples

Resilient Flooring and Accessories; G.

Three samples of each indicated color and type of flooring and base.

Sample size shall be minimum 2-1/2 x 4 inches.

1.4 DELIVERY AND STORAGE

Materials shall be delivered to the building site in original unopened containers bearing the manufacturer's name, project identification, and handling instructions. Materials shall be stored in a clean dry area with temperature maintained above 70 degrees F for 2 days prior to installation, and shall be stacked according to manufacturer's recommendations. Materials shall be protected from the direct flow of heat from hot-air registers, radiators and other heating fixtures and appliances.

1.5 ENVIRONMENTAL REQUIREMENTS

Areas to receive resilient flooring shall be maintained at a temperature above 70 degrees F and below 100 degrees F for 2 days before application, during application and 2 days after application. A minimum temperature of 55 degrees F shall be maintained thereafter.

1.6 SCHEDULING

Resilient flooring application shall be scheduled after the completion of other work which would damage the finished surface of the flooring.

1.7 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a one year period shall be provided.

1.8 EXTRA MATERIALS

Extra flooring material of each color and pattern shall be furnished at the rate of 5 tiles for each 1000 tiles installed. Extra materials shall be from the same lot as those installed. Extra base material composed of 20 linear feet of each color shall be furnished.

PART 2 PRODUCTS

2.1 STAIR TREADS, RISERS, AND STRINGERS

Treads, risers, and stringers shall conform to composition rubber or vinyl. Rubber shall be compounded from a mixture of synthetic and reclaimed rubber. Overall thickness at treads shall be not less than 1/8 inch. Durometer hardness shall be 90, plus or minus 5, when tested in accordance with ASTM D 2240. Vinyl shall be compounded from virgin polymer or copolymer of vinyl chloride resin, plasticized with phosphate or phthalate esters. Overall thickness shall be not less than 3/32 inch.

Design shall be either a one piece nosing/tread/riser or a two piece nosing/tread with a matching coved riser. Installation shall include stringer angles on both the wall and banister sides, and landing trim. Surface of treads shall be raised diamond pattern.

2.2 RESILIENT BASE

Base shall be manufacturer's standard rubber or vinyl, straight style (installed with carpet) and coved style (installed with resilient flooring). Base shall be 4 inches high and a minimum 1/8 inch thick. Preformed outside corners shall be furnished. Base shall conform to

ASTM F 1861 Type TS, Group 1, Style B.

2.3 TRANSITION STRIP

A vinyl or rubber transition strip tapered to meet abutting material shall be provided.

2.4 ADHESIVE

Adhesive for flooring and wall base shall be as recommended by the flooring manufacturer.

2.5 POLISH

Polish shall conform to ASTM D 4078.

2.6 CAULKING AND SEALANTS

Caulking and sealants shall be in accordance with SECTION 07900 JOINT SEALING.

2.7 MANUFACTURER'S COLOR AND TEXTURE

Color and texture shall be in accordance with SECTION 09915 COLOR SCHEDULE.

PART 3 EXECUTION

3.1 EXAMINATION/VERIFICATION OF CONDITIONS

The Contractor shall examine and verify that site conditions are in agreement with the design package and shall repair all conditions that will prevent a proper installation.

3.2 SURFACE PREPARATION

Flooring shall be in a smooth, true, level plane, except where indicated as sloped. Before any work under this section is begun, all defects such as rough or scaling concrete, low spots, high spots, and uneven surfaces shall have been corrected, and all damaged portions of concrete slabs shall have been repaired as recommended by the flooring manufacturer. Concrete curing compounds, other than the type that does not adversely affect adhesion, shall be entirely removed from the slabs. Paint, varnish, oils, release agents, sealers, waxes, and adhesives shall be removed, as recommended by the flooring manufacturer.

3.3 MOISTURE TEST

The suitability of the concrete subfloor for receiving the resilient flooring with regard to moisture content shall be determined by a moisture test as recommended by the flooring manufacturer.

3.4 INSTALLATION OF VINYL-COMPOSITION TILE

Tile flooring shall be installed with adhesive in accordance with the manufacturer's installation instructions. Tile lines and joints shall be kept square, symmetrical, tight, and even. Edge width shall vary as necessary to maintain full-size tiles in the field, but no edge tile shall be less than one-half the field tile size, except where irregular

shaped rooms make it impossible. Flooring shall be cut to, and fitted around, all permanent fixtures, built-in furniture and cabinets, pipes, and outlets. Edge tile shall be cut, fitted, and scribed to walls and partitions after field flooring has been applied.

3.5 INSTALLATION OF RUBBER FLOORING

Rubber flooring shall be installed with adhesive in accordance with the manufacturer's written installation instructions. Lines and joints shall be kept square, symmetrical, tight, and even. Edge width shall vary as necessary to maintain full-size tiles in the field, but no edge pieces shall be less than one-half the field size, except where irregular shaped rooms make it impossible. Flooring shall be cut to, and fitted around, all permanent fixtures, built-in furniture and cabinets, pipes, and outlets. Edges shall be cut, fitted, and scribed to walls and partitions after field flooring has been applied.

3.6 INSTALLATION OF RESILIENT BASE

Wall base shall be installed with adhesive in accordance with the manufacturer's written instructions. Base joints shall be tight and base shall be even with adjacent resilient flooring. Voids along the top edge of base at masonry walls shall be filled with caulk. Preformed resilient wall base units shall be installed at all external corners where there are no corner guards.

3.7 INSTALLATION OF TREADS, RISERS, AND STRINGERS

Stair treads, risers, and stringers shall be installed with adhesive in accordance with the manufacturer's written installation instructions. Treads and risers shall cover the full width of the stairs.

3.8 CLEANING

Immediately upon completion of installation of tile in a room or an area, flooring and adjacent surfaces shall be cleaned to remove all surplus adhesive. After installation, flooring shall be washed with a cleaning solution, rinsed thoroughly with clear cold water, and, except for raised pattern rubber tile and rubber stair treads, shall be given two coats of polish in accordance with manufacturer's written instructions. After each polish coat, floors shall be buffed to an even luster with an electric polishing machine. Raised pattern rubber tile and rubber stair treads shall be cleaned and maintained as recommended by the manufacturer.

3.9 PROTECTION

From the time of laying until acceptance, flooring shall be protected from damage as recommended by the flooring manufacturer. Flooring which becomes damaged, loose, broken, or curled shall be removed and replaced.

-- End of Section --