

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE _____ PAGE _____ OF _____ PAGES

2. AMENDMENT/MODIFICATION NO. _____ 3. EFFECTIVE DATE _____ 4. REQUISITION/PURCHASE REQ. NO. _____ 5. PROJECT NO. *(If applicable)* _____

6. ISSUED BY _____ CODE _____ 7. ADMINISTERED BY *(If other than Item 6)* _____ CODE _____

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)* _____ (X) 9A. AMENDMENT OF SOLICIATION NO. _____
 9B. DATED *(SEE ITEM 11)* _____
 10A. MODIFICATION OF CONTRACT/ORDER NO. _____
 10B. DATED *(SEE ITEM 11)* _____
 CODE _____ 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. Offers 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 _____ 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 ACKNOWLEDGMENT 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 your 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)* _____

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

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> 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 <i>(such as changes in paying office, appropriation date, etc.)</i> 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 <i>(Specify type of modification and authority)</i>

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.)*

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 <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
<i>(Signature of person authorized to sign)</i>		<i>(Signature of Contracting Officer)</i>	

Item 14. Continued.

CHANGES TO VOLUME I – PROJECT INFORMATION, BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT

1. Replace the following sections with the accompanying new sections of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011:"

00120 PROPOSAL SUBMISSION REQUIREMENTS
00710 WAGE RATES

CHANGES TO VOLUME II – DESIGN AND PERFORMANCE REQUIREMENTS

2. Replace the following chapters with the accompanying new chapters of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011:"

CHAPTER 00840 REFERENCED DOCUMENTS
CHAPTER 11 PROJECT PROGRAM
CHAPTER B22 EXTERIOR WINDOWS AND OTHER OPENINGS
CHAPTER D3 HVAC – HEATING, VENTILATING, AND AIR CONDITIONING
CHAPTER X08 DOORS AND WINDOWS

END OF AMENDMENT

SECTION 00120
PROPOSAL SUBMISSION REQUIREMENTS
03/2002
AM # 0005 AND 0012

1 GENERAL

1.1 INTRODUCTION

Through the use of a one-step procurement process, the Department of the Army desires to obtain the design and construction of a Tactical Equipment Shop at Fort Hood, Texas. In this procurement procedure consideration will be given to the Project Organization and Personnel; Experience; Past Performance; Financial Capacity; preliminary design, and cost proposals. Final selection and basis for award of the Design/Build Contract will be on the basis of qualifications, technical quality, price, and other salient factors considered to be in the Government's best interests. If awarded the Contract, the offeror shall complete the design and construction documents and construct the facility in compliance with those completed requirements.

1.2 WHERE AND WHEN TO SUBMIT PROPOSAL

Submit the Proposal no later than the date and time indicated in Item 13.A of the Solicitation, Offer and Award form (Standard Form 1442) found in Section 00010, SOLICITATION, OFFER, AND AWARD.

1.3 EXPLANATION TO PROSPECTIVE OFFERORS

Any prospective offeror desiring an explanation or interpretation of the solicitation, drawing, specifications, etc. must request such in writing, and are directed to the individuals listed in Section 00100 INSTRUCTIONS TO OFFERORS, soon enough to allow a reply to reach all prospective offerors before the submission of their proposals. Oral explanation/instructions given before award of a contract will not be binding. Any information given a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment to the solicitation, if that information is necessary for submitting proposals, or if the lack of it would be prejudicial to other prospective offerors.

1.4 REQUIRED TECHNICAL DATA FOR PROPOSAL SUBMISSION

Offerors are advised that the required data will be utilized for review and evaluation and used for determination of a "Quality Rating" by a Technical Evaluation Board and that all data submitted for consideration under this proposal will be reviewed only for the purposes required for evaluation and award. The Government will not make assumptions concerning the offeror's intent, capabilities, facilities, or experiences. Clear identification is the sole responsibility of the offeror.

1.5 PROPOSAL PREPARATION

Instructions for the preparation and organization of each proposal are included herein. The proposal shall be submitted as summarized below and as required by the specifications.

1.5.1 Volume I – Primary Design Construction Team Management Proposal

- A. Project Organization and Personnel**
- B. Experience**
- C. Past Performance**
- D. _____ (AM#5)**

1.5.2 Volume II – Preliminary Design Proposal

- A. Design Proposal (Volume II)**
- B. Preliminary Project Schedule (Volume II)**

1.5.3 Volume III – Cost/Price Proposal

- A. Solicitation, Offer and Award (SF 1442)**
- B. Price Proposal Schedule**
- C. Bid Guarantee**
- D. Representations and Certifications**
- E. Subcontracting Plan (Applies to Large Businesses Only)**
- F. Small Disadvantaged Business (SDB) Utilization Plan (Applies to all Offerors)**

1.5.4 Format

1.5.4.1 Written Material

- a. All written material, including catalog cuts, shall be submitted in standard three ring loose-leaf binders. Proposals shall be tabbed and labeled in a manner to afford easy identification from a Table of Contents. Font size shall be not less than 10 point. Each page shall be identified with the appropriate page number centered at the bottom of the page. Sheet size of the proposal contents shall be 8 ½ by 11 inches. 11 by 17 inch sheets will be allowed for charts and tables but will be counted as 2 single-sided or 4 double-sided pages. Legibility, clarity, coherence, and the contents are important. Volume I (The Primary Design Construction Team Management Proposal) proposal length shall be limited to 70 single-sided or 35 double-sided pages, exclusive of the cover sheet, Table of Contents, and appendices. The offeror shall not submit verbatim sections or attachments of this solicitation as part of their proposal. Offers that do not meet these requirements may be subject to rejection.
- b. A cover sheet identifying the offeror and the project shall be provided. The second sheet shall be a Table of Contents.
- c. Table of Contents. The proposal shall contain a detailed Table of Contents. The complete Table of Contents shall be included in each binder used.
- d. Materials submitted but not required by this solicitation (such as company brochures and equipment lists) shall be relegated to appendices.
- e. Proposal revisions for written portions of the proposal, including catalog cuts and specifications, shall be submitted as page replacements with revised text readily identifiable, e.g. bold face print or underlined. The source of the revision, e.g. Error, Omission, or Clarification (EOC), amendment or other Contractor-initiated change, shall also be indicated for each revision. Revised pages shall be numbered, dated, submitted in same number of copies as the original proposal submittal, and a different color page than the original.

1.5.4.2 Drawings

- a. Full size drawings shall be submitted in accordance with Section 1016, DESIGN DOCUMENT REQUIREMENTS. Each drawing shall be identified with the appropriate Sequence and Sheet Numbers in the lower right hand corner. The original and one copy of all drawings must be full size drawings. The remaining copies may be full size or reduced size, but no smaller than 11 x 17 inches.
- b. All alternate designs which may or may not be priced as additive or deductive items shall be graphically described on separate drawings from the base proposal design. All alternate designs shall meet the minimum requirements of the solicitation.

c. Proposal revisions for drawings shall be submitted as sheet replacements with all changes identified on the drawings with clouds and in the title block, including the source of the revision, e.g. Error, Omission, or Clarification (EOC), amendment, or other Contractor-initiated change. Revised drawings shall be numbered, dated, and submitted in the same number of copies as the original proposal submittal.

1.5.4.3 Electronic Material

(AM#5) The successful offeror shall submit one copy of the proposal and all revisions, if applicable, on CD-ROM disk within 5 calendar days of the notice of contract award. Revisions shall be incorporated in the documents, marked and tabbed according to the final proposal revision. All textual material, catalog cuts, and other non-drawing material shall be in Adobe Acrobat Portable Document Format (.pdf), arranged in the same order as the hard copy version with each section or part book marked. All drawings shall be formatted in accordance with Section 01016 DESIGN DOCUMENT REQUIREMENTS, Paragraph “.CAL Files.” The offeror must ensure that all textual material, if it has been scanned, has been converted to a text searchable document by using the Paper Capture tool in Adobe Acrobat.

1.5.4.4 Proposal Submission

(AM#5) The proposal submitted shall include an original and copies (hard copy) as indicated below. Each proposal shall be marked to clearly identify the original and the copies. The copies shall be numbered.

Volume I – Primary Design Construction Team Management Proposal	Original and nine (9) copies
Volume II – Preliminary Design Proposal	Original and nine (9) copies
Volume III – Cost/Price Proposal	Original and <u>one (1) copy (AM#5)</u>

1.6 REFERENCED PUBLICATIONS

Corps of Engineers' (COE) design criteria and manuals that are referenced in this solicitation, such as Technical Manuals (TM) and Instructions (TI), Military Handbooks, Engineering Regulations (ER), and Engineering Manuals (EM), can be downloaded from the Internet at the following address: <http://www.hnd.usace.army.mil/techinfo> or obtained from the current National Institute of Building Science's (NIB) Construction Criteria Base (CCB) CD-ROM disk. The COE SWD-AEIM, _____ (AM#5), and EC 1110-1-94 (AM#5) are on the Solicitation CD-ROM Disk. The Installation Information Infrastructure Architecture (I3A) guidelines can be downloaded from the Internet at the following address: <http://arch-odisc4.army.mil/>. Obtaining other referenced publications such as Federal and Military specifications, Military Standards, and industry standards (i.e., ASTM, ANSI, ACI, NFPA, building codes) will be the responsibility of each offeror. See Section 00100 INSTRUCTIONS TO OFFERORS, paragraph "52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (AUG 1998)", for information on obtaining these publications. Offerors are warned that due to the limited time for proposal preparation and submittal, there may not be enough time for ordering and receiving any of the above references. Failure to receive requested references will not be sufficient reason for extension of the proposal submission date.

1.7 UNNECESSARILY ELABORATE PROPOSALS OR QUOTATIONS

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror's lack of cost consciousness. Elaborate artwork, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

1.8 REQUIREMENT FOR SPECIAL MARKING OF PROPOSAL DATA

Envelopes or other cover for material submitted in response to this RFP shall be opaque, and must be so presented that they may easily be identified. At a minimum, the outside cover for each volume must show:

Destination of Proposal
Name and location of project as described in the RFP documents
Solicitation number
Name and address of offeror
Project volume number

Submit the proposal in the format specified. Oral or telephonic proposals or modifications will not be considered.

Mail or deliver the proposal to the address listed on the Standard Form 1442, "Solicitation, Offer and Award."

1.9 DESCRIPTION OF EVALUATION CRITERIA

1.9.1 Volume I – Primary Design Construction Team Management Proposal Preparation

The Primary Design Construction Team Management Proposal shall include information as described below and shall be presented in the sequence listed.

A. Project Organization and Personnel:

1. Personnel (Primary Design Construction Team):

- a. This factor considers the offeror's proposed design, construction, and management team. Provide professional resume data on the individuals who will be key personnel on the Primary Design Construction project team. Key personnel identified in this section should be senior working-level people who will be involved in design and construction on a day-to-day basis, as opposed to departmental level supervisors or executives. If reassignment of personnel is considered possible, provide the names and resumes of the alternate professionals in each assignment.

See Sections 01015 DESIGN REQUIREMENTS AFTER AWARD, 01320 PROJECT SCHEDULE, 01430 DESIGN QUALITY CONTROL, and 01451 CONTRACTOR QUALITY CONTROL for minimum personnel qualifications. The following list shall be provided as a minimum:

Project Manager
Project Architect
Senior Structural Engineer
Senior Mechanical Engineer
Senior Electrical Engineer
Senior Civil Engineer
Fire Protection Engineer
Corrosion Engineer or Specialist (NACE)
Lightning Protection Specialist (Am#3)
Registered Communication Distribution Designer
Design Quality Control Manager
Construction Quality Control Manager
Project Scheduler

Information to be provided includes:

Name
Project assignment
Name of firm with which associated

Years experience: with this firm, with other firms
Education: degrees(s)/year/specialization
Active registration: state and year first registered
Experience and qualifications relevant to proposed project: for each project listed, provide project description, project dates, the individual's project assignment to include specific roles and responsibilities, and its relevance to this solicitation. Identify the length of time key personnel stayed on their contracts and how well they managed their portion of the referenced contracts.

b. Identify the Designer(s)-of-Record for each discipline

c. In an appendix, provide letters of commitment for all key personnel on the Primary Design Construction project team and any proposed alternate personnel. By identifying these personnel, the offeror is making a commitment that, barring unforeseen circumstances, they are the personnel who will be assigned to the project. A letter of commitment from each firm committing specific individuals from the firm may be provided in lieu of separate letters for each individual. After contract award, substitutions for any of the key personnel or alternates shall require the Contracting Officer's approval.

d. Capacity to Perform

(1) (AM#5) Provide a list and number of key professional job titles within the offeror's and consultants' firms who are available and will be used as backup to each member of the Primary Design Construction Team when required.

(2) Discuss capacity to successfully perform the requirements of this Contract based on current workload and staffing. Discuss strategy to provide supplemental and/or replacement personnel to support this project during design and/or construction, as necessary. In the appendix, provide a list of all current contracts for the Primary Design Construction Team members, including consultants.

2. Team Organization and Management:

a. Provide an organizational chart and supporting narrative describing how the team will be structured. Include all key design and construction personnel and firms on the organizational chart. Discuss the specific roles and responsibilities of each key individual and firm.

b. Describe the proposed management structure for the team. Discuss how the design and construction process will be managed, to include a discussion on delegation of authority within the team.

c. Describe interactions within the team and with the Corps of Engineers during design. Discuss how design changes will be handled and the roles that various team members will play when dealing with design changes. Discuss the role of construction team members during design phase.

d. Describe interactions within the team and with the Corps of Engineers during construction. Discuss how changes will be handled during construction and the roles that various team members will play when dealing with changes during construction. Discuss the role of design team members during construction. Specifically address design team's role in construction Quality Control program; Requests For Information (RFI's); shop drawing/submittal review and approval; attending progress meetings; site visits; inspections; and contract completion and closeout.

e. Describe the time control systems to be utilized. Discuss the use of the project schedule for managing the design and construction. Describe internal procedures for handling delays to minimize time growth.

f. Identify the items of work to be self-performed by offeror and the percentage of the overall contract value that this work represents.

g. Describe the team's computer-aided drafting and design (CADD) capabilities. Identify the CADD software to be used in the design of this project; if all disciplines are not using the same CADD software, identify the software that each discipline is using. Discuss compatibility with the Government's target CADD. Explain how compatibility will be achieved if the design, or portion of the design, is prepared using a CADD system other than the Government's target CADD system. (Refer to Section 01016 DESIGN DOCUMENT REQUIREMENTS for information on the Government's target CADD system and compatibility requirements.)

B. Experience

1. Provide a list of projects currently underway or completed within the last 5 years that best demonstrates the design and construction experience of the team (firms and/or individual team members) to successfully complete this facility using a design/build process. Experience beyond 5 years ago for construction contractors will not be given consideration unless the key personnel proposed for this project played a significant role in the earlier project and the project can be shown to be similar to this project. An offeror must make clear the extent of involvement in those projects by current key personnel and clearly describe how the older project is similar to this project, considering changes in technology, materials, equipment, codes, etc. Experience beyond 5 years ago for design firms will not be given consideration.

List no more than 10 projects total. The list of projects shall include the following information:

- a. Project name and location
- b. Type of facility
- c. Nature of firm's responsibility (design, construction or both)
- d. Identify type of contract (design, design/build, or construction)
- e. Project owner's name and address and project manager's (point of contact) name, telephone number, fax number, and email address (if known)
- f. If a government contract, include the contracting agency and contracting officer's name, telephone number, fax number, and email address (if known)
- g. Date started
- h. Original scheduled completion date
- i. Actual completion date
- j. Overall size of facility (in square feet or square meters)
- k. Construction cost (excluding design costs)
- l. Duration of construction (excluding design time)
- m. Problems encountered and corrective actions taken
- n. Identify which proposed team members and/or firms were involved in the project; their specific roles and responsibilities on the project; and the extent of time they were involved with the project
- o. Relevance of experience to the solicitation project
- p. Was sustainable design used? If yes, indicate the certification level. (AM#5)**

2. Joint Ventures: If offeror represents the combining of two or more companies for the purpose of this RFP, the proposal shall indicate whether the firms have experience working together in design/build ventures and for how long and how many projects. In addition, each company of this joint venture shall list their Government contract experiences.

C. Past Performance:

1. For each design and/or construction firm on the project team, provide firm's name, address, and DUNS number.

2. Non-Corps References

For each non-Corps project listed under "Volume I: Experience" factor, offerors should send Client Authorization Letters and Contractor Performance Report (See Section 00500) to each reference listed in the proposal to assist in the timely processing of the past performance evaluation. In an appendix, provide a copy of issued letters with the offeror's proposal. Copies of aforementioned letters will not count towards the page limitation stated in Paragraph 1.5.4.1 of this Section.

3. Offerors are encouraged to submit awards, letters, evaluations, or other forms of recognition that demonstrate their performance capabilities and customer satisfaction. If provided, this additional past performance information shall be relegated to an appendix and will not count towards the aforementioned page limitation.

4. New Companies

For new companies entering the marketplace (without relevant company experience) the quality of the past performance of their key management personnel of the Primary Design Construction Team and consultants will indicate the risk of good performance and become the basis of the past performance evaluation. Identifying how long key personnel stayed on their contracts and how well they managed their portion of the referenced contracts will be of great importance in the evaluation process.

D. (AM#5) _____

1.9.2 Volume II – Design Proposal Preparation

PRELIMINARY DESIGN PROPOSAL

The purpose of the Preliminary Design Proposal is:

To provide sufficient design information for the Government to determine the acceptability of the proposed design in meeting the functional requirements set forth herein for operational use and economical maintenance during the anticipated life of the facility.

To provide data for a determination of the engineering sufficiency and soundness of the basic approach to the design for each technical discipline. Also, it will serve as a documentary check that the designer has been provided or has developed the essential engineering criteria necessary for all facets of final computations and detailed development of a thoroughly engineered, coordinated, economical, and functional design.

The Preliminary Design Proposal consists of two parts, the Design Proposal and the Preliminary Project Schedule:

A. Design Proposal

1. The design proposal shall include, as a minimum, the following descriptive narratives, manufacturer's catalog data, and graphic information:

a. Narratives

(1) General Description

(a) Provide brief description of the facility addressing the overall design, materials components, and engineering. **DO NOT INCLUDE DESIGN CALCULATIONS.** Include the following:

- (i) Basic site layout **for the Tactical Equipment Shop site and the option #2 Truck Loading Dock site (am#3)** and the rationale behind the site design. Address existing site features, site demolition requirements, new utilities, site improvements, **and identify pavement section to be used for hardstand pavement. (am#1)**
 - (ii) Building's architectural configuration and the rationale behind the design. Address relationship of the site and site activities to the building. Address exterior and interior building materials.
 - (iii) Building's interior configuration, to include general discussion on interior finishes, including those in the shops, offices, general administrative areas, warehouse and common areas (copy rooms, break/vending areas, restrooms). Discuss use of common areas within the facility. **DO NOT PROVIDE COLOR BOARDS.**
 - (iv) Structural system and the rationale behind the selection of the proposed system, including identification of major structural materials and systems.
 - (v) Heating, Ventilation and Air Conditioning system and rationale behind the selection of the proposed system.
 - (vi) Vehicle Maintenance Systems including waste oil, waste antifreeze, off-spec fuel collection and storage, POL distribution and dispensing systems, vehicle exhaust systems, parts wash and wash bay systems, compressed air systems and rationale behind the selection of the proposed systems.
 - (vii) Hoisting systems and the rationale behind the selection of the proposed systems.
 - (viii) Fire protection system and the rationale behind the selection of the proposed system.
 - (ix) Exterior power distribution systems (upgrade to existing system) and the rationale behind the selection of the proposed system. Discuss service to the building and location. Identify type of wire. Identify whether aerial or underground.
 - (x) Interior power distribution systems and the rationale behind the selection of the proposed system. Identify electrical characteristics of power supply (phase, voltage, KVA). Provide description of panels, protection devices and typical loading of circuits. Identify type of wire.
 - (xi) Exterior lighting system and the rationale behind the proposed system. Address exterior lighting locations, illumination levels for each area, and lighting controls.
 - (xii) Interior lighting system and the rationale behind the selection of the proposed system. Address illumination levels for each area, emergency lighting, and lighting controls.
 - (xiii) Interior communications systems (telephone, data, cable TV, sound transmission) and the rationale behind the selection of each system.
 - (xiv) Environmental Considerations and Occupational Safety and Health Issues.
- (b) Describe the energy-efficient and/or energy-saving features proposed for this project.
- (c) Identification of proposed methods of meeting security requirements.
- (d) If the design proposal includes any deviations from the RFP requirements, including functional or adjacency requirements, identify the deviation, provide justification for the deviation, and describe the benefit/improvement that the deviation provides to the facility. (See Section 00150 PROPOSAL EVALUATION AND CONTRACT AWARD, paragraph "DESIGN FREEDOM".)**
- (e) Identify all proposed betterments. (See Section 00800 SPECIAL CONTRACT PROCEDURES, clauses entitled "DESIGN-BUILD CONTRACT ORDER OF PRECEDENCE" AND "PROPOSED BETTERMENTS".)**

b. Manufacturer Catalog Data

Manufacturer catalog data shall include industry standard quality indicators for the specific material or equipment and that will be used to establish the proposed construction quality during proposal evaluation. Data may be in the form of CSI standard product information formats Manu-Spec and Spec-Data, and manufacturer's specifications and details. Furnish data, arranged by CSI Divisions, on:

- (1) Glazing: windows and glazing for library and classrooms.
- (2) Doors
- (3) Interior finishes, to include floors, base, walls, ceilings, toilet partitions, lavatory tops
- (4) Exterior finishes, to include walls, roof, and soffits
- (5) Interior and exterior light fixtures, including identification of where each proposed fixture type will be used
- (6) Any other catalog data deemed pertinent

c. Graphic Information

Furnish preliminary drawings and schematics to illustrate the proposal. If a plan does not fit on one standard size drawing sheet at the scale specified, provide an overall plan to fit on one standard size drawing sheet plus individual sheets at the scale specified.

- (1) Site Layout Plan, minimum scale 1:400 or 1:500, showing:
 - (a) Building location
 - (b) Service drives, parking, and hardstand
 - (c) Location of site features (i.e. landscaping, sidewalks, lighting, mechanical and electrical equipment)
 - (d) Set-backs
 - (e) Preliminary grading and drainage Plan
- (2) Architectural Floor Plans, minimum scale 1:100 (1/8" = 1'), with all areas identified, showing:
 - (a) Gross area of building; exterior and interior dimensions; size of areas; critical and basic dimensions.
 - (b) Area calculations
 - (c) Preliminary finish schedule
 - (d) Plumbing fixture locations, including drinking fountains
 - (e) **DELETED (AM#12)**
- (3) Interior Sections/Elevations, minimum scale 1:50 (1/4" = 1'), showing:
 - (a) Offices
 - (b) Common areas (break/vending areas, copy areas)
 - (c) Restrooms
 - (d) Shops
 - (e) Warehouse
- (4) Exterior Elevations of building(s), minimum scale 1:100 (1/8" = 1'), showing:
 - (a) Fenestrations and material indications.
 - (b) Critical and basic dimensions.
 - (c) Exterior finish materials.
- (5) Building Cross-Sections

Provide one cross-section through each wing of the building(s) and one longitudinal cross-section through the building indicating floor and ceiling heights, and all overhead equipment and utility distribution as well as crane hook range of motion.

d. Sustainable Design. Using the Sustainable Project Rating Tool (SPiRiT), provide a self-assessment of the sustainability features of the facility (see Volume IV ATTACHMENTS for the Sustainable Project Rating Tool manual and rating sheets). For each required element and for each point-scored element where you have met (or exceeded) the requirement, provide justification of how you have met the stated requirement. Justification shall be documented on the non-annotated version of SPiRiT tool (SPiRiT v1.4 (.doc), April 2001) available on the Internet at <http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm>, or use the version that is on the Solicitation CD. Justification shall be inserted in the document immediately after the requirement text for each element. Label the justification as "Justification of Scoring". Scoring shall be summarized on the SPiRiT scoring sheet (SpiRiT v1.4 (.xls), April 2001) available at <http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm> (this file is also located on the Solicitation CD). This scoring summary shall be attached to the front of the SPiRiT tool in the submitted documentation. Goal is minimum Bronze level certification. If Bronze level certification cannot be attained, discuss the factors that prevent achieving this goal in one section prior to the beginning of the SPiRiT scoring summary.

B. Preliminary Project Schedule.

A time-scaled logic diagram shall be submitted with the Preliminary Design proposal reflecting the detailed design phase activities and summary level construction activities from Notice to Proceed through final completion, including all option work. Project Schedule shall conform to Section 01320 PROJECT SCHEDULE and may be used for preparation of the Preliminary Schedule required in Section 01320 after award. The following information shall be included as a minimum:

1. Detailed design activities
2. Summary level construction activities
3. Phasing requirements
4. Critical Path
5. Milestones and Constraints
6. Overall Design Duration, in calendar days
7. Overall Construction Duration, in calendar days
8. Overall Proposed Duration, in calendar days

The Contractor shall propose the contract durations for Work Item #1, Design and Construction of the new facility. The proposed duration shall not exceed the duration specified in Section 01000, Design and Construction Schedule. The proposed schedule shall support the proposed duration. Upon contract award, the successful offeror's proposed duration shall become the contract duration for Work Item #1. It should be noted that the Government will include provisions in the contract for liquidated damages for each calendar day the Contractor exceeds the contract schedule.

1.9.3 VOLUME III Cost/Price Proposal Preparation

Prices shall be firm. The offeror's price, to be considered in the competitive negotiation evaluation, shall be the offeror's Total Base Bid, including all option work, as shown on the price proposal schedule. The cost/price proposal will be evaluated separately, after evaluation of Volume I and Volume II. The cost/price proposal shall consist of the following:

1. Solicitation, Offer and Award.

The Standard Form 1442 shall be completely filled out and signed by a principal of the firm authorized to bind the design-build team. Signature(s) must be in long hand.

2. Price Proposal Schedule

- a. Offerors shall complete the Price Proposal Schedule by filling out the pricing data blanks.

b. Overhead and profit shall be applied proportionally to each category and will not be required to be shown separately.

c. Offerors shall include allowance for weather days in the Cost/Price Proposal and shall schedule any contingency for severe weather in accordance with weather requirements included in Section 01000, DESIGN AND CONSTRUCTION SCHEDULE.

3. Bid Guarantee.

The bid guarantee shall be submitted in accordance with Section 00700, Contract Clauses.

4. Representations and Certifications.

Representations are local, state, and federal representative statements and certifications made by the Offeror concerning a variety of issues. Complete each item in Section 00600, REPRESENTATIONS AND CERTIFICATIONS, and submit one original with the Volume III proposal.

5. Subcontracting Plan. (Applies to Large Businesses only.)

All large businesses shall submit a subcontracting plan with their technical and price/cost proposals. The plan shall be prepared in accordance with FAR 52.219-9. Failure to submit an acceptable subcontracting plan may make the offeror ineligible for award of the contract. The submission of the subcontracting plan is in no way advantageous to large businesses over any small business in the evaluation process. A sample subcontracting plan and scoring checklist are included on the solicitation CD-ROM disk. See Section 00100 INSTRUCTIONS TO OFFERORS, paragraph SMALL BUSINESS SUBCONTRACTING PLAN for additional information and Fort Worth District subcontracting floors.

6. Small Disadvantaged Business (SDB) Utilization Plan. (Applies to all Offerors.)

Offerors shall submit a SDB Utilization Plan, to include the following information:

- a. Identification of each SDB concern proposed and the work each is to perform.
- b. Targets expressed in dollars and percentages representing each SDB concern's participation of the total contract value.
- c. Total target value of all SDB participation, expressed in dollars and percentages, of the total contract value.

The offeror is put on notice that any targets represented in submitted proposal will be incorporated into and become part of any resulting contract. All proposed SDB concerns must be certified by the Small Business Administration and listed in the online database PRO-Net. SDB concerns may register in PRO-Net at <http://pronet.sba.gov>.

1.10 CLARIFICATIONS AND FINAL PROPOSAL REVISION

1.10.1 General

Any conflicting criteria which cannot be resolved by the Order of Precedence specified in Section 00800 SPECIAL CONTRACT REQUIREMENTS shall be brought to the attention of the Government by the Offeror as part of the written clarification requirement of the proposal. In the absence of such request for clarification, the Offeror shall perform to the most beneficial criteria as determined by the Government.

1.10.2 Clarifications Prior to Proposal Due Date

In the event that clarifications are required prior to submitting the Volume I or II proposal, contact the individuals listed in Section 00100, INSTRUCTIONS TO OFFERORS. All RFP holders will be advised of significant clarifications affecting the scope of the project.

1.10.3 Clarifications Submitted with Proposals

For clarifications remaining at the time and date that proposals are due, written clarifications may be included in the proposal for consideration by the Government. Clarifications submitted with proposals shall clearly identify the understanding of the RFP documents and how this understanding is reflected in the cost proposal. Extensive qualifications, exclusions and exceptions in the form of clarifications may be considered by the Government to be non-responsive and may be grounds for rejection of the proposal.

1.10.4 Final Proposal Revision

If the Contracting Officer determines that discussions are necessary, all offerors in the competitive range will be given an opportunity to submit a final proposal revision. All proposal revisions must be submitted as required in paragraph 1.5.4 Format, subparagraphs 1.5.4.1 Written Material and 1.5.4.2 Drawings.

1.11 PAYMENT FOR PROPOSALS

Offerors will not be reimbursed for the cost of preparing their proposals.

1.12 NOTICE

Failure to submit all the data indicated in this section may be cause for determining a proposal non-responsive and, therefore, not considered for award.

2 PRODUCTS (NOT USED)

3 EXECUTION (NOT USED)

END OF SECTION

APPLICATION OF WAGE DECISIONS

Solicitation No: DACA63-02-R-0011
Project: Design/Construct Tactical Equipment Shop
Location: Fort Hood, Texas

1. Service Contract Act (SCA) Wage Determination Number 94-2523, Revision 15, will be applicable to those activities performing installation support requirements for certain minor maintenance repairs, clerical support services, custodial services, grounds maintenance, and landscaping or for those services requiring the utilization of professional/service employees, i.e., Biologists, Agronomists, Environmentalists, Environmental Abatement, Computer Specialists, Architects/Engineers, Surveyors, and associated Technicians thereof of the professional/technical trades.

NOTE: Payroll records are not required to be submitted to the U.S. Army Corps of Engineers for work performed under the Service Contract Act (SCA). SCA payroll records are required to be kept by the Prime Contractor, and available for review if requested, for a minimum of three years from the date of contract completion. Labor compliance will be monitored by the U.S. Department of Labor for SCA labor records.

2. Davis-Bacon Act Wage Decision, TX020051, Building Construction Projects, will be applicable to the construction, alteration, painting or repair of buildings, installation within buildings, appurtenances to buildings, foundations for buildings, excavation and fill for buildings, and utilities within five feet of buildings for those construction activities performed in **Bell County, Texas.**

3. Davis-Bacon Act Wage Decision, TX020043, Heavy and Highway Construction Projects, will be applicable to all utilities more than five feet from buildings, and any other construction requirements not shown in paragraph 2 above in **Bell County, Texas**

NOTE:

(1) PAYROLL RECORDS ARE REQUIRED, UNDER THE DAVIS-BACON ACT, TO BE SUBMITTED TO THE U.S. ARMY CORPS OF ENGINEERS FOR ALL CONSTRUCTION WORK PERFORMED.

(2) THE WAGE DECISION NUMBER APPLICABLE TO THE WORK PERFORMED IS TO BE SHOWN ON ALL THE CERTIFIED PAYROLL RECORDS SUBMITTED.

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

WAGE DETERMINATION NO: 94-2523 REV (15) AREA: TX,WACO

WAGE DETERMINATION NO: 94-2523 REV (15) AREA: TX,WACO

REGISTER OF WAGE DETERMINATIONS UNDER

U.S. DEPARTMENT OF LABOR

FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU WITH DOL

WASHINGTON D.C. 20210

William W.Gross Division of
Director Wage Determinations

Wage Determination No.: 1994-2523
Revision No.: 15
Date Of Last Revision: 07/06/2001

State: **Texas**

Area: **Texas** Counties of Anderson, **Bell**, Bosque, Brazos, Coryell, Falls, Freestone, Hamilton, Hill, Leon, Limestone, McLennan, Mills, Robertson

****Fringe Benefits Required Follow the Occupational Listing****

OCCUPATION TITLE	MINIMUM WAGE RATE
Administrative Support and Clerical Occupations	
Accounting Clerk I	7.87
Accounting Clerk II	8.59
Accounting Clerk III	10.41
Accounting Clerk IV	11.71
Court Reporter	13.22
Dispatcher, Motor Vehicle	12.08
Document Preparation Clerk	10.01
Duplicating Machine Operator	10.01
Film/Tape Librarian	10.40
General Clerk I	8.24
General Clerk II	9.26
General Clerk III	11.41
General Clerk IV	12.78
Housing Referral Assistant	12.68
Key Entry Operator I	8.62
Key Entry Operator II	12.28
Messenger (Courier)	7.63
Order Clerk I	9.57
Order Clerk II	10.45
Personnel Assistant (Employment) I	10.16
Personnel Assistant (Employment) II	11.71
Personnel Assistant (Employment) III	13.93
Personnel Assistant (Employment) IV	16.56
Production Control Clerk	14.58
Rental Clerk	10.40
Scheduler, Maintenance	10.40
Secretary I	10.40
Secretary II	12.21
Secretary III	13.22
Secretary IV	14.27
Secretary V	15.99
Service Order Dispatcher	10.40
Stenographer I	10.45
Stenographer II	13.36
Supply Technician	15.42
Survey Worker (Interviewer)	12.08
Switchboard Operator-Receptionist	8.48

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

Test Examiner	12.21
Test Proctor	12.21
Travel Clerk I	9.40
Travel Clerk II	10.28
Travel Clerk III	11.13
Word Processor I	9.44
Word Processor II	10.66
Word Processor III	12.38
Automatic Data Processing Occupations	
Computer Data Librarian	10.46
Computer Operator I	9.89
Computer Operator II	13.81
Computer Operator III	16.28
Computer Operator IV	18.04
Computer Operator V	19.96
Computer Programmer I (1)	16.06
Computer Programmer II (1)	19.29
Computer Programmer III (1)	21.77
Computer Programmer IV (1)	26.33
Computer Systems Analyst I (1)	22.60
Computer Systems Analyst II (1)	24.16
Computer Systems Analyst III (1)	27.47
Peripheral Equipment Operator	11.55
Automotive Service Occupations	
Automotive Body Repairer, Fiberglass	15.59
Automotive Glass Installer	13.40
Automotive Worker	13.40
Electrician, Automotive	14.17
Mobile Equipment Servicer	11.73
Motor Equipment Metal Mechanic	14.95
Motor Equipment Metal Worker	13.40
Motor Vehicle Mechanic	14.95
Motor Vehicle Mechanic Helper	10.90
Motor Vehicle Upholstery Worker	12.56
Motor Vehicle Wrecker	13.40
Painter, Automotive	14.17
Radiator Repair Specialist	13.40
Tire Repairer	11.33
Transmission Repair Specialist	14.95
Food Preparation and Service Occupations	
Baker	9.89
Cook I	8.70
Cook II	9.89
Dishwasher	6.52
Food Service Worker	6.58
Meat Cutter	10.96
Waiter/Waitress	6.84
Furniture Maintenance and Repair Occupations	
Electrostatic Spray Painter	14.17
Furniture Handler	9.23
Furniture Refinisher	14.17
Furniture Refinisher Helper	10.90
Furniture Repairer, Minor	12.56
Upholsterer	14.17
General Services and Support Occupations	
Cleaner, Vehicles	7.15
Elevator Operator	7.15

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

Gardener	9.45
House Keeping Aid I	7.00
House Keeping Aid II	7.86
Janitor	7.17
Laborer, Grounds Maintenance	8.54
Maid or Houseman	6.23
Pest Controller	10.73
Refuse Collector	7.15
Tractor Operator	8.77
Window Cleaner	7.87
Health Occupations	
Dental Assistant	10.93
Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	10.93
Licensed Practical Nurse I	9.66
Licensed Practical Nurse II	10.83
Licensed Practical Nurse III	12.12
Medical Assistant	9.77
Medical Laboratory Technician	11.24
Medical Record Clerk	10.37
Medical Record Technician	13.54
Nursing Assistant I	7.56
Nursing Assistant II	8.50
Nursing Assistant III	9.27
Nursing Assistant IV	10.40
Pharmacy Technician	12.19
Phlebotomist	10.83
Registered Nurse I	14.37
Registered Nurse II	17.58
Registered Nurse II, Specialist	17.58
Registered Nurse III	21.27
Registered Nurse III, Anesthetist	21.27
Registered Nurse IV	25.49
Information and Arts Occupations	
Audiovisual Librarian	15.04
Exhibits Specialist I	14.31
Exhibits Specialist II	18.07
Exhibits Specialist III	20.79
Illustrator I	13.91
Illustrator II	17.56
Illustrator III	20.20
Librarian	16.86
Library Technician	12.08
Photographer I	11.44
Photographer II	13.91
Photographer III	17.56
Photographer IV	20.20
Photographer V	24.53
Laundry, Dry Cleaning, Pressing and Related Occupations	
Assembler	6.55
Counter Attendant	6.55
Dry Cleaner	7.79
Finisher, Flatwork, Machine	6.55
Presser, Hand	6.55
Presser, Machine, Drycleaning	6.55
Presser, Machine, Shirts	6.55
Presser, Machine, Wearing Apparel, Laundry	6.55
Sewing Machine Operator	8.37

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Tailor	8.96
Washer, Machine	7.57
Machine Tool Operation and Repair Occupations	
Machine-Tool Operator (Toolroom)	14.17
Tool and Die Maker	16.20
Material Handling and Packing Occupations	
Forklift Operator	10.18
Fuel Distribution System Operator	13.66
Material Coordinator	12.13
Material Expediter	12.13
Material Handling Laborer	8.46
Order Filler	9.51
Production Line Worker (Food Processing)	10.53
Shipping Packer	10.72
Shipping/Receiving Clerk	10.72
Stock Clerk (Shelf Stocker; Store Worker II)	10.14
Store Worker I	7.73
Tools and Parts Attendant	11.60
Warehouse Specialist	10.62
Mechanics and Maintenance and Repair Occupations	
Aircraft Mechanic	17.16
Aircraft Mechanic Helper	12.51
Aircraft Quality Control Inspector	18.00
Aircraft Servicer	14.43
Aircraft Worker	15.39
Appliance Mechanic	14.17
Bicycle Repairer	11.33
Cable Splicer	14.95
Carpenter, Maintenance	14.17
Carpet Layer	13.40
Electrician, Maintenance	16.18
Electronics Technician, Maintenance I	15.28
Electronics Technician, Maintenance II	16.97
Electronics Technician, Maintenance III	19.30
Fabric Worker	12.56
Fire Alarm System Mechanic	14.95
Fire Extinguisher Repairer	11.73
Fuel Distribution System Mechanic	14.95
General Maintenance Worker	13.40
Heating, Refrigeration and Air Conditioning Mechanic	14.95
Heavy Equipment Mechanic	14.95
Heavy Equipment Operator	14.95
Instrument Mechanic	17.19
Laborer	8.46
Locksmith	14.17
Machinery Maintenance Mechanic	15.03
Machinist, Maintenance	14.95
Maintenance Trades Helper	10.90
Millwright	14.95
Office Appliance Repairer	14.17
Painter, Aircraft	14.17
Painter, Maintenance	14.17
Pipefitter, Maintenance	17.83
Plumber, Maintenance	16.35
Pneudraulic Systems Mechanic	14.95
Rigger	14.95
Scale Mechanic	13.40

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Sheet-Metal Worker, Maintenance	14.95
Small Engine Mechanic	13.40
Telecommunication Mechanic I	15.48
Telecommunication Mechanic II	18.67
Telephone Lineman	15.48
Welder, Combination, Maintenance	14.95
Well Driller	14.95
Woodcraft Worker	14.95
Woodworker	11.88
Miscellaneous Occupations	
Animal Caretaker	7.46
Carnival Equipment Operator	9.28
Carnival Equipment Repairer	10.01
Carnival Worker	6.22
Cashier	7.36
Desk Clerk	8.63
Embalmer	16.84
Lifeguard	9.02
Mortician	16.84
Park Attendant (Aide)	11.32
Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	8.89
Recreation Specialist	11.97
Recycling Worker	9.29
Sales Clerk	8.42
School Crossing Guard (Crosswalk Attendant)	7.15
Sport Official	8.61
Survey Party Chief (Chief of Party)	15.28
Surveying Aide	9.53
Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	13.06
Swimming Pool Operator	9.89
Vending Machine Attendant	9.29
Vending Machine Repairer	11.37
Vending Machine Repairer Helper	9.29
Personal Needs Occupations	
Child Care Attendant	8.63
Child Care Center Clerk	10.76
Chore Aid	6.37
Homemaker	11.97
Plant and System Operation Occupations	
Boiler Tender	14.95
Sewage Plant Operator	14.17
Stationary Engineer	17.19
Ventilation Equipment Tender	10.90
Water Treatment Plant Operator	14.17
Protective Service Occupations	
Alarm Monitor	9.65
Corrections Officer	12.62
Court Security Officer	12.62
Detention Officer	12.62
Firefighter	13.63
Guard I	8.45
Guard II	11.10
Police Officer	14.75
Stevedoring/Longshoremen Occupations	
Blocker and Bracer	14.89
Hatch Tender	12.95
Line Handler	12.95

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Stevedore I	12.03
Stevedore II	13.68
Technical Occupations	
Air Traffic Control Specialist, Center (2)	27.84
Air Traffic Control Specialist, Station (2)	18.62
Air Traffic Control Specialist, Terminal (2)	20.50
Archeological Technician I	12.68
Archeological Technician II	13.85
Archeological Technician III	17.56
Cartographic Technician	21.24
Civil Engineering Technician	18.47
Computer Based Training (CBT) Specialist/ Instructor	20.72
Drafter I	11.97
Drafter II	13.15
Drafter III	17.97
Drafter IV	21.25
Engineering Technician I	13.63
Engineering Technician II	16.43
Engineering Technician III	18.40
Engineering Technician IV	26.25
Engineering Technician V	30.72
Engineering Technician VI	32.32
Environmental Technician	19.94
Flight Simulator/Instructor (Pilot)	23.54
Graphic Artist	15.67
Instructor	17.16
Laboratory Technician	15.32
Mathematical Technician	19.94
Paralegal/Legal Assistant I	12.84
Paralegal/Legal Assistant II	14.44
Paralegal/Legal Assistant III	17.66
Paralegal/Legal Assistant IV	21.37
Photooptics Technician	18.17
Technical Writer	22.71
Unexploded (UXO) Safety Escort	17.16
Unexploded (UXO) Sweep Personnel	17.16
Unexploded Ordnance (UXO) Technician I	17.16
Unexploded Ordnance (UXO) Technician II	20.76
Unexploded Ordnance (UXO) Technician III	24.88
Weather Observer, Combined Upper Air and Surface Programs (3)	14.16
Weather Observer, Senior (3)	15.73
Weather Observer, Upper Air (3)	14.16
Transportation/ Mobile Equipment Operation Occupations	
Bus Driver	12.39
Parking and Lot Attendant	7.08
Shuttle Bus Driver	10.21
Taxi Driver	8.25
Truckdriver, Heavy Truck	14.33
Truckdriver, Light Truck	10.21
Truckdriver, Medium Truck	14.26
Truckdriver, Tractor-Trailer	14.33

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$2.02 an hour or \$80.80 a week or \$350.13 a month.

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years, and 4 after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry- house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)} Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper. When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

GENERAL DECISION TX020051 06/07/02 TX51

General Decision Number TX020051

Superseded General Decision No. TX010051

State: **TEXAS**

Construction Type:

BUILDING

County(ies):

BELL CORYELL

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories).

Modification Number	Publication Date
0	03/01/2002
1	03/29/2002
2	06/07/2002

COUNTY(ies):

BELL CORYELL

ELEC0072A 08/30/2001

	Rates	Fringes
ELECTRICIANS	19.75	3.65+4%
CABLE SPLICERS	20.75	3.65+4%

* IRON0482B 06/01/2002

	Rates	Fringes
IRONWORKERS, Structural	16.65	4.65

SUTX1067A 11/16/1991

	Rates	Fringes
AIR CONDITIONING AND HEATING MECHANICS (Excluding Duct Work)	9.10	
BRICKLAYERS	14.00	
CARPENTERS (Including Drywall Hangers)	11.58	
CEMENT MASONS	10.50	
GLAZIERS	7.00	.46
INSULATION INSTALLERS (Batt and Blown)	8.31	.54
IRONWORKERS, Reinforcing	11.00	
LABORERS (Including Mason Tenders)	5.61	
LATHERS	15.33	
PAINTERS	8.32	.13
PLASTERERS	12.78	
PLUMBERS AND PIPEFITTERS (Excluding HVAC Work)	10.07	
POWER EQUIPMENT OPERATORS: Backhoes	8.54	

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

ROOFERS	7.78	
SHEET METAL WORKERS (Including HVAC Work)	9.79	
SOFT FLOOR LAYERS	13.46	.26
TILE SETTERS	15.00	.25

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

INCIDENTAL PAVING AND UTILITIES

ASPHALT HEATER OPERATOR	7.55	
ASPHALT RAKER	6.50	
CARPENTER	8.75	
CONCRETE FINISHER-PAVING	8.50	
CONCRETE FINISHER-STRUCTURES	8.35	
ELECTRICIAN	14.00	
FORM BUILDER-STRUCTURES	8.90	
FORM LINER-PAVING & CURB	8.05	
FORM SETTER-PAVING & CURB	7.10	
FORM SETTER-STRUCTURES	7.70	
LABORER-COMMON	5.60	
LABORER-UTILITY	6.45	
MECHANIC	10.00	
SERVICER	6.60	
PIPELAYER	5.70	
POWER EQUIPMENT OPERATORS:		
Asphalt Distributor	7.00	
Asphalt Paving Machine	7.15	
Broom or Sweeper Operator	6.60	
Bulldozer, 150 HP & Less	7.10	
Bulldozer over 150 HP	7.35	
Concrete Paving Finishing Machine	7.00	
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Less than 1 1/2 C.Y.	8.00	
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel 1 1/2 C.Y. & Over	9.45	
Foundation Drill Operator, Truck Mounted	10.50	
Front End Loader 2 1/2 C.Y. & Less	7.10	
Front End Loader Over 2 1/2 C.Y.	7.85	
Motor Grader Operator, Fine Grade	9.05	
Motor Grader Operator	8.35	
Roller, Steel Wheel, Plant-Mix Pavement	6.20	
Roller, Steel Wheel Other Flatwheel or Tamping	5.95	
Roller, Pneumatic, Self Propelled	5.90	
Scraper, 17 C.Y. & Less	6.15	
Scraper, Over 17 C.Y.	7.10	
Side Boom	6.30	

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

Tractor, (Pneumatic) 80 HP & Less	6.00
Tractor, (Pneumatic) over 80 HP	7.20
TRUCK DRIVERS:	
Single Axle, Light	6.45
Single Axle, Heavy	6.60
Tandem Axle or Semi-trailer	6.55
WELDER	9.50

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

GENERAL DECISION TX020043 03/01/02 TX43

General Decision Number TX020043

Superseded General Decision No. TX010043

State: **TEXAS**

Construction Type:

**HEAVY
HIGHWAY**

County(ies):

BELL	CORYELL	TRAVIS
BEXAR	GUADALUPE	WILLIAMSON
BRAZOS	HAYS	
COMAL	MCLENNAN	

Heavy (excluding tunnels and dams) **and Highway Construction Projects** (does not include building structures in rest area projects). *NOT TO BE USED FOR WORK ON SEWAGE OR WATER TREATMENT PLANTS OR LIFT/PUMP STATIONS IN BELL, CORYELL, McLENNAN AND WILLIAMSON COUNTIES.

Modification Number	Publication Date
0	03/01/2002

COUNTY(ies):

BELL	CORYELL	TRAVIS
BEXAR	GUADALUPE	WILLIAMSON
BRAZOS	HAYS	
COMAL	MCLENNAN	

SUTX2042A 03/26/1998

	Rates	Fringes
AIR TOOL OPERATOR	8.08	
ASPHALT HEATER OPERATOR	11.00	
ASPHALT RAKER	8.00	
ASPHALT SHOVELER	7.97	
BATCHING PLANT WEIGHER	11.00	
CARPENTER	10.80	
CONCRETE FINISHER-PAVING	9.57	
CONCRETE FINISHER-STRUCTURES	8.83	
CONCRETE RUBBER	8.52	
ELECTRICIAN	16.25	
FLAGGER	6.86	
FORM BUILDER-STRUCTURES	8.77	
FORM LINER-PAVING & CURB	8.00	
FORM SETTER-PAVING & CURB	8.68	
FORM SETTER-STRUCTURES	8.73	
LABORER-COMMON	7.12	
LABORER-UTILITY	7.99	
MECHANIC	12.15	
OILER	11.40	
SERVICER	8.44	
PAINTER-STRUCTURES	10.00	
PIPE LAYER	8.27	
ASPHALT DISTRIBUTOR OPERATOR	9.70	

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

ASPHALT PAVING MACHINE	9.26
BROOM OR SWEEPER OPERATOR	7.12
BULLDOZER	9.28
CONCRETE CURING MACHINE	7.79
CONCRETE FINISHING MACHINE	11.00
CONCRETE PAVING SAW	9.79
SLIPFORM MACHINE OPERATOR	11.15
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL	10.12
FOUNDATION DRILL OPERATOR TRUCK MOUNTED	15.00
FRONT END LOADER	8.86
HOIST - DOUBLE DRUM & LESS	10.81
MIXER	7.12
MIXER - CONCRETE PAVING	11.00
MOTOR GRADER FINE GRADE	12.37
MOTOR GRADER	11.14
PAVEMENT MARKING MACHINE	8.31
PLANER OPERATOR	15.75
ROLLER, STEEL WHEEL PLANT-MIX PAVEMENTS	7.73
ROLLER, STEEL WHEEL OTHER FLATWHEEL OR TAMPING	7.33
ROLLER, PNEUMATIC, SELF PROPELLED	7.17
SCRAPERS	8.38
TRACTOR-CRAWLER TYPE	9.40
TRAVELING MIXER	7.92
TRENCHING MACHINE, HEAVY	9.92
WAGON-DRILL/BORING MACHINE	8.00
REINFORCING STEEL SETTER PAVING	14.50
REINFORCING STEEL SETTER STRUCTURES	10.61
STEEL WORKER-STRUCTURAL	11.73
SPREADER BOX OPERATOR	8.55
WORK ZONE BARRICADE	8.29
SIGN INSTALLER	7.97
TRUCK DRIVER-SINGLE AXLE LIGHT	8.32
TRUCK DRIVER-SINGLE AXLE HEAVY	7.954
TRUCK DRIVER-TANDEM AXLE SEMI- TRAILER	8.02
TRUCK DRIVER-LOWBOY/FLOAT	10.12
WELDER	11.02

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

ACCOMPANYING AMENDMENT NO. 0012 TO SOLICITATION NO. DACA63-02-R-0011

1.) Has there been an initial decision in the matter? This can be:

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Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

CHAPTER 00840

REFERENCED DOCUMENTS

APPLICABILITY

- A. The following documents form a part of the Request for Proposal to the extent they are referenced elsewhere herein.

GOVERNMENT REGULATIONS AND PUBLICATIONS

- A. CFR - Code of Federal Regulations, United States Government:
- 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Consumer Product Safety Commission; 1977, with 1984 Revision.
 - 28 CFR 36 - Nondiscrimination by Public Accommodations and in Commercial Facilities; Final Rule; Department of Justice; Federal Register, July 26, 1991.
 - 29 CFR 1910 - Occupational Safety and Health Standards; Occupational Safety and Health Administration; 1997.
 - Deleted (am#5).
 - Deleted (AM#12).
- B. U.S. Government Voluntary Standards:
- Deleted (AM#12).
 - FS SS-T-312 - Tile, Floor: Asphalt, Rubber, Vinyl, and Vinyl Composition; Revision B, 1974, and Amendment 1, 1979.
 - FS RR-T-650- Treads, Metallic and Nonmetallic, Skid Resistant; Revision E, 1994.
 - FS TT-P-115- Paint, Traffic(Highway, White and Yellow); Revision F, 1984.
 - PS 1 - Construction and Industrial Plywood; 1995.
 - PS 20 - American Softwood Lumber Standard; 1999.
 - MIL-HDBK-1008C (10 June 1997) Fire Protection For Facilities Engineering, Design and Construction.
 - SWD Architectural and Engineering Instructions Manual (SWD-AEIM), October 2000.
 - Installation Design Guide.

MODEL CODE ORGANIZATIONS

- A. ICC - International Code Council, Inc.:
- ICC (IBC) - International Building Code; 2000 edition.
 - ICC (IFC) - International Fire Code; 2000 edition.
 - ICC (IFGC) - International Fuel Gas Code; 2000 edition.
 - ICC (IMC) - International Mechanical Code; 2000 edition.
 - ICC (IPC) - International Plumbing Code; 2000 edition.

NON-GOVERNMENTAL STANDARDS DEVELOPING ORGANIZATIONS

- A. AAMA - American Architectural Manufacturers Association:

1. AAMA 1503.1 - Voluntary Test Method for Thermal Transmission and Condensation Resistance of Windows, Doors, and Glazed Wall Sections; 1998.
 2. AAMA GDSG-1 - Glass Design for Sloped Glazing; 1987.
 3. AAMA/NWWDA 101/I.S.2 - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors; 1997, and revisions of Reprinting of 1999
- B. AASHTO - American Association of State Highway and Transportation Officials:
1. AASHTO GDPS-4 - Guide for Design of Pavement Structures, Volume 1, 1993; and GDPS3-V2, Volume 2, 1986.
 2. AASHTO GDHS-3 - A Policy on Geometric Design of Highways and Streets; 1994.
- C. AATCC - American Association of Textile Chemists & Colorists:
1. AATCC Test Method 16 - Test Method for Colorfastness to Light; 1993 (Reaffirmed 1998).
 2. AATCC Test Method 134 - Electrostatic Propensity of Carpets; 1996.
- D. ACI - American Concrete Institute International:
1. ACI 301 - Specifications for Structural Concrete; 1999.
 2. ACI 302.1R - Guide for Concrete Floor and Slab Construction; 1996.
 3. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 1989 (Reapproved 1997).
 4. ACI 305R - Hot Weather Concreting; 1999.
 5. ACI 306R - Cold Weather Concreting; 1988.
 6. ACI 308 - Standard Practice for Curing Concrete; 1992 (Reapproved 1997).
 7. ACI 336.1 - Reference Specification for the Construction of Drilled Piers; 1998.
 8. ACI 530.1/ASCE 6/TMS 602 - Specification for Masonry Structures; 1999.
 9. ACI SP-66 - ACI Detailing Manual; 1994.
- E. AFPA - American Forest and Paper Association:
1. AFPA WCD 1 T11 - Manual for Wood Frame Construction; 1988.
- F. AGA - American Gas Association:
1. AGA (DIR) - Directory of Certified Appliances and Accessories; 1998.
- G. AHA - American Hardboard Association:
1. AHA A135.4 - Basic Hardboard; 1995.
- H. AMCA - Air Movement and Control Association, Inc.:
1. ANSI/AMCA 210 - Laboratory Methods of Testing Fans for Aerodynamic Performance Rating; 1999.
- I. ANSI - American National Standards Institute (for documents designated ANSI/XXXX, see organization XXXX):
1. ANSI A14.3 - American National Standard for Ladders -- Fixed -- Safety Requirements; 1992.
 2. ANSI A108.1 - American National Standard for Installation of Ceramic Tiles; 1999.
 3. ANSI A108.1A - American National Standard Specifications for Installation of Ceramic Tile in the

Wet-Set Method, with Portland Cement Mortar; 1999.

4. ANSI A108.1B - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar; 1999.
 5. ANSI A118.1 - American National Standard Specifications for Dry-Set Portland Cement Mortar; 1999.
 6. ANSI A118.3 - American National Standard Specifications for Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive; 1999.
 7. ANSI A118.4 - American National Standard Specifications for Latex-Portland Cement Mortar; 1999.
 8. ANSI A118.5 - American National Standard Specifications for Chemical Resistant Furan Mortars and Grouts for Tile Installation; 1999.
 9. ANSI A118.6 - American National Standard Specifications for Standard Cement Grouts for Tile Installation; 1999.
 10. ANSI A118.7 - American National Standard Specifications for Polymer Modified Cement Grouts for Tile Installation; 1999.
 11. ANSI A136.1 - American National Standard for Organic Adhesives for Installation of Ceramic Tile; 1999.
 12. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 1988.
 13. ANSI A208.1 - American National Standard for Particleboard; 1999.
 14. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use; 1994.
 15. ANSI A250.6 - Hardware on Steel Doors (Reinforcement--Application); 1997.
 16. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames; 1998.
 17. ANSI Z60.1 - American National Standard for Nursery Stock; 1996.
 18. ANSI Z124.3 - American National Standard for Plastic Lavatories; 1995.
- J. AOSA - Association of Official Seed Analysts:
1. AOSA RULES - Rules for Testing Seeds; 1998, revised 1999.
- K. ARI - Air-Conditioning and Refrigeration Institute:
1. ARI 210/240 - Unitary Air-Conditioning and Air Source Heat Pump Equipment; 1994.
 2. ARI 310/380 - Packaged Terminal Air-Conditioners and Heat Pumps; 1993.
 3. ARI 340/360 - Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment; 1993.
 4. ARI 365 - Commercial and Industrial Unitary Air-Conditioning Condensing Units; 1994.
 5. ANSI/ARI 550/590 - Standard for Water Chilling Packages Using the Vapor Compression Cycle; 1998, Addendum June 1999.
 6. ARI 880 - Air Terminals; 1998.
 7. ARI 1010 - Self-Contained, Mechanically Refrigerated Drinking-Water Coolers; 1994.
- L. ASCE - American Society of Civil Engineers:

1. ANSI/ASCE 7 - Minimum Design Loads for Buildings and Other Structures; 1998 (pub. 2000).
- M. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers:
1. ASHRAE (HVACA) - ASHRAE Handbook - HVAC Applications; 1999.
 2. ASHRAE (FUND) - ASHRAE Handbook - Fundamentals; 1997.
 3. ASHRAE Std 15 - Safety Code for Mechanical Refrigeration; 1994.
 4. ASHRAE Std 52.1 - Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter; 1992.
 5. ANSI/ASHRAE Std 55 - Thermal Environmental Conditions for Human Occupancy; 1992 with Addendum.
 6. ANSI/ASHRAE Std 62 - Ventilation for Acceptable Indoor Air Quality; 1999.
 7. ASHRAE Std 90.1 - Energy Efficient Design of new Buildings Except Low-Rise Residential Buildings; 1999.
- N. ASME - American Society of Mechanical Engineers:
1. ANSI/ASME A13.1 - Scheme for the Identification of Piping Systems; 1996.
 2. ASME A17.1 - Safety Code for Elevators and Escalators; 2000.
 3. ANSI/ASME A112.21.1M - Floor Drains; 1991 (R1998).
 4. ANSI/ASME A112.21.2M - Roof Drains; 1991 (R1998).
 5. ANSI B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 1984 (Reapproved 1994).
 6. ANSI/ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; 1995, 1998 Addenda.
 7. ANSI/ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings - DWV; 1992.
 8. ANSI/ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes; 1988.
 9. ANSI/ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV; 1994.
 10. ASME (BPV IV) - Boiler and Pressure Vessel Code, Section IV, Rules for Construction of Heating Boilers; 1998.
- O. ASTM - American Society for Testing and Materials:
1. ASTM A 36/A 36M - Standard Specification for Carbon Structural Steel; 2000a.
 2. ASTM A 53/A 53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2000.
 3. ASTM A 74 - Standard Specification for Cast Iron Soil Pipe and Fittings; 1998.
 4. ASTM A 82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement; 1997a.
 5. ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2000.
 6. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2000.
 7. ASTM A 307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength; 2000.

8. ASTM A 325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2000.
9. ASTM A 325M - Standard Specification for High-Strength Bolts for Structural Steel Joints (Metric); 2000.
10. ASTM A 366/A 366M - Standard Specification for Commercial Steel (CS) Sheet, Carbon, (0.15 Maximum Percent) Cold-Rolled; 1997.
11. ASTM A 500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 1999.
12. ASTM A 501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 1999.
13. ASTM A 510 - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel; 2000.
14. ASTM A 510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel (Metric); 2000.
15. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2001.
16. ASTM A 641/A 641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 1998.
17. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2000.
18. ASTM A 951 - Standard Specification for Masonry Joint Reinforcement; 2000.
19. ASTM B 42 - Standard Specification for Seamless Copper Pipe, Standard Sizes; 1998.
20. ASTM B 43 - Standard Specification for Seamless Red Brass Pipe, Standard Sizes; 1998.
21. ASTM B 68 - Standard Specification for Seamless Copper Tube, Bright Annealed; 1999.
22. ASTM B 68M - Standard Specification for Seamless Copper Tube, Bright Annealed (Metric); 1999.
23. ASTM B 75 - Standard Specification for Seamless Copper Tube; 1999.
24. ASTM B 75M - Standard Specification for Seamless Copper Tube (Metric); 1999.
25. ASTM B 88 - Standard Specification for Seamless Copper Water Tube; 1999.
26. ASTM B 88M - Standard Specification for Seamless Copper Water Tube (Metric); 1999.
27. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2000.
28. ASTM B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric); 2000.
29. ASTM B 280 - Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service; 1999.
30. ASTM B 306 - Standard Specification for Copper Drainage Tube (DWV); 1999.
31. ASTM C 4 - Standard Specification for Clay Drain Tile and Perforated Clay Drain Tile; 2000.
32. ASTM C 14 - Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe; 1999.
33. ASTM C 14M - Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe

- (Metric); 1999.
34. ASTM C 36/C 36M - Standard Specification for Gypsum Wallboard; 1999.
 35. ASTM C 76 - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe; 2000.
 36. ASTM C 76M - Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe (Metric); 2000.
 37. ASTM C 90 - Standard Specification for Loadbearing Concrete Masonry Units; 2001.
 38. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2000.
 39. ASTM C 129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2000a.
 40. ASTM C 150 - Standard Specification for Portland Cement; 2000.
 41. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale); 2000.
 42. ASTM C 236 - Standard Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box; 1989 (Reapproved 1993).
 43. ASTM C 270 - Standard Specification for Mortar for Unit Masonry; 2000.
 44. ASTM C 404 - Standard Specification for Aggregates for Masonry Grout; 1997.
 45. ASTM C 423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2000.
 46. ASTM C 425 - Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings; 2000.
 47. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 1994.
 48. ASTM C 476 - Standard Specification for Grout for Masonry; 2001.
 49. ASTM C 564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings; 1997.
 50. ASTM C 568 - Standard Specification for Limestone Dimension Stone; 1999.
 51. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2000.
 52. ASTM C 635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2000.
 53. ASTM C 645 - Standard Specification for Nonstructural Steel Framing Members; 2000.
 54. ASTM C 700 - Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated; 2000.
 55. ASTM C 754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2000.
 56. ASTM C 755 - Standard Practice for Selection of Vapor Retarders for Thermal Insulation; 1997.
 57. ASTM C 836 - Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course; 2000.
 58. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board; 1999a.
 59. ASTM C 864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets,

- Setting Blocks, and Spacers; 1999.
60. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants; 1998.
 61. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2000.
 62. ASTM C 1053 - Standard Specification for Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications; 2000.
 63. ASTM C 1142 - Standard Specification for Extended Life Mortar for Unit Masonry; 1995.
 64. ASTM C 1184 - Standard Specification for Structural Silicone Sealants; 2000a.
 65. ASTM C 1193 - Standard Guide for Use of Joint Sealants; 2000.
 66. ASTM C 1199 - Standard Test Method for Measuring the Steady State Thermal Transmittance of Fenestration Systems Using Hot Box Methods; 2000.
 67. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 1997a.
 68. ASTM D 312 - Standard Specification for Asphalt Used in Roofing; 2000.
 69. ASTM D 449 - Standard Specification for Asphalt Used in Dampproofing and Waterproofing; 1989 (Reapproved 1999).
 70. ASTM D 1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 1999.
 71. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine; 1999.
 72. ASTM D 2178 - Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing; 1997a.
 73. ASTM D 2239 - Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter; 1999.
 74. ASTM D 2241 - Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series); 2000.
 75. ASTM D 2447 - Standard Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter; 1999.
 76. ASTM D 2513 - Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings; 2000.
 77. ASTM D 2609 - Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe; 2000.
 78. ASTM D 2662 - Standard Specification for Polybutylene (PB) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter; 1996a.
 79. ASTM D 2665 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2000.
 80. ASTM D 2666 - Standard Specification for Polybutylene (PB) Plastic Tubing; 1996a.
 81. ASTM D 2680 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping; 1995a.
 82. ASTM D 2683 - Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing; 1998.

83. ASTM D 2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 1996a.
84. ASTM D 2846/D 2846M - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems; 1999.
85. ASTM D 3000 - Standard Specification for Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Outside Diameter; 1995a.
86. ASTM D 3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2000.
87. ASTM D 3262 - Standard Specification for "Fiberglass" (Glass Fiber-Reinforced Thermosetting-Resin) Sewer Pipe; 1996.
88. ASTM D 3309 - Standard Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems; 1996a.
89. ASTM D 3462 - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules; 2000.
90. ASTM D 3840 - Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Fittings for Nonpressure Applications; 1999.
91. ASTM D 4869 - Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing; 1988 (Reapproved1993).
92. ASTM D 4897 - Standard Specification for Asphalt-Coated Glass-Fiber Venting Base Sheet Used in Roofing; 1998.
93. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction; 1998.
94. ASTM E 84 - Standard Test Methods for Surface Burning Characteristics of Building Materials; 2000a.
95. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 1999.
96. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials; 2000.
97. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings; 2000.
98. ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 1991 (Reapproved1999).
99. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference; 1997.
100. ASTM E 336 - Standard Test Method for Measurement of Airborne Sound Insulation in Buildings; 1997.
101. ASTM E 413 - Classification for Rating Sound Insulation; 1987 (Reapproved1999).
102. ASTM E 580 - Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels in Areas Requiring Seismic Restraint; 2000.
103. ASTM E 736 - Standard Test Method for Cohesion/Adhesion of Sprayed Fire Resistive Materials Applied to Structural Members; 2000.
104. ASTM E 760 - Standard Test Method for Effect of Impact on Bonding of Sprayed Fire Resistive Material Applied to Structural Members; 1992 (Reapproved2000).

105. ASTM E 761 - Standard Test Method for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved2000).
106. ASTM E 773 - Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units; 1997.
107. ASTM E 774 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units; 1997.
108. ASTM E 814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops; 2000.
109. ASTM E 966 - Standard Guide for Field Measurement of Airborne Sound Insulation of Building Facades and Facade Elements; 1999.
110. ASTM E 1007 - Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures; 1997.
111. ASTM E 1264 - Standard Classification for Acoustical Ceiling Products; 1998.
112. ASTM E 1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2000.
113. ASTM E 1352 - Standard Test Methods for Cigarette Ignition Resistance of Mock-Up Upholstered Furniture Assemblies; 1999.
114. ASTM E 1477 - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers; 1998a.
115. ASTM E 1537 - Standard Test Method for Fire Testing of Upholstered Furniture Items; 1999.
116. ASTM E 1677 - Standard Specification for Air Retarder (AR) Material or System for Low-Rise Framed Building Walls; 1995 (Reapproved2000).
117. ASTM F 441/F 441M - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80; 1999.
118. ASTM E 1592 (2001) Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
119. ASTM F 442/F 442M - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR); 1999.
120. ASTM F 476 - Standard Test Methods for Security of Swinging Door Assemblies; 1984 (Reapproved1996).
121. ASTM F 588 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact; 1997.
122. ASTM F 679 - Standard Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings; 2001.
123. ASTM F 793 - Standard Classification of Wallcovering by Durability Characteristics; 1993 (Reapproved1998).
124. ASTM F 809/F 809M - Standard Specification for Large Diameter Polybutylene Plastic Pipe; 1995.
125. ASTM F 842 - Standard Test Methods for Measurement of Forced Entry Resistance of Horizontal Sliding Door Assemblies, Excluding Glazing Impact; 1997.
126. ASTM F 845 - Standard Specification for Plastic Insert Fittings for Polybutylene (PB) Tubing; 1996.
127. ASTM F 1066 - Standard Specification for Vinyl Composition Floor Tile; 1999.

128. ASTM F 1233 - Standard Test Method for Security Glazing Materials and Systems; 1998.
 129. ASTM F 1281 - Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe; 2001.
 130. ASTM F 1282 - Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe; 2001.
 131. ASTM F 1700 - Standard Specification for Solid Vinyl Floor Tile; 1999.
- P. AWI - Architectural Woodwork Institute:
1. AWI P-200 - Architectural Woodwork Quality Standards; 1997.
- Q. AWPA - American Wood-Preservers' Association:
1. AWPA C2 - Lumber, Timber, Bridge Ties and Mine Ties -- Preservative Treatment by Pressure Processes; 2000.
 2. AWPA C3 - Piles -- Preservative Treatment By Pressure Processes; 1999.
 3. AWPA C14 - Wood for Highway Construction -- Preservative Treatment By Pressure Processes; 1999.
 4. AWPA C20 - Structural Lumber -- Fire-Retardant Treatment by Pressure Processes; 1999.
- R. AWS - American Welding Society:
1. AWS D1.1 - Structural Welding Code - Steel; 2000.
- S. AWWA - American Water Works Association:
1. ANSI/AWWA C104/A21.4 - American National Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water; 1995.
 2. ANSI/AWWA C110 - American National Standard for Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (75 mm Through 1200 mm), for Water and Other Liquids; 1998.
 3. ANSI/AWWA C111/A21.11 - American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; 1995.
 4. ANSI/AWWA C151/A21.51 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water; 1996.
 5. ANSI/AWWA C153/A21.53 - American National Standard for Ductile-Iron Compact Fittings, 3 In. Through 24 In. (76mm Through 610 mm) and 54 In. Through 64 In. (1400 mm Through 1600 mm), for Water Service; 1994.
 6. ANSI/AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution; 1997.
- T. BHMA - Builders Hardware Manufacturers Association:
1. ANSI/BHMA A156.1 - American National Standard for Butts and Hinges; 2000.
 2. ANSI/BHMA A156.2 - American National Standard for Bored and Preassembled Locks & Latches; 1996.
 3. ANSI/BHMA A156.3 - American National Standard for Exit Devices; 1994.
 4. ANSI/BHMA A156.4 - American National Standard for Door Controls - Closers; 2000.
 5. ANSI/BHMA A156.5 - American National Standard for Auxiliary Locks & Associated Products; 1992.

6. ANSI/BHMA A156.6 - American National Standard for Architectural Door Trim; 1994.
 7. ANSI/BHMA A156.7 - American National Standard for Template Hinge Dimensions; 1988 (R1997).
 8. ANSI/BHMA A156.8 - American National Standard for Door Controls - Overhead Stops and Holders; 2000.
 9. ANSI/BHMA A156.10 - American National Standard for Power Operated Pedestrian Doors; 1999.
 10. ANSI/BHMA A156.12 - American National Standard for Interconnected Locks & Latches; 1999.
 11. ANSI/BHMA A156.13 - American National Standard for Mortise Locks & Latches; 1994.
 12. ANSI/BHMA A156.14 - American National Standard for Sliding & Folding Door Hardware; 1997.
 13. ANSI/BHMA A156.15 - American National Standard for Closer Holder Release Devices; 1995.
 14. ANSI/BHMA A156.16 - American National Standard for Auxiliary Hardware; 1997.
 15. ANSI/BHMA A156.18 - American National Standard for Materials and Finishes; 2000.
 16. ANSI/BHMA A156.19 - American National Standard for Power Assist and Low Energy Power Operated Doors; 1997.
 17. ANSI/BHMA A156.21 - American National Standard for Thresholds; 1996.
- U. BIFMA - Business and Institutional Furniture Manufacturers Association:
1. ANSI/BIFMA X5.6 - American National Standard for Office Furnishings -- Panel Systems -- Tests; 1993.
- V. CISPI - Cast Iron Soil Pipe Institute:
1. CISPI 301 - Cast Iron Soil Pipe Institute: Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications; 1997
- W. CLFMI - Chain Link Fence Manufacturers Institute:
1. CLFMI CLF 2445 - Product Manual; 1997.
- X. CRI - Carpet and Rug Institute:
1. CRI 104 - Standard for Installation of Commercial Textile Floorcovering Materials; 1996.
- Y. EIA - Electronic Industries Association: See TIA.
- Z. EIMA - EIFS Industry Members Association:
1. EIMA 101.86 - Standard Test Method for Resistance of Exterior Insulation and Finish Systems (EIFS), Class PB to the Effects of Rapid Deformation (Impact); 1995, Revised August 1995.
- AA. GA - Gypsum Association:
1. GA-600 - Fire Resistance Design Manual; 2000.
- AB. GANA - Glass Association of North America:
1. GANA (SM) - FGMA Sealant Manual; 1990.
 2. GANA (GM) - GANA Glazing Manual; 1997.
- AC. HPVA - Hardwood Plywood & Veneer Association:
1. ANSI/HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood; 2000.
- AD. IEEE - The Institute of Electrical and Electronics Engineers:

1. IEEE 142 - IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems; 1991.
2. IEEE 739 - IEEE Recommended Practice for Energy Management in Industrial and Commercial Facilities; 1995.
3. IEEE 1100 - IEEE Recommended Practice for Powering and Grounding Sensitive Electronic Equipment; 1999.
4. IEEE C57.12.00 - General Requirements for Liquid Immersed Distribution, Power, and Regulating Transformers; 2000.

AE. IESNA - Illuminating Engineering Society of North America:

1. IESNA (LH) - Lighting Handbook; 2000.
2. IESNA RP-5 - Recommended Practice of Daylighting; 1999.
3. ANSI/IESNA RP-8 - American National Standard Practice for Roadway Lighting; 2000.

AF. LPI - Lightning Protection Institute:

1. LPI-175 - Standard of Practice; 1987.

AG. MSS - Manufacturers Standardization Society of the Valve and Fittings Industry:

1. MSS SP-67 - Butterfly Valves; 1995.
2. MSS SP-70 - Cast Iron Gate Valves, Flanged and Threaded Ends; 1998.
3. MSS SP-80 - Bronze Gate, Globe, Angle and Check Valves; 1997.
4. MSS SP-85 - Cast Iron Globe & Angle Valves, Flanged and Threaded Ends; 1994.
5. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 1996.

AH. NAAMM - National Association of Architectural Metal Manufacturers:

1. NAAMM HMMA 860 - Guide Specifications for Hollow Metal Doors and Frames; 1992.
2. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2000.
3. NAAMM HMMA 862 - Guide Specifications for Commercial Security Hollow Metal Doors and Frames; 1987.
4. NAAMM MBG 531 - Metal Bar Grating Manual; 1993.
5. NAAMM ML/SFA 920 - Guide Specifications for Metal Lathing and Furring; 1991.

AI. NACE - NACE International:

1. NACE RP0169 - Standard Recommended Practice, Control of External Corrosion on Underground or Submerged Metallic Piping Systems; 1996.
2. NACE RP0285 - Standard Recommended Practice, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection; 1995.
3. NACE TM0497 - Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems; 1997.

AJ. NEMA - National Electrical Manufacturers Association:

1. NEMA LD 3 - High-Pressure Decorative Laminates; 1995.

AK. NFPA - National Fire Protection Association:

1. NFPA 10 - Standard for Portable Fire Extinguishers; 1998.
2. NFPA 11 - Standard for Low-Expansion Foam; 1998.
3. NFPA 11A - Standard for Medium- and High-Expansion Foam Systems; 1999.
4. NFPA 12A - Standard on Halon 1301 Fire Extinguishing Systems; 1997.
5. NFPA 13 - Standard for the Installation of Sprinkler Systems; 1999.
6. NFPA 14 - Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems; 2000.
7. NFPA 16 - Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems; 1999.
8. NFPA 17 - Standard for Dry Chemical Extinguishing Systems; 1998.
9. NFPA 20 - Standard for the Installation of Stationary Pumps for Fire Protection; 1999.
10. NFPA 25 - Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems; 1998.
11. NFPA 70 - National Electrical Code; 2002.
12. NFPA 72 - National Fire Alarm Code; 1999.
13. NFPA 80 - Standard for Fire Doors and Fire Windows; 1999.
14. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures; 2000.
15. NFPA 204 - Guide for Smoke and Heat Venting; 1998.
16. NFPA 261 - Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes; 1998.
17. NFPA 266 - Standard Test Method for Fire Characteristics of Upholstered Furniture Exposed to Flaming Ignition Source; 1998.
18. NFPA 701 - Standard Method of Fire Tests for Flame Propagation of Textiles and Films; 1999.

AL. PCI - Precast/Prestressed Concrete Institute:

1. PCI MNL-116 - Manual for Quality Control for Plants and Production of Structural Precast Concrete Products; 1999.
2. PCI MNL-120 - PCI Design Handbook - Precast and Prestressed Concrete; Precast/Prestressed Concrete Institute; 1999.
3. PCI MNL-123 - Design and Typical Details of Connections for Precast and Prestressed Concrete; 1988, Second Edition.

AM. SDI - Steel Deck Institute:

1. SDI (DM) - Publication No. 29, Design Manual for Composite Decks, Form Decks, Roof Decks and Cellular Deck Floor Systems with Electrical Distribution; 1995.
2. SDI MOC1 - Manual of Construction with Steel Deck; 1992.

AN. SDI - Steel Door Institute:

1. ANSI/SDI 100 - Recommended Specifications Standard Steel Doors and Frames; 1991.
2. SDI 105 - Recommended Erection Instructions for Steel Frames; 1998.

3. SDI 107 - Hardware on Steel Doors (Reinforcement - Application); 1984.
4. SDI 125 - High Frequency Hinge Preparations for Frames; 1992.

AO. SJI - Steel Joist Institute:

1. SJI (SPEC) - Standard Specifications Load Tables and Weight Tables for Steel Joists and Joist Girders; 1994, Fortieth Edition.

AP. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association, Inc.:

1. SMACNA (ASMM) - Architectural Sheet Metal Manual; 1993.
2. SMACNA (DCS) - HVAC Duct Construction Standards; 1995, with Addendum No. 1.

AQ. SSPC - Society for Protective Coatings:

1. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 1982 (Ed. 2000).
2. SSPC-Paint 25.1 - Zinc Oxide, Alkyd, Linseed Oil Primer for Use Over Hand Cleaned Steel; 1997 (Ed. 2000).
3. SSPC-Paint 25.1BCS - Zinc Oxide, Alkyd, Linseed Oil Primer for Use Over Blast Cleaned Steel; 1997 (Ed. 2000).
4. SSPC-SP 1 - Solvent Cleaning; Society for Protective Coatings; 1982.
5. SSPC-SP 2 - Hand Tool Cleaning; Society for Protective Coatings; 1982 (Ed. 2000).
6. SSPC-SP 3 - Power Tool Cleaning; Society for Protective Coatings; 1982 (Ed. 2000).
7. SSPC-SP 5 - White Metal Blast Cleaning; Society for Protective Coatings; 2000.
8. SSPC-SP 6 - Commercial Blast Cleaning; Society for Protective Coatings; 2000.
9. SSPC-SP 7 - Brush Off Blast Cleaning; Society for Protective Coatings; 2000.
10. SSPC-SP 10 - Near White Blast Cleaning; Society for Protective Coatings; 2000.

AR. TCA - Tile Council of America:

1. TCA (HB) - Handbook for Ceramic Tile Installation; 2001.

AS. USGBC - U. S. Green Buildings Council, www.usgbc.org

1. USGBC (LEED) - LEED Building Rating System; current edition.

AT. WDMA - Window and Door Manufacturers Association (formerly National Wood Window and Door Association):

1. WDMA NWWDA I.S.1-A - Architectural Wood Flush Doors; 1997.
2. WDMA NWWDA I.S.6 - Wood Stile and Rail Doors; 1997.

PRIVATE EVALUATION ORGANIZATIONS

A. FM - Factory Mutual System:

1. FM P7825 - Approval Guide; current edition.

B. ITS - Intertek Testing Services (including Warnock-Hersey):

1. ITS (DIR) - Directory of Listed Products; current edition.

C. NFRC - National Fenestration Rating Council

D. UL - Underwriters Laboratories Inc.:

1. UL (BMD) - Building Materials Directory; current edition.
2. UL (EAUED) - Electrical Appliance and Utilization Equipment Directory; current edition.
3. UL (ECMD) - Electrical Construction Materials Directory; current edition.
4. UL (FPED) - Fire Protection Equipment Directory; current edition.
5. UL (FRD) - Fire Resistance Directory; current edition.
6. UL (RMSD) - Roofing Materials and Systems Directory; current edition.
7. ANSI/UL 972 - Burglary Resisting Glazing Material; 1995.

END OF CHAPTER 00840

CHAPTER 11

PROJECT PROGRAM

THE PROJECT PROGRAM CONSTITUTES ONE OF THE CONCEPTUAL DOCUMENTS AND CONSISTS OF THE FOLLOWING:

- A. **Program Narrative** : See the Project Description in Chapter 0005 PROJECT DESCRIPTION and PROGRAM REQUIREMENTS Chapter 1 PROJECT SUMMARY.
- B. **Mission Statement** : See Attachment A. drawings for FUNCTIONAL REQUIREMENTS, DESIGN ANALYSIS, PERFORMANCE CRITERIA.
- C. **Relationship Diagram** : See Attachment A drawing number B-1 Floor Plan
- D. **Area Requirements** : See Attachment A drawing number (AM#12) A-1 FUNCTIONAL REQUIREMENTS
- E. **Space Finishes and Fittings**. See Attachment A drawing number (AM#12) A-7 FEATURES OF FUNCTIONAL AREAS.

END OF CHAPTER 11

CHAPTER B22

EXTERIOR WINDOWS AND OTHER OPENINGS

PERFORMANCE

A. Basic Function:

1. Fill, cover, close, or otherwise protect all openings in the exterior walls (other than doors) so that the entire exterior enclosure functions as specified, using windows and other opening elements as specified, without using components that must be installed at changes of season.
2. The elements comprising exterior windows and other openings include windows, fixed glazing other than glazed walls, ventilation openings, protection devices for openings, and elements that form or complete the openings, unless an integral part of another element.
3. Where exterior window and other opening elements also must function as elements defined in another element group, meet requirements of both element groups.
4. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter B - Shell, and Chapter B2 - Exterior Enclosure.

B. Amenity and Comfort:

1. Thermal Performance of Elements Forming Exterior/Interior Separation:
 - a. Maximum Thermal Transmittance of Any Individual Component: U-value of 2.8 W/sq m K (0.50 Btu/sq ft/hr/deg F) when tested in accordance with ASTM C 236-1989(R93) or ASTM C 1199-2000.
2. Air Infiltration:
 - a. Mechanical Ventilation Openings: Automatically closed when ventilation is not required. Unless ducted, maximum of 5 cu m/h/sq m (0.3 cfm/sq ft) of crack when closed, measured in accordance with ASTM E 283-1991(R99) at differential pressure of 75 Pa (1.57 psf).
3. Acoustical Performance:
 - a. Window Sound Transmission Class: Minimum 31 STC, as measured in accordance with ASTM E 90-1999 and classified in accordance with ASTM E 413-1987(R99).
4. Appearance:
 - a. Sight Lines of Glazed Areas: Provide maximum glazing area with minimum interruption by framing members.
 - b. Frames: Design frames of openings to give a flush appearance without shadow lines.

C. Health and Safety:

1. Fire Resistance: Rating as required to maintain fire resistance rating of exterior wall in which they occur.
2. Forced Entry Resistance:
 - a. Openings At the Ground Floor: Class I in accordance with ASTM F 1233-1998, minimum, and Grade 10, minimum, in accordance with ASTM F 588-1997.
 - b. Openings Above the Ground Floor: Class I in accordance with ASTM F 1233-1998, minimum, and Grade 10, minimum, in accordance with ASTM F 588-1997

D. Structure:

1. Lintels: Constructed to span openings and support loads imposed by exterior wall; maximum deflection of 1/600 of span, vertically and horizontally.
2. Wind Design: No damage when tested in accordance with ASTM E 330-1997 at 1.5 times positive and negative design wind loads using 10 second duration of maximum load.

- a. Members Supporting Glass: Maximum deflection of flexure limit of glass; with full recovery of glazing materials.
- E. Durability:
1. Air Intake and Exhaust Openings: Minimize rainwater penetration and protect adjacent interior spaces from damage from water.
 2. Water Penetration: Design openings and components of openings to positively drain water to exterior of the building.
 - a. Top of Openings: If wall construction does not provide its own methods of drainage, use separate flashing to prevent water from entering opening components or the interior of the building.
 - b. Bottom of Openings: Integral or separate sill or flashing to prevent water running over or draining out of opening components from entering the wall construction below or the interior of the building.

PRODUCTS

- A. Windows (Operable and Fixed):
1. Do not use:
 - a. Wood windows.
 - b. Metal-clad wood windows.
 - c. Plastic-clad wood windows.
 - d. Tubular plastic windows.
 - e. Composite windows.
- B. Fixed Glazing:
1. Do not use:
 - a. Storefronts.
 - b. Wood windows.
 - c. Metal-clad wood windows.
 - d. Plastic-clad wood windows.
 - e. Tubular plastic fixed windows.
 - f. Composite windows.
- C. Glazing:
1. Do not use:
 - a. Ceramic glass.
 2. **All exterior window glazing shall be double glazed, exterior pane, 1/8 inch (6 mm) annealed float glass, interior pane shall be (AM#12) laminated (2 ea. 1/8" annealed glass panes bonded together with a bonding interlayer, such as 0.030 inch (0.75 mm) polyvinyl-butryal (PVB). (AM#1)**
- D. Other Exterior Opening Elements: All components required to complete the opening.
- E. Lintels:
1. Do not use:
 - a. Precast concrete.
 - b. Stone.
- F. Sills:
1. Do not use:
 - a. Precast concrete.
 - b. Unit masonry.

c. Stone.

END OF CHAPTER B22

CHAPTER D3

HVAC - HEATING, VENTILATING, AND AIR CONDITIONING

PERFORMANCE

A. Basic Function:

1. Provide artificial means of controlling temperature, relative humidity, velocity, and direction of air motion in the interior spaces enclosed by the shell, and reduction of airborne odors, particulates, and contaminant gases.
2. The HVAC system consists of the following elements:
 - a. Energy Supply (D31): Elements which provide energy used to maintain building comfort.
 - b. Heat Generation (D32): Elements required to heat building to maintain space comfort.
 - c. Refrigeration (D33): Elements necessary to generate the cooling required to maintain building comfort.
 - d. Air Distribution (D34): Elements required to distribute air to maintain building comfort.
 - e. HVAC Controls (D36): Elements required to control equipment which maintains building comfort.
 - f. Emergency air handler unit shut off switch accessible by occupants, condenser 10 Feet from building.
3. Where HVAC elements also must function as elements defined within another element group, meet the requirements of both element groups.
4. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance and Chapter D - Services.

B. Amenity and Comfort:

1. Space Temperature Setpoint: As specified in Chapter 111.

C. Health and Safety:

1. Outdoor Air Intakes: Locate all outside air intakes minimum of 3m (10ft) above grade _____ **(AM#5)**.
2. Locate exterior HVAC equipment 10m (33ft) from exterior wall of building _____ **(AM#5)**.
3. **Standard Equipment Bracing: Design all overhead equipment mountings to resist forces of 0.5 times the equipment weight in any direction and 1.5 times the equipment weight in the downward direction. This standard does not preclude the need to design equipment mountings for forces required by other criteria such as seismic standards.** **(AM#1)**
4. Electrical Shock Prevention:
 - a. Provide a means of disconnecting power at each piece of equipment.
5. Refrigerants:
 - a. Comply with the requirements of ASHRAE 15-1994.
 - b. Prevent release of refrigerant to atmosphere.
 - c. Prevent exposure of occupants to hazardous refrigerants.
6. Indoor Air Quality: Provide sufficient ventilation to obtain acceptable indoor quality, determined using the Ventilation Rate Procedure of ANSI/ASHRAE 62-1999.

D. Operation and Maintenance:

PRODUCTS

A. HVAC System Type:

1. Use one or more of the following:
 - a. Stand-Alone HVAC Systems:
 - 1) Forced-draft, natural gas furnace with split-system cooling.
 - 2) Air-cooled, self-contained air handlers.
 - 3) Gas Fired, vented, **(AM#12) low** intensity radiant tube heaters. (Repair Bays, Warehouse).
 - 4) Gas Fired Unit heaters (Utility and POL).
 - 5) Gas fired heating-ventilating and make-up air units (**Welding Bay** **(AM#1)**).
 - 6) Exhaust Fans (Maintenance Pit, Repair Bays, Warehouse, Toilets).
 - 7) Supply Fans (Utility)
 - 8) Welding Exhaust System.
 - 9) Overhead Vehicle Tailpipe Exhaust System.(Repair Bays)
 - 10) Condenser Unit.
 - 11) Gas Fired Domestic Water Heater.
 - b. Central HVAC Systems:
 - 1) Central chilled water and hot water heating systems with fan coil units and air handlers.
 - 2) Chilled water supplied by an air-cooled chiller.

END OF CHAPTER D3

CHAPTER X08

DOORS AND WINDOWS

08050 - BASIC DOOR AND WINDOW MATERIALS AND METHODS

- A. Fire-Rated Doors and Frames: Comply with NFPA 80-1999; UL listed and labeled.

08100 - METAL DOORS AND FRAMES

- A. Steel Doors:

1. Grade: ANSI A250.8-1998.
 - a. Exterior Doors: Level 4, Model 2, Seamless (14 gage).
 - b. Fire Doors and Stairwell Doors: Level 4, Model 2, Seamless (14 gage).
 - c. Interior Doors: Level 4, Model 2, Seamless (14 gage).
2. Comply with additional requirements specified in Chapter B.
3. Finish: Prime painted, unless otherwise indicated.
4. Factory-prepare and reinforce for hardware specified in accordance with Standard; coordinate with Door Hardware Schedule.
 - a. Provide SDI-125-1992 High Frequency Hinge Preparation on frames at entrances.
5. Install in accordance with SDI-105-1998 and ANSI A250.6-1997.

- B. Steel Door Frames: Drywall slip-on type; except fire-rated doors use welded corner type.

1. Grade: ANSI A250.8-1998, gage as required by Standard for the grade steel door specified; provide anchors as specified by Standard.
2. Grade: NAAMM HMMA 860-1992, HMMA 861-2000, and HMMA 862-1987 as specified below.
 - a. Exterior Doors: NAAMM HMMA 862.
 - b. Fire Doors and Stairwell Doors: NAAMM HMMA 861.
 - c. Interior Doors: NAAMM HMMA 860.
3. Comply with additional requirements specified in Chapter B.
4. Comply with other requirements specified for specific doors.
5. Finish: Prime painted, unless otherwise indicated.
 - a. Exterior Doors: Galvanized G60/Z180 per ASTM A 653/A 653M-2000.
6. Factory-prepare and reinforce for hardware specified in accordance with Standard; coordinate with Door Hardware Schedule.
 - a. Provide SDI-125-1992 High Frequency Hinge Preparation on frames at entrances.
7. Fire-Rated Frames: UL listed and labeled.
8. Manufacturers: Same as for hollow steel doors.

08300 - SPECIALTY DOORS

- A. Coiling Doors: Galvanized steel with factory prime coating, helical coil spring counterbalanced power operation with manual chain back-up.
1. Slat Profile: S-curved.
 2. Slat Width: 50 mm (2 inches).
 3. Tracks and Guides: Galvanized steel.
 4. Galvanizing: ASTM A 653/A 653M-2000 G90/Z275 or equivalent.

5. Power Operator Controls: Push button **from inside only (AM#12)**.

08500 - WINDOWS

- A. Windows: Factory-assembled, fixed and operating units, of extruded aluminum, complete with frame, weatherstripping, operating hardware, and anchors.
 1. Quality Grade: AAMA/NWWDA 101/I.S.2-1997(R99) Performance Class R15, with hardware and anchorages compatible with frame/sash material.
 2. Operating Type: Single hung.

METAL-FRAMED SKYLIGHTS: EXTRUDED ALUMINUM, FACTORY-ENGINEERED,-FABRICATED, AND -FINISHED, FIXED FRAMING SUPPORTING GLAZING, COMPLETE WITH GLAZING SEALS, FLASHINGS, AND ANCHORS.

- A. Comply with performance criteria specified in Chapter B.
- B. Frame Members: Tubular, with integral condensation gutters and weeps.
- C. Structural Supports: Building structure as indicated.
- D. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
- E. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.

08600 - SKYLIGHTS

- A. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
 1. Comply with performance criteria specified in Chapter B.
 2. Frame Members: Tubular, with integral condensation gutters and weeps.
 3. Structural Supports: Building structure as indicated.
 4. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 5. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.
- B. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
 1. Comply with performance criteria specified in Chapter B.
 2. Frame Members: Tubular, with integral condensation gutters and weeps.
 3. Structural Supports: Building structure as indicated.
 4. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 5. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.
 6. Structural Glazing Sealant: ASTM C 1184-2000a silicone.
 7. Vertical Ends and Sides: Same type of glazing specified for other vertical glazing applications.
- C. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
 1. Comply with performance criteria specified in Chapter B.

2. Frame Members: Tubular, with integral condensation gutters and weeps.
 3. Structural Supports: Included in skylight structure, applying no lateral thrust to building structure.
 4. Glazing: Acrylic glazing sheet, single, flat.
 5. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 6. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.
 7. Structural Glazing Sealant: ASTM C 1184-2000a silicone.
 8. Vertical Ends and Sides: Same type of glazing specified for other vertical glazing applications.
 9. Finish: Natural anodized, Class I.
 10. Designer Qualifications: Licensed professional engineer.
 11. Installer: Manufacturer supervised.
- D. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
1. Comply with performance criteria specified in Chapter B.
 2. Frame Members: Tubular, with integral condensation gutters and weeps.
 3. Structural Supports: Building structure as indicated.
 4. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 5. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.
 6. Structural Glazing Sealant: ASTM C 1184-2000a silicone.
 7. Vertical Ends and Sides: Same type of glazing specified for other vertical glazing applications.
 8. Finish: Natural anodized, Class I.
 9. Installer: Manufacturer.
 10. Manufacturers:
 - a. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
 - 1) Comply with performance criteria specified in Chapter B.
 - 2) Frame Members: Tubular, with integral condensation gutters and weeps.
 - 3) Structural Supports: Building structure as indicated.
 - 4) Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 - 5) Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.
 - 6) Structural Glazing Sealant: ASTM C 1184-2000a silicone.
 - 7) Vertical Ends and Sides: Same type of glazing specified for other vertical glazing applications.
- E. Unit Skylights: Extruded aluminum, factory-assembled fixed units, complete with glazing, glazing frame, and anchors.
1. Shape: Square.
 2. Glazing: Acrylic, double, dome shaped.
 3. Frame and Curb Thickness: 2.0 mm (0.08 inch).

4. Mounting: On integral curb.
 5. Curb Height From Top of Roof Penetration: 230 mm (9 inches).
 6. Finish: Natural anodized.
 7. Size: 760 x 760 mm (30 x 30 inches).
- F. Metal-Framed Skylights: Extruded aluminum, factory-engineered, -fabricated, and -finished, fixed framing supporting glazing, complete with glazing seals, flashings, and anchors.
1. Comply with performance criteria specified in Chapter B.
 2. Frame Members: Tubular, with integral condensation gutters and weeps.
 3. Structural Supports: Building structure as indicated.
 4. Glazing Method: Glazing caps with gaskets; allow for reglazing individual panes from exterior without disturbing adjacent panes.
 5. Gaskets: EPDM, ASTM C 864-1999; or silicone rubber, ASTM C 1115-2000.

08700 - HARDWARE

- A. General Requirements: Complete Door Hardware Schedule is to be prepared after award.
1. Allowance: Include in the Contract Sum the cost of all door hardware, not including installation, except that specified as to be furnished with the door, in the amount(s) of:
 2. Schedule:
 - a. Preparer: DHI-certified Architectural Hardware Consultant (AHC).
 - b. Provide all hardware needed to appropriately hang, latch, lock, and control doors, in accordance with the code.
 3. Material and Finish: Satin stainless steel (630), complying with ANSI/BHMA A156.18-2000.
 - a. Inside all doors: Satin stainless steel (630).
 - b. Hinges: As specified.
 - c. Plates, Protective Trim, and Push and Pull Bars: Solid satin stainless steel.
 - d. Plates, Protective Trim, and Push and Pull Bars: Solid, not plated.
 - e. Exposed Door Closer Covers and Arms at Aluminum Doors in Aluminum Frames: Finished to match aluminum finish.
 - f. Exposed Door Closer Covers: Painted to match door frame.
 4. Fire Door Hardware: UL listed and labeled.
- B. Keys:
1. Key to new master key system.
 2. Key locks differently and in groups based on Government's instructions.
 3. Provide construction keying using removable core cylinders.
 4. Cylinders: Minimum 7-pin tumbler type with removable, interchangeable cores.
 5. Key Control System: Key tags/holders, locked wall-mounted storage unit(s), and computer software record keeping system, complying with ANSI/BHMA A156.5-1992.
 - a. Capacity: To hold all new keys, plus 50 percent extra.
 - b. Cabinet Locks: Keyed to building system.
- C. Hinges: Hang each door with suitable hinges or pivots, for free and easy operation.
1. Full mortise butt hinges unless otherwise indicated.

2. Swing clear hinges at corridor or close passage situations.
- D. Butt Hinges: Five-knuckle, complying with ANSI/BHMA A156.1-2000. ANSI numbering system is used only to indicate configuration; comply with all requirements of standard and of specification.
1. Style: Exposed or concealed bearing.
 2. Dimensions: Complying with ANSI/BHMA A 156.7-1988(R1997); sizes as recommended by manufacturer for application.
 3. Material: Steel, plated with specified finish.
 - a. Exception for doors with hinge barrel exposed to outdoors: Brass or bronze with specified finish (plated if necessary) or stainless steel.
 4. Grade:
 - a. Doors with closers: Grade 1, heavy weight, anti-friction bearing.
 - b. Other exterior doors: Grade 1, heavy weight, anti-friction bearing.
 - c. Extra heavy doors: Grade 1, heavy weight, anti-friction bearing.
 - d. Interior doors without closers: Grade 1 heavy weight, anti-friction bearing.
 5. Configurations:
 - a. Full Mortise: A0100 series.
 - b. Swing Clear Hinges: A0120 (full mortise).
 - c. Wide Throw:
- E. Locks and Latches:
1. Locking Functions: as required by individual door.
 2. Locksets and Latchsets: Cylindrical (bored), except where otherwise indicated.
 3. Provide a lock on every pair of doors and every single door, unless otherwise indicated.
 4. Where a lock is specifically not required, provide positive latching, unless otherwise indicated.
- F. Exit Devices: Traditional cross bar type, complying with ANSI/BHMA A156.3-1994.
1. Fire-Rated Doors: Notwithstanding other specification requirements, provide hardware that meets code and provides as much of the specified functionality as possible; coordinate with types of doors and frames specified.
 2. Vertical Rod Devices: Surface-mounted type wherever possible.
 3. Pairs of Exterior Doors: One vertical rod device, one rim device.
 4. Single Exterior Doors: Rim type device.
 5. Pairs of Interior Doors: Two vertical rod type devices, to maintain both active.
 6. Single Interior Doors: Rim type device.
 7. Multiple Point Locking:
- G. Locksets: Cylindrical (bored) type.
1. Grade: Complying with ANSI/BHMA A156.2-1996.
 - a. Exterior Doors: Grade 1.
 - b. Other Interior Doors: Grade 1.
 2. Trim: Lever in ____ design.
- H. Auxiliary Deadlocks and Deadlatches: Bored type.
1. Grade: Complying with ANSI/BHMA A156.5-1992 Grade 1.

2. Key deadbolt the same as lockset.
- I. Flushbolts:
 1. Self-Latching:
- J. Miscellaneous Bolts and Latches:
 1. Dutch Door:
- K. Door Closers:
 1. Main Entrance Doors: Surface Mounted.
 2. Other Exterior Doors: Surface mounted.
 3. Fire-Rated Doors: Surface mounted.
- L. Surface Mounted Closers: Complying with ANSI/BHMA A156.4-2000.
 1. Functional Features:
 - a. Exterior Doors: Grade 1.
 - 1) Hold-open.
 - 2) Additional adjustable closing force of 15 percent (PT4A) above force required for size.
 - 3) Adjustable hydraulic backcheck (PT4D)
 - 4) Built-in factory dead stop at 90-110 degrees (PT4G).
 - b. Interior Doors: Grade 1.
 - 1) Hold-open, except for fire doors.
 - 2) Adjustable hydraulic backcheck (PT4D)
 - 3) Built-in factory dead stop at 90-110 degrees (PT4G).
 2. Closing Force: As specified in ANSI/BHMA A156.4-2000 for size required.
 3. Multi-sized closers may be used (PT4H), provided performance when adjusted for actual door size is the same as for equivalent sized closers; field adjusted as specified by manufacturer.
 4. Interior Door Closer Sizes: Size I or II through VI. Closers for doors close to a wall shall be of narrow projection so as to not strike the wall at the 90 degree open position.
 5. Exterior Door Closer Sizes: Size I or II through VI. Except as otherwise specified, sizes shall conform to manufacturer's published recommendations. Closers for exterior doors shall have parallel arms or shall be top jamb mounted. Closers for doors close to a wall shall be of narrow projection so as to not strike the wall at the 90 degree open position.
 6. Mounting: On hinge (pull) side of door, unless otherwise indicated.
 - a. Where closer would be exposed in corridor or other public space, mount on room side, regardless of door swing.
 - b. Use arms that project as little as possible.
 7. Covers: Manufacturer's standard, full rectangular style (metal).
- M. Door Stops: Complying with ANSI/BHMA A156.16-1997 Grade 1, with concealed or inconspicuous fasteners.
 1. Floor Stops: Dome type (L02140 or L02160).
 2. Wall Stops: Round convex bumper (L02100).
 3. Overhead Concealed Stops:
- N. Door Holders: Complying with ANSI/BHMA A156.16-1997 Grade 1, with concealed or inconspicuous fasteners.

1. Floor Holders: Manual (L01370).
 2. Overhead Concealed Holders:
- O. Coordinators:
1. Carry-Open Bars and Hardware Brackets:
 2. Gravity-Type:
- P. Protective Hardware: Material and finish as specified under "General Requirements"; styles as specified in ANSI/BHMA A156.6-1994.
1. Kick Plates: 100 mm (4 inches) high by 25 mm (1 inch) narrower than width of door.
 2. Mop Plates:
- Q. Push And Pull Hardware: Material and finish as specified under "General Requirements"; styles as specified in ANSI/BHMA A156.6-1994.
1. Combination Push/Pull Bars:
 2. Pull Plates:
 3. Push Plates:
- R. Astragals for Fire-Rated Doors: Steel, UL listed and labeled.
- S. Smoke Seals: Compression type, UL listed and labeled for use on fire-rated doors; provide at all interior fire-rated doors.
- T. Weatherstripping for Swinging Doors: Compression-type, unless otherwise indicated; neoprene.
1. Retainers: Metal of finish matching door finish.
 2. Fasteners: Tamperproof.
 3. Provide at each exterior door unless otherwise indicated.
 - a. At Jambs and Head: Bulb type adjustable after installation.
 - b. At Meeting Stiles of Pairs, Both Active: Bulb type on both leaves.
 - c. At Meeting Stiles of Pairs, One Inactive: Overlapping astragal type.
 4. Install so air leakage is minimized, while allowing free operation and low-pressure closing of door.
- U. Thresholds: Comply with ANSI/BHMA A156.21-1996, of configurations as indicated.
1. Material: Aluminum with fluted surface.
 2. Height Above Finish Floor: 9.5 mm (3/8 inch) high maximum, beveled, with no slope greater than 1:2.
 3. Width: As indicated, or as required to cover floor openings and provide necessary weather seal.
 4. Provide at each exterior door unless otherwise indicated.
 - a. At Utility Room Exterior Doors: Rabbeted type with compression gasket.
- V. Window Hardware:
- W. Hardware Specified Elsewhere:
1. Coiling Doors, Coiling Grilles, Folding Doors, and Overhead Doors: See 08300.

08800 - GLAZING

- A. Use glass types as follows:

1. Exterior Windows: Insulating glass; gasket glazed with supplementary sealant.
 2. Exterior Doors and Sidelights: Fully tempered single glass; gasket glazed.
 3. Fire-Rated Doors and Windows: Wired glass; wet glazing method.
 4. Other Interior Doors and Sidelights: Safety glazing as specified; dry glazed.
- B. Insulating Glass: Sealed insulating glass units, with glass to elastomer seal, complying with ASTM E 773-1988(93) and ASTM E 774-1997, Class CBA.
1. Outer Pane: 6 mm annealed float glass; untinted.
 2. Inner Pane: 6 mm **laminated glass. (AM#12)**
 3. Seal: Polyurethane.
 4. Warranty: 5 years, no fogging due to seal failure.
- C. **Deleted (AM#12)**
- D. **Deleted (AM#12)**
- E. Glazing Accessories: Follow recommendations of GANA Glazing Manual, 1997 and FGMA Sealant Manual, 1990.
1. Gaskets in Curtain Wall, Storefront, and Windows: Provided by glazing framing manufacturer.
 2. Gaskets: Resilient silicone rubber, complying with ASTM C 864-1999; black.
 3. Setting Blocks: Neoprene, 80-90 Shore A hardness.
- F. Exterior Glazing Sealant: Silicone, acid-curing, complying with ASTM C 920-2000, Class 25, Grade NS, Uses NT, A and G; install in accordance with ASTM C 1193 -1991(R95) and GANA's FGMA Sealant Manual-1990.
- G. Interior Glazing Sealant: Clear silicone.

08900 - GLAZED CLERESTORY

- A. Translucent Wall: To allow natural lighting.

END OF CHAPTER X08