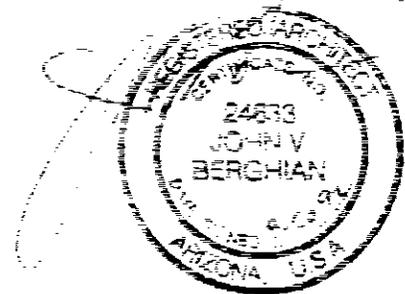
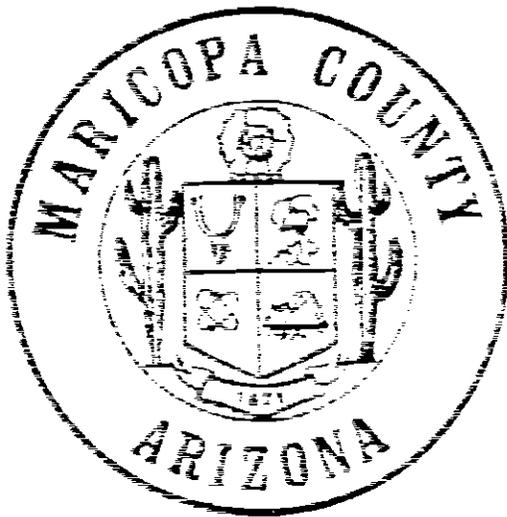


**Project Manual for:
Maricopa County Durango Complex
Outside Ramadas**

**Flood Control District of Maricopa County
Maricopa County Department of Transportation**

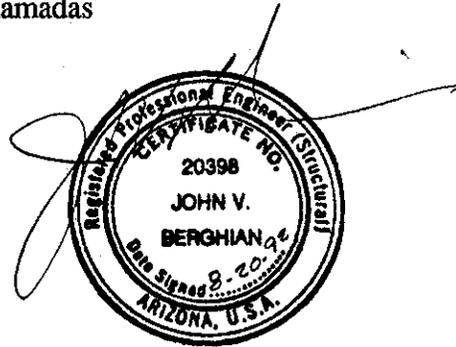
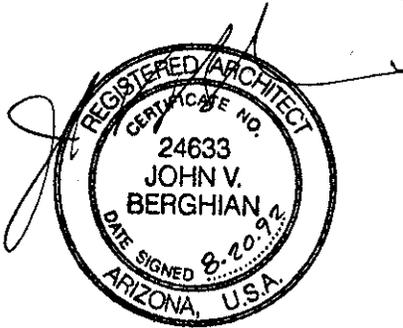
Project No. KCP-906



Set No. 06

Project Manual for:

Maricopa County Durango Complex
Outside Ramadas



Flood Control District of Maricopa County
Maricopa County Department of Transportation

Project No. KCP-906
August 20, 1992

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SECTION 00005

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PROJECT NUMBER: KCP-906

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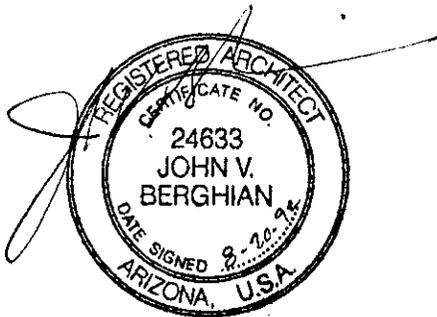
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END OF SECTION



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Outside Ramadas

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SECTION 00024

ADVERTISEMENT TO BID

Notice is hereby given that the Board of Supervisors of Maricopa County, Arizona, will receive sealed bids for the furnishing of all labor, material, services, and transportation required for the construction described in general as follows:

Construction of two outside ramadas as indicated in these plans and specifications.

The proposed Bid Documents will be available at the Office of:

Maricopa County
Facilities Management Department (MCFMD)
401 West Jefferson
Phoenix, Arizona 85003

Bona-fide licensed general contractors may secure copies of the proposed Bid Documents from MCFMD on the following basis:

1. One set of bid documents, which includes 2 sets of specifications and 2 sets of drawings, upon payment of a certified check for \$25.00 deposit (made payable to MCFMD), completely refundable if the bid documents are returned to the engineer in good condition within ten (10) days after bid opening.
2. No partial sets will be issued.

Each bid shall be made out on the Bid Form in Section 00310 of this specification and shall be accompanied by a, certified or cashier's check or bid bond for five percent (5%) of the total of the bid, made payable to the order of the Board of Supervisors of Maricopa County, Arizona. Such check or bid bond will be given as a guarantee that the bidder will enter into the said contract after being requested to do so by the Board of Supervisors. Such check or bid bond will be returned to the respective unsuccessful bidders upon the award of the contract to the successful bidders, and will be returned to the successful bidder upon the execution and delivery of the satisfactory surety company bonds and construction contract.

A pre-bid conference will be held at 2:00 P.M. local time, Thursday, September 3, 1992, at the Flood Control District Administration Building, 2801 West Durango, Phoenix, Arizona 85009.

Bids will be sealed and filed with the Clerk of the Board of Supervisors of Maricopa County at the Office of the Clerk, Tenth Floor, Maricopa County New Administration Building, 301 West Jefferson Street, Phoenix, Arizona, 85003, on or before 3:00 P.M., Thursday, September 17, 1992.

Bids will be opened and read aloud in Room 1010, Maricopa County New Administration Building, 301 West Jefferson Street, immediately after the above mentioned hour of closing.

The Board of Supervisors reserves the right to reject any or all bids or waive any informality in any bid. No bidder may withdraw his bid for a period of 45 calendar days after the date set for the opening thereof.

Notice is hereby given that the Board of Supervisors, pursuant to its resolution dated October 7, 1974, will accept securities in accordance with Section 34-221, A.R.S., as amended in lieu of retaining 10% of all estimates, if so elected by the Contractor, on all contracts awarded after December 1, 1974.

Attention of Bidders is directed to the Construction Time Limit and Liquidated Damage provisions set forth in the Supplementary General Conditions of the Contract.

Maricopa County will endeavor to insure in every way possible that minority and women-owned business enterprises shall have every opportunity to participate in providing professional services, goods and contractual services to the County without being discriminated against on the grounds of race, religion, sex, age, or national origin.

MBE AND WBE CONTRACT PARTICIPATION for this contract, goals of MBE/WBE 5 percent are established for Minority/Women-Owned Business Enterprises. Instructions and required forms are included in the Minority and Women-Owned Business Enterprise Program Contracting Requirements Section 00810. The Maricopa County Minority and Women Owned Business Enterprise Program, effective January 1, 1992, is incorporated by reference.

Dated this 20th day of July, 1992.

CLERK, BOARD OF SUPERVISORS
MARICOPA COUNTY, ARIZONA

Publication Dates: Arizona Business Gazette
August 21, 1992
August 28, 1992

SECTION 00200

INSTRUCTIONS TO BIDDERS

PROJECT: OUTSIDE RAMADAS
OWNER: MARICOPA COUNTY
Phoenix, Arizona
OWNER/AGENT: FACILITIES MANAGEMENT DEPARTMENT
401 W. Jefferson, Phoenix, Arizona 85003

PART 1 - BIDDING INSTRUCTIONS

1. PLACE AND TIME OF BIDDING

The owner will receive sealed bids for the construction of this project until 3:00 P.M., Thursday, September 1992 at the office of the Clerk of the Board of Supervisors, Tenth Floor, Maricopa County New Administration Building, 301 West Jefferson, Phoenix, Arizona. Bids will be opened and read aloud in Room 1010, Maricopa County New Administration Building, 301 West Jefferson, Phoenix, Arizona, immediately after the above mentioned time.

2. SUBMITTAL PROCEDURE

The bid forms to be used are those furnished herein, which shall be filled in completely with ink or typewriter. Each bidder shall submit his bid in a large sealed envelope addressed to the Owner and clearly identified with the name of the bidder. Proposals shall be marked with the words "BID: Outside Ramadas". If Bid is forwarded by mail, this envelope must be enclosed in another envelope addressed to Owner.

3. BID SECURITY

Each bid must be accompanied by certified check, cashier's check, or a bid bond prepared on the A.I.A. Document No. A-310 Bid Bond Form, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Such

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check or bid bond shall be in the amount of five percent (5%) of the bid and shall be payable to the Board of Supervisors of Maricopa County. Such checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

The Contractor shall, before executing the contract, file with the Clerk of the Board of Supervisors of Maricopa County a Statutory Performance Bond and a Payment Bond, each in the amount of one hundred percent (100%) of the contract price, as required under the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes.

Unless otherwise required, the bonds shall be written on A.I.A. Document No. A-312, December, 1984, Performance Bond and Payment Bond.

4. SOCIAL SECURITY ACT

The Contractor agrees to comply with, and to require all of his subcontractors to comply with, all the provisions of the Act of Congress, approved August 14, 1935, known and cited as the "Social Security Act" and also the provisions of the Act of the State Legislature, approved and known as the "State Unemployment Compensation Law", and all other laws and regulations pertaining to labor and workmen, and all amendments to same, and the Contractor further agrees to indemnify and hold harmless Maricopa County, of and from any and all claims and demands made against it by virtue of the failure of the Contractor, or any subcontractors, to comply with the provisions of any or all said Acts and Amendments.

5. LIST OF SUBCONTRACTORS

For use by Owner to determine competency and compatibility of those who will work on this project, each bidder is required to submit with his bid a list naming the subcontractors who will be used in performing the work. This list shall be filled out and enclosed in a separate opaque sealed envelope marked "LIST OF SUBCONTRACTORS" and showing the bidder's name thereon; this envelope shall then be inserted in the General Bid envelope, with the other forms. The list submitted by

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the unsuccessful bidder will be returned unopened. Subcontractors not named in such list may not be employed on the project without express written permission of the Owner. By this requirement the Owner does not establish any contractual relation between the Owner and any subcontractor, the sole purpose and function of such requirement being set forth in the first sentence of this paragraph.

6. TELEGRAPHIC COMMUNICATION

No telegraphic bid or telegraphic modification of bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the sender unopened.

7. BID DOCUMENTS

Copies of the proposed Contract Documents may be obtained for bidding purposes upon the conditions set forth in the advertisement to bid.

8. GENERAL PROCEDURES

It will be the bidder's responsibility to verify that he has received all Addenda which may have been issued during the bidding period. Bidder's failure to acknowledge, on his bid proposal, the receipt and acceptance of all Addenda will constitute reason for rejection of said bid proposal.

9. INTERPRETATION OF BID DOCUMENTS

During the bidding period, questions of interpretation and clarification will only be answered to Prime Contractors. Questions raised by fabricators, material suppliers, and subcontractors must be directed to said Prime Contractor.

Any questions answered by the Owner or the Architect during bidding period, if said answer affects the essence of bidding, will be incorporated in Addenda, which will be forwarded equally to all contractors. No verbal instructions nor interpretations of drawings and specifications will be made other than indicated above and no request for interpretations and clarifications will be accepted during the seven (7) calendar days prior to bid due date.

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PART 2 - ADDITIONAL BIDDING CONDITIONS

1. FAMILIARITY WITH CONDITIONS AND DOCUMENTS

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents, (including all Addenda). He shall satisfy himself as to the nature and location of the work and the general and local conditions. He shall gain full knowledge as to employment of labor, transportation, disposal, handling and storage of material, availability of water, electric power and all other facilities in the area which will have a bearing on the performance of his work and the contract for which he submits his proposal.

Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

Any failure by the Contractor to acquaint himself with all the available information shall not relieve him from any responsibility for performing his work properly.

Any request for information, approval, or interpretation shall be directed in writing to the Architect.

2. SOILS REPORT

A soils report has been prepared for this project as a service to the Owner. Copies of the report are on file at the Flood Control District Administration Building. No representation or warranty is made by the Owner or the Architect as to the adequacy of the contents of this report. Bidders shall obtain, at their own expense, all information necessary to completely perform the Contract in a complete and proper manner.

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3. LEGAL CONTROLS

The bidders shall familiarize themselves with the provisions of the laws, codes, and regulations of the State of Arizona, local agencies, and municipalities that have jurisdiction at the location of the work. All contractors shall comply with all provisions of "An Act to Regulate the Business of Contracting", Title 32, Chapter 10, Arizona Revised Statutes and "Rules and Regulations for Contractors", dated July 10, 1963, or the latest revision thereof, as adopted under the provisions of Title 32, Chapter 10, A.R.S.

All Contractors and subcontractors shall comply with provisions of Arizona Revised Statute 34-241, entitled "Eligibility and Preference of Contractors and Subcontractors."

4. BID WITHDRAWAL

Any bid may be withdrawn prior to the scheduled time of bid opening or authorized postponement thereof. Bids received after time of bid opening will not be considered. No bid may be withdrawn within forty-five (45) days after actual date of opening of bids.

5. BID SECURITY FORFEITURE

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within five (5) days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the amount of the bid security.

6. CONTRACT FORM

The form of agreement between the Owner and the Contractor shall be written on A.I.A. Document No. A-101, Standard Form of Agreement Between Owner and Contractor.

7. QUALIFICATION OF CONTRACTOR

It is required by the Owner that bona-fide, licensed, general contract bidders submit a summary of previous work experience in the construction category of the proposed project and a

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statement of financial responsibility. The Owner may also conduct any other investigations it deems necessary to determine the bidder's performance capabilities.

The Qualification Statements shall be properly and legibly prepared on A.I.A. Document No. A-305, Contractor's Qualification Statement, and then placed in the same envelope with the Bid Proposal. Bidder's failure to submit a Qualification Statement may constitute reason for rejection of said bid proposal.

8. MEETINGS AND CONFERENCES

A Pre-Bid Conference will be held at the time and place set forth in the bid advertisement.

The Owner will be represented by members of the Facilities Management staff of Maricopa County. If answers given during the conference will materially affect the bidding, an addendum will be issued stating such answers to all concerned.

Prior to the signing of the contract, the successful Bidder shall meet with the Owner and Architect to establish the necessary phasing of construction of the project, and upon establishing same, the Bidder shall submit a breakdown of the total amount of his proposal to indicate, as accurately as possible, the cost of each phase of the work. This cost breakdown is required to enable the Owner to prepare the construction period.

Within seven (7) days after the signing of the contract, there will be a Pre-Construction Conference between the Contractor and the Owner. At that time a schedule of work shall be agreed upon concerning phasing of the work, necessary construction sequencing, and construction staging areas.

General Contractors wishing to examine facilities wherein work is to be performed shall contact the Planning and Construction Division of Maricopa County Facilities Management Department (602) 262-1141.

END OF SECTION

00200-6P

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SECTION 00310

BID FORM

TO: Board of Supervisors
Maricopa County
Phoenix, Arizona 85003

From:

1. Pursuant to and in compliance with the Invitation to Bid and the proposed Contract Documents relating to construction of:

Two outside ramadas as indicated in these plans and specifications,

the undersigned, having become thoroughly familiar with the terms and conditions of the proposed Contract Documents and with local conditions affecting the performance and costs of the Work at the place where the Work is to be completed, and having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the Work within the time stated and in strict accordance with the proposed Contract Documents, including furnishing any and all labor and materials, and to do all the work required to construct and complete said Work in accordance with the Contract Documents, for the following sum of money: (All amounts to be shown in both words and figures. In case of discrepancy, the amount in words will govern).

- A. Base Bid: All labor, materials, services, and equipment necessary for completion of the Work shown on the Drawings and in the Specifications.

_____ Dollars (\$_____)

(Show amounts in both words and figures. In case of discrepancy, amount shown in words will govern.)

2. I understand that the Owner reserves the right to reject this bid, but that this bid shall remain open and not be withdrawn for a period of forty-five (45) calendar days from the date prescribed for its opening.

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3. BONDS: If awarded the Contract, the undersigned hereby agrees to sign said Contract and furnish approved surety company bond, as required by the General Conditions, within five (5) days after notice of the award of said Contract.
4. COMPLETION DATES: If awarded the Contract, the undersigned hereby agrees to achieve Substantial Completion of the Work within one hundred twenty (120) consecutive calendar days after the date stipulated in the Notice to Proceed. If Bidder fails to meet the date for Substantial Completion, Bidder further agrees to pay, as liquidated damages, the sum of one hundred Dollars (\$100.00) for each consecutive calendar day thereafter as hereinafter provided in the Contract Documents.

Bidder further agrees to achieve Final Completion of the Work within thirty (30) consecutive calendar days following the date of Substantial Completion. If Bidder fails to meet the date for Final Completion, Bidder further agrees to pay, as liquidated damages, the sum of one hundred Dollars (\$100.00) for each consecutive calendar day thereafter as hereinafter provided in the Contract Documents.

5. BIDDING CONDITIONS: The undersigned hereby acknowledges his understanding, compliance, and agreement to the conditions and requirements of the Instructions to the Bidders.
6. SUBCONTRACTOR & SUBSTITUTION LISTS: The undersigned understands that the attached list of Subcontractors is an integral part of the Bid Form and asserts that its use is in accordance with the instructions thereon and in the General Conditions.
7. OMISSIONS: The undersigned understands that failure to complete all blanks or spaces indicated in this Bid Form shall constitute sufficient reason for rejection of the entire bid.
8. Bidder acknowledges receipt of following addenda:

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Outside Ramadas

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Signature if an Individual:

Doing Business as:

Business Address:

If a Partnership:

By: _____

Member of Firm

Member of Firm

Business Address:

If a Corporation:

By _____

Title:

Business Address:

Telephone Number:

(Seal - if Bid is by Corporation)

000310-3P

Outside Ramadas

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SECTION 00430

LIST OF SUBCONTRACTORS

This list shall be properly and legibly prepared and sealed in a separate envelope identified on the outside and then placed in the same envelope with the bid proposal. Failure to provide complete and accurate information shall constitute reason for rejection of bid proposal. Subcontractors not named herein may not be employed on the project without the express written permission of the Owner. Owner reserves the right to require additional A-305 Qualification Statements to be submitted for verification of subcontractor eligibility.

ITEM	NAME OF CONTRACTOR
FINISH CARPENTRY:	
CONCRETE:	
MASONRY:	
STRUCTURAL STEEL:	
PAINTING:	
ROOFING:	
PLUMBING:	
OTHER (SPECIFY):	

All Contractors and Subcontractors shall comply with provisions of Arizona Revised Statute 34-241, entitled Eligibility and Preference of Contractors and Subcontractors, and no contract shall be sublet to a subcontractor who has not paid taxes as required therein.

Date: _____

Signed: _____
General Contractor

END OF SECTION

Outside Ramadas

00430-1P

SECTION 00435

CONTRACTOR'S QUALIFICATION STATEMENT

A.I.A. DOCUMENT A305

PART 1 - GENERAL

1.01 - DESCRIPTION

A. The American Institute of Architects document A305 - 1986 Edition, Contractor's Qualification Statement is hereby made a portion of the Bidding Documents.

1.02 - Submittals

A. Submit Qualification Statement with Bid Proposal.

00435-1P

Outside Ramadas

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THE AMERICAN INSTITUTE OF ARCHITECTS

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AIA Document A101

STANDARD FORM OF AGREEMENT BETWEEN
OWNER AND CONTRACTOR
where the basis for payment is a
STIPULATED SUM

1977 EDITION

standard inclusions

AGREEMENT

made as of the day of in the year of
Nineteen Hundred and Ninety-two

BETWEEN the Owner: Maricopa County Board of Supervisors
301 West Jefferson
Phoenix, Arizona 85003

and the Contractor:

The Project:

The Architect: Flood Control District of Maricopa County
2801 West Durango
Phoenix, Arizona 85009

The Owner and Contractor agree as set forth below.

A101 - 1977-1

MC 6/91

**ARTICLE 1
THE CONTRACT DOCUMENTS**

**ARTICLE 2
WORK**

The Contractor shall perform all the Work required by the Contract Documents for Outside Ramadas.

**ARTICLE 3
TIME OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

The work to be performed under this Contract shall be commenced within 10 consecutive calendar days of the signing of this agreement and, subject to authorized adjustments, Substantial Completion shall be achieved not later than one hundred twenty (120) consecutive calendar days from commencement.

Should the Contractor neglect, fail, or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, the Contractor then does hereby agree, as part consideration of the award of this Contract, to pay to the Owner the sum of one hundred Dollars (\$100.00) per calendar day, not as a penalty, but as liquidated damages for such breach of Contract, for each and every calendar day the Contractor shall be in default after the time stipulated in the Contract for completing the work.

The said amount is fixed and agreed upon between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain.

A101 - 1977-2

MC 6/91

**ARTICLE 4
CONTRACT SUM**

The Owner shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of

The Contract Sum is determined as follows:

BASE BID: All labor, materials, services, and equipment necessary for completion of the work shown on the Drawings and indicated in the Specifications.

_____ Dollars (\$)

TOTAL CONTRACT SUM:

_____ Dollars (\$)

**ARTICLE 5
PROGRESS PAYMENTS**

**ARTICLE 6
FINAL PAYMENT**

A101 - 1977-3

**ARTICLE 7
MISCELLANEOUS PROVISIONS**

7.2 The Contract Documents which constitute the entire agreement between the Owner and the Contractor are listed in Article 1 and, except for Modifications issued after execution of this Agreement, are enumerated as follows:

1. AIA Document A101 (1977 Edition) Standard Form of Agreement Between Owner and Contractor.
2. AIA Document A201 (August, 1976 Edition) General Conditions of the Contract for Construction.
3. Supplementary Conditions, pages 1 through 18, in the Project Manual.
4. AIA Document A311 (Format) (February, 1970 Edition) Performance Bond, Labor and Material Payment Bond.
5. Maricopa County Certificate of Insurance, (Format) form number 7500-300 in the Project Manual.
6. The Contract Documents and Construction Specifications for Outside Ramadas as prepared by FCDMC.

OWNER
MARICOPA COUNTY
BOARD OF SUPERVISORS

CONTRACTOR

A101 - 1977-4

MC 6/91

SECTION 00600

BID BOND

A.I.A. DOCUMENT A310

PART 1 - GENERAL

1.01 - Description

- A. The American Institute of Architects document A310, Bid Bond, February 1970 edition, is hereby made a portion of the bidding requirements by reference.

1.02 - Submittal

- A. Obtain and submit completed document per Instructions to Bidders (Section 00200).

END OF SECTION

00600-1P

Outside Ramadas

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SECTION 00610

PERFORMANCE BOND AND PAYMENT BOND

A.I.A. DOCUMENT A311

PART 1 - GENERAL

1.01 - Description

- A. The American Institute of Architects Document A312, December, 1984 edition, is hereby made a portion of the Contract Documents by reference.

1.02 - Submittals

- A. Obtain and submit a completed copy of the Performance Bond.
- B. Obtain and submit a completed copy of the Payment Bond.
- C. Submit documents with Owner/Contractor agreement forms.

END OF SECTION

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SECTION 00700

GENERAL CONDITIONS OF THE CONTRACT

GENERAL CONTRACTOR VERSION

A.I.A. DOCUMENT A201

PART 1 - GENERAL

1.01 - Description

- A. The American Institute of Architects Document, A201, General Conditions of the Contract for Construction, August 1976 edition, is hereby made a portion of the Contract Documents by reference.

END OF SECTION

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Outside Ramadas

MC 2/92

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SECTION 00800

SUPPLEMENTARY CONDITIONS

GENERAL SUPPLEMENTS:

Following supplements modify, change, delete from, or add to, General Conditions of the Contract for Construction, AIA Document A201, Thirteenth Edition, August 1976. Where any article of the General Conditions of the Contract for Construction is modified, or any paragraph, subparagraph, or clause thereof is modified or deleted, unaltered provisions of that article, paragraph, subparagraph or clause remain in effect.

ARTICLE 1 - CONTRACT DOCUMENTS:

- A. Delete subparagraph 1.1.3 and substitute the following:

1.1.3 - The Work comprises the completed construction and services required by the Contract Documents and includes all labor necessary to produce such construction, services, and all materials and equipment incorporated or to be incorporated in such construction or to be provided by the Contractor to fulfill the Contractor's obligations.

- B. Delete subparagraph 1.1.4 and substitute the following:

1.1.4 - The Project is the total construction of which the Work performed under the Contract Documents may be the whole or part and which may include construction by the Owner or by separate contractors.

- C. Add new clauses 1.2.3.1 and 1.2.4.1 as follows:

1.2.3.1 - Detailed specifications take priority over general specifications and large scale drawings take precedence over small scale drawings.

1.2.4.1 - Contractor is solely responsible for coordination of bidding and scope of work of subcontractors. Neither the Architect or the Owner will act as arbiter as to which trade or subcontractor is to furnish or install various items indicated or required to perform construction.

00800-1P

Outside Ramadas

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D. Add new Paragraph 1.4 INTERPRETATION as follows:

1.4 INTERPRETATION

1.4.1 - In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.4.2 - The words "furnish" or "install" or "provide", unless specifically limited in context, means: furnishing and incorporating in the Work, including all labor, material, and equipment to perform the Work indicated.

1.4.3 - In the interest of conciseness, some sentences, statements, and clauses contained in the Contract Documents may exclude the word "shall" or the phrase "the Contract shall" from a statement. Any such exclusion shall be interpreted to include the phrase "the Contractor shall" and the requirements described therein shall be interpreted as mandatory elements of the Contract.

1.4.4 - The terms Architect, Engineer, Architect/Engineer or Engineer/Architect shall mean:

Flood Control District of Maricopa County

(Name of Firm)

or duly authorized representatives thereof.

ARTICLE 2 - ARCHITECT:

A. Delete subparagraph 2.2.12 entirely.

B. Delete subparagraph 2.2.13 and substitute the following:

2.2.13 - The Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable for implementation of intent of the Contract Documents, the Architect will have authority to require additional inspection or testing of the Work in accordance with the subparagraph 7.7.2 whether or not such Work is fabricated, installed, or completed. Neither this authority of the Architect nor a decision made in good faith either to exercise such authority shall give rise to a duty or responsibility of the Architect to the

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Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

- C. Add clause 2.2.15.1 as follows:

2.2.15.1 - The Architect will provide the Contractor with revisions to drawings and specifications as may be required to show authorized changes.

- D. Delete last sentence of subparagraph 2.2.19 beginning with the word "Any".

ARTICLE 3 - OWNER:

- A. Delete subparagraph 3.1.1 and substitute the following:

3.1.1 - Pursuant to the provisions of the Arizona Revised Statutes, the Maricopa County Board of Supervisors is the Owner. It is hereby understood and agreed that the Owner's authorized Administrator for the Project shall be the Director of the Facilities Management Department or his authorized representative.

- B. Delete subparagraph 3.2.2 and substitute the following:

3.2.2 - The Owner shall provide engineering surveys to establish reference points for construction which, in the Architect's judgment, are necessary to enable the Contractor to proceed with the Work.

- C. Delete subparagraph 3.2.5 entirely.

- D. Delete subparagraph 3.2.6 entirely.

- E. Add subparagraph 3.4.2 as follows:

3.4.2 - Neither the Owner nor his officers, agents, or employees are in any way liable or accountable to the Contractor, or his surety, for the method by which completion of the Work, or any portion thereof, is accomplished, or for the price paid therefore. Contractor and surety are responsible for all cost for completing the Work, including cost in excess of original contract price. Contractor will be paid the amount saved if cost of completion is less than the original contract price. The Owner does not forfeit the right to recover damages from the Contractor or surety for failure to complete the contract requirements by taking over the Work, or declaring the contract in default. Maintenance of the work remains the Contractor's

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and surety's responsibility as provided for in the performance bond and guarantee of the Contractor.

ARTICLE 4 - CONTRACTOR:

A. Add subparagraph 4.2.2 as follows:

4.2.2 - By entering into an Agreement with the Owner, the Contractor acknowledges that he has examined all documents pertaining to the Work, examined the character of the site and any existing structures, and has satisfied himself as to the nature of the Work, and all other matters, which can in any way affect the Work. Further, by entering into Agreement with the Owner, the Contractor acknowledges that he is satisfied as to the feasibility and correctness of the Contract Documents for construction of the Work.

B. Add subparagraph 4.2.3 as follows:

4.2.3 - The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported to the Architect at once.

C. Delete subparagraph 4.3.2 and substitute the following:

4.3.2 - The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, subcontractors, sub-subcontractors, suppliers, and their agents and employees, and other parties performing portions of the work under contract to the Contractor, a subcontractor, sub-subcontractor or supplier.

D. Add new subparagraph 4.3.4 as follows:

4.3.4 - The Contractor shall be responsible for inspection of portions of the work already performed under this contract to determine that such portions are in proper condition to receive subsequent work.

E. Add new subparagraph 4.4.3 as follows:

4.4.3 - The Contractor hereby understands and shall comply with the Immigration Reform and Control Act (IRCA) of 1986. The Contractor also agrees to permit the County and its agents access to Contractor personnel records to verify compliance with INCA requirements.

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F. Add new subparagraph 4.5.2 as follows:

4.5.2 - Acceptance of materials by, or in behalf of the Owner shall not bar future rejection, if subsequently found to be defective or inferior in quality, or lacking uniformity, to material specified, or are not as represented.

G. Add new subparagraph 4.6.2 as follows:

4.6.2 - Include State sales tax and use tax and all other taxes, whether or not yet effective or merely scheduled to go into effect, on all materials and supplies incorporated and used in construction of the work in the contract price.

H. Add new subparagraph 4.6.3 as follows:

4.6.3 - The Contractor shall require all sales and use taxes paid by his subcontractors and suppliers to be identified as clearly discernible items to facilitate the Contractor's keeping tax as separate items of expense on his records.

I. Add new subparagraph 4.6.4 as follows:

4.6.4 - Upon completion of the project, and before receiving final payment, the Contractor shall furnish the Owner three (3) copies of a certified list of all sales and service taxes paid by the Contractor in execution of this contract.

J. Add new subparagraph 4.9.2 as follows:

4.9.2 - The Superintendent shall be satisfactory to the Architect and the Owner, and shall not be changed except with the written consent of the Architect and the Owner, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ.

K. Add new subparagraph 4.10.2 as follows:

4.10.2 - The Contractor shall prepare and keep current a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals. The schedule of submittals shall be submitted to the Architect for review and approval promptly after award of the Contract.

L. Add new subparagraph 4.12.9 as follows:

4.12.9 - Informational submittals upon which the Architect is

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not expected to take responsive action may be so identified in the Contract Documents.

M. Revise subparagraph 4.16.1 to read as follows:

4.16.1 - Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate through the Architect. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with subcontractors and material supplies shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

ARTICLE 5 - SUBCONTRACTORS:

There are no amendments to this Article.

ARTICLE 6 - WORK BY OWNER OR BY SEPARATE CONTRACTORS:

A. Modify subparagraph 6.2.5 as follows:

6.2.5 - Delete the words "or initiates an arbitration proceeding against" from the second sentence and "or arbitration" from the last sentence of this subparagraph.

ARTICLE 7 - MISCELLANEOUS PROVISIONS:

A. Modify subparagraph 7.2.1 as follows:

7.2.1 - Delete the period following the last sentence of subparagraph 7.2.1 and add the following:

"and of Contractor's surety. File copy of consent of surety, together with copy of assignment with Owner and Architect. In case Contractor assigns all, or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain clause substantially to effect that, it is agreed that right of assignees in, and to any monies due or to become due to Contractor, shall be subject to prior liens and claims of all persons, firms, and corporations for services rendered; for payment of all laborers and mechanics for labor performed; for payment for all materials and equipment furnished, and payment for all materials and equipment used or rented in performance of the work called for in Contract; and for payment of any liens, claims, or amounts due to governments or any of their funds."

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- B. Add clause 7.5.1.1 as follows:

7.5.1.1 - When bonds are modified due to issuance of a change order, provide written confirmation from surety indicating that bonds have been modified and to what extent they have been modified.

- C. Modify existing subparagraph 7.7.3 as follows:

7.7.3 - Delete the period following the last sentence of subparagraph 7.7.3 and add the following:

"with a copy to the Owner."

- D. Delete paragraph 7.9 entirely.

- E. Add new subparagraphs 7.9.1, 7.9.2 and 7.9.3 as follows:

7.9.1 - Contractor shall maintain all financial records relating to this contract using generally accepted accounting practices.

7.9.2 - Contractor shall maintain all financial records for a minimum of two (2) years after the date of substantial completion. Owner and Owner's auditor shall have unlimited access to all Contractor records regarding this contract. Owner shall have unlimited audit rights by an auditor designated by the Owner. Contractor shall allow auditor to reproduce any and/or all Project records. Should an audit indicate overpayment to Contractor, Contractor shall reimburse Owner the amount of such overpayment plus the cost to Owner incurred in conducting the audit, minus any cost incurred by the Contractor in complying with requirements of the audit.

7.9.3 - Contractor shall notify the Owner as to the location of Project records.

ARTICLE 8 - TIME:

- A. Add new clause 8.1.2.1 as follows:

8.1.2.1 - Contractor shall not start work, or store materials or equipment on site until written notice to proceed is issued.

- B. Delete subparagraph 8.2.1 and substitute the following:

8.2.1 - Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable

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period for performing the Work.

- C. Revise subparagraph 8.3.1 as follows:

8.3.1 - Delete the words "or by delay authorized by the Owner pending arbitration" in the first sentence.

ARTICLE 9 - PAYMENTS AND COMPLETION:

- A. Add to clause 9.3.1.1 as follows:

9.3.1.1 - The form of Application for Payment shall be AIA Document G702, Application and Certificate of Payment, and AIA Document G703, Continuation Sheet, supported as described in subparagraph 9.3.1 above.

- B. Add new subparagraph 9.3.4 as follows:

9.3.4 - Progress Payments: The Contractor shall, on or before the first day of each month, make an estimate of the Work performed during the preceding month and submit same to the Architect for checking and approval. On or about the 25th day of the month following the month in which the Work was performed, the Owner shall pay to the Contractor, ninety percent (90%) of the value of said Work in place, or materials and equipment suitably stored as checked and approved by the Architect and the Owner. The balance of ten percent (10%) of the estimate shall be retained by the Owner until the time for final acceptance of the Work.

- C. In Subparagraph 9.7.1, delete the words "or awarded by arbitration" from the first sentence.

- D. Delete subparagraph 9.8.1 and substitute the following:

9.8.1 - Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

- E. Delete subparagraph 9.8.2 and substitute the following:

9.8.2 - When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed

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or corrected. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. The Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish the responsibilities of the Owner and the Contractor for security, maintenance, heating and cooling, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate.

- F. Add new subparagraph 9.8.3 as follows:

9.8.3 - Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contractor Documents.

- G. Delete subparagraph 9.9.1 and substitute the following:

9.9.1 - Upon receipt of written notice that the Contractor considers the Work ready for final inspection and acceptance, and upon receipt of a final Application for Payment, the Architect will promptly conduct pre-final inspections until the Architect agrees that the Work is acceptable under the Contract Documents and the Contract fully performed. When the Architect finds the Work acceptable and the Contract fully performed, the Architect shall so notify the Owner and schedule a final inspection to be attended by the Architect, the Contractor, and the Owner. If the Owner determines that final completion has not been achieved, the discrepancies shall be noted for Contractor correction and another inspection shall be conducted

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upon notification by the Architect that the discrepancies have been corrected. Once the Owner agrees that final completion has been achieved, the Architect will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information, and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The Architect's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.9.2 have been fulfilled.

H. Add new clause 9.9.1.1 as follows:

9.9.1.1 - Warranties required by the Contract Documents shall commence on the day of Final Completion of the work or designated portion thereof unless otherwise stated in the Contract Documents.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY:

A. Add new subparagraphs 10.1.2, 10.1.3, and 10.1.4 as follows:

10.1.2 - In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop work in the area affected and report the condition to the Owner and the Architect in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless, by written agreement of the Owner and Contractor.

10.1.3 - The Contractor shall not be required pursuant to Article 12 to perform without consent any work relating to asbestos or polychlorinated biphenyl (PCB).

10.1.4 - To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Architect, Architect's consultants and agents and employees or any of them from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from the existence of asbestos or polychlorinated biphenyl (PCB) in the affected area which has not been rendered

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harmless, provided that such claim, damage, loss, and expense is attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible property (other than the work itself) including loss of use resulting therefor, but only to the extent caused in whole or part by the negligent acts or omissions of the Owner, anyone directly or indirectly employed by the Owner or anyone for whose acts the Owner may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Subparagraph.

B. Add new subparagraphs 10.2.8 and 10.2.9 as follows:

10.2.8 - Give notice in writing at least forty-eight (48) hours before breaking ground, to all persons, public utility companies, owners of property having structures or improvements in proximity to site of the work, superintendents, inspectors, or those otherwise in charge of property, streets, water lines, gas lines, sewer lines, telephone cables, electric cables, railroads, or others who may be affected by Contractor's operations, in order that they may remove any obstruction for which they are responsible, and have representation on site to see that their property is properly protected. Such notice does not relieve the Contractor of responsibility for any damages, claims, or defense of all actions against Owner and Architect resulting from performance of such work in connection with or arising out of Contract.

10.2.9 - Protect utilities encountered whether indicated on drawings or not. Maintain utilities in service until moved or abandoned. Exercise care in excavation around utilities. Restore any damaged items of work to same condition (or better) as existed prior to starting work. Maintain utilities or other services indicated to be abandoned in service until new facilities are provided, tested, and ready for use.

ARTICLE 11 - INSURANCE:

A. Add new clause 11.1.1.7 as follows:

11.1.1.7 - Claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 4.18 et seq.

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- B. Delete subparagraph 11.1.2 and substitute the following:

11.1.2 - The insurance herein required shall be written for not less than the limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence basis or a claims made basis, shall be maintained without interruption from date of commencement of the work until date of final payment and termination of any coverage required to be maintained after final payment.

- C. Add new clause 11.1.4.1 as follows:

11.1.4.1 - The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the State of Arizona, such insurance as is herein required and for which the Contractor may be legally liable, continuously during the term of the Contract. Should insurance policies expire during the term of the Contract, the Contractor shall replace said policies with the same coverages and provide the Owner with a renewal certificate of insurance on the form provided.

- D. Delete subparagraph 11.3.4 and substitute the following:

11.3.4 - The Contractor shall file the required certificate of insurance with the Owner before an exposure to property loss can occur.

- E. Delete subparagraph 11.3.6 in its entirety.

- F. Delete subparagraph 11.3.7 and substitute the following:

11.3.7 - If required in writing by any party in interest, the Owner as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of his duties. He shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties may reach. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate change order.

- G. Delete subparagraph 11.3.8 and substitute the following:

11.3.8 - The Owner as trustee shall have the power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five days after the occurrence of loss to the Owner's exercise of this power.

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H. Delete subparagraph 11.4.1 in its entirety.

ARTICLE 12 - CHANGES IN THE WORK:

A. Delete subparagraph 12.1.3 and substitute the following:

12.1.3 - Determine the cost or credit to the Owner for work covered by approved changes on the basis of one or more of the following:

12.1.3.1 - Unit prices of allowances stated in the Contract Documents, or

12.1.3.2 - Previously agreed upon and approved lump sum, or

12.1.3.3 - Actual cost of work.

B. Add new subparagraph 12.1.4 as follows:

12.1.4 - Base lump sum proposals, unit prices, allowances, and actual cost of work upon:

12.1.4.1 - Labor (including Social Security, welfare contributions, and other fringe benefits).

12.1.4.2 - Materials.

12.1.4.3 - Equipment.

12.1.4.4 - Subcontractor cost (the actual cost to the subcontractor for labor, material, and equipment, plus 15 percent (15%) of those costs to cover the subcontractor's overhead and profit).

12.1.4.5 - Contractor Overhead and Profit - to above items 12.1.4.1, 12.1.4.2, and 12.1.4.3, add a fixed fee of 15 percent (15%) of the cost of the work. To item 12.1.4.4, add a fixed fee of 5 percent (5%).

12.1.4.6 - Overhead and Profit is compensation to cover the cost of job and office supervision, overhead, bond, profit, and any other general expenses.

12.1.4.7 - For purposes of clauses 12.1.4.4 and 12.1.4.5 (Contractor's overhead and profit) the subcontractor's overhead and profit shall be reduced and the Contractor's overhead and profit shall be increased by the actual amount of any applicable sales tax payable by the

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Contractor on equipment and materials provided by the subcontractor. Applicable sales tax is not considered as an overhead and profit expense by either Contractor or subcontractor.

12.1.4.8 - Include detailed cost breakdown for each component of work indicating both quantities and unit prices for all lump sum proposals. Submit proposals within two weeks after receipt of proposal request.

12.1.4.9 - List daily, all labor expenditure for work performed at actual cost. Present properly itemized invoice to Owner with an Application for Payment.

C. Add new subparagraph 12.1.5 as follows:

12.1.5 - If methods indicated in clauses 12.1.3.1 or 12.1.3.2 cannot be agreed upon, Contractor shall promptly proceed with work involved. Cost of such work will then be determined under provisions of clause 12.1.3.3. Pending final determination of cost to Owner, payments on account shall be made on Architect's Certificate for Payment. Amount of credit to be allowed by Contractor to Owner for any deletion or change which results in net decrease in cost, will be amount of actual net decrease. When both additions and credits are involved in any one change, figure allowance for overhead and profit and basis of net increase, if any.

D. Add new clause 12.3.1.1 as follows:

12.3.1.1 - In no case will any claims for extras be allowed unless such work, labor, materials, or equipment have been approved in writing by the Owner, through the Architect. Claims for such extras must be approved by the Architect before Owner makes payment.

E. Revise subparagraph 12.4.1 to read as follows:

12.4.1 - The Architect will have authority, upon review and written approval of the Owner, to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by Architect's written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 13 - UNCOVERING AND CORRECTION OF WORK:

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A. 13.1.1 - Add the words "without change in the Contract Time." at the end of the last sentence.

B. Delete subparagraph 13.2.2 and substitute the following:

13.2.2 - Contractor hereby agrees to keep all work constructed under the Contract in good repair for a minimum period of one (1) year, unless a longer period is specified in the Contract Documents. No provision of the Contract Documents which limits the warrantee period to less than one (1) year from date of the Architect's approval as identified on the final Certificate for Payment is valid. Upon written notice by registered or certified mail from the Owner, or Owner's representative, to the Contractor of any defect, functional or structural deterioration which appreciably reduces effectiveness or efficiency of the Work or improvement for purpose intended, or any serious departure from standards of original construction described in the Contract Documents, said deficiency shall be remedied by the Contractor. The Contractor shall make such remedy without further cost to the Owner, including in part, all damages caused by such defect, deficiency, deterioration or departure, and by its repair, replacement, or correction.

C. Add new clauses 13.2.2.1, 13.2.2.2, 13.2.2.3, and 13.2.3.4 as follows:

13.2.2.1 - It is intended that this provision apply as a personal obligation of the Contractor. If Contractor does not proceed to remedy such defects, deficiencies, deteriorations or departures called to his attention in said notice within ten (10) consecutive calendar days of the Contractor's receipt of notice, Owner may cause repairs to be made as Owner deems best. Entire cost thereof shall be paid by Contractor.

13.2.2.2 - Obligations of the Contractor as herein provided are in addition to, and not in limitation of, any obligations imposed upon him by special warranties required by Contract Documents or otherwise prescribed by law.

13.2.2.3 - Owner will give prompt notice to Contractor by registered or certified letter mailed to the last known address of the Contractor and by sending a copy of such letter to surety. Such notice is mutually agreed to be sufficient and adequate.

13.2.2.4 - Such additional specific warranties on various subdivisions of the Work as are required shall be furnished by subcontractors under each respective subdivision of the Work. However, responsibility for furnishing such specific warranties

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rests with Contractor.

- D. 13.2.7 Change the phrase "Date of Substantial Completion" to read "Date of Final Completion" in the second sentence.

ARTICLE 14 - TERMINATION OF THE CONTRACT

There are no amendments to this Article.

END OF SECTION

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SECTION 00810

MARICOPA COUNTY
MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
CONSTRUCTION CONTRACTING REQUIREMENTS

- A. The following conditions will apply in the calculation of the percentage attainment:
1. All MBE/WBE firms used in attainment of the goal must be certified with the Maricopa County Minority Business Office (MBO). The MBO is located in the Maricopa County Highway Department building, 2901 West Durango Street, Phoenix, telephone 506-8656. In addition, only those firms certified at least five (5) calendar days prior to the bid opening will be considered in the attainment of the goal.
 2. Prime contractor subcontracts to MBE or WBE:
The MBE/WBE amount to be applied to the goal will be based on that portion (dollar value) of the contract that the MBE/WBE performs. For example, if a prime contractor subcontracts work amounting to \$100,000 of a contract for which the total project cost is \$1,000,000 the MBE/WBE participation will be credited as 10 percent.
 3. Prime Minority Consultant:
An MBE/WBE prime contractor will be credited with the MBE/WBE participation for that portion of the contract which they themselves perform, plus those portions subcontracted to other MBE/WBE firms. For example, if an MBE/WBE prime contractor proposes to perform 50 percent of a project quoted at \$1,000,000 and subcontracts 25 percent to an MBE/WBE firm, MBE/WBE participation will be credited as 75 percent, or \$750,000.
 4. Minority-Non-Minority Joint Venture:
A joint venture consisting of MBE/WBE participation and non-MBE/WBE business enterprises, functioning as a prime contractor, will be credited with minority participation on the basis of the percentage of profit accruing to the MBE/WBE firm. For example, if a MBE/WBE and non-MBE/WBE joint venture proposes to perform 50 percent of a \$1,000,000 project and 50 percent of the joint venture profits (\$500,000) are to accrue to the MBE/WBE partner in the joint venture, MBE/WBE participation will be credited at 25 percent or \$250,000.

5. Lower Tier Non-MBE/WBE Participation:
MBE/WBE subcontractors proposing to further subcontract to non-MBE/WBE contractors shall not have that portion of subcontracting activity considered when determining the percentage of MBE/WBE participation.
6. MBE/WBE Suppliers:
Any MBE/WBE supplier that performs a commercially useful function, manufactures or substantially alters the material or product it supplies will have that portion of activity considered when determining the percentage of MBE/WBE participation.
7. MBE/WBE Trucking:
Credit for trucking by MBEs or WBEs will be the amount to be paid when the MBE or WBE trucker will perform the trucking with his/her trucks, tractors, and employees or when a MBE or WBE trucking broker has signed agreements with MBE and WBE truckers.

B. Required forms:

Two Affidavits are included as part of this section. The first form, the "MBE/WBE Assurances Affidavit", must be completed and submitted with the Bid. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION OF THE BID.

A SAMPLE of the "Actual MBE/WBE Participation Affidavit" that must be completed and returned by the first and second low bidders by 4:00 p.m. to the Minority Business Office on the seventh calendar day after bid opening is provided for information purposes. An original form may be requested from the Minority Business Office. A copy of the sample or the sample form itself may also be used. The affidavit will list the MBE/WBE participation by MBE/WBE firm name and the related dollar value of the MBE/WBE contract. The information in this affidavit is binding on the contractor, to the extent that any amounts may be increased and not decreased, and that if any listed MBE/WBE's are unable to enter into a subcontract with contractor, the contractor will provide a written report to the Procurement Officer through the Owner's representative.

C. Good Faith Efforts:

Bids which fail to meet MBE or WBE minimum goals at levels which equal or exceed established goals may be considered non-responsive unless good faith efforts can be determined. Only MBE and WBE firms certified by Maricopa County five (5) calendar days prior to the Bid submittal date, and which will perform a commercially useful function will be counted toward meeting the participation goals. Any portion of the work that a proposed MBE or WBE firm will subcontract to other than

another certified firm, regardless of tier, will not be counted toward the applicable goals.

The apparent first and second low bidders who do not fulfill the established MBE and WBE goals must demonstrate, through detailed and comprehensive documentation, that "good faith" efforts have been made to solicit, assist and utilize MBE and WBE firms to meet participation goals.

The County Minority Business Office (MBO) will assist prime contractors in identifying possible qualified and interested MBE and WBE subcontractors to meet designated MBE and WBE goals. A M/WBE directory will be made available which contractors may utilize in identifying MBE and WBE firms. It will be the responsibility of the prime contractors to obtain the MBE and WBE firms necessary to meet the MBE and WBE goals.

FAILURE TO CONTACT THE MBO FOR ASSISTANCE IN COMPLYING WITH THESE GOALS MAY RESULT IN NOT HAVING IMPLEMENTED "GOOD FAITH" EFFORTS. Contact may be in writing, by telephone, or in person. If by phone or in person, name of MBO person spoken to should be obtained and written within the "good faith efforts" documentation submittal.

FAILURE TO IMPLEMENT "GOOD FAITH" EFFORTS IN ACCORDANCE WITH THE MARICOPA COUNTY MINORITY BUSINESS ENTERPRISE PROGRAM TO THE SATISFACTION OF MARICOPA COUNTY, COULD RESULT IN THE REJECTION OF THE BID.

If information submitted by the apparent low bidder or top tank proposer indicates that established MBE and WBE goals have not been met, the bidder or proposer shall be required to provide sufficient documentation to demonstrate that he/she has complied with MBE and WBE requirements or good faith efforts. Good faith efforts will be determined by both quality and intensity of these efforts. Documentation provided to the Minority Business Office (MBO) must include:

1. The date bidder/proposer requested assistance written, in person, or by telephone, from the MBO. The bidder/proposer should request assistance from the MBO office in order for a determination of good faith effort to be made. As Maricopa County M/WBE directories are updated frequently, bidders shall contact the MBO to ensure that they have the most recent edition.

2. Names, addresses and telephone numbers; and dates of notification of Maricopa County certified MBEs and WBEs solicited by direct mail for this project; and dates and methods used for follow up of initial solicitations to determine with certainty whether MBEs or WBEs were interested in subcontracting. (SEE NOTE)
3. Items of work for which bidder/proposer requested sub bids, proposals, or materials to be supplied by MBEs and WBEs; information furnished to interested MBEs and WBEs such as specifications and requirements of the work; plans; and any breakdown of items of work into economically feasible units to facilitate MBE and WBE participation.
4. Names of MBEs and WBEs who submitted bids or proposals for any of the work indicated above and were not accepted by the prime. An explanation of why MBEs or WBEs contacted were not awarded subcontracts. If price was the reason for rejection of the bid, the price bid of rejected MBEs or WBEs and price bid of the selected subcontractor shall be submitted. Since utilization of available MBEs and WBEs is the program objective, price differences will not automatically be considered as cause for rejection of MBE and WBE bids.
5. Documentation of written notices or telephone calls to a reasonable number of M/WBEs soliciting their participation in sufficient time to allow M/WBEs to participate effectively. All provide applicable goods and services for subject procurement/project should be contacted.

NOTE: The above good faith efforts must have been conducted during the bidding period and prior to the bid opening date with substantial time in order to allow for a response from potential M/WBE subcontractors. Original contact by prime contractor just prior to or on the bid date will not be construed as having provided sufficient response time for submission of subcontract bids.

The following efforts can also be utilized in demonstrating "Good Faith" in soliciting M/WBE participation.

1. A description of the efforts made to assist MBEs and WBEs whose bids were rejected to be more competitive in their subcontracting bids. These efforts could include assistance in meeting bonding or insurance requirements.
2. Names and dates of advertisement of each newspaper, trade paper, and minority focus paper in which a request for MBE and WBE participation for this project was placed by the bidder/proposer.

Bidders are encouraged to seek M/WBEs in the same geographical area in which the work is to be performed or goods provided. If the bidder cannot meet the established goals using M/WBEs from the geographical area, the bidder should expand its search to a reasonable wider geographical area.

The MBO will make the final decision as to whether good faith efforts were met based on the information submitted.

D. Appeal Process for Bid Award:

If the Owner is considering award of a contract to a bidder other than the low bidder because of failure to meet MBE and WBE participation goals or good faith efforts, the bidder will be notified and given an opportunity to protest the decision. This protest will be made in accordance with the Maricopa County Procurement Code, Article 9, MCI-905, which is incorporated by reference.

E. Contract Compliance:

Failure of any bidder, contractor or subcontractor to comply with any of the requirements of the Maricopa County Minority and Women-Owned Business Program shall be a material breach of contract. During the term of an awarded contract, the prime contractor shall:

1. Fulfill the MBE and WBE participation commitments submitted with their bid;
2. Continue to make every effort to utilize MBEs and WBEs;
3. Require that their subcontractors make every effort to utilize MBEs and WBEs;
4. Maintain records necessary for monitoring their compliance with provisions contained in the M/WBE Program.

The primary responsibility for assuring the contractor's compliance with these M/WBE contract requirements after award rests with the Owner's designated representative. The Owner's designated representative should ascertain that no one other than the approved MBE or WBE contractors or subcontractors are performing the work, and that MBE and WBE subcontractor substitutes have been approved in advance. The prime contractor shall not perform any MBE or WBE contract work items without prior approval by the Owner's designated representative.

The Owner's designated representative shall advise the Minority Business Office immediately of any circumstances where a contractor appears to be in violation of the MBE and WBE contract requirements. An investigation will be held by the MBO and a recommendation for corrective action shall be forwarded to the Owner's designated representative. Intentional noncompliance with the MBE and WBE requirements may result in withholding funds on the items already completed, in termination of the contract, and/or formal debarment from future contracts. The Maricopa County Minority Business Office (MBO) reserves the right to inspect all records of the contractor, MBEs and WBEs concerning this project.

The MBO will conduct MBE and WBE compliance reviews on a regular basis.

F. Substitution of Subcontractors:

The prime contractor shall request approval to replace an approved MBE or WBE subcontractor that is unable or unwilling to perform successfully on a contract with another MBE or WBE. This failure does not remove the contractor's responsibility for meeting the MBE and WBE participation goals on the contract. A written request for substitution must be made to the Owner's Procurement Officer, through the appropriate Owner's representative of the Procurement Agency. The substitute MBE or WBE, obtained to perform an equal or greater dollar value of work, must be approved by the Owner's representative, prior to beginning of any work by the substitute MBE or WBE. The request for substitution must include, but is not limited to the following:

1. Reason for substitution.
2. Name, address, and telephone number of the approved MBE or WBE.

3. Name, address and telephone number of the MBE or WBE substitute.
4. Item, numbers, description of work and the proposed MBE and/or WBE dollar amount.
5. Good faith effort documentation if the substitute subcontractor is not an MBE or WBE.

G. Requests for Pay:

Each Request for Pay must be accompanied by a Maricopa County Minority/Women-Owned Business Enterprise Program MBE/WBE Participation Report in the form as provided in these documents.

The final pay request shall include a listing of total contract MBE/WBE participation. Line numbers and a description of actual work performed shall also be included. If, at the time of contract completion, the MBE and WBE commitments are not actually attained, the report is to provide an explanation of failure to comply. These reports shall be submitted within thirty (30) days of contract completion, PRIOR TO RELEASE OF ANY REMAINING CONTRACT RETENTION.

Three Attachments:

1. MBE/WBE Assurances Affidavit (1 page)
2. MBE/WBE Participation Report (1 page)
3. Actual MBE/WBE Participation Affidavit (1 page)

MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
MBE/WBE ASSURANCES AFFIDAVIT

(NOTE: FAILURE TO COMPLETE AND SUBMIT THIS AFFIDAVIT WITH THE BID PROPOSAL SHALL BE CAUSE FOR REJECTION OF THE BID.)

The undersigned, fully cognizant of the Maricopa County MBE/WBE Program requirements and of the goals established, hereby certifies that in the preparation of this Bid,

(the entity submitting the Bid)

(CHECK ONE)

_____ Will meet the established goal for participation by Minority/Women-Owned Business Enterprises.

_____ Will provide the necessary documentation to the Minority Business Office to establish that a good faith effort was made.

The first and second low bidders will specify their MBE/WBE participation on the Actual Participation Affidavit or provide documentation of their good faith efforts not later than 4:00 p.m., the seventh calendar day following the bid opening. If participation is "None" so stated therein, together with the documentation of bidder's good faith efforts to obtain the participation. This documentation will be reviewed by the MBO to determine whether in fact a comprehensive "good faith" effort has been implemented. The required affidavit shall be obtained by the apparent first and second low bidders from the Minority Business Office, Maricopa County Highway Department Building, 2901 West Durango, Phoenix, Arizona 85009, telephone (602) 506-8600, following the bid opening and verbal notification from the Procurement Officer of the Procurement Agency; a SAMPLE affidavit form for reference purposes follows.

_____ Name of Firm	_____ Signature
_____ Title	_____ Date

STATE OF ARIZONA)
)ss.
County of Maricopa)

Subscribed and sworn to before me this ____ day of _____, 199_,
by _____.

Attachment 1

Notary Public

Outside Ramadas

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MARICOPA COUNTY
MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES PROGRAM

MBE/WBE PARTICIPATION REPORT
(To be attached with Request for Pay)

Date: _____

Contractor: _____
Contact Person: _____
Address: _____

Telephone: _____

Project: _____

Contract Number: _____
For Pay Period of: _____

Subcontractor: _____
Person to Contact: _____
Address: _____
Telephone Number: _____

Type of Firm: _____
Type of Work: _____

Subcontract Amount: _____

Amount Earned: _____
(Commission) This Period: _____
Total Earned by Subcontractor: _____

Total MBE/WBE Contract Goal, %: _____
Total Cumulative MBE/WBE
Participation on This Contract, %: _____

MBE/WBE subcontract payment made
during this reporting period (yes or no): _____

cc: Minority Business Office
Maricopa County Department of Transportation
2901 West Durango Street
Phoenix, Arizona 85009

Attachment 2

Outside Ramadas

00810-9P

MC 2/92

S A M P L E
COMPLETED AFFIDAVIT MUST BE SUBMITTED WITHIN SEVEN CALENDAR DAYS FOLLOWING BID OPENING
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
Actual Minority/Women-owned Participation Affidavit

 Name of Prime Contractor

 Project Number

 Contact Person

 Total Amount of Contract

 Street No.

 City State Zip

<u>Minority/Women-owned Firm</u>	<u>Principal</u>	<u>Address</u>	<u>Type of Work</u>	<u>Subcontract Amount</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

The undersigned has entered into a formal agreement with the minority contractors/suppliers listed above in the execution of this contract with the Flood Control District of Maricopa County.

 Signature

 Title

 Date

STATE OF ARIZONA)
) ss
 County of Maricopa)

Subscribed and sworn to before me this _____ day of _____ by _____

 Notary Public

My Commission Expires: _____

Attachment No. 3

00810-10P

SECTION 00820

CERTIFICATE OF INSURANCE

PART 1 - GENERAL

1.01 - Description

- A. Maricopa County Certificate of Insurance Format, May, 1982 edition, revised January, 1992, is hereby made a portion of the Contract Documents by reference.

1.02 - Submittals

- A. Obtain and submit a completed copy of the Certificate of Insurance with the Owner/Contractor agreement forms.

END OF SECTION

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CERTIFICATE OF INSURANCE

COUNTY DEPARTMENT Facilities Management PROJECT TITLE _____

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES
	COMPANY LETTER A
	COMPANY LETTER B
NAME AND ADDRESS OF INSURED	COMPANY LETTER C
	COMPANY LETTER D
	COMPANY LETTER E
	COMPANY LETTER F
	COMPANY LETTER G

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE AND ARE IN FORCE AT THIS TIME.

COMPANY LETTER	TYPE OF INSURANCE	POLICY NUMBER	POLICY EXPIRATION DATE	LIMITS OF LIABILITY IN \$1000	
				MINIMUM	each occurrence
<input type="checkbox"/>	COMPREHENSIVE GENERAL LIABILITY FORM			BODILY INJURY PER PERSON	
<input type="checkbox"/>	PREMISES OPERATION			EACH OCCURRENCE	
<input type="checkbox"/>	CONTRACTUAL				
<input type="checkbox"/>	BROAD FORM PROPERTY DAMAGE			PROPERTY DAMAGE	
<input type="checkbox"/>	EXPLOSION & COLLAPSE			OR	
<input type="checkbox"/>	PRODUCTS/COMPLETED OPERATION HAZARD				
<input type="checkbox"/>	UNDERGROUND HAZARD			BODILY INJURY AND PROPERTY DAMAGE Combined	
<input type="checkbox"/>	INDEPENDENT CONTRACTORS				
<input type="checkbox"/>	PERSONAL INJURY				
<input type="checkbox"/>	COMPREHENSIVE AUTO LIABILITY & NON-OWNED			SAME AS ABOVE	
<input type="checkbox"/>	EXCESS LIABILITY			Necessary if underlying not above minimum	
<input type="checkbox"/>	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY			STATUTORY each accident	
<input type="checkbox"/>	OTHER				

Maricopa County is added as an additional insured in respect to liability arising in any manner out of the performance of any contract entered into between the named and Maricopa County or liability arising out of any services provided or duty performed by any party as required by statute, law, purchase order, or otherwise required. It is agreed that any insurance available to the named insured shall be primary of other sources that may be available. It is further agreed that no policy shall expire, be cancelled or materially changed to effect the coverage available to the County without thirty (30) days written notice to the County. THIS CERTIFICATE IS NOT VALID UNLESS COUNTERSIGNED BY AUTHORIZED REPRESENTATIVE OF THE INSURANCE COMPANY.

NAME AND ADDRESS OF CERTIFICATE HOLDER
 MARICOPA COUNTY FACILITIES MANAGEMENT
 401 W. Jefferson St.
 Phoenix, AZ. 85003

DATE ISSUED _____ AUTHORIZED REPRESENTATIVE _____

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 - Description

- A. Project Requirements: The Work under the base bid of the Contract shall include all work indicated or specified within the Contract unless the work is specifically indicated as "Not in Contract".

1.02 - Specification

- A. In the preparation of these specifications an effort has been made to segregate the various branches of the work under headings, by trades. This is done only for convenience and shall not relieve the Contractor of the responsibility of furnishing every item indicated or specified whether properly segregated or not.
- B. Specifications are arranged in accordance with the Construction Specifications Institute Document MP-2-1-83. The five digit Arabic Section Designation is in accordance with the above referenced document.
- C. No responsibility will be assumed by the Owner, or Architect or their representatives for omissions or duplications by the Contractor in the completion of the Contract due to any alleged error in the arrangement of the material in these specifications nor shall any such segregation of work and materials operate to make the Architect or its representative an arbiter in defining limits to agreements between the Contractor and his subcontractors or suppliers.
- D. The misplacement, addition and/or omission of any letter, word, or punctuation mark, shall in no way damage the true spirit, intent or meaning of these specifications.

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- E. The word "shown", "indicated", "noted", "scheduled", or words of the like effect shall be understood to mean that reference is made to the drawings accompanying these specifications.
- F. Where reference herein is made to colors or finishes "as select", the reference is to selection(s) made by the Architect.
- G. Reference to known standards within these specifications shall and intend to be the latest edition or amendment published prior to the date of these specifications, unless specifically specified otherwise, and to such portions of it that relate and apply directly to the material or installation called for on the project.

1.03 - Disposition Of Utilities

- A. Contractor shall contact utility company to obtain all local restrictions and regulations prior to start of construction.
- B. Observe rules and regulations governing the respective utilities in executing all work under this heading.
- C. Adequately protect active utilities from damage, and remove or relocate only as indicated or specified.
- D. Remove, plug or cap inactive and abandoned utilities encountered during the Work. If there are not specific requirements, plug or cap such utility lines at least three feet (3') outside of new building walls or as required by local regulations.

1.04 - Architectural and Engineering Services

- A. It is understood that normal architectural and engineering liaison for the purpose of interpretation of the contract document is provided for by the Owner. Should any services of the A/E be required to assist in the corrections of errors or omissions in construction by the Contractor, or services of the A/E be required because of the changes in structure or equipment where the Contractor has requested approval of substitute methods or materials, these services will be provided by the A/E at his standard hourly rates, and shall be paid for by the Contractor.

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1.05 - Safety Requirements

- A. These construction documents and all phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the federal laws, including but not limited to, the latest amendments of the following:
1. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-596.
 2. Part 1910 - Occupational Safety and Health Standards, Chapter XVII, Title 29, Code of Federal Regulations.
 3. Part 1518 - Safety and Health Regulations for Construction Chapter XIII, Title 29, Code of Federal Regulations.
 4. Arizona OSHA of 1972 and Federal OSHA 1970 as it applies to Arizona law, shall constitute the outline for the safety program to be adhered to during the course of the project. A copy of these publications shall be available at the job site for reference.

1.06 - Approved Applicators

- A. Where specific instructions in these specifications require that a particular product and/or material(s) be installed and/or applied by an approved applicator of the manufacturer, it shall be the Contractor's responsibility to ensure that any subcontractor used for such Work be an approved applicator.

1.07 - Watertight-Weathertight

- A. Anything in the contract documents notwithstanding, the Contractor accepts the responsibility of constructing a watertight, weathertight project.

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1.08 - Extra Work

- A. In accordance with the General Conditions and when authorized in writing by the Owner, extra work may be ordered. Claims for additional compensation, for extra work accomplished, will not be recognized unless such extra work has been authorized in advance and in writing by the Owner.

1.09 - Signed Drawings and Specifications

- A. Immediately upon signing the Contract for the Work, the Contractor shall sign three (3) complete sets of Drawings and Specifications (for Specifications signature is to be applied on Table of Contents sheet thereof) as additional evidence of his understanding of the Work called for with such alternatives and amendments as specifically mentioned in the agreement. These shall become the Contract Drawings and the Contract Specifications. The Contractor shall file one (1) set with the Owner and keep one (1) set at the job site at all times during the progress of the Work. The job site set shall be the Contractors copy. The A/E will retain one (1) complete set in his office.

1.10 - Archaeological Features

- A. The attention of the Contractor is directed to Sections 41-771 and 41-772, A.R.S., which make it a misdemeanor, punishable by a fine not exceeding \$500.00 and imprisonment not exceeding six months, to investigate, explore or excavate, in either federal or state land, in or on prehistoric ruins, ancient burial grounds, fossilized footprints, hieroglyphics and all other archaeological features of Arizona without permits from the archaeological branch of the University of Arizona and the County Board of Supervisors.

In view of the above, it is a provision of the Contract that when archaeological features are found, encountered or unearthed in the excavation of the Work, the Contractor shall immediately notify the Owner.

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The Contractor shall notify the Owner in writing, three (3) working days in advance of the scheduled dates for demolition, excavation and trenching. During these operations the Owner may elect to have a field representative on site to observe and to investigate the subsoil conditions and obtain samples of artifacts as necessary.

1.11 - Security Procedures (Detention, County Attorney and Court Facilities)

- A. Work to be accomplished on this project.
1. The normal working hours for County employees in the Maricopa County Durango Complex are 7:00 A.M. to 5:00 P.M. Contractor's work shall occur between these hours except as stated in A.2 and A.3 below.
 2. Should the Contractor desire to work other than the normal hours, special arrangements will be required with the Security Guards (i.e. payment for their services) through the Building Services Coordinator, Facilities Management Department.
 3. The Security Guards pay rate is \$8.65/hr. with a four (4) hour minimum. The Contractor must determine, and verify with the Owner, the hours that will be worked and he must cover the cost of all personnel for whatever work hours he establishes, at no additional cost to the owner.

1.12 - Site Access

- A. Materials and equipment to be transported to and from the project site shall be restricted and may be subject to search. Other items designated may also be specified as restricted, if deemed so necessary by the Owner.

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1.16 - Coordination

- A. The Contractor will coordinate his work with the Owner's separate contractors at the site through the Owner's representative for the commencement of other scheduled work.

PART 2 - SPECIAL REQUIREMENTS

2.01 - Description

- A. In connection with the performance of work under this Agreement, the Contractor and their subcontractors hereby agree not to discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The aforesaid provisions shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor and their subcontractors agree to post hereafter in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of the non-discrimination clause.
- B. The Contractor and their subcontractors are required to comply with Executive Order 75-5, "Non-discrimination in Employment by Government Contractors and Subcontractors," which is hereby included in its entirety by reference and considered a part of this agreement.
- C. The Contractor and their subcontractors are required to comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, Title 49, Code of Federal Regulations; Part 21 through Appendix H and Title 23, CFR 710.405(b) are made applicable by reference and are hereinafter considered a part of this agreement.
- D. The Contractor and their subcontractors are required to comply with the provisions of Executive Order 11246, entitled "Equal Employment Opportunity", as amended by Executive Order 11375, and as supplemented in Department

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of Labor Regulations (41 CFR Part 60). Said provisions are made applicable by reference and are hereinafter considered a part of this agreement.

- E. The Contractor and their subcontractors shall take the following affirmative action steps with respect to securing supplies, equipment or services under the terms of this agreement:
1. Assure that minority and/or women's business enterprises are solicited whenever they are potential sources.
 2. When economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum minority and/or women's business enterprises participation.
 3. Where requirements permit, establishing delivery schedules which will encourage participation by minority and/or women's business enterprises.
 4. Use the services and assistance of the Small Business Administration and the Office of Minority Business Enterprise of the Department of Commerce as required.
- F. The Contractor and their subcontractors hereby understand and shall comply with the Immigration Reform and Control Act (IRCA) of 1986. The Contractor also agrees to permit the County and its agents access to the Contractor's personnel records to verify his compliance with IRCA requirements.

END OF SECTION

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SECTION 01045

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 - Description

- A. Work Included: This Section establishes general requirements pertaining to cutting, fitting, and patching of the work required to:
1. Make the several parts fit properly.
 2. Uncover work to provide for installation, inspection, or both, of ill-timed work.
 3. Remove and replace work not conforming to requirements of the Contract Documents.
 4. Remove and replace defective work.

1.02 - Quality Assurance

- A. Perform all cutting and patching in strict accordance with pertinent requirements of these specifications and, in the event no such requirements are determined, in conformance with the Architect's written direction.
- B. In all cases, exercise extreme care in cutting operations, and perform such operations under adequate supervision by competent mechanics skilled in the applicable trade. Openings shall be neatly cut and shall be kept as small as possible to avoid unnecessary damage. Careless and/or avoidable cutting damage, etc., will not be tolerated, and the Contractor will be held responsible for such avoidable or willful damage.

All replacing, patching and repairing of materials and surfaces cut or damaged in the execution of the work shall be performed by experienced mechanics of the several trades involved. Such replacing, repairing and/ or patching shall be done with the applicable materials,

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in such a manner then all surfaces so replaced, etc., will, upon completion of the work, match the surrounding similar surfaces.

1.03 - Submittals

A. Request for the Architect's Consent:

1. Prior to cutting which affects structural safety, submit a written request to the Architect for permission to proceed with cutting.
2. Should conditions of the work, or schedule, indicate a required change of materials or methods for cutting patching, notify the Architect and secure his written permission prior to proceeding.

B. Notices to the Architect:

1. Prior to cutting and patching performed pursuant to the Architect's instructions, submit a cost estimate to the Architect. Secure the Architect's approval of cost estimates and type of cost reimbursement before proceeding with cutting and patching.
2. Submit written notice to the Architect designating the time the work will be uncovered, therefore providing a time for the Architect's observation.

PART 2 - PRODUCTS

2.01 - Materials

- A. For replacement of work removed, use materials which comply with the pertinent Section of these specifications.

2.02 - Payment For Costs

- A. The Owner will reimburse the Contractor for cutting and patching performed pursuant to the Architect's written request after claim for such reimbursement is submitted

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by the Contractor. Perform all other cutting and patching needed to comply with the Contract Documents at no additional cost to the Owner.

PART 3 - EXECUTION

3.01 - Conditions

- A. Inspect existing conditions, including elements subject to movement or damage during cutting, and patching.
- B. After uncovering the work, inspect conditions affecting installation of new work.

3.02 - Discrepancies

- 1. If uncovered conditions are not as anticipated, immediately notify the Architect and secure needed directions.
- 2. Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.

3.03 - Preparation Prior To Cutting

- A. Provide all required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the work.

3.04 - Performance

- A. Perform cutting and demolition by methods which will prevent damage to other portions of the work and will provide a proper surface to receive new installation or repair and new work. Perform fitting and adjustment of products to provide finished installation complying with the specified tolerance and finishes.

END OF SECTION

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SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.01 - Description

- A. This Section describes requirements for verifying, establishing and maintaining construction grades, lines, levels and monuments as indicated within the contract documents.

1.02 - General

- A. The Contractor shall, before commencing Work, verify all grades, lines, levels and dimensions indicated and report any errors or inconsistencies to the A/E. The Contractor shall not proceed until such errors or inconsistencies are corrected or meet A/E modified requirements.
- B. Provide construction staking and surveying from base lines, grades, and bench marks shown on the plans. Under no circumstances will the Contractor be granted a time extension to this contract due to the lack of construction survey information. Any discrepancies in design of base lines and grades revealed in construction operations shall be brought to the Owner's representative's attention immediately for correction or clarification.
- C. The Contractor shall establish and maintain all construction grades, lines, levels and bench marks and shall be responsible for the accuracy and protection of the same. This work shall be accomplished by a licensed civil engineer or surveyor. Protect all temporary bench marks and maintain them in place for the duration of the Contract or until such time as their removal does not affect completion of the Project.
- D. Do not remove any property line markers or monuments or data established by the Owner. If such are damaged or removed the Contractor shall bear cost of replacement.

END OF SECTION

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SECTION 01060

SPECIAL CONDITIONS

PART 1 - GENERAL

1.01 - Description

- A. Services of a watchmen are not required; however, Contractor shall be responsible for and make good any loss or damage due to vandalism or robbery during construction.

1.02 - Good Repair

- A. Definition. Good repair as defined in General Conditions shall be extended to include:
 - 1. Site and Drainage Work
 - 2. Trench Conditions
 - 3. Landscaping Improvements
 - 4. Environmental/Process Applications of Work
- B. If in opinion of Owner, deterioration has taken place, the Owner shall notify the Contractor and his surety of said matter. If the Contractor does not proceed to remedy such matters called to his attention within ten (10) days after date of mailing, the Owner shall have sufficient cause to correct matters requiring repairs as the Owner deems best, and entire cost shall be paid by Contractor and surety.

1.03 - Site Maintenance and Temporary Painting

- A. Paint and maintain in good repair temporary structures, fences, barricades and related items.
- B. Keep site clean of debris, rubble and paper. Store and stockpile materials in an orderly manner and protect against damage.

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1.04 - Drawings and Contract Documents for Contractor Use

- A. No Charge Documents. The Architect/Engineer will furnish to Contractor, free of charge, upon award of Contract the following documents:

Drawings	15 each
Project Manuals	15 each

- B. Cost Documents. Additional documents after "No-charge" documents will be furnished to Contractor at cost.

1.05 - Testing

- A. Construction Phase Soils Testing. The Contractor will pay for "Passing" soils tests on project. Costs of corrective actions and costs of "Failing" soils tests are also the sole responsibility of the Contractor.
- B. Concrete Testing. The Contractor shall perform required concrete testing and pay for costs associated with securing samples, storing, handling, performing tests.
- C. Other Testing. Unless specifically stated otherwise in individual sections of specifications or drawings, required testing, testing procedures, reports, certificates, and costs associated with all phases of securing required satisfactory test information which may be required by individual sections of specifications or drawings are the full responsibility of the Contractors.

1.06 - Work Schedule

- A. Within 15 days after award of contract, provide and submit for approval a schedule to maintain in order to successfully construct work within time allotted. Schedule shall be of Critical Path and account for schedule of all subcontracts. Provide schedule for proper sequence of construction considering various crafts, purchasing time, shop drawing approval, material delivery, equipment fabrication and similar time consuming factors. Show on schedule as a minimum, earliest starting, earliest completion, latest starting, latest finish, free

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and total float for each task or item. Evaluate schedule not less than monthly. Update, correct, and rerun schedule and submit to Architect/Engineer in triplicate to show rescheduling necessary to reflect true job conditions. When shortening of various time intervals is necessary to correct for behind schedule conditions, indicate steps to implement to accomplish work in shortest schedule. Information shall be submitted to Architect/Engineer in writing with revised schedule.

- B. If Contractor does not take necessary action to accomplish work according to schedule, he may be ordered by Owner in writing to take necessary and timely action to improve work progress. Order may require increased work forces, extra equipment, extra shifts or other action as necessary. Should Contractor refuse or neglect to take such action or fail to accomplish improvements, the Owner may take any action authorized under provisions of this contract including, but not necessarily limited to, withholding of payment and termination of contract.

1.07 - Start-Up and Demonstration

- A. Pre Start-up Period. Prior to start-up, observe the following procedures by sequence:
1. Insure by checklist submitted to Owner that all required written statements from manufacturers by individual sections of specifications are received and comply to Contract Documents.
 2. Insure work is completed before start-up of any unit or system. Certify to Owner that specifically required services of respective equipment manufacturer's representative by individual sections of specifications have been performed in accordance with Contract Documents.
 3. Definition of System. For this project, "system" is defined as the arrangement of items or components of equipment (either process, mechanical or electrical) which form a unit of operation. Separate start-up and demonstration by system.

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4. Insure systems are tested hydraulically, mechanically, and electrically. Insure systems which require calibration, commissioning, and balancing are fully certified as complete in performance in accordance with Contract Documents. Insure required tagging, identification, and stenciling is complete.
5. Schedule start-up a minimum of thirty (30) days prior with written notice issued to but not necessarily limited to: Owner, Architect/Engineer, subcontractors, and applicable control agencies.
6. Provide all labor, supervision, utilities, chemicals, equipment, vehicles or any other items necessary to start-up, operate, and demonstrate the system.

1.08 - Removal of Existing Facilities

- A. All equipment, piping, etc. removed and not specifically designated for reuse shall remain property of Owner and shall be stored at plant site as directed by Owner. All other debris shall be hauled by Contractor and disposed in a City approved landfill.

1.09 - Drawings Showing Changes During Construction

- A. Throughout progress of construction, Contractor shall maintain a careful record of all changes from drawings in actual construction. At the completion of work and prior to final payment, Contractor shall file with Engineer one (1) set of drawings with all changes neatly and legibly recorded thereon.

1.10 - Inspection by Public Agencies

- A. Authorized representatives of the State of Arizona, Department of Health Services, shall have access to the work wherever it is in preparation or progress. The Contractor shall provide proper facilities for such access and inspection.

END OF SECTION

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SECTION 01150

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment, and services for all Applications for Payment as indicated, in accordance with provisions of Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, and complete installation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 - General

- A. On or before the first scheduled Weekly Progress Meeting day of each month, Contractor shall submit to the Architect, an itemized Application for Payment for the work completed during the previous calendar month. This application will be reviewed for content by the A/E and Owner during said meeting.
- B. Provide supporting data substantiating the Contractor's right to payment as the Owner and Architect may require, see 3.02 Application for Payment (below) for requirements.
- C. Submit estimates of the cost of work to be completed during the current calendar month with the Application for Payment.

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- D. Submit lien waivers covering the payment that was paid to Contractor for the previous calendar month.
- E. Submit Progress Photographs.
- F. Submit Record Photographs.
- G. Submit updated monthly CPM Schedule.
- H. Submit updated Material Status Report.

3.02 - Applications For Payment

- A. Submit the Application for Payment on AIA Documents G702 and G703, and the Application and Certificate for Payment on a Continuation Sheet.
- B. Furnish six (6) original Applications for Payment.
- C. Application for Payment will serve as a certification of the status of project.
- D. Signature on Application for Payment to be that of duly authorized agent of the Contractor.
- E. Base Application for Payment upon 100 percent of value of work installed and materials and equipment suitably stored at site and materials and equipment suitably stored off-site in insured and/or a bonded warehouse. The suitability of any off-site storage facility will be determined by the Owner. Invoice copies are required for verification of cost and delivery to an approved location. If the Owner elects to inventory stored materials, prior to payment application acceptance, the General Contractor shall make arrangement for the Owner or his representative(s) to preview said materials.
- F. Applications for Payment must be accompanied by lien waivers from Contractor, his subcontractors, sub-subcontractors, and suppliers or receipted invoices covering payments paid to Contractor for the previous calendar month.
- G. Lien waivers must show amount paid.

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H. Itemize Applications for Payment:

1. Heading completed in full.
2. Original contract sum.
3. Change order summary completed.
4. Net charge by change order.
5. Contract sum to date.
6. Total completed and stored to date.
7. Retainage section completed.
8. Total earned, less retainage.
9. Amount of previous payments.
10. Current payment due.
11. Balance to finish.
12. Notarized section completed.
13. AIA Document G703 completed.

END OF SECTION

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SECTION 01153

CHANGE ORDER PROCEDURE

PART 1 - GENERAL

1.01 - Description

- A. Work Included: Make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by the Owner and the Architect and issued after execution of the Contract, in accordance with the provisions of this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.
 - 2. Changes in the Work are described further in Article 12 of the General Conditions.

1.02 - Quality Assurance

- A. Include within the Contractor's quality assurance program such measures as are needed to assure familiarity of the Contractor's staff and employees with these procedures for processing Change Order data.

1.03 - Submittals

- A. Make submittals directly to the Architect at the address shown on the Project Directory in the Project Manual.
- B. Submit the number of copies called for under the various items listed in this Section.

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1.04 - Product Handling

- A. Maintain a "Register of Bulletins and Change Orders" at the job site, accurately reflecting current status of all pertinent data.
- B. Make the Register available to the Architect and the Owner for review at his request.

1.05 - Processing Changes Initiated By the Owner

- A. Should the Owner contemplate making a change in the work or a change in the Contract Time of Completion, the Architect will issue a "Bulletin" to the Contractor.
 - 1. Bulletins will be dated and will be numbered in sequence.
 - 2. The Bulletin will describe the contemplated change, and will carry one of the following instructions to the Contractor:
 - a. Make the described change in the work at no change in the Contract Sum and no change in the Contract Time of Completion.
 - b. Make the described change in the work, credit or cost for which will be determined in accordance with Paragraph 12.1 of the General Conditions.
 - c. Promptly advise the Architect as to credit or cost proposed for the described change. This is not an authorization to proceed with the change.
- B. If the Contractor has been directed by the Architect to make the described change in the work at no change in the Contract Sum and no change in the Contract Time of Completion, but the Contractor wishes to make a claim for one or both of such changes, the Contractor shall proceed with the change and shall notify the Architect as provided for under Paragraph 12.3 of the General Conditions.

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- C. If the Contractor has been directed by the Architect to make the described change subject to later determination of cost or credit in accordance with Paragraph 12.1 of the General Conditions, the Contractor shall:
1. Take such measures as needed to make the change.
 2. Consult with the Architect and reach agreement on the most appropriate method for determining credit or cost for the change.
- D. If the Contractor has been directed by the Architect to promptly advise him as to credit or cost proposed for the described change, the Contractor shall:
1. Analyze the described change and its impact on costs and time.
 2. Secure the required information and forward it to the Architect for review.
 3. Meet with the Architect as required to explain costs and, when appropriate, determine other acceptable ways to achieve the desired objective.
 4. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase the Owner's cost for making the change, advising the Architect in writing when such avoidance no longer is practicable.

1.06 - Processing Changes Initiated By the Contractor

- A. Should the Contractor discover a discrepancy among the Contract Documents, a concealed condition as described in Paragraph 12.2 of the General Conditions, or other cause for suggesting a change in the work, a change in the Contract Sum, or a change in the Contract Time of Completion, he shall notify the Architect as required by pertinent provisions of the Contract Documents.

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- B. Upon agreement by the Architect that there is reasonable cause to consider the Contractor's proposed change, the Architect will issue a Bulletin in accordance with the provisions described in Article 1.5 above.

1.07 - Processing Bulletins

- A. Make written reply to the Architect in response to each Bulletin.
 - 1. State proposed change in the Contract Sum, if any.
 - 2. State proposed change in the Contract Time of Completion, if any.
 - 3. Clearly describe other changes in the work, if required by the proposed change, or desirable therewith, if any.
 - 4. Include full backup data such as subcontractor's letter of proposal or similar information.
 - 5. Submit this response in single copy.
- B. When cost or credit for the change has been agreed upon by the Owner and the Contractor, or the Owner has directed that cost or credit be determined in accordance with provisions of Paragraph 7.1 of the General Conditions, the Architect will issue a "Change Order" to the Contractor.

1.08 - Processing Change Orders

- A. Change Orders will be dated and will be numbered in sequence.
- B. The Change Order will describe the change or changes, will refer to the Bulletin or Bulletins involved, and will be signed by the Owner and the Architect.
- C. The Architect will issue six (6) copies of each Change Order to the Contractor utilizing the AIA document G701, April, 1978.

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1. The Contractor promptly shall sign all six (6) copies and return three (3) copies to the Architect.
 2. The Architect will retain one (1) signed copy in his file, will forward one (1) signed copy to the Owner, and will forward one (1) signed copy to the Lender.
- D. Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:
1. The Contractor promptly shall return five (5) copies of the Change Order, unsigned by him, to the Architect with a letter signed by the Contractor and stating the reason or reasons for the Contractor's disagreement.
 2. The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

END OF SECTION

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SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 - Description

- A. Project Meetings are held to enable an orderly review of the work as it progresses on a periodic basis (every two weeks). It also provides an opportunity for systematic discussion of cost, schedule, problems and solutions. The Owner will conduct project meetings throughout the construction period.
- B. The Contractor's relationship with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and are not a part of project meetings content.
- C. Persons designated by the Contractor to attend and participate in the project meetings shall have all required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.02 - Submittals

- A. To the maximum extent practicable, advise the Owner at least three (3) working days in advance of project meetings regarding all items to be added to the agenda.
- B. The Owner will compile minutes of each project meeting and will furnish copies to the Contractor and all participants. The Contractor may make and distribute such other copies as he wishes. The Owner shall furnish a copy of the minutes to responsible parties of required attendance even if they are not represented at the meetings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

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3.01 - Meeting Schedule

- A. Except as noted below the preconstruction meeting, project meetings will be held on a weekly basis or more frequently if required. Meeting dates and times will be coordinated in an effort to allow all parties whose participation is essential.

3.02 - Meeting Location

- A. To the maximum extent practicable, meetings will be held at the job site.

3.03 - Preconstruction Meeting

- A. The Owner will conduct the preconstruction meeting which shall be scheduled within ten (10) days after the Owner has issued the Notice to Proceed. It will be attended by authorized representatives of the Contractor, all major subcontractors, the Architect, the Owner, and other interested parties.
- B. Minimum Agenda: Distribute data on, and discuss:
 - 1. Organizational arrangement of Contractor's forces and personnel, personnel of subcontractors, materials suppliers, Architect, and Owner.
 - 2. Channels and procedures for communications.
 - 3. Construction schedule, including sequence of critical work. A two week schedule will be prepared and updated for each project meeting and utilized by the Contractor as well as the overall project schedule.
 - 4. Contract Documents, including distribution of required copies of original Documents and revisions.
 - 5. Processing of Shop Drawings and other data submitted to the Architect for review.
 - 6. Processing of field decisions and Change Orders.
 - 7. Rules and regulations governing performance of the Work.

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8. Procedures and responsibilities regarding Project Record Documents.
9. Procedures and responsibilities regarding operations and maintenance information and training Owner's personnel.
10. Procedures for safety and first aid, security, quality control, housekeeping, and other related matters.

3.04 - Project Meetings

- A. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the Work. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspects of the Work are involved.
- B. Minimum Agenda:
 1. Review, revise as necessary, and approve minutes of previous meeting.
 2. Review progress of the Work since last meeting, including status of submittals for approval.
 3. Present and discuss Contractors updated two week schedule.
 4. Identify problems which impede planned progress.
 5. Develop corrective measures and procedures to regain planned schedule.
 6. Discuss changes in the work.
 7. Complete other current business.

END OF SECTION

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SECTION 01310

CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 - Description

- A. To assure adequate planning and execution of the Work so that the Work is completed by the date allowed in the Contract, and to assist the Owner or his representative in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.
- B. Contractor should employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, in analyzing and use of Critical Path Method or PERT, and in preparation and issue of periodic reports as required below.

1.02 - Reliance Upon Approved Schedule

- A. The computer generated Construction Schedule, as approved by the Owner and Architect will become an integral part of the Contract, and will establish interim Contract completion dates for the various activities. The ultimate responsibility for timely completion of all contract milestones and the completion of the contract shall be that of the Contractor as acceptance of the schedule by the Owner and Architect does not alleviate the Contractor of responsibility for compliance.
- B. Should any activity not be complete within seven (7) calendar days after the stated scheduled date, (approved and accepted construction delays will be taken into consideration) the Owner shall have the right to order the Contractor to expedite completion of the activity by whatever means the Owner deems appropriate and necessary, without additional compensation to the Contractor.

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- C. Should any activity be fifteen (15) or more calendar days behind schedule, the Owner shall have the right to direct the activity to be performed by whatever method the Owner deems appropriate.
- D. Costs incurred by the Owner and Architect in connection with expediting construction activity under this Article shall be reimbursed to the Owner and Architect by the Contractor.
- E. It is expressly understood and agreed that failure by the Owner to exercise the option to either order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered precedent-setting for any other activities.

1.03 - Preliminary and Construction Analysis

- A. Within ten (10) calendar days after receipt of Notice to Proceed submit one (1) reproducible copy and five (5) prints of a preliminary construction schedule, plus five (5) prints and a proposed format for Material Status Reports, prepared in accordance with this Section.
- B. Within thirty (30) calendar days after receipt of Notice to Proceed, submit one (1) reproducible and four (4) prints of the final construction schedule prepared in accordance with this Section and approved by the Owner.
- C. See instructions to complete work within date specified for further clarification. Submit with the monthly payment application five (5) prints of the updated construction schedule, accompanied by five (5) prints of the updated Material Status Reports prepared in accordance with this Section.

PART 2 - REPORT FORMATS

2.01 - Construction Diagram

- A. The Schedule or Construction Diagram must be a standard and accepted computer generated schedule of activities that shall graphically show the order and interdependence of all activities necessary to complete the Work,

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and the sequence in which each activity is to be accomplished, as planned by the Contractor and his Project Field Superintendent in coordination with all subcontractors whose work is shown on the diagram. Activities shown on the diagram shall include, but are not necessarily limited to:

1. Project mobilization;
 2. Submittals and approvals of shop drawings and samples;
 3. Procurement of equipment and critical materials;
 4. Fabrication of special material and equipment, installation and testing;
 5. Final cleanup;
 6. Final inspection and testing;
 7. All activities determined by the Owner to affect the progress of required dates for completion, for all and for each part of the work.
- B. The detail of information shall be such that duration times of activities shall normally range from 1 to 25 calendar days. The selection and number of activities shall be subject to Owner approval.
- C. Show on the diagram, as a minimum for each activity, description of each activity, duration in calendar days of each activity, completion of each activity, and how each activity affects each other activity. Submit diagram on a sheet 30" high, or agreed height by the Owner, by the width required.
- D. The Contractor shall additionally provide a two-week Bar Chart type schedule for review at each weekly project meeting. The information shall be detailed by activity and updated weekly to demonstrate work progress for any two week period. The two-week schedule should be based upon the information contained within the approved Project Schedule. Each activity schedule to be complete during a previous week that is not accomplished shall be

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explained during the current weekly meeting with solutions for upgrading that activity and/or statements relative to the delays to explain the same.

2.02 - Material Status Reports

- A. The Contractor's standard materials status report form will be acceptable if, in the Owner's judgment, it provides sufficient pertinent data to determine that materials procurement flow is adequate for all needs of the Work.

Content:

1. Item description, listed in accordance with the Specifications Section number in which the item is called for;
2. Purchase Order number and date of issue;
3. Vendor name;
4. Date shipped and shipping means utilized;
5. Estimated date of arrival at job site;
6. Actual date of arrival at project site, and receiving report number.

On a letter of transmittal accompanying periodic reports, or an accompanying summary sheet, or by other means acceptable to the Owner, clearly indicate those items which are critically overdue or otherwise detrimental to the maintenance of the approved schedule.

PART 3 - CONSTRUCTION STATUS REPORT

3.01 - Content

- A. Report actual progress by updating the mathematical analysis as indicated below.
- B. Note on the summary report, or clearly show on a revised issue the affected portions of the detailed diagram, all revisions causing changes in the detailed program.

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- C. Revise the summary report as necessary for continued clarity.
- D. Describe activities or portions of activities completed during the reporting period.
- E. State the percentage of Work actually completed and schedule as of the report date, and the progress along the critical path in terms of days ahead or days behind the scheduled dates.
- F. If the Work is behind schedule, also report progress along other paths with negative slack.
- G. Include a narrative report which shows, but is not necessarily limited to:
 - 1. A description of the problem areas, current and anticipated;
 - 2. Delaying factors, and their impact;
 - 3. An explanation of corrective actions taken or proposed.

3.02 - Revisions

- A. Make only those revisions to the approved Construction Schedule and approved Material Status Reports as they are approved in advance by the Owner.

END OF SECTION

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SECTION 01320

DAILY PROGRESS REPORTS

PART 1 - GENERAL

1.01 - Description

A. General:

1. Furnish all labor, materials, tools, equipment, and services for all progress reports as indicated, in accordance with provisions of Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, and complete installation.
4. See General Conditions for additional General Requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 - General

- A. General Contractor shall prepare a comprehensive daily log and maintain it during entire project period.
- B. General Contractor shall utilize the daily log entries for compilation into monthly Progress Reports.
- C. General Contractor shall present previous month's copies of the Daily Progress Reports to the Owner/Architect at weekly/monthly progress meetings as accompanied with his monthly payment request.

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SECTION 01340

SHOP DRAWINGS, PROJECT DATA AND SAMPLES

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment and services for furnishing, processing, delivery, reproduction and other functions for scheduling and handling of shop drawings, project data and samples as indicated, in accordance with Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for completion of work under this section.
4. See appropriate actions for specific items for which data and/or samples are required.
5. See General Conditions for additional requirements.

- B. See Technical Sections for items for which data is required.

1.02 - Address For Submission

- A. Submit all items to Architect/Engineer for review at the address indicated within these documents.

1.03 - Submittal - General

- A. Contractor shall be responsible for and make all submissions.
1. Submit to Architect/Engineer.
 2. Transmit all items on a shop drawing transmittal form with copies to the Owner. (See Contractor's manual for approved content form.)

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5. Provide Operation-Maintenance Manuals, and warranties in a separate transmittal. Refer to Section 01062 - 1.19 for operation maintenance manual requirements. Transmittal numbers for Operation-Maintenance Manuals shall be original number for Operation-Maintenance "O-M".

1.04 - Schedule

- A. Within ten (10) calendar days after award of Contract, submit an itemized schedule, indicating proposed submittal dates for all items.
 1. Include all shop drawings, data, samples and other items required to be submitted including operations and maintenance data.
- B. Schedule all items requiring Architect/Engineer action for submission during first 25 percent of construction period.
- C. Partial monthly payment requests will not be processed until a revised itemized schedule is received and approved with each payment request.

1.05 - Product List

- A. Within fifteen (15) calendar days after award of Contract, submit six (6) copies of complete list of products, equipment and subcontractors proposed for use.
- B. Tabulate by specification section.
- C. Only items which have been specified or approved by addenda may be used.
- D. No partial payment requests will be processed until this data and other submissions required by Contract Documents are received.
- E. For products specified under reference standards, approved equal products, or products of optional manufacturers, include with listing of each product:
 1. Name and address of manufacturer.
 2. Trade name.

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1.07 - Submittals - Samples

- A. Identify samples with manufacturer's name, item, use, type, project designation, specification section or drawing detail reference, color, range, texture, finish and other pertinent data.
- B. Submit two (2) samples to address indicated with transmittal letters, or construction site if required.
 - 1. Include brochures, shop drawings, and installation instructions with transmittal.
 - 2. Submit transmittal for site-built samples to address indicated.
- C. Architect/Engineer or Owner may, at his option, retain samples for comparison purposes until completion of Work.
 - 1. Samples will be returned or may be used in the Work unless the technical section specifically indicates otherwise.
 - 2. Remove samples when directed.
 - 3. Pay all costs of furnishing or constructing, and removing samples.
- D. Transmittals, shop drawings, or samples submitted to Architect shall have the Contractor's stamp on it with his signature and be marked "approved".
- E. Resubmit samples of rejected items.

1.08 - Architect/Engineer Review

- A. Reproduce and distribute "A/E approved" submittals that the Architect/Engineer reviews and stamps "furnish as submitted" or "furnish as noted".
- B. Contractor shall retain one (1) copy of each "A/E approved" submittal on file at the job-site.
- C. Architect/Engineer and the Owner shall retain one (1) copy of each "A/E approved" submittal in the project file.

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H. Reviewed samples submitted or constructed and approved by Architect/Engineer constitute criterion for judging completed work. Finish work or items not equal to samples will be rejected.

I. Start of work which requires submittals, prior to return of submittals with Architect/Engineer or Owner's stamp indicating review and approval is at Contractor's risk.

END OF SECTION

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SECTION 01370

SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 - Description

- A. Work Included: Provide a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.
- B. Related Work
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.
 - 2. Schedule of Values is required under Paragraph 4.8 of the General Conditions.
 - 3. Schedule of Values is required to be compatible with the "continuation sheet" accompanying applications for payment, as described in Section 01150.

1.02 - Quality Assurance

- A. Use required means to assure arithmetical accuracy of the sums described.
- B. When so required by the Architect, provide copies of the subcontracts or other data acceptable to the Architect, substantiating the sums described.

1.03 - Submittals

- A. Prior to first application for payment, submit a proposed Schedule of Values to the Owner.
 - 1. Meet with the Owner and determine additional data, if any, required to be submitted.

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2. Secure the Architect's and Owner's approval of the Schedule of Values prior to submitting first application for payment.

END OF SECTION

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SECTION 01400

QUALITY CONTROL

PART 1 - GENERAL

1.01 - Description

- A. Provide and maintain an effective Contractor Quality Control (CQC) program and perform sufficient and adequate inspections and testing of all items of work, including those of subcontractors, to ensure compliance with Contract Documents. Including but not limited to the surveillance and tests specified in the technical sections of the Specifications. Furnish appropriate facilities, instruments, and testing devices required for performance of the quality control function. Controls must be adequate to cover construction operations and be scheduled with the construction sequence.
- B. The individual selected by the General Contractor to manage the Contractor Quality Control Program must be approved by the Architect/Engineer and the Owner following an approved resume indicating the experience of the proposed manager.

1.02 - Control of On-Site Construction

- A. Perform inspections prior to beginning work on any definable feature of work. The CQC manager shall monitor and review the contract requirements with the supervisors directly responsible for the performance of the work; check to assure that materials, products, and equipment have been tested, submitted, and approved; check to assure that provisions have been made for required control testing; examine the work area to ascertain that preliminary work has been completed; physically examine materials and equipment to assure that they conform to shop drawings data and that the materials and equipment are on hand.

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- B. Perform initial inspections as soon as work commences on a representative portion of a particular feature of workmanship; monitor and review control testing for compliance with contract requirements.
- C. Perform follow-up inspections on a regular basis to assure continuing compliance with contract requirements until completion of that particular work.

1.03 - Control of Off-Site Operations

- A. Perform factory quality control inspections for items fabricated or assembled off-site as opposed to "off-the-shelf" items. The CQC representative at the fabricating plant shall be responsible for release of the fabricated items for shipment to the job site. The CQC representative at the job site shall receive the item and note any damage incurred during shipment. The Contractor shall be responsible for protecting and maintaining the item in good condition throughout the period of on-site storage and during erection or installation. Although any item found to be faulty may be rejected before it is used, final acceptance of an item by the Owner is based on its satisfactory incorporation into the work and acceptance of the completed project.

END OF SECTION

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SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 - Description

- A. The Contractor shall cooperate with the Architect/Engineer, and the Owner-approved testing laboratory and all others responsible for testing and inspecting the Work.
- B. The provision of other testing and inspecting, as specified, will be furnished by the Architect/Owner in this Section and/or in the Specifications.
- C. Where no other testing requirements are described, but the Owner decides that testing is required, the Owner may direct that such testing be performed under current standards for testing. Payment for such testing will be made as described in this Section.
- D. The General Contractor will pay for all services of the testing laboratory as further described in this Section.

1.02 - Quality Assurance

- A. The Owner will approve the testing laboratory in accordance with ASTM E329.
- B. Codes and Standards: Testing, when and where required, will be in accordance with pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.

1.03 - Product Handling

- A. Promptly process and distribute required copies of test reports and related instructions to ensure necessary retesting and replacement of materials with the least possible delay.
 - 1. Retests of all work shall be specifically indicated by the term "Retest" and shall be sufficiently descriptive to designate the date, location, and original test information indicating why the original was not in compliance with documents.
- B. The Laboratory shall send all test reports to the Owner, the Contractor and the Architect.

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PART 2 - PRODUCTS

2.01 - Payment for Testing

A. Initial Services

1. The Contractor will pay for initial testing services as specified.
2. When initial tests indicate non-compliance with the Contract Documents, the costs of initial tests associated with that non-compliance, as well as the retests, will be paid by the Contractor.

- B. Retesting: When initial tests indicate non-compliance with the Contract Documents, all subsequent retesting occasioned by the non-compliance shall be performed by the same testing agency and the costs thereof will be paid by the Contractor.

2.02 - Code Compliance Testing

- A. Inspections and tests required by codes or ordinances, or by a plan approval authority, and which are made by a legally constituted authority, shall be the responsibility of, and shall be paid for by, the Contractor, unless otherwise provided in the Contract Documents.

2.03 - Contractor's Convenience Testing

- A. Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor and at the sole expense of the Contractor.

PART 3 - EXECUTION

3.01 - Cooperation With Testing Laboratory

- A. Representative of the testing laboratory shall have access to the Work at all times. The Contractor shall provide facilities for such access in order that the laboratory may properly perform its function.

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SECTION 01500

TEMPORARY FACILITIES, UTILITIES & CONTROLS

PART 1 - GENERAL

1.01 - Description

- A. All labor, material, equipment and services necessary to furnish, erect and maintain temporary facilities and controls and perform temporary work required in the performance of the Contract, including those indicated and specified. The Drawings identify storage areas allocated to the Contractor for the Work, and he shall limit his storage and office operations to the defined areas.
- B. Maintenance and Removal: Maintain temporary facilities and controls in a clean, proper, safe operating and sanitary condition for the duration of the Contract. Upon completion of the Contract, remove all temporary facilities and controls from the premises.

1.02 - Utilities

- A. Electric power as required for the Contractor's use, shall be provided by the Contractor.
- B. Potable water for the Contractor's use is available from a hose bib located adjacent to each ramada.
- C. The General Contractor will furnish drinking water for all those connected with the work.

1.03 - Toilet Facilities

- A. The Contractor shall limit his use of toilet facilities to the Flood Control District Operations and Maintenance Building indicated on the plans.

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1.04 - Fire Protection

- A. Provide adequate fire extinguishers on the premises during the course of construction, of the type and sizes recommended by the NFPA and the Uniform Fire Code to control fires resulting from the particular work being performed and instruct employees in their use. Place extinguishers in the immediate vicinity of the work being performed, ready for instant use. In the use of especially hazardous types of equipment, such as acetylene torches, welding equipment, tar pots, kettles, etc., no work shall be commenced or equipment used unless fire extinguishers of approved type and capacity are placed in the working area available for immediate use by the workman using the above-mentioned equipment.
- B. The Contractor shall maintain fire exiting routes of existing adjacent building in accordance with applicable codes and regulations.

1.05 - Temporary Enclosures, Barriers and Fences

- A. Provide and maintain all fences, barricades, lights, shoring and other protective structures or devices necessary for the safety of workman, equipment, the public and property as required by State or municipal laws and regulations, local ordinances, laws and other requirements of the County, State, and other authorities having jurisdiction with regard to safety precautions, operation and fire hazards.
- B. Provide and maintain pumping facilities, including power, for keeping the site, excavations and structure free from accumulations of water at all times, whether from underground seepage, rainfall, drainage or broken line.

1.06 - Scaffold, Staging, Etc.

- A. The work under each Section of these Specifications shall include providing, installing, and maintaining all scaffold, staging, trestles, and planking necessary for the work under each Section in strict conformity with applicable laws, ordinances, and maintenance of same so as not to interfere with or obstruct the work of other trades. Additionally, the work under each Section of these Specifications shall include providing all forms of

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protection necessary to preserve the work of other trades free from damage. These provisions shall be considered as though repeated under each separate Section of these Specifications.

1.07 - Tree and Plant Protection

- A. Existing or newly planted vegetation, shrubs, trees, sidewalks, paving, etc., on the site, shall, unless directly effected by the Work of this Contract, be protected against damage of any kind. No diesel or gasoline engine shall be left running under trees to remain. No vehicle shall be allowed to pass over the feeder root system within the drip line unless approved by the Owner. Work, storage and traffic areas shall be restricted to those areas immediately adjacent to the construction site as outlined in the contract documents. Damage of any kind caused by the Work of this Contract shall be made good before final acceptance of the Project. The Contractor shall provide water and protection barricades as required to maintain all trees, plants, shrubs, existing site improvements, etc., designated to remain.

1.08 - Security

- A. Provide such watchman's service as necessary to protect both the Contractor and Owner's interest during the progress of construction of the project. The A/E and the Owner do not assume any responsibility, at any time, for the protection of the construction project and construction premises or for the loss of materials, from the time that the Contract operations have commenced until the final acceptance of the Work by the Owner. If watchman's service is deemed necessary by the Contractor, such protection shall be provided by the Contractor.
- B. If a watchman's service is deemed necessary in conjunction with an existing County Detention, County Attorney, or Court Facility, the requirements itemized in Section 01010, Subsection 1.11 will be strictly adhered to.

1.09 - Noise, Debris and Dust Control

- A. Exercise all possible care to control excessive noise and dust during the construction to keep these problems to a

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minimum. Traffic or construction areas shall be sprinkled with water or chemicals as required by the Owner and in accordance with applicable County requirements.

- B. All debris, etc., shall be removed from all pipe, pipe chases or other such remote and hidden spaces prior to closing of said space.

1.10 - Demolition of Existing Structures, Etc.

- A. All structures, equipment, and other items owned by the County which are scheduled for removal shall remain the property of the Contractor unless otherwise noted in the contract documents. The manner of dismantling, moving, storing or disposal shall be reviewed by the Owner's representative, prior to commencement of said activities, with the cost being borne by the Contractor.

1.11 - Staging Areas

- A. A designated Contractor's Staging Area is indicated on the plans.

1.12 - Temporary Fences and Barricades

- A. General Contractor will furnish, install and maintain all necessary sound temporary fences, barricades, trench and hole covers, warning lights and all other safety devices necessary to prevent injury to persons and damage to property.

1.13 - Access to Project Site

- A. Authorized representatives of the Owner (and representative of the Government Agency involved, if project is Federally assisted) and Arizona State Industrial Commission shall have ready access to project at all times.

END OF SECTION

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SECTION 01600

MATERIAL & EQUIPMENT: DELIVERY, HANDLING & STORAGE

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment, work and services for delivery, receiving, handling, storage, and protection of materials and equipment.
2. See Technical Sections for additional requirements.
3. Completely coordinate with work of other trades.
4. Although such work is not specifically indicated, furnish all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, and complete installation.

1.02 - Codes and Construction Requirements

- A. Comply with applicable codes.
- B. Accomplish work in such a manner as to avoid damage to property.
- C. Provide fire protection.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 - Product Delivery

- A. By manufacturer's normal means.
- B. In original labeled containers.

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- C. Where applicable, with U/L labeling on packages.
- D. Contractor responsible for acceptance at site.
- E. Schedule deliveries to avoid delaying Work.
- F. Inspect items for damage upon delivery, reorder as required to avoid delays.

3.02 - Product Handling and Storage

- A. Use methods that avoid damage to item or structure.
- B. Protect weather sensitive items from weather and solar damage.
- C. Store only in authorized areas on site.
- D. When off-site storage is authorized, perform re-handling and move items to site at no added cost.
- E. Replace or repair damaged items.
- F. Protect installed items as required until acceptance of Work.
- G. Uncrate, assemble (if required) and remove crate.

3.03 - Clean-Up

- A. Remove excess materials from site.
- B. Turn over to Owner, excess materials scheduled to remain.
- C. Restore site storage areas at Contractor's expense, as directed by the Architect, and approved by the Owner.

END OF SECTION

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SECTION 01630

SUBSTITUTIONS & PRODUCT OPTIONS

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all work and services for furnishing, submitting, processing, and handling of requests for substitution and product options. Any substitution or option shall be in accord with provisions of Contract Documents.
2. Completely coordinate with work of other trades.
3. See appropriate sections for specific items.
4. See General Conditions for additional information.

B. Address submissions to Architect/Engineer.

1.02 - Product Selection - General

- A. Base all bids on materials, equipment and procedures specified.
- B. Certain types of equipment and kinds of material are described in specifications by means of trade names, catalog numbers and/or manufacturer's names. This is not intended to exclude from consideration other items which may be capable of accomplishing the purpose indicated.
- C. Other types of equipment and kinds of material may be acceptable to Owner and Architect. (Prior approval required; see page 01630-5P, Prior Approvals, for format.
- D. Listing of a manufacturer implies acceptance of them only as supplier of a product which complies with specified item.

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- E. Equipment, materials and methods of construction, if not specifically indicated, must be approved in writing by Architect/Engineer and be agreed upon by Owner prior to letting of Contract.
- F. Architect/Engineer reserves the right to require substitute items to comply color- and pattern-wise with base specified items, if necessary to achieve "design intent".
- G. No substitution will be permitted after letting of Contract, except as indicated herein.
- H. Conditional bids and voluntary alternates will not be considered.

1.03 - Contractor's Options

- A. For products specified only by reference standards, any product meeting standards may be used.
- B. For products specified by naming several products or manufacturers, use any product or manufacturer named.
- C. For products specified by naming one manufacturer and product, and several optional manufacturers or products, select any named product and manufacturer which meets all specification criteria.
 - 1. Contract Documents are based upon use of primary manufacturer.
 - 2. By use of optional manufacturer or product, Contractor acknowledges that he will be responsible for all adjustments to fit product to the Work and for providing all additional work, equipment, and services required by use of product, at no additional cost to Owner.

1.04 - Requests for Substitution

- A. Only written requests with complete submittal data will be considered.

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- B. Requests must be received by Architect at least ten (10) calendar days prior to bid date. Requests received less than ten (10) calendar days prior to bid date will not be considered.
- C. Submit request in triplicate.
- D. In making request for substitution, or in using an approved substitute item, Contractor acknowledges:
 - 1. He has investigated proposed product or method, and has determined that it is equal or superior in all respects to that specified, and that it will perform the intended function.
 - 2. He will provide same guarantee for substitute item as for product or method specified.
 - 3. He will coordinate installation of accepted substitution into Work, to include building modifications if necessary, making such changes as may be required for Work to be complete in all respects.
 - 4. He waives all claims for additional costs related to any requested and/or approved substitution which may subsequently become apparent.
 - 5. All Contractor requested modifications and/or revisions to the Drawings and/or Specifications shall be paid for by the Contractor at no expense to the Owner.
- E. Contractor shall acknowledge acceptance of the foregoing provisions in request form.
- F. An Addendum or Addenda listing approved substitutions will be published. No verbal or written approvals other than by Addendum or Addenda will be valid.

1.05 - Submittal Data

- A. Complete data substantiating compliance of proposed substitution with Contract Documents.
- B. For products: 01630-3P

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1. Products identification, including manufacturer's name.
 2. Manufacturer's literature, marked to indicate specific model, type, size, and options to be considered:
 - a. Product description.
 - b. Performance and test data.
 - c. Reference standards.
 - d. Difference in power demand, air quantities, etc.
 - e. Dimensional differences from specified unit.
 3. Full size samples if requested. Architect reserves the right to impound sample until physical units are installed on project for comparison purposes. Requester will pay all costs of furnishing and return of samples. Architect is not responsible for loss of, or damage to, samples.
 4. Name and address of similar projects and name of Owner's Representative who can be contacted to discuss product, installation, and field performance data.
- C. For construction methods:
1. Detailed description of proposed method.
 2. Illustrate on drawings.
- D. Itemized comparison of proposed substitute to specified item.
- E. Data relating to changes in construction schedule.
- F. Relation to separate contracts.
- G. Cost of proposed substitution in comparison with product or method specified.

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3.02 - Taking Specimens

- A. Specimens and samples for testing, unless otherwise provided in the Contract Documents, will be taken by the testing personnel. Sampling equipment and personnel will be provided by the testing laboratory. Deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

3.03 - Schedules for Testing

- A. Establishing the schedule
 - 1. By advance discussion with the testing laboratory selected by the Contractor, and approved by the Owner, Contractor and testing laboratory shall determine the time required for the laboratory to perform its tests and to issue each of its findings.
 - 2. Provide for required time within the construction schedule.
- B. Revising the schedule: When changes of construction schedule are necessary during construction, coordinate such changes of schedule with the testing laboratory as required.
- C. Adherence to schedule: When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra charges for testing attributable to the delay will be paid by the Contractor and shall not be borne by the Owner.

3.04 - Alternative and Additional Inspection Procedure

- A. The Architect/Engineer shall have the right, subject to the Owner's approval, to require alternative and/or additional inspection or testing procedures other than as specified when, in the Architect/Engineer's judgement, other inspections or testing services are required to demonstrate compliance with the Contract requirements. Costs of such alternative and/or additional inspections or testing services will be borne by the Owner if products are found to comply; otherwise, costs shall be borne by the Contractor.

END OF SECTION

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1.06 - Substitution After Bid Date

- A. No substitutions will be considered after bid date except for: Non-availability of specified item due to strikes, lockouts, bankruptcy, discontinuance of production, proven shortage, or similar occurrences.
- B. Notify Architect, in writing (with a copy being sent to the Program Management Consultant), with substantiating data as soon as non-availability becomes apparent, to avoid delay in construction.
- C. Forward submittal data as required for substitutions above.

1.07 - Rejection of Substitution or Optional Items

- A. Substitutions and/or options will not be considered if:
 - 1. They are indicated or implied on shop drawings, or project data submittals, without formal request submitted in accordance with this section.
 - 2. Acceptance will require substantial revision of Contract Documents or building spaces.
 - 3. Request for substitution does not indicate specific item for which request is submitted. Acceptance of a manufacturer only will not be made.

1.08 - Prior Approvals

The following manufacturers are approved for bidding, subject to complete conformance with plans and specifications:

Prior approval does not automatically mean equipment is approved. Final submittals and shop drawings shall be made as required by the specifications for final approval of all equipment and materials. Any changes required due to substitution is the Contractor's responsibility.

END OF SECTION

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SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment, and services for project closeout as indicated in accordance with the provisions of the Contract Documents.
2. Completely coordinate closeout with all subcontractors and materials suppliers.
3. Although such information is not specifically indicated, furnish all supplementary or miscellaneous information incidental to, or necessary for, complete project information.
4. See General Conditions for additional information.

1.02 - Substantial Completion and Final Inspection

- A. When the Contractor is of the opinion that the Project is Substantially Complete, in accordance with the Contract Documents, he shall send to the Architect a written statement that the Work is complete and shall request a Substantial Completion inspection by the Architect. Such notice shall be given at least three (3) days before the requested inspection date. If the Architect finds the Work not to be Substantially Complete, the Architect shall advise Contractor in writing as to the reasons for such determination. After satisfying the Architect on either the first or subsequent inspection(s) that Substantial Completion has been achieved, the Architect shall so notify the Owner and establish a date and time for a Substantial Completion inspection to be attended by the Contractor, the Architect, and the Owner.
- B. Once the Architect and Owner agree that Substantial Completion has been achieved, Architect shall prepare a Certificate of Substantial Completion, AIA Document G704, for the approval and acceptance of the Contractor and Owner, attaching thereto a "punch list" of items to be

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completed and corrected. This list will be as complete as possible, based on the Architect's observations, but shall not relieve or otherwise waive the Contractor's responsibility to complete or correct subsequently discovered items.

- C. Final Application for Payment will not be accepted and processed until the Owner is satisfied that the Work is satisfactorily completed, including "punch list" items; and that all manuals, documents, guarantees, as-builts, and as-built drawings, as required by the specifications, have been received and accepted by the Architect/Engineer. Final Application for Payment shall be accompanied by the executed AIA Document G706 entitled "Contractor's Affidavit of Payment of Debts and Claims" and Document G707 entitled "Consent of Surety Company to Final Payment".

1.03 - Final Adjustment, Tests and Demonstrations

- A. Tests: For the purpose of trial acceptance, the Contractor shall arrange a demonstration and test of all mechanical and electrical equipment furnished hereunder for operating efficiency and for conformance to all requirements herein specified and to all applicable regulations of any governing agency. Equipment shall be tested under operating conditions; where possible, all safety devices shall be tested under simulated emergency conditions. All tests shall be scheduled through the Architect and shall be witnessed by the Architect. The Architect shall notify the Owner of any scheduled tests at least forty-eight (48) hours in advance so that the Owner may attend if desired. Where test results indicate a need for final adjustments, Contractor shall make such adjustments and retest until test results indicate compliance.
- B. All tests shall be scheduled through the Architect and shall be witnessed by the Owner's representative for the (but not necessarily limited to) following tests:
 - 1. Soils Engineer Certification: 02210.
- C. Demonstration: When the Contractor is satisfied that all systems and equipment meet performance and operational requirements directed by applicable codes, safety standards and these specifications, he shall arrange for a basic demonstration and test in the presence of the Owner and/or Owner's representative. Testing shall be in

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accordance with written procedures as described or developed by Architect and included in the Contract Documents (but not necessarily limited to) the following tests:

1. Misting System: 10100
- D. Certificate of Occupancy: All required certificates of inspection, tests, or approvals shall be secured by the Contractor from the governing authority. Promptly deliver the Certificate of Occupancy to the Architect.

1.04 - Warranties and Bonds

- A. Contractor shall provide written warranties and bonds in favor of the Owner, as required by respective sections of these Specifications, and arrange to commence at the date of Substantial Completion of the project or date of installation of warranted item(s), whichever is later.
- B. Provisions of contract concerning Work provided or corrected after date of completion under provisions of GC 13.2 (or any other provisions of the Contract except maintenance requirements) and all affected work are extended for period equal to original period of corrective or otherwise provided Work. Time coverage extension provisions of the Paragraph are not applicable to items of Work or equipment when so stipulated in the particular Specification Section for that item.
- C. During the period of any guarantee, the Contractor shall provide services within a reasonable time following a request by the Owner to do so. When the complete breakdown of a piece of equipment occurs, the service shall be performed promptly. The service shall be provided during normal working hours, unless otherwise specified herein. Should the listed service agency fail to perform the service in a reasonable amount of time, the Contractor shall provide the service through any other agency that will comply.

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1.05 - Extra Material Inventory

- A. Upon Substantial Completion of the Contract Work, provide the Owner with extra materials (i.e., spare parts, etc.) as identified in respective sections of the Specifications. Deliver to the Owner when and as directed by the Architect on the basis of a written detailed inventory including a signed receipt from the designated Owner representative.

1.06 - Project Close-Out Submittals

- A. At the time of Substantial Completion and prior to final payment, the Contractor shall deliver to the Owner via the Architect, the following items as described previously in this section:
1. Extra Material Inventory.
 2. Warranties and Bonds.
 3. Certificate of Occupancy.
 4. Test Certificates.
 5. Annotated record photographs and negatives.

1.07 - Post Construction Inspection

- A. Approximately two (2) months prior to expiration of one-year Date of Substantial Completion, Architect will make visual inspection of Project in company of Owner and Contractor to determine whether correction of Work is required in accordance with provisions of the General Conditions.
- B. The Architect will promptly notify Contractor of any observed deficiencies.

END OF SECTION

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SECTION 01710

CLEANING UP

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment, and services for clean up as required in conjunction with Work performed, in accordance with provisions of Contract Documents.
2. Completely coordinate with Work of all other trades.
3. Although such Work is not specifically indicated, furnish and install supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.

1.02 - Fire Protection

- A. Store volatile waste in covered metal containers.
- B. Remove volatile waste from premises daily.

PART 2 - PRODUCTS

2.01 - Cleaning Materials

- A. Use materials recommended by manufacturers of surfaces to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer or by the manufacturer of surface to be cleaned.

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PART 3 - EXECUTION

3.01 - General

- A. Clean all items installed under this Contract.
 - 1. Leave free of stains, damage, or other defects prior to final acceptance.
 - 2. Include washing, sweeping, polishing of all finished wall surfaces, floors, windows, hardware, mirrors, lighting fixtures and equipment items.
 - 3. Replace damaged or defaced items not acceptable to Architect, to his satisfaction at no additional expense to Owner.
- B. See Technical Sections for additional cleaning requirements.

3.02 - During Construction

- A. Each Contractor:
 - 1. Clean up all waste materials, rubbish, and debris resulting from his own operations daily.
 - 2. Place waste materials, rubbish, and debris from operations into approved containers outside of building in an area designated by Owner.
 - 3. Oversee cleaning and ensure that the construction site is maintained free from accumulations of debris.
 - 4. At reasonable intervals, minimum once a week, clean up entire site of excess debris and dispose of debris off-site.
 - 5. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces of fixtures, hardware, and equipment.

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6. Repair, patch, and touch-up marred surfaces to match adjacent finishes damaged by his own operations.
7. Comply with additional requirements defined in specifications.
8. Vacuum interior areas when ready for painting.
9. Schedule cleaning operations so that contaminants resulting from cleaning do not fall on wet painted surfaces.
10. Should the Contractor fail to clean up debris after written request by the Owner/Architect, then the Owner after twenty-four (24) hours shall have the authority to provide clean-up services and deduct said services from the Contractor's Contract.

3.03 - Final Cleaning

- A. Use experienced workmen or professional cleaners for final cleaning.
- B. At completion of construction, just prior to acceptance or occupancy, perform final cleaning.
- C. Remove dirt, stains, labels, and foreign materials.
- D. Repair and touch-up marred areas.
- E. Broom clean paved surfaces; rake clean other surfaces of grounds; vacuum, polish, and mop floors.

END OF SECTION

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SECTION 01740

WARRANTIES & GUARANTEES

PART 1 - GENERAL

1.01 - Description

- A. Provide written warranties, guarantees, bonds or service contracts for products and installations indicated.
- B. See General Conditions and Supplementary General Conditions.
- C. Provide warranties, guarantees, bonds or service contracts for period(s) indicated.
- D. Provide manufacturer's warranties or guarantees for products.
 - 1. Where manufacturer's standard warranties or guarantees expire before expiration date required by Contract Documents, obtain and pay for warranty or guarantee extensions, at no additional cost to Owner.
- E. Provide all warranties, guarantees, bonds or service contracts prior to final acceptance.
- F. Provide Architect a copy of each warranty, guarantee, bond or service contract issued. Submit with each of the foregoing an information sheet for Owner's personnel which includes:
 - 1. Effective dates or period.
 - 2. Proper procedures in the event of failure.
 - 3. Instances which might affect the validity of warranties, bonds or service contracts.
- G. Submit all warranties, guarantees, bonds or service contracts identified by specification section and equipment identification used in operating and maintenance data.

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1.02 - Related Work Specified Elsewhere

- A. Technical Specifications: Divisions 2 through 16
- B. Contract Closeout: Section 01700
- C. Project Record Documents: Section 01720

END OF SECTION

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SECTION 01760

SPARE PARTS & MAINTENANCE MATERIALS

PART 1 - GENERAL

1.01 - Description

A. General

1. Furnish all labor, materials, tools, equipment and services for all spare parts and maintenance materials as indicated, in accordance with the provisions of the Contract Documents.
2. Completely coordinate with work of all other trades.
3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, and complete installation.
4. See Division 1 for General Requirements.
5. See Specification Sections for items required.

1.02 - Submittals (See Section 01340)

- A. Spare parts and tools.
- B. Maintenance.
- C. Extra materials (attic stock).

PART 2 - PRODUCTS

2.01 - Spare Parts and Tools

- A. Package in clearly identified boxes.
 1. Indicate manufacturer's name, part name and stock number.

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2. Indicate what the piece of equipment part or tool is for.
3. Indicate name, address, and phone number of closest supplier.

2.02 - Maintenance Materials

- A. Package in clearly identified boxes.
 1. Indicate trade name and stock number.
 2. Indicate which item material is to be used with.
 3. Indicate name, address, and phone number of closest supplier.

2.03 - Extra Materials (Attic Stock)

- A. Package in clearly identified container, or install where indicated.
 1. Indicate trade name, stock number, size, color, etc.
 2. Indicate where product is to be used.
 3. Indicate name, address, and phone number of closest supplier.

PART 3 - EXECUTION

3.01 - Delivery

- A. Deliver to Owner at time of final completion, unless Owner requests earlier delivery.

END OF SECTION

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SECTION 02010

SUBSURFACE EXPLORATION

1.0 GENERAL

1.1 SUBSURFACE SOIL DATA

1.1.1. SUBSURFACE SOIL INVESTIGATIONS have been made. A complete report is available to review at the Flood Control District Administration Building. This report is being made available to inform the contractor on the nature of material encountered and is not a part of the contract documents.

SECTION 02100

CLEARING

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Special Provisions

Section 01800

1.2 WORK REQUIRED

1.2.1. UTILITY RELOCATION. Utilities interfering with construction must be relocated, and coordinated with the Architect-Engineer. Contractor is to follow BlueStake procedures as part of its coordination.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

1.3.1. RELOCATE UTILITIES in a manner that meets the requirements of the Architect-Engineer and local codes.

2.0 EXECUTION

2.1 CLEARING

2.1.1. REMOVE existing decomposed granite groundcover under the new construction, and stockpile material adjacent to the construction as directed by the Architect-Engineer.

SECTION 02210

BUILDING EARTHWORK

1.0 - GENERAL

2.0 - PRODUCTS

2.1 - MATERIALS

2.1.1. GRANULAR FILL. Use a granular material which is pervious, prevents capillary action, and conforms to the following requirements:

- 100 percent passing the 1-1/8" sieve
- 38-70 percent passing the 1/4" sieve
- 3-12 percent passing the 200 sieve

PI max of five

3.0 - EXECUTION

3.1 - GENERAL EXCAVATION

3.1.1. EXCAVATE in accordance with the Contract Documents and in a manner which insures reasonable accuracy in preserving lines and levels shown on the Drawings.

3.2 FOOTING EXCAVATION

3.2.1 OVEREXCAVATION FOR FOOTINGS. Excavate vertically from the widest part of the footing to a depth of 36" below existing grade.

Compact the bottom of the excavation to 95% of minimum density per paragraph

3.2.5. Once compaction is achieved, place ABC fill material to bottom of footing depth and compact to 95% of maximum density per paragraph 3.2.5 in lifts not to exceed 6 inches.

3.2.2 REMOVE SURFACE WATER from footing excavations immediately and do not allow it to stand.

3.2.3. POUR FOOTINGS immediately after excavation is completed. Place concrete for footings which bear on earth on undisturbed soil. When footings are inadvertently overexcavated below elevations shown on the Drawings, the footings shall be filled to the proper level with concrete.

3.2.4 UNEXPECTED SUBSURFACE CONDITIONS. Where suitable bearings are encountered at different elevations from those indicated on the Drawings, the Architect-Engineer shall direct, in writing, that the excavation be carried to elevations above or below those indicated on the Drawings. Adjustment in payment shall be made in accord with the terms of the General Conditions.

3.2.5. COMPACTION UNDER FOOTINGS AND SLABS ON GRADE shall be at least 95 percent of maximum density, at a moisture content within 2 percent above and below optimum moisture content as determined by Test Procedure ASTM D698.

3.3 PROTECTION

3.3.1. PROTECT SOILS, in the building area and perimeter, against moisture content increases throughout the construction period. Expose footing and utility excavations for as short a time as practical and, if water enters the excavation, remove the softened soils completely or allow to dry before placing footings or floor slabs.

3.4 - QUALITY CONTROL

3.4.1. TESTING. The testing laboratory will take compaction tests at the bottoms of all overexcavated footing excavations (5 per Ramada), ABC fill material placed in overexcavated footing excavations (5 per Ramada), and subgrade for floor slabs (1 per Ramada). Soil not meeting the required compaction, as determined by the testing laboratory, shall be removed, replaced, recompact, and retested at the expense of the Contractor. The location of each test shall be recorded and submitted with the testing laboratory results.

3.4.2. INSPECTION. The testing laboratory will inspect bottoms of all footing excavations, and subgrade for floor slabs prior to placement of concrete.

SECTION 02250

TERMITE CONTROL

1.0 GENERAL

1.1. STANDARDS AND QUALIFICATIONS

1.1.1. THE USE OF CHLORDANE has been or soon will be banned for use as a termite treatment. Chemical soil treatment material and procedures shall not contain or use chlordane. All work and material shall conform to the requirements of the State of Arizona Structural Pest Control Board.

1.2 - JOB CONDITIONS

1.2.1 ENVIRONMENTAL REQUIREMENTS. Do not apply working solution when soil and fill are frozen or excessively wet, or immediately after heavy rain.

1.2.2 PROTECTION. Do not disturb treated areas during subsequent construction operation or permit slabs to be placed sooner than 12 hours after soil treatment.

1.2.3 SCHEDULING

1. Begin soil treatment work only after all preparations for slab placement have been completed.
2. Begin foundation wall treatment only after footings, foundation walls, and other foundation work, including waterproofing, foundation drainage, and subslab plumbing, are complete.
3. Begin backfill treatment only after backfilling is complete.
4. Coordinate soil treatment with related work of other trades. If construction in any area is placed before specific treatment is made, provide post-construction treatment as specified rates and absorb the additional expense required by post-construction treatment.

1.3 SUBMITTALS

1.3.1 GUARANTEE. Submit in duplicate, to the Architect-Engineer, a guarantee which states that the application was made at concentration, rates, and methods which comply with the minimum requirements of these Specifications. The guarantee shall be noncancellable, drawn in favor of the Owner and its successors or assigns, for a period of 10 years.

If subterranean termite activity exists in or under the building during this period. The exterminator shall promptly, and without expense to the Owner, retreat the soil and make good damages caused by subterranean termite activity, limited to fifty thousand dollars (\$50,000.00) maximum repair with proof of active subterranean termite damage.

2.0 PRODUCTS

2.1. CHEMICALS

2.1.1. USE ONLY A CHEMICAL formulated as an emulsible concentrate for subsequent dilution with water. Fuel oil will not be permitted as a diluent. Use the following chemicals in the concentration indicated on the label directions.

<u>NAME</u>	<u>MANUFACTURER</u>
Hlortyrifos	(Dursban) Dow Chemical
Ermethrin	(Dragnet or Torpedo) FMC-ICI
Enbalerate	(Everside Concentrate 2299)
Sofenphos	(Prylon)

3.0 EXECUTION

3.1 LOCATIONS AND RATE OF APPLICATION (MINIMUM)

3.1.1. UNDER INTERIOR AND/OR ATTACHED EXTERIOR SLABS ON GRADE, apply one gallon of toxicant per 10 square feet over earth fill or 1-1/2 gallons of toxicant per 10 square feet over granular material.

3.1.2. ALONG FOUNDATION WALLS, apply four gallons of toxicant per 10 linear feet to both the inside and outside of the wall to treat the top 1 foot of soil.

3.1.3. AROUND PIERS AND PLUMBING AND LONG BOTH SIDES OF INTERIOR PARTITION WALLS, apply four gallons of toxicant per 10 linear foot.

3.2 METHODS OF APPLICATION

3.2.1. APPLY TOXICANT WITH SPRAY EQUIPMENT under slabs on grade.

3.2.2. APPLY TOXICANT WITH SOIL INJECTOR ROD in backfill areas. Insert the rod at 12-inch intervals at a distance not to exceed 6 inches from the wall. Penetrate the rod to within 6 inches of the top of the footing or concrete turndown.

SECTION 03100

CONCRETE FORMWORK

1.0 GENERAL

1.1. QUALITY ASSURANCE

1.1.1. DESIGN OF FORMWORK shall be the responsibility of the Contractor.

1.1.2. MINIMUM STANDARDS. American Concrete Institute Building Code Requirements for Reinforced Concrete, ACI 318, and Specifications for Structural Concrete for Buildings, ACI 301, shall be the minimum design and construction standards. Formwork tolerances shall conform to ACI 347, Part I.

2.0 PRODUCTS

2.1. MATERIALS

2.1.1. FORMS AND SHORING MATERIALS to be used are to be determined by the Contractor.

3.0 EXECUTION

3.1 FORM ERECTION

3.1.1. ERECT FORMS to conform to shapes, lines, and dimensions of the members as shown on the Drawings. Forms shall be sufficiently tight to prevent leakage of mortar, and shall be properly braced or tied together to maintain position and shapes.

3.1.2. EARTH CUTS may be used as a form for footings if made neatly.

3.1.3. POSITION SHORING as required to safely support forms and to prevent an overload of existing construction. Shore floor deck as required by Section 05300.

3.2 FORM REMOVAL

3.2.1. REMOVE FORMS such as to insure the complete safety of the structure.

SECTION 03200

CONCRETE REINFORCEMENT

1.0 GENERAL

1.1 QUALITY ASSURANCE

1.1.1. BUILDING CODE REQUIREMENTS. Fabrication and installation shall meet the requirements of Building Code Requirements for Reinforced Concrete, ACI 318.

1.1.2. MILL TESTS. Upon request, furnish certified copies of mill test reports covering chemical and physical properties of reinforcing steel.

1.2 SUBMITTALS

1.2.1. SUBMIT SHOP DRAWINGS in accord with ACI-315, Manual of Standard Practice for Detailing Reinforced Concrete Structures, the General Conditions, and General Requirements. Splice lengths shall be shown on the shop drawings.

1.3 STORAGE AND HANDLING

1.3.1. STORE, HANDLE, AND CLEAN REINFORCING as necessary to keep it free of dirt, loose mill scale and rust, paint, oil, or other foreign material that will destroy or reduce bond.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. REINFORCING BARS shall meet the requirements of Standard Specification for Deformed Billet-Steel Bars for Concrete Reinforcement, ASTM A 615, Grade 60, and the exceptions to ASTM A 615 listed in ACI 318.

2.1.2. BAR SUPPORTS shall meet the requirements of ACI-315. Use noncorrosive supports to prevent surface staining where supports are in contact with an exposed concrete surface.

3.0 EXECUTION

3.1. PLACING REINFORCEMENT

3.1.1. PLACE REINFORCEMENT BARS accurately and secure adequately to resist displacement.

SECTION 03251

EXPANSION AND CONTRACTION JOINTS

1.0 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

Masonry Joints	Section 04150
Joint Sealer	Section 07900

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. EXPANSION JOINT FILLER FOR EXTERIOR SLABS shall be an asphalt type, composed of asphalt, vegetable fiber, and mineral filler, which meets the requirements of ASTM D 994.

3.0 EXECUTION

3.1 JOINTS IN SLAB-ON-GRADE

3.1.1. INSTALL ISOLATION JOINTS at joints in contact with vertical surfaces such as columns and walls.

3.1.2. CONTROL JOINTS shown on the plans shall be tooled. Sawcut joints or "Zip Strips" will not be permitted.

SECTION 03300

CAST-IN-PLACE CONCRETE

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Granular Fill

Section 02210

1.2. CONCRETE QUALITY AND WORKMANSHIP

1.2.1. MINIMUM STANDARDS. American Concrete Institute Building Code Requirements for Reinforced Concrete, ACI 318, and Specifications for Structural Concrete for Buildings, ACI 301, shall be the minimum design and construction standards. Keep at least one copy of ACI 301 in the field office at all times.

1.3 SUBMITTALS

1.3.1. CONCRETE MIX. Submit the following to the Architect-Engineer as shop drawings, in accord with the General Conditions and General Requirements, for each mix to be provided. Make no alterations in materials without approval.

Aggregate gradation
Compressive strength
Percent air content
Pounds of aggregate per cubic yard
Pounds of water per pound of cement
Pounds of cement per cubic yard
Slump in inches
Source of each aggregate
Type and quantity of admixtures used

1.3.2. CERTIFICATION Submit the admixture manufacturer's certification, to the Architect-Engineer, stating the chloride content of the admixture and whether or not chloride was added during the manufacture of the admixture.

1.4 ENVIRONMENTAL REQUIREMENTS

1.4.1. HOT WEATHER REQUIREMENTS. Conform to ACI 305, Recommended Practice for Hot Weather Concreting.

1.4.2. COLD WEATHER REQUIREMENTS. Conform to ACI 306, Recommended Practice for Cold Weather Concreting.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. PORTLAND CEMENT shall meet the requirements of ASTM C 150, Type II,

Fly ash shall not be used.

2.1.2. NORMAL WEIGHT AGGREGATES shall meet the requirements of ASTM C 33.

2.1.3. ADMIXTURES

1. Water-Reducing or Retarding Admixtures, if used, shall conform to ASTM C 494, Type A, Type B, or Type D.
2. Calcium Chloride shall not be used.

2.1.4. CURING AND SEALING COMPOUNDS shall be acrylic base compounds, and shall be one of the following types and manufacture:

Sealco 309
Dress and Seal #18
CS-309
Acryseal
Kure-N-Seal

Gifford-Hill & Company, Inc.
L & M Construction Chemicals, Inc.
W.R. Meadows, Inc.
Protex Industries, Inc.
Sonneborn Division of Contech, Inc.

2.2 CONCRETE MIXES

2.2.1. MIX CONCRETE to provide a compressive strength as shown on the Drawings, and a slump of 3 inches to 5 inches. Use minimum cement content of 5-1/2 sacks per cubic yard.

2.3 CONCRETE PRODUCTION

2.3.1. PRODUCE AND DELIVER READY-MIXED CONCRETE in accord with ASTM C 94. Excessive slump or more than 90 minute between batching and placing will be considered as a basis for rejection of the load.

3.0 EXECUTION

3.1 PREPARATION

3.1.1. CLEAN EQUIPMENT for mixing and transporting concrete. Forms shall be thoroughly wetted (except in freezing weather) or oiled. Clean reinforcement of ice, dirt, rust, scale, or other coatings. Remove debris, water, and ice from the place of deposit of concrete. Remove laitance and other unsound material from hardened concrete before additional concrete is added.

3.2 CONVEYING AND PLACING

3.2.1. CONVEY CONCRETE FROM TRUCKS to the place of final deposit by methods that will prevent separation or loss of materials

3.2.2. CHUTING, PUMPING, AND PNEUMATIC CONVEYING EQUIPMENT shall be of a size and design that insures a practically continuous flow of concrete at the delivery end without separation of materials.

3.2.3 PUMP CONCRETE to conform with the report recommendations of ACI Committee 304, Placing Concrete by Pumping Methods.

3.2.4. DEPOSIT CONCRETE as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Place concrete at a rate so that concrete is plastic and flows readily into the spaces between the bars. Concrete contaminated by foreign material shall not be used unless approved by the Architect-Engineer. When placing is once started, it shall be carried on as a continuous operation until placement of the panel or section is completed.

3.3. CONSOLIDATION

3.3.1. CONSOLIDATE CONCRETE in accord with ACI 309.

3.4 FINISHING

3.4.1. FLATWORK. Floor finish shall be in accord with ACI 301, Chapter 11. The following finishes shall be used, unless noted otherwise:

1. Troweled Finish. Troweled finishes shall be true planed within 5/16 inch in 10 feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction. Provide a salt finish to match texture of existing adjacent sidewalks.

3.4.2. FORMED SURFACES. The following finishes shall be used, unless noted otherwise:

1. Rough Form Finish. For concrete surfaces not exposed to view. Patch tie holes and defects. Chip off fins exceeding 1/4 inch in height.
2. Smooth Form Finish. For concrete exposed to view. Form facing material shall produce a smooth, hard, uniform texture on the concrete. Patch tie holes and defects. Completely remove fins.

3.5 CURING AND PROTECTION

3.5.1. CURE FORMED SURFACES by moist curing while forms are in place.

3.5.2. APPLY CURING-SEALING COMPOUND immediately after the finishing of flatwork is completed, in accord with the manufacturer's recommendations, to meet or exceed ASTM C 309. Coverage shall not exceed 300 square feet per gallon. Use a compound which will not interfere with the bond of subsequent coatings.

3.5.3. APPLY A SECOND COAT OF CURING-SEALING COMPOUND to exposed concrete floors at the completion of construction in accord with the manufacturer's recommendations.

3.6 FIELD QUALITY CONTROL

3.6.1 TESTS. Unless otherwise noted in the drawings or directed by the Architect-Engineer, a test set is required to be made as follows:

Ramada #1:

Masonry Pier Footing - one (1) test
Floor Slab - one (1) test

Ramada #2:

Masonry Pier Footing - one (1) test
Floor Slab - one (1) test

Each test set shall include the following:

1. Three Compression Test Specimens made, tested, and evaluated in accord with ACI 301.
2. Slump Test made in accord with ASTM C 143.
3. Temperature of concrete sample.

3.6.2. STANDARD CYLINDERS shall be used.

3.6.3. TEST RESULTS shall be reported to the Architect, Owner, and Contractor within 24 hours of testing.

3.6.4. CONTRACTOR shall employ testing laboratory as specified in Section 01410.

3.6.5. THE CONTRACTOR shall employ a testing laboratory to perform tests and submit test reports in accord with the requirements of Section 01410.

3.6.6. TEST RESULTS shall be reported to the Architect, Contractor, and Owner within twenty-four hours of testing.

SECTION 04100

MORTAR

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Erecting Unit Masonry with Mortar Section 04200

1.2 PRODUCT DELIVERY, STORAGE AND HANDLING

1.2.1. DELIVER MORTAR MATERIALS, other than aggregate and water, in sealed and labeled packages.

1.2.2. STORE MORTAR MATERIALS in a manner that prevents deterioration or intrusion of foreign material. Material that has become unsuitable for good construction shall not be used.

1.3 JOB CONDITIONS

1.3.1. ENVIRONMENTAL CONDITIONS. During cold weather, store and mix mortar materials, incorporate into masonry work and protect to meet the requirements of the Guide Specifications for Cold Weather Masonry Construction, by the International Masonry Industry All-Weather Council.

1.3.2. HOT WEATHER REQUIREMENTS

1. Wet mortar bed before loading and cover mortar to retard drying when not being used.
2. Use all mortar within 2-1/2 hours of initial mixing and use no mortar after it has begun to set or after it has become harsh or nonplastic.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. PORTLAND CEMENT. Type II/I ASTM C 150.

2.1.2. MASONRY CEMENT. ASTM C 91.

2.1.3. LIME. Quicklime, ASTM C 5, or hydrated lime, Type S, ASTM C 207.

2.1.4. MORTAR AGGREGATE. ASTM C 144.

2.1.5. WATER. Clean and free of deleterious amounts of acids, alkalies, or organic materials.

2.1.6. ANTI-FREEZE COMPOUNDS shall not be used.

2.1.7. CALCIUM CHLORIDE shall not be used as an accelerator.

2.1.8. INTEGRAL WATERPROOFER ADMIXTURE in mortar to reduce water content and shrinkage shall be one of the following types and manufacture:

Hydratite Plus
Omicron
Hydracide Powder

Grace Construction Materials
Master Builders Company
Sonneborn Con Tech

2.2 MORTAR MIXES

2.2.1. MORTAR FOR MASONRY shall be Type S in accord with ASTM C 270, and shall have a minimum 28-day strength of 1,800 psi.

2.2.2. GROUT shall conform to ASTM C 476, have a slump of 10-1/2 inches to 11 inches, and shall have a 28-day strength of 2,000 psi. Where required, grout should be plastic, suitable for pumping without separation of constituents.

2.2.3. COARSE GROUT shall meet the requirements of ASTM C 476.

2.3 RETEMPERING MORTAR

2.3.1. MORTAR OTHER THAN COLORED MORTAR, MAY BE RETEMPERED, unless hereinbefore disallowed, by adding water within a basin formed with mortar and by reworking the mortar within the water. Discard mortar which is unused two hours after initial mixing.

3.0 EXECUTION

3.1 MORTAR TESTING

3.1.1 MORTAR TESTING shall consist of a minimum of two field tests for each ramada. Laboratory testing shall conform to ASTM C 780. Location of test samples per the directions of the Architect/Engineer.

3.1.2. GROUT TESTING shall consist of a minimum of two field tests for each ramada. Laboratory testing shall conform to ASTM C 1019. Location of test samples per the direction of the Architect/Engineer.

SECTION 04150

MASONRY ACCESSORIES

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Installation of Masonry Accessories

Section 04200

1.2 PRODUCT DELIVERY, STORAGE AND HANDLING

1.2.1. STORE REINFORCING off the ground. Reinforcing shall be free of loose rust or other coatings that reduce bond.

2.0 PRODUCTS

2.1. MASONRY HORIZONTAL JOINT REINFORCEMENT

2.1.1. FABRICATE WALL REINFORCEMENT from cold drawn steel wire, meeting the requirements of ASTM A 82, with a width of approximately 2 inches less than the nominal wall thickness. Reinforcement shall consist of No. 9 gauge (standard) deformed side rods weld connected to No. 9 gauge trussed cross rods. Use prefabricated corners and tees at corners and intersections. Reinforcement shall be one of the following types and manufacture:

- | | | |
|----|--|-------------------------------------|
| 1. | For all walls unless otherwise noted. Wire galvanized according to ASTM A 641, Class 1 | |
| | AA600 | AA Wire Products Company |
| | Truss | Dur-O-wal Inc. |
| | Series 300 | Masonry Reinforcing Corp of America |

2.1.2. STEEL REINFORCING shall conform to ASTM A 615, Grade 60.

2.2 MASONRY ANCHORS AND TIES

2.2.1. DOVETAILED METAL TIES shall be galvanized, corrugated, 1 inch x 3-1/2-inches x 16 gauge, where brickwork is veneered to poured grout. Ties shall be extended two inches minimum into brick veneer and shall have a hot dipped galvanized finish.

2.3 METAL LATH

2.3.1. METAL LATH shall be 2.5-pound galvanized steel diamond mesh lath. Install metal lath to close off the bottom of cores which are to be filled with grout.

2.4 COMPRESSIBLE FILLERS

2.4.1. COMPRESSIBLE FILLER AT MASONRY CONTROL JOINTS shall be of the following types and manufacture:

Slot Seal Standard 2015-3
(@ concrete block)

Neo-Seal IV 2218-3 (@ Brick)

Williams Products, Inc.

3.0 EXECUTION

3.1 INSTALLATION

3.1.1 INSTALL ACCESSORIES, as masonry walls are being laid, as specified in Section 04200.

SECTION 04200

UNIT MASONRY

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Mortar for Unit Masonry	Section 04100
Masonry Accessories	Section 04150
Anchor Bolts	Section 05070
Dampproofing	Section 07170

1.2 QUALITY ASSURANCE

1.2.1 JOB MOCKUP. Within 30 days after notification of award of the contract, the contractor shall erect a 9 feet long x 4 feet high sample panel using masonry units. Twenty eight days after erection, the sample panel shall be sandblasted on one side for approval by the Architect-Engineer. After approval by the Architect-Engineer, the ramada walls and piers are to be sandblasted using the same techniques that were used on the sample panel. The sample panel shall be retained until the completion of the Work, at which time the Contractor shall remove and dispose of properly.

1.2.2. MASONRY WORKMANSHIP shall meet the requirements of Custom Workmanship as defined by the Arizona Masonry Guild, Inc.

Masonry wall construction, color, and appearance shall match brickwork on existing adjacent building, and blockwork of existing site wall designated on the plans.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

1.3.1 STACK MASONRY UNITS off the ground in such a manner that air circulation occurs. Protect masonry units so they are not wetted by rain, snow, or capillary action. Upon delivery by the distributor or manufacturer, inspect masonry units, prior to installation in the wall, to insure the color match with the approved samples panel. Handle carefully to avoid chipping, and store on pallets or concrete slab until ready for use. Properly protect the faces of glazed masonry units for delivery, storage, and handling.

1.4 JOB CONDITIONS

1.4.1. COLD WEATHER CONDITIONS. During cold weather, store, erect, and protect masonry materials to meet the requirements of the Guide Specifications for Cold Weather Masonry Construction, by the International Masonry Industry All-Weather Council.

1.4.2. HOT WEATHER CONDITIONS. Protect masonry from too rapid drying by wetting with a light spray each for 3 days including Saturday and Sunday following laying of units. When the high temperature for the day exceeds 80 degrees F, wet masonry twice each day.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. FACING BRICK is provided by the Owner, and located in the "Contractors Staging Area" indicated on the plans.

2.1.2. HOLLOW CONCRETE MASONRY UNITS shall meet the requirements of ASTM C 90, Grade N, Type I, or the Quality Concrete Block Specifications for the State of Arizona, whichever is most stringent. Units shall be manufactured with medium weight aggregate. Special shapes, including end and jamb blocks, solid top blocks, and lintel and bond beam blocks, etc., shall be furnished as shown or required.

3.0 EXECUTION

3.1. ERECTION OF UNIT MASONRY

3.1.1. WETTING OF MASONRY. Wet masonry prior to using to allow time for moisture to be distributed throughout each unit, and so the absorption rate does not exceed 20 grams per minute for 30 square inches, of 194 square centimeters, of surface area when tested in accord with ASTM C 67 or ASTM C 140, but shall be surface dry without free water on surfaces when laid in the wall. During the freezing weather, sprinkle units that require wetting with warm water just before laying.

3.1.2 JOINTING OF WORK. Where fresh masonry joins masonry that is partially or totally set on concrete, the surface to be joined shall be free of loose material and lightly wetted. When necessary to "stop off" a horizontal masonry run, rack back one length at each course and, if grout is used, stop grout 4 inches back of rack. Tothing is not permitted except upon written approval of the Architect-Engineer.

3.1.3. LAYING UP MASONRY. Masonry shall be laid up true and plumb, with special units (corners, jamb blocks, headers, fillers, closers, fitters, etc.) as required to form corners, returns, openings, and offsets and to maintain a proper bond throughout the length of wall. Masonry walls shall be laid up tight against beams or deck above, unless otherwise noted. Where units are to be used in exposed wall construction, the face or faces that are to be exposed shall be free of chips, cracks, or other imperfections, except that if not more than 2% of a shipment contains slight cracks or small chips not larger than 1 inch, this shall not be deemed grounds for rejection.

3.1.4. CUTTING OF UNITS. Avoid cutting masonry units if possible. If cutting of concrete masonry units is necessary, it shall be done with a carborundum wheel with junctions and joints carefully and accurately fitted. No piece shorter than 4 inches shall be used at any vertical corner or jamb.

3.1.5. BONDING. Masonry shall be laid up in running bond, except where other bonds or patterns are indicated on the Drawings.

3.1.6. MORTAR BEDDING

1. Thickness. Unless otherwise indicated, horizontal and vertical mortar joints shall be 3/8-inch thick.
2. Hollow units. Place mortar bedding under the face shells of all units but do not extend across webs, except a full mortar bedding is required under starter courses of units laid on footings, walls, lintels and beams. Provide full mortar bedding for all units in piers, columns, pilasters. Provide mortar at webs adjacent to cells to be filled with grout and at other locations shown on the Drawings. Apply mortar over the full thickness and height of face shells or solid end faces and units shoved tight to form vertical joints.
3. Solid Units. Lay solid units in full bed joints of mortar, and heavily butter vertical surfaces so mortar is applied over the full end area of units. Masons shall avoid over-plumbing and pounding corners and jambs to fit stretcher units after they are set in position.

3.1.7 ADJUSTMENT OF UNITS. If it is necessary to move a unit after it has once been set in place, remove the unit from the wall, clean, and set in fresh mortar.

3.1.8. BOND BEAMS. Construct bond beams at the top of concrete masonry unit walls and elsewhere as shown on the Drawings. Unless otherwise indicated, the minimum bond beam reinforcement shall be two No. 4 bars in 6-inch and 8-inch bond beams and two No. 5 bars in 10-inch and 12-inch bond beams. Bed, reinforce and grout bond beams the same as masonry lintels.

3.1.9 MISCELLANEOUS GROUTING. Unless otherwise shown on the Drawings, fill cores of concrete masonry units solid with grout where required to secure anchors and bolts elsewhere as shown on the Drawings. Install metal lath in horizontal joint below cores to be filled solid with grout.

3.1.10 HORIZONTAL REINFORCING AND TIES

1. Horizontal Reinforcement. Unless otherwise noted, install reinforcement in 16-inch intervals elsewhere. Other reinforcement shall be continuous, except that it shall not pass through vertical masonry control joints. Lap side rods at least 8 inches at splices. Place reinforcement to assure a 5/8-inch mortar cover

on exterior face of walls and 1/2-inch mortar cover on interior faces.

2. Metal Ties and Anchors. Install metal ties and brick anchors as shown on the Drawings.

3.1.11 CONTROL JOINTS. Construct control joints at locations shown on the Drawings, with continuous vertical breaks from the top to the bottom of the wall or from bond beam to bond beam.

3.1.12 NOMINAL DIMENSIONS are used to dimension this building. The Contractor shall make every effort to lay his work to achieve regularly spaced and consistently sized grout joints.

3.2 TOOLING AND POINTING

3.2.1. TOOLING AND POINTING. Joints shall be struck flush, and, after mortar has partially set but is still sufficiently plastic to bond, tool joints with a tool which compacts mortar and presses excess mortar out of the joint rather than dragging it out. Joints shall be made with a straight, clean line.

3.2.2 CONCAVE JOINTS. Joints shall be tooled concave at exposed masonry, except where other joints are specified.

3.2.3. POINTING. Joints which are not tight at the time of tooling shall be raked out, pointed and then tooled.

3.3 GROUTING

3.3.1. MASONRY shall have vertical alignment to provide continuous unobstructed cores or cavities which shall be grouted in accord with the following:

<u>Grout Type</u>	<u>Grout Pour Maximum Height (feet)</u>	<u>Least Clear Dimensions</u>		<u>Cleanouts Required(1)</u>
		<u>Width of Grout Space (inches)</u>	<u>Cell Dimensions (in. x in.)</u>	
Fine	1	3/4	1-1/2 x 2	No
Fine	5	1-1/2	1-1/2 x 2	No
Fine	8	1-1/2	1-1/2 x 3	Yes
Fine	12	1-1/2	1-3/4 x 3	Yes
Fine	24	2	3 x 3	Yes
Coarse	1	1-1/2	1-1/2 x 3	No
Coarse	5	2	2-1/2 x 3	No
Coarse	8	2	3 x 3	Yes
Coarse	12	2-1/2	3 x 3	Yes
Coarse	24	3	3 x 4	Yes

1. Clear dimension is the cell or grout space width less mortar projections.
2. Place grout in continuous pour in grout lifts not exceeding 6 feet.
3. Increase grout space width by the diameter of the horizontal bars in the grout space.
4. Provide cleanouts in the bottom course at every vertical bar but do not space more than 32 inches on centers for solidly grouted masonry.

3.3.2. GROUTING shall be done, wherever possible, from the inside face of masonry. Use extreme care to prevent any grout or mortar from staining the face of masonry to be left exposed or painted. If any grout or mortar does contact the face of such masonry, it shall be immediately removed. Protect sills, ledges, offsets, etc., from droppings of mortar and protect door jambs and corners from damage during construction.

3.3.3. STOP GROUP POUR 1-1/2 inches below the top of a masonry course to form a key when grouting is stopped for one hour or longer.

(1) Cleanouts may be omitted if approved provisions are made to keep the grout space clean prior to grouting.

3.4. REINFORCING

3.4.1. HORIZONTAL AND VERTICAL REINFORCING shall be accurately positioned as shown on the Drawings and rigidly secured against displacement. Reinforcing bars shall be straight, except for bend-around corners and where bends or hooks are detailed on the Drawings.

3.4.2. FOUNDATION DOWELS that do not line up with cores or cavities shall not be sloped more than one horizontal in six vertical. Grout dowels into a core in vertical alignment, even through it is in an adjacent core to vertical wall reinforcing.

3.4.3. SECURE VERTICAL REINFORCING BARS in position at the top and bottom and at intervals not exceeding 200-bar diameters or 10 feet. Do not begin high-lift grouting until reinforcing is in the cores or cavities and secured in position.

3.4.4. LAP BARS at splices as indicated on the Drawings.

3.5 SANDBLASTING

3.5.1. SANDBLAST masonry units after they have been in place a minimum of 28 days. The sandblasted finish shall match the finish of the existing masonry site wall indicated on the plans. Accent brick and other exposed surfaces shall be protected during sandblasting.

3.6 CLEANING AND DAMPPROOFING

3.6.1. CLEAN MASONRY, removing dirt, mortar, stains and other defacement, after completion of masonry work, or after liability from stain or other operations on the building is passed. The use of wire brushes, strong acids, or solutions which might cause discoloration to work, disintegration of mortar or adjacent materials is not permitted. Start cleaning down at the top and continue down until such work is finished. Pointing shall be inspected and any imperfections repointed. After masonry has been cleaned down, apply water repellent coating as specified in Section 07170.

3.7 PROTECTION OF COMPLETED WORK

3.7.1. PROTECT MASONRY from damage or staining when pouring abutting concrete slabs, and when work is in progress or is incomplete.

3.8 SPECIAL STRUCTURAL INSPECTION

3.8.1. SPECIAL STRUCTURAL INSPECTION is required for all masonry construction, and will be provided by the Architect-Engineer. The Contractor shall notify the Architect-Engineer when the steel reinforcement is complete so it can be inspected prior to grouting.

SECTION 05060

WELDING

1.0 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

Structural Steel	Section 05100
Metal Deck	Section 05300

1.2 QUALITY AND WORKMANSHIP

1.2.1 MINIMUM STANDARDS. The codes and specifications listed below are the minimum construction standards and form a part of these Specifications:

American Institute of Steel Construction, Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings

American Welding Society, Specification for Welding Sheet Steel Structures, AWS D1.3

American Welding Society, Structural Welding Code, AWS D1.1

1.2.2. WELDERS shall be certified in accordance with the American Welding Society, and, upon request, shall furnish certification.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. WELDING ELECTRODES FOR STRUCTURAL STEEL shall be E70 Series, unless approved otherwise by the Architect-Engineer.

3.0 EXECUTION

3.1 ERECTION

3.1.1 FIELD WELD CONNECTIONS only where shown on the Drawings or otherwise approved by the Architect-Engineer.

3.2 INSPECTION

3.2.1 TESTING LABORATORY shall make a visual inspection of all shop and field welded connections.

SECTION 05070

BOLTING

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Concrete	Section 03100
Masonry	Section 04200
Structural Steel	Section 05100
Rough Carpentry	Section 06100

1.2 DESIGN CRITERIA

1.2.1. BOLTS CONNECTING TWO PIECES OF STRUCTURAL STEEL shall be designed in accord with the Specification for the Design, Fabrication and Erection of Structural Steel for Buildings and Specification for Structural Joints using ASTM A 325 bolts. Connections shall be bearing type with threads included in the shear plane

1.2.2 BOLTS CAST IN MASONRY shall be designed in accord with the Uniform Building Code. Specification for the Design and Construction of Load-Bearing Concrete Masonry.

1.2.3. BOLTS CONNECTING WOOD TO WOOD, STEEL, CONCRETE, OR MASONRY shall be designed in accord with the National Design Specification for Wood Construction, 1977 Edition.

1.3 SUBMITTALS

1.3.1. SUBMIT SHOP DRAWINGS OF FRAMING MEMBERS including the type, size, and length of all bolts.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 BOLTS CONNECTING STRUCTURAL STEEL shall be heavy hexagon structural bolts with heavy hexagon nuts, and shall conform to ASTM A 325. Bolts shall be 3/4-inch diameter, unless shown otherwise on the Drawings.

2.1.2. HEADED ANCHOR BOLTS CAST IN CONCRETE OR MASONRY shall meet the requirements of ASTM A 307.

2.1.3. BOLTS CONNECTING WOOD MEMBERS shall meet the requirements of ASTM A 307.

2.1.4. NONHEADED ANCHOR BOLTS, either straight or bent, cast in concrete or masonry shall meet the requirements of ASTM A 36.

3.0 EXECUTION

3.1 ERECTION

3.1.1. USE THE TURN-OF-NUT METHOD to tighten high strength A 325 bolts, unless approved otherwise by the Architect-Engineer. Flat circular washers are required at oversized and slotted holes.

3.1.2. OVERSIZED OR LONG SLOTTED HOLES used in the outer ply of connections shall be provided with plate washers or continuous bars at least 5/16 inch thick with standard holes. Size to completely cover the hold after installation.

3.2 INSPECTION

3.2.1. TESTING LABORATORY shall observe the placement of all bolts to assure proper installation.

SECTION 05100
STRUCTURAL STEEL

1.0 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

Welding	Section 05060
Bolting	Section 05070
Metal Fabrications	Section 05500

1.2 DESIGN CRITERIA

1.2.1. MEMBERS AND CONNECTIONS not shown on the Drawings shall be designed by the Contractor to meet the requirements of the current issue of the Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings published by the American Institute of Steel Construction. One-sided or other types of eccentric connections are permitted only with the approval of the Architect-Engineer. Make proper provisions to prevent excessive stresses wherever piles of material, erection equipment, or other loads are carried during erection.

1.3 REQUIREMENTS OF BUILDING CODES

1.3.1. AMERICAN INSTITUTE OF STEEL CONSTRUCTION CODES AND SPECIFICATIONS listed below form a part of these Specifications:

Code of Standard Practice for Steel Buildings and Bridges, except Section 4.2.1.

Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.

1.4 SUBMITTALS

1.4.1. SUBMIT SHOP DRAWINGS to the Architect-Engineer in accord with the General Conditions and General Requirements. Prepare in accord with AISC Structural Steel Detailing, Chapter No. 1. Include the type and size of bolts and welds, grade of steel material, and type of paint. Erection plans shall include:

Dimensioned location of members
Layout for framing including framing around openings
Size of referenced members

1.5 CONNECTIONS

1.5.1. SHOP CONNECTIONS shall be welded, unless shown otherwise.

1.5.2. FIELD CONNECTIONS shall be bolted, unless shown otherwise.

1.6 STORAGE AND HANDLING

1.6.1. STORE MEMBERS above ground on skids or other supports to keep free of dirt, grease and other foreign materials.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 STRUCTURAL STEEL shall meet the requirements of ASTM A 36 with 36 ksi yield strength.

2.1.2. STRUCTURAL TUBING shall meet ASTM A 500, Grade B, with a minimum yield strength of 46 ksi.

2.2 FABRICATION

2.2.1. STRAIGHTENING. Material shall be clean and straight. If straightening or flattening is necessary, it shall be done by a process and in a manner that will not injure the material. Sharp kinks or bends shall be cause for rejections.

2.2.2. PROVIDE HOLES IN MEMBERS to permit connecting the items specified in other Sections of these Specifications. Holes shall not be made or enlarged by burning, nor will the burning of unfair holes in the shop or field be acceptable.

2.2.3. COPEES, CUTS, HOLES AND ALL REENTRANT CORNERS shall be cut, not shipped, notchfree to a 1/2-inch minimum radius.

2.2.4. SHOP COAT. After inspection and before leaving the shop, thoroughly clean steel work, by effective means, of all loose mill scale, rust, splatter, slag or flux deposit, oil, dirt, and other foreign matter. Shop paint structural steel which will not receive fireproofing with one coat of Tnemec 99 or rust inhibitive primer applied thoroughly and evenly at a rate of not more than 400 square feet per gallon. Apply paint to dry surfaces only.

2.2.5. MAKE PIECE IDENTIFICATION FOR EXPOSED MEMBERS so the markings are not visible after the piece is set into place.

2.3 SURFACE PREPARATION

2.3.1. SURFACE CLEANING of steel not exposed to weather shall be SSPC-SP3 or better.

2.3.2. SURFACE CLEANING of steel exposed to weather shall be SSPC-SP6 or better.

3.0 EXECUTION

3.1 ERECTION

3.1.1. ERECT STRUCTURAL STEEL in a safe and orderly manner. When required, submit the program for erection to the Architect-Engineer for approval before erection is begun. Carry steel work up true and plumb, and use temporary bracing wherever necessary to take care of all loads to which the structure may be subjected during erection, including erection equipment and operation of same. Leave such bracing in place as long as required for safety.

3.1.2. PERFORM FINAL BOLT TIGHTENING AND WELDING after members have been positioned and aligned in accord with tolerance requirements of Code of Standard Practice for Steel Buildings and Bridges.

3.2 FIELD PAINTING

3.2.1. TOUCH UP all damaged or abraded areas which were originally shop painted with the same materials and at the same coverage rates as the original shop coating.

SECTION 05300

METAL DECKING

1.0 GENERAL

1.1.1. RELATED WORK SPECIFIED ELSEWHERE

Welding

Section 05060

1.2 DESIGN CRITERIA

1.2.1. DECK DESIGN shall meet the requirements of the American Iron and Steel Institute Specifications for the Design of Light Gauge Cold-Formed Steel Structural Members and the requirements of the Steel Deck Institute Basic Design Specifications. Fire rated installations shall bear the UL label and marking for specific system detailed in UL "Fire Resistance Directory".

1.3 SUBMITTALS

1.3.1. SUBMIT SHOP DRAWINGS to the Architect-Engineer in accord with the General Conditions and General Requirements. Shop drawings shall show the manufacturer's recommended sizes and connection spacings.

1.4 STORAGE AND HANDLING

1.4.1. STORE UNITS on supports above the ground with one end elevated and cover with a waterproof covering to minimize damage and corrosion.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. METAL ROOF DECK shall be Verco HSB-36, 18 gauge (painted), or prior approved equal. The deck shall be formed from sheets conforming to ASTM A 446, Grade E, and shall have a minimum yield strength of 80,000 psi.

2.1.2 ACCESSORIES. Provide all necessary fittings and accessories for a complete installation.

3.0 EXECUTION

3.1 ERECTION

3.1.1. ERECT UNITS in strict accord with the deck manufacturer's recommendations. Provide tight joints and prevent leakage of roofing materials.

3.1.2. WELDING shall be done by competent, experienced welding personnel using equipment, equipment settings, and welding rod as recommended by the deck manufacturer.

Outside Ramadas

05300-1

3.1.3 FASTEN ROOF DECK in strict accord with the manufacturer's and as shown on the plans.

SECTION 05410

COLD-FORMED METAL STUDS

1.0 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

Installation of Metal Studs Section 07220

1.2 SCOPE

1.2.1. THIS SECTION covers cold-formed metal studs on the metal roof decking.

1.3 PRODUCT STORAGE

1.3.1. STORE STUDS in a dry location or stack off the ground and properly support on a level platform and fully protect from the weather.

2.0 PRODUCTS

2.1. MATERIALS

2.1.1. METAL STUDS shall be punched, and shall be the type, size, gauge, and spacing shown on the Drawings, and shall be manufactured by one of the following:

American Studco, Inc.
Angeles Metal Systems
Dale/Incor, Inc.
United State Gypsum Co.
Western Metal Lath

2.1.3 STUDS, 16 gauge or heavier, shall be formed from steel that meets the requirements of ASTM A 446, Grade D, with a minimum yield of 50 ksi.

2.1.4 STUDS, shall be formed from steel having a minimum G-60 galvanized coating.

2.2 FABRICATION

2.2.1. CUT STUDS squarely for attachment to perpendicular members or as required for an angular fit against abutting members. Hold members positively in place until properly fastened.

3.0 EXECUTION

3.1.1. INSTALLATION OF METAL STUDS shall be as required in Section 07220.

3.1.2. TOUCH-UP FIELD ABRASIONS from cutting or welding with a zinc-rich paint or primer.

SECTION 06100

FINISH CARPENTRY

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Anchor Bolts	Section 05070
Painting	Section 09900

1.2 SUBMITTALS

1.2.1. SUBMIT SHOP DRAWINGS showing details of vertical adjustable louvers.

1.3 STORAGE

1.3.1. STORE LUMBER at least 6 inches above the ground on bunks or skids and protect materials from weather with waterproof covers.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. LUMBER shall be seasoned redwood, Grade No. 1, surfaced four sides, graded and grade stamped in accord with the grading rules of one of the following agencies:

Southern Pine Inspection Bureau (SPIB)
Western Wood Products Association (WWPA)

The moisture content of the lumber shall not exceed 19 percent and shall be indicated on the grade stamp by S-Dry or MC-15.

3.0 EXECUTION

3.1 FIXED SEATING shall be sanded smooth on exposed surfaces, and treated on all sides with a clear finish as required by Section 09900.

3.2 VERTICAL ADJUSTABLE LOUVERS shall be constructed so that manually turning one louver, will automatically turn the others in the wall section in a smooth motion.

All sides and ends of the louvers, along with the exposed surfaces of the perimeter framing members shall be sanded smooth and treated with a clear finish as required by Section 09900.

SECTION 07170

DAMPPROOFING

1.0 GENERAL

1.1. JOB MOCKUP

1.1.1. APPLY DAMPPROOFING to half of the sandblasted masonry job mockup. Do not proceed with dampproofing work until the sample application has been approved by the Architect-Engineer.

1.2 JOB CONDITIONS

1.2.1. ENVIRONMENTAL CONDITIONS

1. Weather. Allow at least three dry, sunny days after a rain before the application of dampproofing and do not apply if rain is forecast within 24 hours after application.
2. Temperature. Apply dampproofing only when ambient temperature is 50F or higher and when temperatures below 40F are not forecast within 24 hours after application. Surface temperature of substrate shall be 40F or higher at the time of application.

1.2.2. PROTECT ADJOINING WORK from spillage or blowover of water repellent. Cover adjoining and nearby surfaces of aluminum and glass wherever there is any possibility of water repellent being deposited on their surfaces. Cover live plant material with drop cloths.

1.2.3. DO NOT PROCEED with the application of dampproofing until substrate has cured for at least two months and sealing have been applied.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. DAMPPROOFING shall be clear, penetrating, waterproofing solution, which will not cause a staining reaction or discoloring of substrates and shall be acceptable to the tile subcontractor. The solution shall contain five percent (5%) solids and shall be of the following type and manufacture:

Chemstop Regular
Okon W-1 Regular

Chemstop Manufacturing Corp.
Okon, Inc.

3.0 EXECUTION

3.1. INSPECTION

3.1.1. SURFACES TO RECEIVE LIQUID WATER REPELLENT shall be cleaned, free from dirt, stains, loose material and efflorescence and dry. All surface cracks, slits and voids shall be repaired and/or repainted. All surfaces shall be approved by manufacturer's representative before applying dampproofing.

3.2 APPLICATION OF LIQUID WATER REPELLENT

3.2.1. APPLY LIQUID WATER REPELLENT to exterior face brick masonry walls with a low pressure, nonatomizing, or misting spray. Hold spray close to the wall and flood the entire surface so there is a rundown of from 8 inches to 10 inches. Coverage shall be applied at a minimum rate of 70 to 100 sq ft per gallon. Apply according to manufacturer's recommendations.

3.2.2. APPLY LIQUID WATER REPELLENT to the concrete substrate where ceramic tile is scheduled. Apply in accordance with the manufacturer's recommendations.

SECTION 07220

RIGID ROOF INSULATION

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Preformed Metal Roof Installation Section 07412

1.2 QUALITY ASSURANCE

1.2.1. REGULATORY REQUIREMENTS. Roof insulation materials and methods of installation shall meet the requirements of Factory Mutual Engineering Corporation for "Class I" Insulated Roof Deck Construction and Underwriters Laboratories, Inc., for roof deck constructions which are rated "Fire-Classified".

1.2.2. INSTALLER shall have 5 years minimum experience in work of similar size and type.

1.3 DELIVERY, STORAGE AND HANDLING

1.3.1. STORE ROOF INSULATION MATERIAL to prevent it from becoming wet, soiled or covered with ice or snow. Protect insulation from exposure to sunlight. Store materials in a warm enclosure if the temperature is less than 32 F.

1.3.2. HANDLE INSULATION MATERIAL to prevent cracking, breaking off, or spalling of edges.

1.4 JOB CONDITIONS

1.4.1. WEATHER. Proceed with roof insulation and associated work only when existing and forecast weather conditions meet the recommendations of the manufacturer.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. RIGID ROOF INSULATION shall be a minimum of 2-1/2 inch thick. Roof insulation shall be of the following types and manufacture:

1. Glass Fiber Insulation Board
Fiberglass Roof Insulation Owens-Corning Fiberglas Corp.

3.0 EXECUTION

3.1. INSTALL 2 1/2" CONTINUOUS METAL STUDS perpendicular to the flutes at approximately 24" spacing, tack welding to metal deck at 24" O.C. alternating sides.

3.2 INSTALL RIGID ROOF INSULATION in 24" widths between the metal studs. Adhesive or steep asphalt mopping on the roof deck will not be required.

3.3 PROTECTION

3.3.1. KEEP INSULATION DRY and, after laying, protect it from foot traffic.

SECTION 07412

PREFORMED STANDING SEAM
METAL ROOFING (AGED COPPER)

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

Rigid Roof Insulation Section 07220

1.2 QUALITY ASSURANCE

1.2.1. SMACNA STANDARDS. Except as otherwise shown, detailed or specified, flashing and sheet metal work shall comply with the applicable recommendations and details of the Architectural Steel Metal Manual of the Sheet Metal and Air Conditioning Contractor National Association.

1.2.2. SUBMIT SAMPLES of face finish on metal panel material to the Architect-Engineer in accord with the General Conditions and General Requirements.

1.3 JOB MOCK-UP

1.3.1. WITHIN 30 DAYS after notification of award and before erection of exterior walls, erect a sample of roofing to show detail where roofing material turns down at fascia, and appearance of copper after finishing.

1.3.2. COORDINATE CLOSELY with the Architect the preparation of samples for the finish system. Prepare at least 4 separate 36" x 36" samples of varying finishing methods varying time and concentrations to achieve an acceptable finish.

2.0 PRODUCTS

2.1. MATERIALS

2.1.1. PREFORMED STANDING SEAM METAL ROOF shall be 16 oz clear copper full hard, roll formed in continuous length pans approximately 16 inches wide, with antique solution finish. Include matching foldover clips, continuous snap-on battens with neoprene closures, flashing, copings, trim, closures and other necessary items. All copper shall be from the same mill. The metal roof material shall match the material used on the adjacent building.

2.1.2. ROOF SYSTEM shall be one of the following types and manufacture:

Batt'n Roof 'Fine Line Ora E. Hopper and Son

Systems by AARA and Berridge Manufacturing of similar design and performance are also acceptable.

2.1.3 FINISH SYSTEM shall be Therme Antique Solution by Thermo Materials, Inc.

3.0 EXECUTION

3.1. INSTALLATION

3.1.1. INSTALL PREFORMED METAL ROOFING in accord with the manufacturer's erection drawings and recommendations. The metal roof installation methods, details, appearance, and spacing of battens shall match the metal roofing of the adjacent building.

3.1.2. PRIOR TO INSTALLATION of metal roofing, install 30# asphalt felt over the rigid insulation and metal studs, beginning at the low point of the roof deck, with 3-inch laps on the edges and 6-inch laps at the ends. Secure to the rigid insulation with fasteners approved by the manufacturer.

3.1.3. FINISH SYSTEM shall be shop applied, two-coat using a fogging method. Concentration and exposure time shall be established by the selected method developed by the preparation of samples noted earlier in this section. After the appropriate exposure, thoroughly neutralize and wash off all solution. The appearance of the finished metal roofing shall match the appearance of the existing metal roofing on the adjacent building.

SECTION 09900

PAINTING

1.0 GENERAL

1.1 WORK NOT INCLUDED

- 1.1.1. NONFERROUS METALS. Copper shall not be painted.
- 1.1.2. CONCEALED SURFACES, do not require paint unless otherwise specified.
- 1.1.3. FACTORY-PRIMED PRODUCTS AND MATERIALS do not require job applied prime coats.

1.2 QUALITY ASSURANCE

- 1.2.1. ACCEPTABLE MANUFACTURERS are as follows:

- Benjamin Moore and Co.
- Deer-O-Paints & Chemical, Ltd.
- Dunn Edwards
- DuPont Lucite Paints
- Frazee Industries
- Fuller O'Brien
- Kelly-Moore
- Olympic Stain Division, Comerco, Inc.
- PPG Industries, Inc.
- Pratt and Lambert, Inc.
- Samuel Cabot, Inc.
- The Sherwin-Williams Co.
- Sinclair Co.
- Tnemec Company, Inc.
- The Valspar Corp.

- 1.2.2. COORDINATION. Primers and undercoats shall be of the same manufacture as finish coats. Thinners shall be approved by the paint manufacturer.

1.3 SUBMITTALS

- 1.3.1. SAMPLES. Submit samples of each type of finish and color to the Architect-Engineer in accord with the General Conditions and General Requirements. Clear finish samples shall be submitted on redwood boards. Paint samples shall be submitted on 8-1/2 inch x 11 inch Mead Mark I cover paper, coated on one side, with paint sprayed or applied with a foam rubber roller.

1.3.2. EXTRA STOCK. The Painting Contractor shall furnish the Owner with one gallon of each color or type of finishes, sealed and unused, used on this biding, together with mixing formulate (with matching information). The Painting Contractor shall furnish two copies of this information to the Architect-Engineer in addition to the instructions attached to paint containers.

1.4 DELIVERY, STORAGE AND PROTECTION

1.4.1. DELIVERY. Deliver paints, clear finish, and similar materials in their original containers with seals unbroken and labels intact.

1.4.2. STORAGE. Store materials used on the project in a single place designed by the Owner or the Architect-Engineer. Keep storage place neat and clean, and correct any damage thereto or to its surroundings. Remove any oil, rags, waste, etc., form the building every night and take every precaution to avoid the danger of fire.

1.5 JOB CONDITIONS

1.5.1. TEMPERATURE of surfaces and surrounding air shall be between 50F and 90F during painting and drying.

1.5.2. SURFACES to be painted shall not be wet or damp.

1.5.3. WEATHER. Do not apply exterior paint in rain, snow, fog, or mist, or when relative humidity exceeds 85 percent.

1.5.4. PROTECTION. Adjacent work and building shall be protected by dropcloths, masking tape or other suitable coverings.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. PROPRIETARY PRODUCTS used to designate colors or materials are not intended to imply that products of the named manufacturer are required to the exclusion of equivalent products and manufacturers. The Contractor may use materials manufactured by any of the acceptable manufacturers previously listed.

2.1.2. LEAD CONTENT in pigment shall not exceed 0.5 percent lead metal by weight of the total nonvolatile liquid content or dry film of paint surfaces.

3.0 EXECUTION

3.1. INSPECTION

3.1.1. **CONDITION OF SURFACES.** The painter shall examine surfaces which are scheduled to receive paint or clear finish, and report to the Contractor any surfaces which cannot be put into proper condition for finishing by customary cleaning, sanding, puttying or other similar preparation operations. Application of the first coat shall constitute acceptance of surfaces as fit and proper to receive finish.

3.2 SURFACE PREPARATION

3.2.1. **CLEAN SURFACES** free of dirt, rust, scale, grease and moisture.

3.2.2. CEMENTITIOUS MATERIALS

1. Remove efflorescence, chalk, dust, dirt, grease and oils and roughen as required to remove glaze.
2. Correct alkalinity if this condition will cause blistering and burning of finish paint.
3. Do not paint surfaces where moisture content exceeds eight percent unless otherwise permitted in manufacturer's printed directions.

3.2.3. WOOD

1. Clean wood surfaces to be painted of dirt, oil or other foreign substances with scrapers, mineral spirits and sandpaper. Sand exposed surfaces smooth and dust off.
2. Scrape and clean knots and apply a thin coat of white shellac or other knot sealer to knots, pitch streaks, and sappy spots before application of priming coat.

3.2.4. FERROUS METALS

1. Wash nonprimed metal surfaces with mineral spirits to remove dirt and grease and remove rust or scale by wire brushing or sandpapering clean.
2. Omit prime coat on metal surfaces which have been shop primed unless touchup of damaged prime coats is required.
3. Wire brush damaged shop applied prime coats and touch up with the same primer as shop coat.
4. Apply barrier coat or remove primer and reprime surfaces which are shop primed with primers that are incompatible with finish coats.

3.2.5. GALVANIZED METAL. Clean and treat chemically with a compound designed for this purpose, such as "Lithoform, "Stibley," or "Solfo Metallic Coat," in accord with the manufacturer's instructions.

3.2.6. PREVIOUSLY PAINTED SURFACES. Sand hard glossy finishes to insure adhesion. Spot prime with primer specified for new surfaces where existing paint or primer has been partially removed by blistering, peeling, rupture, or cracking. Completely remove existing finish if 24 percent or more of the existing finish has failed or can be easily scraped off the surface.

3.3. MIXING

3.3.1. MIX AND PREPARE PAINT in accord with the manufacturer's recommendations. Tint undercoats to match finish coats.

3.4 APPLICATION

3.4.1. GENERAL. Apply materials under adequate illumination with brush, roller, or spray in accord with the manufacturer's recommendations. Spread evenly and flow on smoothly without runs, sags, or other surface imperfections. Neatly draw glass and color break lines.

3.4.2. APPLY SECOND COAT only after first coat is thoroughly dry. Sand with fine sandpaper between enamel and varnish coats applied to wood or metal.

3.4.3. APPLY SUBSEQUENT COATS when stains, undercoats, or other conditions show through final coat of paint, until the paint film is of uniform finish, color, and appearance.

3.4.4. SPRAY APPLICATION OF PAINTS will be permitted on exposed metal deck only, provided the application is by airless-type spray equipment. Sprayed surfaces shall be smooth, free of imperfections and paint runs, and shall be completely covered by each coat. Do not double back to build up film thickness of two coats in one pass.

3.5. ADJUSTING AND CLEANING

3.5.1. CLEAN ADJACENT AND OTHER SURFACES which are smeared or splattered as a result of the painting.

3.6 PAINT SCHEDULE

Exposed underside of metal roof deck	Dunn Edwards	#60 Navajo White
Tube steel fascia, roof purlins and connections		Match color of existing tube steel on adjacent bldg.
Redwood louvers and fixed seating	Dunn Edwards	WP3-5 Weather-Pro Clear Finish

SECTION 10100

MISTING SYSTEM

1.0 GENERAL

1.1. RELATED WORK SPECIFIED ELSEWHERE

NONE

2.0 PRODUCTS

2.1 MATERIALS

2.1.1. PLASTIC PIPE shall conform to ASTM D 1785, schedule 40 with solvent welded joints.

2.1.2. COPPER PIPE shall conform to ASTM B 88, Type K. All fittings used in connection with copper pipe shall be copper or bronze. All shut of valves shall be brass.

2.1.3. SPRAY NOZZLES shall be brass with stainless steel inserts threaded into a PVC split section. Spray nozzles shall produce a fine mist at a rate of 0.5 gallons of water per hour each.

2.1.4. FILTER shall be a three-stage, 1-Micron filter.

2.1.5. AUTOMATIC DRAIN VALVE shall be compatible with the misting system, and capable of draining the entire system when the water is turned off.

2.2 SUBMITTALS

2.2.1. SUBMIT MANUFACTURERS LITERATURE of all of the major misting system components to the Architect-Engineer in accordance with the General Conditions and General Requirements.

3.0 EXECUTION

3.1. Install a complete and functioning manually operating misting system as shown on the plans capable of producing a fine and even water mist around the perimeter of roof structure.