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SPECIFICATIONS

FOR

MODIFICATIONS TO FACILITIES, MCDOWELL EXHIBIT PLAZA

INDIAN BEND WASH,

GILA RIVER BASIN,

ARIZONA

Authority: 96x3122 Construction, General
Corps of Engineers, Civil

U.S. ARMY ENGINEER DISTRICT, LOS ANGELES
CORPS OF ENGINEERS

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STANDARD FORM 20
JANUARY 1961 EDITION
GENERAL SERVICES ADMINISTRATION
FED. PROC. REG. (41 CFR) 1-16.401

REFERENCE

DACW09-80-B-0036

INVITATION FOR BIDS
(CONSTRUCTION CONTRACT)

DATE

80 JUL 24

NAME AND LOCATION OF PROJECT

MODIFICATIONS TO FACILITIES
MCDOWELL EXHIBIT PLAZA,
INDIAN BEND WASH,
GILA RIVER BASIN,
ARIZONA

DEPARTMENT OR AGENCY

DEPARTMENT OF THE ARMY

BY (Issuing office)

U. S. ARMY ENGINEER DISTRICT, LOS ANGELES

Sealed bids in duplicate for the work described herein will be received until
1 p.m. local time at the place of bid opening, 14 August 1980

at ~~300 North Los Angeles Street, Los Angeles, California~~

Room 1030 (South Tower) 2721 North Central Avenue, Phoenix, Arizona 85004

and at that time publicly opened.

Information regarding bidding material, bid guarantee, and bonds

BID BONDS. Each bidder shall submit with his bid a Bid Bond (Standard Form 24) with good and sufficient surety or sureties acceptable to the Government, or other security as provided in paragraph 4 of Instructions to Bidders (Standard Form 22) in the form of 20% of the bid price or \$3,000,000, whichever is lesser. The bid bond penalty may be expressed in terms of a percentage of the bid price or may be expressed in dollars and cents.

PERFORMANCE AND PAYMENT BONDS. Within ⁵ days after the prescribed forms are presented to the bidder to whom award is made for signature, a written contract on the form prescribed by the specifications shall be executed and two bonds, each with good and sufficient surety or sureties acceptable to the Government, furnished; namely a performance bond (Standard Form 25) and a payment bond (Standard Form 25-A). The penal sums of such bonds will be as follows:

- (a) Performance Bond. The penal sum of the performance bond shall equal 100% of the contract price.
- (b) Payment Bond.
 - (1) When the contract price is \$1,000,000 or less, the penal sum will be 50% of the contract price
 - (2) When the contract price is in excess of \$1,000,000, but not more than \$5,000,000 the penal sum shall be 40% of the contract price.
 - (3) When the contract price is more than \$5,000,000, the penal sum shall be \$2,500,000.

Any bonds furnished will be furnished by the Contractor to the Government prior to commencement of contract performance.

NOTE: For bids less than \$25,000, bid bonds, performance and payment bonds will not be required.

Description of work

construction of catch basins, drainage piping, concrete swales and aprons, ground cover plantings, irrigation system, and appurtenant work, complete.

ESTIMATED CONSTRUCTION COST IS BETWEEN \$25,000 AND \$100,000.

LIBRARY

8/25/77

READ THE FOLLOWING IN CONJUNCTION WITH INSTRUCTIONS TO BIDDERS (U. S. STANDARD FORM 22).

1. PLANT AND EQUIPMENT. Each bidder shall, upon request of the Contracting Officer, furnish a list of the plant available to the bidder and proposed for use on the work.

2. MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS. The right is reserved, as the interest of the Government may require, to revise or amend the specifications or drawings, or both prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids. If the revisions and amendments are of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the District Engineer will enable bidders to revise their bids. In such cases, the amendment will include an announcement of the new date for opening bids.

3. BIDDERS are required to acknowledge receipt of all amendments to this Invitation on the Bid Form (Standard Form 21) in the space provided, or by separate letter or telegram prior to opening of Bids. Failure to acknowledge all amendments may cause the rejection of the bid.

4. NOTICE REGARDING BUY AMERICAN ACT (1970 SEP). The Buy American Act (41 U.S.C. 10a-10d) generally requires that only domestic construction material be used in the performance of this contract. Exception from the Buy American Act shall be permitted only in the case of nonavailability of domestic construction materials. A bid or proposal offering nondomestic construction material will not be accepted unless specifically approved by the Government. When a bidder or offeror proposes to furnish nondomestic construction material, his bid or proposal must set forth an itemization of the quantity, unit price, and intended use of each item of such nondomestic construction material. When offering nondomestic construction material pursuant to this paragraph, bids or proposals may also offer, at stated prices, any available comparable domestic construction material, so as to avoid the possibility that failure of a nondomestic construction material to be acceptable under this paragraph will cause rejection of the entire bid.

5. AVAILABILITY OF SPECIFICATIONS, STANDARDS AND DESCRIPTIONS (1977 JUN) Specifications, standards and descriptions cited in this solicitation are available as indicated below:

5.1 Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercial), and Data Item Descriptions. Submit request on DD Form 1425 (Specifications and Standards Requisition) to:

Commanding Officer
U.S. Naval Publications and Forms Center
5801 Tabor Avenue - Philadelphia, Pa. 19120

The Acquisition Management Systems and Data Requirements Control List, DoD Directive 5000.19-L, Volume II, may be ordered on the DD Form 1425. The Department of Defense Index of Specifications and Standards (DODISS) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C., 20402. When requesting a specification or standard, the request shall indicate the title, number, date and any applicable amendment thereto by number and date. When requesting a data item description, the request shall cite the applicable data item number set forth in the solicitation. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above, and the solicitation or contract number involved. Such requests may also be made to the activity by Telex No. 834295, Western Union No. 710-670-1685, or telephone (area code 215-697-3321) in case of urgency.

5.2 Commercial Specifications, Standards and Descriptions. These specifications, standards and descriptions are not available from Government sources. They may be obtained from the publishers.

6. AVAILABILITY FOR EXAMINATION OF SPECIFICATIONS, STANDARDS, DRAWINGS, AND OTHER PERTINENT DOCUMENTS. The specifications, standards, drawings, and other pertinent documents cited in this solicitation may be examined at the following location:

U.S. Army Engineer District, Los Angeles
300 No. Los Angeles Street
Los Angeles, California 90053

7. In addition to the immediate site of construction, the Department of Labor has stated that the Davis-Bacon Act applies to Contractor's operations connected with temporary facilities located off the immediate site of construction such as batch plants, sand pits, rock quarries and similar operations which have been set up exclusively to furnish materials for the contract. Therefore, employees related to these temporary facilities are considered on-site employees, and the Contractor shall maintain complete records as set out in the Labor Standards Provisions of the contract.

8. The Government further reserves the right to make award of any or all schedules of any bid, unless the bidder qualifies such bid by specific limitation; also to make award to the bidder whose aggregate bid on any combination of bid schedules is low. For the purpose of this Invitation for Bids, the word "item" as used in paragraph 10(c) of Standard Form 22, shall be considered to mean "schedule."

10/11/65

3/22/65

1/13/65

12/11/70

8/25/77

4/15/71

Read the following in conjunction with instructions to bidders (U.S. Standard Form 22.)

9. DRAWINGS. A maximum of 2 sets of specifications with bound-in-drawings will be furnished without charge to bona fide bidders and suppliers. The drawings and specifications need not be returned.

10. HAND CARRIED BIDS. Hand carried bids shall be deposited in Room 1030, (South Tower), 2721 North Central Avenue, Phoenix, Arizona prior to the time and date set for opening of bids or bids may be delivered to Room 1030 immediately prior to bid opening time.

11. TELEGRAPHIC MODIFICATIONS TO BIDS should be addressed to:

U.S. Army Engineer District, Los Angeles
Resident Office
2721 North Central Avenue
Phoenix, Arizona 85004

12. NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

13. NOTE THE CERTIFICATION OF NONSEGREGATED FACILITIES IN THIS SOLICITATION. Bidders or offerors and applicants are cautioned to note the "Certification of Non-Segregated Facilities" in the solicitation. Failure of a bidder or offeror to agree to the certification will render his bid or offer nonresponsive to the terms of solicitation involving awards of contracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause. (1975 OCT)

14. ADDITIONAL INFORMATION pertaining to these plans and specifications may be obtained by writing or calling (collect calls not accepted) U.S. Army Engineer District, Los Angeles, Attn: Mr. S. M. Ackerman, P.O. Box 2711, Los Angeles, California 90053. Telephone 213 688-5493.

15. NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE. (1972 JUL)

15.1 Restriction. Offers under this procurement are solicited from small business concerns only and this procurement is to be awarded only to one or more small business concerns.. This action is based on a determination by the Contracting Officer, alone or in conjunction with a representative of the Small Business Administration that it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of war or national defense programs, or in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Offers received from firms which are not small business concerns shall be considered nonresponsive and shall be rejected.

15.2 Definition. A "Small Business Concern" is a concern including its affiliates, which is independently owned and operated, is not dominant in the field of operation in which it is offering on Government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration (Code of Federal Regulations, Title 13, Section 121.3-8). For the purpose of this Invitation for Bids, in order to qualify as

a "Small Business Concern" the average annual receipts of the concern and its affiliates for its preceding three fiscal years must not exceed \$12,000,000, except that if the concern has 50 percent or more of its annual sales or receipts attributable to business activity within Alaska, such average annual receipts must not exceed \$15,000,000.

16. ARITHMETIC DISCREPANCIES.

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:

- (1) Obviously misplaced decimal points will be corrected;
- (2) In case of discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected; and
- (4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purposes of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

17. SITE INSPECTION. Arrangements for visiting the site may be made by contacting Edgar Dunnigan, Project Office, Indian Bend Wash, Telephone (602) 992-6848.

18. MINIMUM ACCEPTANCE PERIOD (1975 MAR). Bids allowing less than the number of calendar days specified in the "Bid" portion of SF 19 (or on the reverse of SF 21 as applicable) for acceptance by the Government will be rejected as nonresponsive.

* * * * *

INSTRUCTIONS TO BIDDERS

(CONSTRUCTION CONTRACT)

1. **Explanations to Bidders.** Any explanation desired by a bidder regarding the meaning or interpretation of the invitation for bids, drawings, specifications, etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids. Any interpretation made will be in the form of an amendment of the invitation for bids, drawings, specifications, etc., and will be furnished to all prospective bidders. Its receipt by the bidder must be acknowledged in the space provided on the Bid Form (Standard Form 21) or by letter or telegram received before the time set for opening of bids. Oral explanations or instructions given before the award of the contract will not be binding.

2. **Conditions Affecting the Work.** Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government will assume no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the invitation for bids, the specifications, or related documents.

3. **Bidder's Qualifications.** Before a bid is considered for award, the bidder may be requested by the Government to submit a statement regarding his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the work.

4. **Bid Guarantee.** Where a bid guarantee is required by the invitation for bids, failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

A bid guarantee shall be in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit or, in accordance with Treasury Department regulations, cer-

tain bonds or notes of the United States. Bid guarantees, other than bid bonds, will be returned (a) to unsuccessful bidders as soon as practicable after the opening of bids, and (b) to the successful bidder upon execution of such further contractual documents and bonds as may be required by the bid as accepted.

If the successful bidder, upon acceptance of his bid by the Government within the period specified therein for acceptance (sixty days if no period is specified) fails to execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted within the time specified (ten days if no period is specified) after receipt of the forms by him, his contract may be terminated for default. In such event he shall be liable for any cost of procuring the work which exceeds the amount of his bid, and the bid guarantee shall be available toward offsetting such difference.

5. **Preparation of Bids.** (a) Bids shall be submitted on the forms furnished, or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, each erasure or change must be initialed by the person signing the bid. Unless specifically authorized in the invitation for bids, telegraphic bids will not be considered.

(b) The bid form may provide for submission of a price or prices for one or more items, which may be lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction or a combination thereof, etc. Where the bid form explicitly requires that the bidder bid on all items, failure to do so will disqualify the bid. When submission of a price on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(c) Unless called for, alternate bids will not be considered.

(d) Modifications of bids already submitted will be considered if received at the office designated in the invitation for bids by the time set for opening of bids. Telegraphic modifications will be considered, but should not reveal the amount of the original or revised bid.

6. Submission of Bids. Bids must be sealed, marked, and addressed as directed in the invitation for bids. Failure to do so may result in a premature opening of, or a failure to open, such bid.

~~7. Late Bids and Modifications or Withdrawals~~
(This paragraph applies to all advertised solicitations. In the case of Department of Defense negotiated solicitations, it shall also apply to late offers and modifications (other than the normal revisions of offers by selected offerors during the usual conduct of negotiation with such offerors) but not to withdrawal of offers. Unless otherwise provided, this paragraph does not apply to negotiated solicitations issued by civilian agencies.)

(a) Bids and modifications or withdrawals thereof received at the office designated in the invitation for bids after the exact time set for opening of bids will not be considered unless: (1) They are received before award is made; and either (2) they are sent by registered mail, or by certified mail for which an official dated post office stamp (postmark) on the original Receipt for Certified Mail has been obtained and it is determined by the Government that the late receipt was due solely to delay in the mails for which the bidder was not responsible; or (3) if submitted by mail (or by telegram if authorized), it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation: *Provided*, That timely receipt at such installation is established upon examination of an appropriate date or time stamp (if any) of such installation or of other documentary evidence of receipt (if readily available) within the control of such installation or of the post office serving it. However, a modification which makes the terms of the otherwise successful bid more favorable to the Government will be considered at any time it is received and may thereafter be accepted.

(b) Bidders using certified mail are cautioned to obtain a Receipt for Certified Mail showing a legible, dated postmark and to retain such receipt against the chance that it will be required as evidence that a late bid was timely mailed.

(c) The time of mailing of late bids submitted by registered or certified mail shall be deemed to be the last minute of the date shown in the postmark on the registered mail receipt or registered mail wrapper or on

~~the Receipt for Certified Mail unless the bidder furnishes evidence from the post office station of mailing which establishes an earlier time. In the case of certified mail, the only acceptable evidence is as follows: (1) Where the Receipt for Certified Mail identifies the post office station of mailing, evidence furnished by the bidder which establishes that the business day of that station ended at an earlier time, in which case the time of mailing shall be deemed to be the last minute of the business day of that station; or (2) an entry in ink on the Receipt for Certified Mail showing the time of mailing and the initials of the postal employee receiving the item and making the entry, with appropriate written verification of such entry from the post office station of mailing, in which case the time of mailing shall be the time shown in the entry. If the postmark on the original Receipt for Certified Mail does not show a date, the bid shall not be considered.~~

~~8. Withdrawal of Bids. Bids may be withdrawn by written or telegraphic request received from bidders prior to the time set for opening of bids.~~

9. Public Opening of Bids. Bids will be publicly opened at the time set for opening in the invitation for bids. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.

10. Award of Contract. (a) Award of contract will be made to that responsible bidder whose bid, conforming to the invitation for bids, is most advantageous to the Government, price and other factors considered.

(b) The Government may, when in its interest, reject any or all bids or waive any informality in bids received.

(c) The Government may accept any item or combination of items of a bid, unless precluded by the invitation for bids or the bidder includes in his bid a restrictive limitation.

11. Contract and Bonds. The bidder whose bid is accepted will, within the time established in the bid, enter into a written contract with the Government and, if required, furnish performance and payment bonds on Government standard forms in the amounts indicated in the invitation for bids or the specifications.

Paragraph 12 below replaces paragraphs 7 and 8 of Standard Form 22 which have been deleted.

12. LATE BIDS, MODIFICATIONS OF BIDS OR WITHDRAWAL OF BIDS (1979 MAR)

(a) Any bid received at the office designated in the solicitation after the exact time specified for receipt will not be considered unless it is received before award is made and either:

(i) it was sent by registered or certified mail not later than the fifth calendar day prior to the date specified for the receipt of bids (e.g., a bid submitted in response to a solicitation requiring receipt of bids by the 20th of the month must have been mailed by the 15th or earlier); or,

(ii) it was sent by mail (or telegram if authorized) and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation.

(b) Any modification or withdrawal of bid is subject to the same conditions as in (a) above except that withdrawal of bids by telegram is authorized. A bid may also be withdrawn in person by a bidder or his authorized representative, provided his identity is made known and he signs a receipt for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bids.

(c) The only acceptable evidence to establish:

(i) the date of mailing of a late bid, modification or withdrawal sent either by registered or certified mail is the U.S. or Canadian Postal Service postmark on the wrapper or on the original receipt from the U.S. or Canadian Postal Service. If neither postmark shows a legible date, the bid, modification or withdrawal shall be deemed to have been mailed late. (The term "postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees of the U.S. or Canadian Postal Service. Therefore, offerors should request the postal clerk to place a hand cancellation bull's eye "postmark" on both the receipt and the envelope or wrapper.)

(ii) the time of receipt at the Government installation is the time/date stamp of such installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(d) Notwithstanding the above, a late modification of an otherwise successful bid which makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

NOTE: The term "telegram" includes mailgrams.

STANDARD FORM 21
DECEMBER 1965 EDITION
GENERAL SERVICES ADMINISTRATION
FED. PROC. REG. (41 CFR) 1-16.401

BID FORM
(CONSTRUCTION CONTRACT)

REFERENCE

DACW09-80-B-0036

Read the Instructions to Bidders (Standard Form 22)
This form to be submitted in duplicate

DATE OF INVITATION

80 JUL 24

NAME AND LOCATION OF PROJECT

MODIFICATIONS TO FACILITIES
MCDOWELL EXHIBIT PLAZA,
INDIAN BEND WASH,
GILA RIVER BASIN,
ARIZONA

NAME OF BIDDER (Type or print)

(Date)

TO: U. S. ARMY ENGINEER DISTRICT, LOS ANGELES
P. O. Box 2711
Los Angeles, California 90053

In compliance with the above-dated invitation for bids, the undersigned hereby proposes to perform all work for modifications to facilities McDowell Exhibit Plaza.

in strict accordance with the General Provisions, specifications, schedules, drawings, and conditions, for the following amount.

EQUAL EMPLOYMENT COMPLIANCE (1978 SEP) By submission of this offer, the offeror represents that, to the best of his knowledge and belief, except as noted below, up to the date of this offer no written notice such as a show cause letter, a letter indicating probable cause, or any other written notification citing specific deficiencies, has been received by the offeror from any Federal Government agency or representative thereof that the offeror or any of its divisions or affiliates or known first-tier subcontractors is in violation of any of the provisions of Executive Order 11246 of September 24, 1965, as amended, or rules and regulations of the Secretary of Labor (41 CFR, Chapter 60) and specifically as to not having an acceptable affirmative action compliance program or being in noncompliance with any other aspect of the Equal Employment Opportunity Program. It is further agreed that should there be any change (i) in the offeror's status or circumstances between this date and the date of expiration of this offer or any extension thereof, or (ii) during any contract or extension thereof resulting from this solicitation, the Contracting Office will be notified promptly.

The undersigned agrees that, upon written acceptance of this bid, mailed or otherwise furnished within 30 calendar days (~~calendar days unless a different period is inserted by the bidder~~) after the date of opening of bids, he will within 5 calendar days (unless a longer period is allowed) after receipt of the prescribed forms, execute Standard Form 23, Construction Contract, and give performance and payment bonds on Government standard forms with good and sufficient surety. (See paragraph No. 18 of the Invitation for Bids).

The undersigned agrees, if awarded the contract, to commence and to complete the work in accordance with the stipulations of Paragraph 1. of the SPECIAL PROVISIONS.

RECEIPT OF AMENDMENTS: The undersigned acknowledges receipt of the following amendments of the invitation for bids, drawings, and/or specifications, etc. (Give number and date of each):

The representations and certifications on the accompanying STANDARD FORM 19-B are made a part of this bid.

ENCLOSED IS BID GUARANTEE, CONSISTING OF

IN THE AMOUNT OF

NAME OF BIDDER (Type or print)

FULL NAME OF ALL PARTNERS (Type or print)

BUSINESS ADDRESS (Type or print) (Include "ZIP Code")

BY (Signature in ink. Type or print name under signature)

TITLE (Type or print)

DIRECTIONS FOR SUBMITTING BIDS: Envelopes containing bids, guarantees, etc., must be sealed, marked, and addressed as follows:

Envelopes shall be marked in the upper left hand corner Bid Under Reference No.

DACW09-80-B-0036

Envelopes shall be addressed:
U.S. ARMY ENGINEER DISTRICT
 Phoenix Resident Office
 2721 North Central Avenue
 Phoenix, Arizona

CAUTION—Bids should not be qualified by exceptions to the bidding conditions.

REPRESENTATIONS AND CERTIFICATIONS**(Construction and Architect-Engineer Contract)****(For use with Standard Forms 19, 21 and 252)**

REFERENCE (Enter same No.(s) as on SF 19, 21 and 252)

NAME AND ADDRESS OF BIDDER (No., Street, City, State, and ZIP Code)

DATE OF BID

In negotiated procurements, "bid" and "bidder" shall be construed to mean "offer" and "offeror."

The bidder makes the following representations and certifications as a part of the bid identified above. (Check appropriate boxes.)

1. SMALL BUSINESS

He is, is not, a small business concern. (A small business concern for the purpose of Government procurement is a concern, including its affiliates, which is independently owned and operated, is not dominant in the field of operations in which it is bidding on Government contracts, and can further qualify under the criteria concerning number of employees, average annual receipts, or other criteria as prescribed by the Small Business Administration. For additional information see governing regulations of the Small Business Administration (13 CFR Part 121)).

2. MINORITY BUSINESS ENTERPRISE

He is, is not a minority business enterprise. A minority business enterprise is defined as a "business, at least 50 percent of which is owned by minority group members or, in case of publicly owned businesses, at least 51 percent of the stock of which is owned by minority group members." For the purpose of this definition, minority group members are Negroes, Spanish-speaking American persons, American-Orientals, American-Indians, American-Eskimos, and American-Aleuts."

3. CONTINGENT FEE

(a) He has, has not, employed or retained any company or person (other than a full-time bona fide employee working solely for the bidder) to solicit or secure this contract, and (b) he has, has not, paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the bidder) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract; and agrees to furnish information relating to (a) and (b) above as requested by the Contracting Officer. (For interpretation of the representation, including the term "bona fide employee," see Code of Federal Regulations, Title 41, Subpart 1-1.5.)

4. TYPE OF ORGANIZATION

He operates as an individual, partnership, joint venture, corporation, incorporated in State of

5. INDEPENDENT PRICE DETERMINATION

(a) By submission of this bid, each bidder certifies, and in the case of a joint bid each party thereto certifies as to his own organization, that in connection with this procurement:

(1) The prices in this bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, in the case of a bid, or prior to award, in the case of a proposal, directly or indirectly to any other bidder or to any competitor; and

(3) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition.

(b) Each person signing this bid certifies that:

(1) He is the person in the bidder's organization responsible within that organization for the decision as to the prices being bid herein and that he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above; or

(2) (i) He is not the person in the bidder's organization responsible within that organization for the decision as to the prices being bid herein but that he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above, and as their agent does hereby so certify; and (ii) he has not participated, and will not participate, in any action contrary to (a)(1) through (a)(3) above.

(c) This certification is not applicable to a foreign bidder submitting a bid for a contract which requires performance or delivery outside the United States, its possessions, and Puerto Rico.

(d) A bid will not be considered for award where (a)(1), (a)(3), or (b) above, has been deleted or modified. Where (a)(2) above, has been deleted or modified, the bid will not be considered for award unless the bidder furnishes with the bid a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

NOTE.—Bids must set forth full, accurate, and complete information as required by this invitation for bids (including attachments). The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

THE FOLLOWING NEED BE CHECKED ONLY IF BID EXCEEDS \$10,000 IN AMOUNT.

6. EQUAL OPPORTUNITY

He has, has not, participated in a previous contract or subcontract subject to the Equal Opportunity Clause herein, the clause originally contained in Section 301 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114; he has, has not, filed all required compliance reports; and representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained prior to subcontract awards.

(The above representations need not be submitted in connection with contracts or subcontracts which are exempt from the equal opportunity clause.)

7. PARENT COMPANY AND EMPLOYER IDENTIFICATION NUMBER

Each bidder shall furnish the following information by filling in the appropriate blocks:

(a) Is the bidder owned or controlled by a parent company as described below? Yes No. (For the purpose of this bid, a parent company is defined as one which either owns or controls the activities and basic business policies of the bidder. To own another company means the parent company must own at least a majority (more than 50 percent) of the voting rights in that company. To control another company, such ownership is not required; if another company is able to formulate, determine, or veto basic business policy decisions of the bidder, such other company is considered the parent company of the bidder. This control may be exercised through the use of dominant minority voting rights, use of proxy voting, contractual arrangements, or otherwise.)

(b) If the answer to (a) above is "Yes," bidder shall insert in the space below the name and main office address of the parent company.

NAME OF PARENT COMPANY	MAIN OFFICE ADDRESS (No., Street, City, State, and ZIP Code)
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(c) Bidder shall insert in the applicable space below, if he has no parent company, his own Employer's Identification Number (E.I. No.) (Federal Social Security Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941), or, if he has a parent company, the E.I. No. of his parent company.

EMPLOYER IDENTIFICATION NUMBER OF		PARENT COMPANY	BIDDER
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8. CERTIFICATION OF NONSEGREGATED FACILITIES

(Applicable to (1) contracts, (2) subcontracts, and (3) agreements with applicants who are themselves performing federally assisted construction contracts, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause.)

By the submission of this bid, the bidder, offeror, applicant, or subcontractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files; and that he will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

9. CLEAN AIR AND WATER

(Applicable if the bid or offer exceeds \$100,000, or the contracting officer has determined that orders under an indefinite quantity contract in any year will exceed \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1)) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)) and is listed by EPA, or is not otherwise exempt.)

The bidder or offeror certifies as follows:

(a) Any facility to be utilized in the performance of this proposed contract has , has not , been listed on the Environmental Protection Agency List of Violating Facilities.

(b) He will promptly notify the contracting officer, prior to award, of the receipt of any communication from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that any facility which he proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities.

(c) He will include substantially this certification, including this paragraph (c), in every nonexempt subcontract.

Alterations to Standard Form 19-B, REPRESENTATIONS AND CERTIFICATIONS

Delete Item No. 2, MINORITY BUSINESS ENTERPRISE and insert the following:

2. SMALL DISADVANTAGED BUSINESS CONCERN

(a) He is, is not, a small business concern owned and controlled by socially and economically disadvantaged individuals. The term "small business concern" means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" means a small business concern-

(1) that is at least 51 per centum owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 per centum of the stock of which is owned by one or more socially or economically disadvantaged individuals; and

(2) whose management and daily business operations are controlled by one or more such individuals.

(b) The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans (such as American Indians, Eskimos, Aleuts, and native Hawaiians), and other minorities or any other individuals found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act.

After Item No. 3, CONTINGENT FEE, the following clause has been added:

"If the offeror/quoter, by checking the appropriate box provided therefor, has represented that he has employed or retained a company or person (other than a full-time bona fide employee working solely for the offeror/quoter) to solicit or secure this contract, or that he has paid or agreed to pay any fee, commission, percentage, or brokerage fee to any company or person contingent upon or resulting from the award of this contract, he shall furnish, in duplicate, a complete Standard Form 119, Contractor's Statement of Contingent or Other Fees. If offeror/quoter has previously furnished a completed Standard Form 119 to the office issuing this solicitation, he may accompany his proposal/quotation with a signed statement (a) indicating when such completed form was previously furnished, (b) identifying by number the previous solicitation or contract, if any, in connection with which such form was submitted, and (c) representing that the statement in such form is applicable to this proposal/quotation."
(ASPR 7-2002.1)

Standard Form 19-B, REPRESENTATIONS AND CERTIFICATIONS (continued)

The bidder makes the following representations and certifications as a part of the bid identified hereinbefore. (Check appropriate boxes).

10. WOMAN-OWNED BUSINESS.

He is, is not, a woman-owned business. A woman-owned business is a business which is, at least, 51 percent owned, controlled and operated by a woman or women. Controlled is defined as exercising the power to make policy decisions. Operated is defined as actively involved in the day-to-day management. For the purposes of this definition, businesses which are publicly owned, joint stock associations, and business trusts are exempted. Exempted businesses may voluntarily represent that they are, or are not, women-owned if this information is available.

11. PERCENT FOREIGN CONTENT.

Approximately _____ percent of the proposed contract price represents foreign content or effort.

12. CERTIFICATION-WAGE AND PRICE STANDARDS

(Applicable to awards in excess of \$5 million, and awards of indefinite delivery type contracts under which cumulative orders are expected to exceed \$5 million.)

(a) By submission of this bid or offer, the bidder or offeror certifies that he is in compliance with the Wage and Price Standards issued by the Council on Wage and Price Stability (6 CFR Part 705, Appendix, and Part 706).

(b) The clause entitled, "Certification - Wage and Price Standards," set forth elsewhere in this solicitation, shall be incorporated in any resulting contract except where waived by agency head involved.

STANDARD FORM 23
JANUARY 1961 EDITION
GENERAL SERVICES ADMINISTRATION
FED. PROC. REG. (41 CFR) 1-16.401

CONSTRUCTION CONTRACT

(See instructions on reverse)

CONTRACT NO

DATE OF CONTRACT

Rev. LAD Nov. 70

NAME AND ADDRESS OF CONTRACTOR

CHECK APPROPRIATE BOX

- Individual
- Partnership
- Joint Venture
- Corporation, incorporated in the
State of _____

DEPARTMENT OR AGENCY

CONTRACT FOR (*Work to be performed*)

PLACE

CONTRACT PRICE (*Express in words and figures*)

ADMINISTRATIVE DATA (*Optional*)

The United States of America (hereinafter called the Government), represented by the Contracting Officer executing this contract, and the individual, partnership, joint venture, or corporation named above (hereinafter called the Contractor), mutually agree to perform this contract in strict accordance with the General Provisions, and the following designated specifications, schedules, drawings, and conditions:

WORK SHALL BE STARTED

WORK SHALL BE COMPLETED

Alterations. The following alterations were made in this contract before it was signed by the parties hereto:

In witness whereof, the parties hereto have executed this contract as of the date entered on the first page hereof.

THE UNITED STATES OF AMERICA

CONTRACTOR

By _____

(Name of Contractor)

(Official title)

By _____

(Signature)

(Title)

INSTRUCTIONS

1. The full name and business address of the Contractor must be inserted in the space provided on the face of the form. The Contractor shall sign in the space provided above with his usual signature and typewrite or print his name under the signature.

2. An officer of a corporation, a member of a partnership, or an agent signing for the Contractor shall place his signature and title after the word "By" under the name of the Contractor. A contract executed by an attorney or agent on behalf of the Contractor shall be accompanied by two authenticated copies of his power of attorney or other evidence of his authority to act on behalf of the Contractor.

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(Construction Contract)
Edition of 15 December 1978

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GENERAL PROVISIONS
(Construction Contract)
(Edition of 15 Dec 1978)

Issued By: Department of the Army, Corps of Engineers

(General Provisions 1 through 31 and 32 through 40 are those prescribed by the General Services Administration in Standard Form 23-A, April 1975 edition and Standard Form 19-A, November 1972 edition, respectively, as amended pursuant to the latest revisions of the Defense Acquisition Regulation and Engineer Contract Instructions, ER 1180-1-1.)

1.1 DEFINITIONS

(The following clause is applicable if the procurement instrument identification number is prefixed by the letters "DACW")

(a) The term "head of the agency" or "Secretary" as used herein means the Secretary of the Army; and the term "his duly authorized representative" means the Chief of Engineers, Department of the Army, or an individual or board designated by him.

(b) The term "Contracting Officer" as used herein means the person executing this contract on behalf of the Government and includes a duly appointed successor or authorized representative. (DAR 7-602.1 & ECI 7-070)

1.2 DEFINITIONS (1964 JUN)

(The following clause is applicable if the procurement instrument identification number is prefixed by the letters "DACA")

(a) The term "head of the agency" or "Secretary" as used herein means the Secretary, the Under Secretary, any Assistant Secretary, or any other head or assistant head of the executive or military department or other Federal agency; and the term "his duly authorized representative" means any person or persons or board (other than the Contracting Officer) authorized to act for the head of the agency or the Secretary.

(b) The term "Contracting Officer" as used herein means the person executing this contract on behalf of the Government and includes a duly appointed successor or authorized representative. (DAR 7-602.1)

2. SPECIFICATIONS AND DRAWINGS (1964 JUN)

The Contractor shall keep on the work a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy either in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at his own risk and expense. The Contracting Officer shall furnish from time to time such detail drawings and other information as he may consider necessary, unless otherwise provided. (DAR 7-602.2)

3. CHANGES (1968 FEB)

(a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any change in the work within the general scope of the contract, including but not limited to changes:

- (i) in the specifications (including drawings and designs);
- (ii) in the method or manner of performance of the work;
- (iii) in the Government-furnished facilities, equipment, materials, services, or site; or
- (iv) directing acceleration in the performance of the work.

(b) Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation or determination) from the Contracting Officer, which causes any such change, shall be treated as a change order under this clause, provided, that the Contractor gives the Contracting Officer written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a change order.

(c) Except as herein provided, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly: Provided however, That except for claims based on defective specifications, no claim for any change under (b) above shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as therein required: And provided further, That in the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with such defective specifications.

(e) If the Contractor intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the Contracting Officer a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the Government. The statement of claim hereunder may be included in the notice under (b) above.

(f) No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract. (DAR 7-602.3)

4. DIFFERING SITE CONDITIONS (1968 FEB)

(a) The Contractor shall promptly, and before such conditions are disturbed, notify the Contracting Officer in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract. The Contracting Officer shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

(b) No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above; provided, however, the time prescribed therefor may be extended by the Government.

(c) No claim by the Contractor for an equitable adjustment hereunder

shall be allowed if asserted after final payment under this contract. (DAR 7-602.4)

5. TERMINATION FOR DEFAULT - DAMAGES FOR DELAY - TIME EXTENSIONS (1969 AUG)

(a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within such time, the Government may, by written notice to the Contractor, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event the Government may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the Government resulting from his refusal or failure to complete the work within the specified time.

(b) If fixed and agreed liquidated damages are provided in the contract and if the Government so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

(c) If fixed and agreed liquidated damages are provided in the contract and if the Government does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

(d) The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

(1) The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any such delay (unless the Contracting Officer grants a further period of time before the date of final payment under the contract), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in his judgment, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the "Disputes" clause of this contract.

(e) If, after notice of termination of the Contractor's right to proceed under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the Government, be the same as if the notice of termination had been issued pursuant to such clause. If, in the foregoing circumstances, this contract does not contain a clause providing for

termination for convenience of the Government, the contract shall be equitably adjusted to compensate for such termination and the contract modified accordingly; failure to agree to any such adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(f) The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(g) As used in paragraph (d)(1) of this clause, the term "subcontractors or suppliers" means subcontractors or suppliers at any tier. (DAR 7-602.5)

6. DISPUTES

(a) This contract is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601, et. seq.). If a dispute arises relating to the contract, the Contractor may submit a claim to the Contracting Officer who shall issue a written decision on the dispute in the manner specified in DAR 1-314 (FPR 1-1.318).

(b) "Claim" means

- (1) a written request submitted to the Contracting Officer;
- (2) for payment of money, adjustment of contract terms, or other relief;
- (3) which is in dispute or remains unresolved after a reasonable time for its review and disposition by the Government; and
- (4) for which a Contracting Officer's decision is demanded.

(c) In the case of disputed requests or amendments to such requests for payment exceeding \$50,000, or with any amendment causing the total request in dispute to exceed \$50,000, the Contractor shall certify, at the time of submission as a claim, as follows:

I certify that the claim is made in good faith, that the supporting data are accurate and complete to the best of my knowledge and belief; and that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(Contractor's Name)

(Title)

(d) The Government shall pay the Contractor interest

- (1) on the amount found due on claims submitted under this clause;
- (2) at the rates fixed by the Secretary of the Treasury, under the Renegotiation Act, Public Law 92-41;
- (3) from the date the Contracting Officer receives the claim, until the Government makes payment.

(e) The decision of the Contracting Officer shall be final and conclusive and not subject to review by any forum, tribunal, or Government agency unless an appeal or action is timely commenced within the times specified by the Contract Disputes Act of 1978.

(f) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal or action related to the contract, and comply with any decision of the Contracting Officer. (DAR 7-103.12)

7. PAYMENTS TO CONTRACTOR (1979 MAR)

- (a) The Government will pay the contract price as hereinafter provided.
- (b) The Government will make progress payments monthly as the work

proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates approved by the Contracting Officer. If requested by the Contracting Officer, the Contractor shall furnish a breakdown of the total contract price showing the amount included therein for each principal category of the work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates the Contracting Officer, at his discretion, may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration (1) if such consideration is specifically authorized by the contract and (2) if the Contractor furnishes satisfactory evidence that he has acquired title to such material and that it will be utilized on the work covered by this contract.

(c) In making such progress payments, there shall be retained 10 percent of the estimated amount until final completion and acceptance of the contract work. However, if the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, he may authorize such payment to be made in full without retention of a percentage. Also, whenever the work is substantially complete, the Contracting Officer shall retain an amount he considers adequate for the protection of the Government, and, at his discretion, may release to the Contractor all or a portion of any excess amount. Furthermore, on completion and acceptance of each separate building, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made therefor without retention of a percentage.

(d) All material and work covered by progress payments made shall thereupon become the sole property of the Government, but this provision shall not be construed as relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work, or as waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(e) The Contractor shall, upon request, be reimbursed for the entire amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after furnishing evidence of full payment to the surety.

(f) Upon completion and acceptance of all work, the amount due the Contractor under this contract shall be paid upon the presentation of a properly executed voucher and after the Contractor shall have furnished the Government with a release of all claims against the Government arising by virtue of this contract, other than claims in stated amounts as may be specifically excepted by the Contractor from the operation of the release. If the Contractor's claim to amounts payable under the contract has been assigned under the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), a release may also be required of the assignee. (DAR 7-602.7)

8. ASSIGNMENT OF CLAIMS (1976 OCT)

(a) Pursuant to the provisions of the Assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), if this contract provides for payments aggregating \$1,000 or more, claims for moneys due or to become due the Contractor from the Government under this contract may be assigned to a bank, trust company, or other financing institution, including any Federal lending agency, and may thereafter be further assigned and reassigned to any such institution. Any such assignment or reassignment shall cover all amounts payable under this contract and not already paid, and shall not be made to more than one party, except that any such assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in

such financing. Unless otherwise provided in this contract, payments to assignee of any moneys due or to become due under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or setoff. (The preceding sentence applies only if this contract is made in time of war or national emergency as defined in said Act and is with the Department of Defense, the General Services Administration, the Energy Research and Development Administration, the National Aeronautics and Space Administration, the Federal Aviation Administration, or any other department or agency of the United States designated by the President pursuant to Clause 4 of the provision of section 1 of the Assignment of Claims Act of 1940, as amended by the Act of May 15, 1951, 65 Stat. 41.)

(b) In no event shall copies of this contract or of any plans, specifications, or other similar documents relating to work under this contract, if marked "Top Secret," "Secret," or "Confidential," be furnished to any assignee of any claim arising under this contract or to any other person not entitled to receive the same. However, a copy of any part or all of this contract so marked may be furnished, or any information contained therein may be disclosed, to such assignee upon the prior written authorization of the Contracting Officer. (DAR 7-602.8)

9. MATERIAL AND WORKMANSHIP (1964 JUN)

(a) Unless otherwise specifically provided in this contract, all equipment, material, and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in this contract, reference to any equipment, material, article, or patented process, by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at his option, use any equipment, material, article, or process which, in the judgment of the Contracting Officer, is equal to that named. The Contractor shall furnish to the Contracting Officer for his approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the work. When required by this contract or when called for by the Contracting Officer, the Contractor shall furnish the Contracting Officer for approval full information concerning the material or articles which he contemplates incorporating in the work. When so directed, samples shall be submitted for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles installed or used without required approval shall be at the risk of subsequent rejection.

(b) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may, in writing, require the Contractor to remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable. (DAR 7-602.9)

10. INSPECTION AND ACCEPTANCE (1976 OCT)

(a) All work (which term includes but is not restricted to materials, workmanship, and manufacture and fabrication of components) shall be subject to inspection and test by the Government at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of the Government and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the contract requirements. No inspection or test by the Government shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for

damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the Government after acceptance of the completed work under the terms of paragraph (f) of this clause, except as hereinabove provided.

(b) The Contractor shall, without charge, replace any material or correct any workmanship found by the Government not to conform to the contract requirements, unless in the public interest the Government consents to accept such material or workmanship with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(c) If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Government (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with the clause of this contract entitled "Termination for Default - Damages for Delay - Time Extensions."

(d) The Contractor shall furnish promptly, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspection and test as may be required by the Contracting Officer. All inspection and test by the Government shall be performed in such manner as not unnecessarily to delay the work. Special, full size, and performance tests shall be performed as described in this contract. The Government reserves the right to charge to the Contractor any additional cost of inspection or test when material or workmanship is not ready at the time specified by the Contractor for inspection or test or when reinspection or retest is necessitated by prior rejection.

(e) Should it be considered necessary or advisable by the Government at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall, on request, promptly furnish all necessary facilities, labor and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, an equitable adjustment shall be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.

(f) Unless otherwise provided in this contract, acceptance by the Government shall be made as promptly as practicable after completion and inspection of all work required by this contract, or that portion of the work that the Contracting Officer determines can be accepted separately. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud or as regards the Government's rights under any warranty or guarantee. (DAR 7-602.11)

11. SUPERINTENDENCE BY CONTRACTOR (1976 OCT)

The Contractor, at all times during performance and until the work is completed and accepted, shall give his personal superintendence to the work or have on the work a competent superintendent, satisfactory to the Contracting Officer and with authority to act for the Contractor. (DAR 7-602.12)

12. PERMITS AND RESPONSIBILITIES (1964 JUN)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State, and municipal laws, codes, and

regulations, in connection with the prosecution of the work. He shall be similarly responsible for all damages to persons or property that occur as a result of his fault or negligence. He shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted. (DAR 7-602.13)

13. CONDITIONS AFFECTING THE WORK (1964 JUN)

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve him from responsibility for successfully performing the work without additional expense to the Government. The Government assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of this contract, unless such understanding or representations by the Government are expressly stated in the contract. (DAR 7-602.14)

14. OTHER CONTRACTS (1964 JUN)

The Government may undertake or award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors and Government employees and carefully fit his own work to such additional work as may be directed by the Contracting Officer. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by Government employees. (DAR 7-602.15)

15. SHOP DRAWINGS (1976 OCT)

(a) The term, "shop drawings", includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data; and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract.

(b) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate his approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate his approval or disapproval of the shop drawings and if not approved as submitted shall indicate his reasons therefor. Any work done prior to such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (c) below.

(c) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation(s), he shall issue an appropriate contract modification, except that, if the variation is minor and does not involve a change in price or in time of performance, a modification need not be issued.

(d) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated herein) of all shop drawings as called

for under the various headings of these specifications. Three sets (unless otherwise indicated herein) of all shop drawings will be retained by the Contracting Officer and one set will be returned to the Contractor. (DAR 7-602.54(a))

16. USE AND POSSESSION PRIOR TO COMPLETION (1976 OCT)

The Government shall have the right to take possession of or use any completed or partially completed part of the work. Prior to such possession or use, the Contracting Officer shall furnish the Contractor an itemized list of work remaining to be performed or corrected on such portions of the project as are to be possessed or used by the Government, provided that failure to list any item of work shall not relieve the Contractor of responsibility for compliance with the terms of the contract. Such possession or use shall not be deemed an acceptance of any work under the contract. While the Government has such possession or use, the Contractor, notwithstanding the provisions of the clause of this contract entitled "Permits and Responsibilities," shall be relieved of the responsibility for the loss or damage to the work resulting from the Government's possession or use. If such prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment in the contract price or the time of completion will be made and the contract shall be modified in writing accordingly. (DAR 7-602.39)

17. SUSPENSION OF WORK (1968 FEB)

(a) The Contracting Officer may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Contracting Officer in the administration of this contract, or by his failure to act within the time specified in this contract (or if no time is specified, within a reasonable time), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent (1) that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor or (2) for which an equitable adjustment is provided for or excluded under any other provision of this contract.

(c) No claim under this clause shall be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such suspension, delay, or interruption, but not later than the date of final payment under the contract. (DAR 7-602.46)

18. TERMINATION FOR CONVENIENCE OF THE GOVERNMENT-CONSTRUCTION (1974 APR)

(a) The performance of work under this contract may be terminated by the Government in accordance with this clause in whole, or from time to time in part, whenever the Contracting Officer shall determine that such termination is in the best interest of the Government. Any such termination shall be

effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the contract is terminated, and the date upon which such termination becomes effective.

(b) After receipt of a Notice of Termination, and except as otherwise directed by the Contracting Officer, the Contractor shall:

- (i) stop work under the contract on the date and to the extent specified in the Notice of Termination;
- (ii) place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the contract as is not terminated;
- (iii) terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;
- (iv) assign to the Government, in the manner, at the times, and to the extent directed by the Contracting Officer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Government shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- (v) settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Contracting Officer, to the extent he may require, which approval or ratification shall be final for all the purposes of this clause;
- (vi) transfer title and deliver to the Government, in the manner, at the times, and to the extent, if any, directed by the Contracting Officer, (A) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (B) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the Government;
- (vii) use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Contracting Officer, any property of the types referred to in (vi) above; provided however, that the Contractor (A) shall not be required to extend credit to any purchaser, and (B) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Contracting Officer; and provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Government to the Contractor under this contract or shall otherwise be credited to the price or cost of the work covered by this contract or paid in such other manner as the Contracting Officer may direct;
- (viii) complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
- (ix) take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to this contract which is in the possession

of the Contractor and in which the Government has or may acquire an interest.

At any time after expiration of the plant clearance period, as defined in Section VIII, Defense Acquisition Regulation, as it may be amended from time to time, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Contracting Officer, and may request the Government to remove such items or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the Government will accept title to such items and remove them or enter into a storage agreement covering the same; provided, that the list submitted shall be subject to verification by the Contracting Officer upon removal of the items, or if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

(c) After receipt of a Notice of Termination, the Contractor shall submit to the Contracting Officer his termination claim, in the form and with certification prescribed by the Contracting Officer. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer, upon request of the Contractor made in writing within such one year period or authorized extension thereof. However, if the Contracting Officer determines that the facts justify such action, he may receive and act upon any such termination claim at any time after such one year period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

(d) Subject to the provisions of paragraph (c), the Contractor and the Contracting Officer may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in paragraph (e) of this clause, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Contracting Officer to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this paragraph (d).

(e) In the event of the failure of the Contractor and the Contracting Officer to agree, as provided in paragraph (d), upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, the Contracting Officer shall pay to the Contractor the amounts determined by the Contracting Officer as follows, but without duplication of any amounts agreed upon in accordance with paragraph (d):

(i) with respect to all contract work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of:

- (A) the cost of such work;
 - (B) the cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in paragraph (b)(v) above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of Work under this contract, which amounts shall be included in the cost on account of which payment is made under (A) above; and
 - (C) a sum, as profit on (A) above, determined by the Contracting Officer pursuant to 8-303 of the Defense Acquisition Regulation, in effect as of the date of execution of this contract, to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed under this subdivision (C) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and
- (ii) the reasonable cost of the preservation and protection of property incurred pursuant to paragraph (b)(ix); and any other reasonable cost incidental to termination of work under this contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this contract. The total sum to be paid to the Contractor under (i) above shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the Government shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under (i) above, the fair value, as determined by the Contracting Officer, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government, or to a buyer pursuant to paragraph (b)(vii).

(f) Costs claimed, agreed to, or determined pursuant to (c), (d), (e), and (i) hereof shall be in accordance with Section XV of the Defense Acquisition Regulation as in effect on the date of this contract.

(g) The Contractor shall have the right of appeal, under the clause of this contract entitled "Disputes", from any determination made by the Contracting Officer under paragraph (c), (e), or (i) hereof, except that if the Contractor has failed to submit his claim within the time provided in paragraph (c) or (i) hereof, and has failed to request extension of such time, he shall have no such right of appeal. In any case where the Contracting Officer has made a determination of the amount due under paragraph (c), (e) or (i) hereof, the Government shall pay to the Contractor the following: (i) if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Contracting Officer, or (ii) if an appeal has been taken, the amount finally determined on such appeal.

(h) In arriving at the amount due the Contractor under this clause there shall be deducted (i) all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of

this contract, (ii) any claim which the Government may have against the Contractor in connection with this contract, and (iii) the agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of this clause, and not otherwise recovered by or credited to the Government.

(i) If the termination hereunder be partial, the Contractor may file with the Contracting Officer a claim for an equitable adjustment of the price or prices specified in the contract relating to the continued portion of the contract (the portion not terminated by the Notice of Termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices. Any claim by the Contractor for an equitable adjustment under this clause must be asserted within ninety (90) days from the effective date of the termination notice, unless an extension is granted in writing by the Contracting Officer.

(j) The Government may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this contract whenever in the opinion of the Contracting Officer the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this clause, such excess shall be payable by the Contractor to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97 for the Renegotiation Board, for the period from the date such excess payment is received by the Contractor to the date on which such excess is repaid to the Government; provided, however, that no interest shall be charged with respect to any such excess payment attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition, or such later date as determined by the Contracting Officer by reason of the circumstances.

(k) Unless otherwise provided for in this contract, or by applicable statute, the Contractor shall - from the effective date of termination until the expiration of three years after final settlement under this contract - preserve and make available to the Government at all reasonable times at the office of the Contractor but without direct charge to the Government, all his books, records, documents and other evidence bearing on the costs and expenses of the Contractor under this contract and relating to the work terminated hereunder, or, to the extent approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions thereof. (DAR 7-602.29(a))

19. PRICING OF ADJUSTMENTS (1970 JUL)

When costs are a factor in any determination of a contract price adjustment pursuant to the "Changes" clause or any other provision of this contract, such costs shall be in accordance with Section XV of the Defense Acquisition Regulation as in effect on the date of this contract. (DAR 7-103.26)

20. PATENT INDEMNITY (1964 JUN)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any Letters Patent of the United States (except Letters Patent issued upon an application which is now or may hereafter be, for reasons of national security, ordered by the Government to be kept secret or otherwise withheld from issue) arising out of

the performance of this contract or out of the use or disposal by or for the account of the Government of supplies furnished or construction work performed hereunder. (DAR 7-602.16(a))

21. ADDITIONAL BOND SECURITY (1976 OCT)

If any surety upon any bond furnished in connection with this contract becomes unacceptable to the Government, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Government, or if the contract price is increased to such an extent that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Government and of persons supplying labor or materials in the prosecution of the work contemplated by this contract. (DAR 7-602.17)

22. EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (1975 JUN)

(a) This clause is applicable if the amount of this contract exceeds \$10,000 and was entered into by means of negotiation, including small business restricted advertising but is not applicable if this contract was entered into by means of formal advertising.

(b) The Contractor agrees that the Comptroller General of the United States or any of his duly authorized representatives shall, until the expiration of three years after final payment under this contract or such lesser time specified in either Appendix M of the Defense Acquisition Regulation or the Federal Procurement Regulations Part 1-20, as appropriate, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Contractor involving transactions related to this contract.

(c) The Contractor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Comptroller General of the United States or any of his duly authorized representatives shall, until the expiration of three years after final payment under the subcontract or such lesser time specified in either Appendix M of the Defense Acquisition Regulation or the Federal Procurement Regulations Part 1-20, as appropriate, have access to and the right to examine any directly pertinent books, documents, papers, and records of such subcontractor, involving transactions related to the subcontract. The term "subcontract" as used in this clause excludes (i) purchase orders not exceeding \$10,000 and (ii) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

(d) The periods of access and examination described in (b) and (c) above for records which relate to (i) appeals under the "Disputes" clause of this contract, (ii) litigation or the settlement of claims arising out of the performance of this contract, or (iii) costs and expenses of this contract as to which exception has been taken by the Comptroller General or any of his duly authorized representatives, shall continue until such appeals, litigation, claims or exceptions have been disposed of. (DAR 7-104.15)

23. BUY AMERICAN ACT (1966 OCT)

(a) Agreement. In accordance with the Buy American Act (41 U.S.C. 10a-10d), the Contractor agrees that only domestic construction material will be used (by the Contractor, subcontractors, materialmen, and suppliers) in the performance of this contract, except for nondomestic construction material listed in the "Nondomestic Construction Materials" clause, if any, of this contract.

(b) Domestic construction material. "Construction material" means any article, material, or supply brought to the construction site for incorporation in the building or work. An unmanufactured construction material is a "domestic construction material" if it has been mined or produced in the United States. A manufactured construction material is a "domestic construction material" if it has been manufactured in the United States and if the cost of its components which have been mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. "Component" means any article, material, or supply directly incorporated in a construction material.

(c) Domestic component. A component shall be considered to have been "mined, produced, or manufactured in the United States" (regardless of its source in fact) if the article, material, or supply in which it is incorporated was manufactured in the United States and the component is of a class or kind determined by the Government to be not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality. (DAR 7-602.20)

24. EQUAL OPPORTUNITY (1978 SEP)

(If, during any twelve (12) month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded Federal contracts and/or subcontracts which have an aggregate value in excess of \$10,000, the Contractor shall comply with (1) through (7) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.)

During the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action 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 agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this Equal Opportunity clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided by the agency Contracting Officer, advising the labor union or workers' representative of the contractor's commitments under this Equal Opportunity clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended by Executive Order

No. 11375 of October 13, 1967, and by the rules, regulations, and orders of the Secretary of Labor or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

(6) In the event of the Contractor's noncompliance with the Equal Opportunity clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States. (DAR 7-103.18(a))

25. COVENANT AGAINST CONTINGENT FEES (1958 JAN)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such commissions, percentage, brokerage or contingent fee. (DAR 7-103.20)

26. OFFICIALS NOT TO BENEFIT (1949 JUL)

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit. (DAR 7-103.19)

27. CONVICT LABOR (1975 OCT)

In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1965 (18 U.S.C. 4082(c)(2)) and Executive Order 11755, December 29, 1973. (DAR 7-104.17)

28. UTILIZATION OF SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS CONCERNS (1979 JUL)

(a) It is the policy of the United States that small business and small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in the performance of contracts let by any Federal agency.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with the efficient performance of this contract. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(c) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals," hereafter referred to as disadvantaged business, shall mean a small business concern -

(1) which is at least 51 per centum owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 per centum of the stock of which is owned by one or more socially and economically disadvantaged individuals; and

(2) whose management and daily business operations are controlled by one or more of such individuals. The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans (such as American Indians, Eskimos, Aleuts and Native Hawaiians), and other minorities, or any other individuals found to be disadvantaged by the Administration pursuant to Section 8(a) of the Small Business Act.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals. (DAR 7-104.14(a))

29. FEDERAL, STATE, AND LOCAL TAXES (1971 NOV)

(a) Except as may be otherwise provided in this contract, the contract price includes all applicable Federal, State, and local taxes and duties.

(b) Nevertheless, with respect to any Federal excise tax or duty on the transactions or property covered by this contract, if a statute, court decision, written ruling, or regulation takes effect after the contract date, and -

(1) results in the Contractor being required to pay or bear the burden of any such Federal excise tax or duty or increase in the rate thereof which would not otherwise have been payable on such transactions or property, the contract price shall be increased by the amount of such tax or duty or rate increase, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price as a contingency reserve or otherwise; or

(2) results in the Contractor not being required to pay or bear the burden of, or in his obtaining a refund or drawback of, any such Federal excise tax or duty which would otherwise have been payable on such transactions or property or which was the basis of an increase in the contract price, the contract price shall be decreased by the amount of the relief, refund, or drawback, or that amount shall be paid to the Government, as directed by the Contracting Officer. The contract price shall be similarly

decreased if the Contractor, through his fault or negligence or his failure to follow instructions of the Contracting Officer, is required to pay or bear the burden of, or does not obtain a refund or drawback of, any such Federal excise tax or duty.

(c) Paragraph (b) above shall not be applicable to social security taxes or to any other employment tax.

(d) No adjustment of less than \$100 shall be made in the contract price pursuant to paragraph (b) above.

(e) As used in paragraph (b) above, the term "contract date" means the date set for bid opening, or if this is a negotiated contract, the contract date. As to additional supplies or services procured by modification to this contract, the term "contract date" means the date of such modification.

(f) Unless there does not exist any reasonable basis to sustain an exemption, the Government upon the request of the Contractor shall, without further liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax; provided that, evidence appropriate to establish exemption from any Federal excise tax or duty which may give rise to either an increase or decrease in the contract price will be furnished only at the discretion of the Government.

(g) The Contractor shall promptly notify the Contracting Officer of matters which will result in either an increase or decrease in the contract price and shall take action with respect thereto as directed by the Contracting Officer. (DAR 7-103.10(a))

30. DAVIS-BACON ACT (40 U.S.C. 276a to a-7) (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Acts and to insert this clause in all subcontracts hereunder with private persons or firms)

(a) All mechanics and laborers, including apprentices and trainees, employed or working directly upon the site of the work shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Copeland Regulations (29 CFR, Part 3)), the full amounts due at time of payment computed at wage rates not less than the aggregate of the basic hourly rates and the rates of payments, contributions, or costs for any fringe benefits contained in the wage determination decision of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor or subcontractor and such laborers and mechanics. A copy of such wage determination decision shall be kept posted by the Contractor at the site of the work in a prominent place where it can be easily seen by the workers. The term mechanics and laborers shall be deemed to include apprentices and trainees not covered by an approved program as provided by the apprentice and trainee clause of the contract.

(b) The Contractor may discharge his obligation under this clause to workers in any classification for which the wage determination decision contains:

(1) Only a basic hourly rate of pay, by making payment at not less than such basic hourly rate, except as otherwise provided in the Copeland Regulations (29 CFR, Part 3); or

(2) Both a basic hourly rate of pay and fringe benefits payments, by making payment in cash, by irrevocably making contributions pursuant to a fund, plan, or program for, and or by assuming an enforceable commitment to bear the cost of, bona fide fringe benefits contemplated by the Davis-Bacon

Act, or by any combination thereof. Contributions made, or costs assumed, on other than a weekly basis shall be considered as having been constructively made or assumed during a weekly period to the extent that they apply to such period. Where a fringe benefit is expressed in a wage determination in any manner other than as an hourly rate and the Contractor pays a cash equivalent or provides an alternative fringe benefit, he shall furnish information with his payrolls showing how he determined that the cost incurred to make the cash payment or to provide the alternative fringe benefit is equal to the cost of the wage determination fringe benefit. In any case where the Contractor provides a fringe benefit different from any contained in the wage determination, he shall similarly show how he arrived at the hourly rate shown therefor. In the event of disagreement between or among the interested parties as to an equivalent of any fringe benefit, the Contracting Officer shall submit the question, together with his recommendation, to the Secretary of Labor for final determination.

(c) The assumption of an enforceable commitment to bear the cost of fringe benefits, or the provision of any fringe benefits not expressly listed in section 1(b)(2) of the Davis-Bacon Act or in the wage determination decision forming a part of the contract, may be considered as payment of wages only with the approval of the Secretary of Labor pursuant to a written request by the Contractor. The Secretary of Labor may require the Contractor to set aside assets, in a separate account, to meet his obligations under any unfunded plan or program.

(d) The Contracting Officer shall require that any class of laborers or mechanics, including apprentices and trainees, which is not listed in the wage determination decision and which is to be employed under the contract shall be classified or reclassified conformably to the wage determination decision, and shall report the action taken to the Secretary of Labor. If the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers or mechanics, including apprentices and trainees, to be used, the Contracting Officer shall submit the question, together with his recommendation, to the Secretary of Labor for final determination.

(e) In the event it is found by the Contracting Officer that any laborer or mechanic, including all apprentices and trainees, employed by the Contractor or any subcontractor directly on the site of the work covered by this contract has been or is being paid at a rate of wages less than the rate of wages required by paragraph (a) of this clause, or by the "Apprentices and Trainees" clause of this contract, the Contracting Officer may (i) by written notice to the Government Prime Contractor terminate his right to proceed with the work, or such part of the work as to which there has been a failure to pay said required wages, and (ii) prosecute the work to completion by contract or otherwise, whereupon such Contractor and his sureties shall be liable to the Government for any excess costs occasioned the Government thereby.

(f) Paragraphs (a) through (e) of the clause shall apply to this contract to the extent that it is (i) a prime contract with the Government subject to the Davis-Bacon Act or (ii) a subcontract also subject to the Davis-Bacon Act under such prime contract. (DAR 7-602.23(a)(i))

31. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION (40 U.S.C. 327-333) (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

This contract is subject to the Contract Work Hours and Safety Standards Act and to the applicable rules, regulations, and interpretations of the Secretary of Labor.

(a) The Contractor shall not require or permit any laborer or mechanic, including apprentices, trainees, watchmen, and guards in any workweek in which he is employed on any work under this contract to work in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such workweek on work subject to the provisions of the Contract Work Hours and Safety Standards Act unless such laborer or mechanic, including apprentices, trainees, watchmen, and guards, receives compensation at a rate not less than one and one-half times his basic rate of pay for all such hours worked in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such workweek, whichever is the greater number of overtime hours. The "basic rate of pay," as used in this clause, shall be the amount paid per hour, exclusive of the Contractor's contribution or cost for fringe benefits and any cash payment made in lieu of providing fringe benefits, or the basic hourly rate contained in the wage determination, whichever is greater.

(b) In the event of any violation of the provisions of paragraph (a), the Contractor shall be liable to any affected employee for any amounts due, and to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including an apprentice, trainee, watchman, or guard, employed in violation of the provisions of paragraph (a) in the sum of \$10 for each calendar day on which such employee was required or permitted to be employed on such work in excess of eight (8) hours or in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by paragraph (a). (DAR 7-602.23(a)(ii))

32. APPRENTICES AND TRAINEES (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

(a) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau, or if a person is employed in his first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a state apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification employed on this contract shall not be greater than the ratio permitted to the Contractor as to his entire work force under the register program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in paragraph (b) of this clause or is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor shall furnish to the Contracting Officer written evidence of the registration of his program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages of the journeyman hourly rates), for the area of construction prior to using apprentices on the contract work. The wage rate paid apprentices shall be not

less than the appropriate percentage of the journeyman's rate contained in the applicable wage determination.

(b) Trainees will be permitted to work at less than the predetermined rate for the work performed when they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification, by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The ratio of trainees to journeymen on this contract shall not be greater than permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and not participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor shall furnish the Contracting Officer written evidence of the certification of his program, the registration of the trainee, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws the approval of a training program, the Contractor shall no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of this contract. (DAR 7-602.23(a)(iii))

33. PAYROLLS AND BASIC RECORDS (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

(a) The Contractor shall maintain payrolls and basic records relating thereto during the course of the work and shall preserve them for a period of three (3) years thereafter for all laborers and mechanics, including apprentices, trainees, watchmen, and guards, working at the site of the work. Such records shall contain the name and address of each such employee, his correct classification, rate of pay (including rates of contributions for, or costs assumed to provide, fringe benefits), daily and weekly number of hours worked, deductions made and actual wages paid. (NOTE: Watchmen and guards are reflected on payroll records for Contract Work Hours and Safety Standards Act purposes only.) Whenever the Contractor has obtained approval from the Secretary of Labor as provided in paragraph (c) of the clause entitled "Davis-Bacon Act," he shall maintain records which show the commitment, its approval, written communication of the plan or program to the laborers or mechanics affected, and the costs anticipated or incurred under the plan or program.

(b) The Contractor shall submit weekly a copy of all payrolls to the Contracting Officer. The Government Prime Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. The copy shall be accompanied by a statement signed by the Contractor indicating that the payrolls are correct and complete, that the wage rates contained therein are not less than those determined by the Secretary of Labor, and that the classifications set forth for each laborer or mechanic, including apprentices and trainees, conform with the work he performed. Weekly submission of the "Statement of Compliance" required under this contract and the Copeland Regulations of the Secretary of Labor (29 CFR, Part 3) shall satisfy the

requirement for submission of the above statement. The Contractor shall submit also a copy of any approval by the Secretary of Labor with respect to fringe benefits which is required by paragraph (c) of the clause entitled "Davis-Bacon Act."

(c) The Contractor shall make the records required under this clause available for inspection by authorized representatives of the Contracting Officer and the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. (DAR 7-602.23(a)(iv))

34. COMPLIANCE WITH COPELAND REGULATIONS (1964 JUN)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

The Contractor shall comply with the Copeland Regulations of the Secretary of Labor (29 CFR, Part 3) which are incorporated herein by reference. (DAR 7-602.23(a)(v))

35. WITHHOLDING OF FUNDS (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

(a) The Contracting Officer may withhold or cause to be withheld from the Government Prime Contractor so much of the accrued payments or advances as may be considered necessary (i) to pay laborers and mechanics, including apprentices, trainees, watchmen, and guards, employed by the Contractor or any subcontractor on the work the full amount of wages required by the contract, and (ii) to satisfy any liability of the Contractor and any subcontractor for liquidated damages under paragraph (b) of the clause entitled "Contract Work Hours and Safety Standards Act-Overtime Compensation."

(b) If the Contractor or any subcontractor fails to pay any laborer, mechanic, apprentice, trainee, watchman, or guard employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Government Prime Contractor, take such action as may be necessary to cause suspension of any further payments or advances until such violations have ceased. (DAR 7-602.23(a)(vi))

36. SUBCONTRACTS (1972 FEB)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

The Contractor agrees to insert the clauses hereof entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act-Overtime Compensation," "Apprentices and Trainees," "Payrolls and Basic Records," "Compliance with Copeland Regulations," "Withholding of Funds," "Subcontracts," and "Contract Termination-Debarment" in all subcontracts. The term "Contractor" as used in such clauses in any subcontract shall be deemed to refer to the subcontractor except in the phrase "Government Prime Contractor." (DAR 7-602.23(a)(vii))

37. CONTRACT TERMINATION - DEBARMENT (1972 APR)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours

Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

A breach of the clauses hereof entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act-Overtime Compensation," "Apprentices and Trainees," "Payrolls and Basic Records," "Compliance with Copeland Regulations," "Withholding of Funds," and "Subcontracts" may be grounds for termination of the contract, and for debarment as provided in 29 CFR 5.6. (DAR 7-602.23(a)(viii))

38. DISPUTES CONCERNING LABOR STANDARDS (1977 DEC)

(If this contract is with a State or political subdivision thereof, the Contractor agrees to comply with the requirements of the Contract Work Hours Standards Act and to insert this clause in all subcontracts hereunder with private persons or firms)

Disputes arising out of the labor standards provisions of this contract shall be subject to the Disputes clause except to the extent such disputes involve the meaning of classifications or wage rates contained in the wage determination decision of the Secretary of Labor or the applicability of the labor provisions of this contract which questions shall be referred to the Secretary of Labor in accordance with the procedures of the Department of Labor. (DAR 7-602.23(a)(ix))

39. CONTRACTOR INSPECTION SYSTEM (1964 NOV)

The Contractor shall (i) maintain an adequate inspection system and perform such inspections as will assure that the work performed under the contract conforms to contract requirements, and (ii) maintain and make available to the Government adequate records of such inspections. (DAR 7-602.10(a))

40. GRATUITIES (1952 MAR)

(a) The Government may, by written notice to the Contractor, terminate the right of the Contractor to proceed under this contract if it is found, after notice and hearing, by the Secretary or his duly authorized representative, that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the Government with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such contract; provided, that the existence of the facts upon which the Secretary or his duly authorized representative makes such findings shall be in issue and may be reviewed in any competent court.

(b) In the event this contract is terminated as provided in paragraph (a) hereof, the Government shall be entitled (i) to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the contract by the Contractor, and (ii) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the Secretary or his duly authorized representative) which shall be not less than three nor more than ten times the costs incurred by the Contractor in providing any such gratuities to any such officer or employee.

(c) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract. (DAR 7-104.16)

41. SUBCONTRACTING PLAN FOR SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS CONCERNS (FORMALLY ADVERTISED) (1979 JUL)

(The following clause is applicable if this contract (1) offers subcontracting possibilities, (2) is expected to exceed \$500,000, or \$1,000,000 in the case of construction of any public facility and (3) is required to include the clause in DAR 7-104.14(a))

(a) The apparent low bidder, upon request by the contracting officer, shall submit a subcontracting plan which addresses separately subcontracting with small business concerns and small disadvantaged business concerns, and which shall be included in and made a material part of the resultant contract. The subcontracting plan shall be submitted within the time specified by the contracting officer. Failure to submit the subcontracting plan shall make the bidder ineligible for the award of a contract.

As a minimum, the subcontracting plan shall include:

(1) Separate percentage goals (expressed in terms of percentage of total planned subcontracting dollars) for the utilization as subcontractors of small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals; for the purposes of the subcontracting plan, the Contractor shall include all first tier subcontracts to be awarded in performance of this contract, including a proportionate share of products, services, etc., whose costs are normally allocated as indirect or overhead costs when reasonably determined to be attributable to this contract.

(2) The name of an individual within the employ of the bidder who will administer the subcontracting plan of the bidder and a description of the duties of such individual;

(3) A description of the efforts the bidder will make to assure that small business and small disadvantaged business concerns will have an equitable opportunity to compete for subcontracts;

(4) Assurances that the bidder will include the clause entitled "Utilization of Small Business and Small Disadvantaged Business Concerns" in all subcontracts which offer further subcontracting opportunities, and that the bidder will require all subcontractors (except small business concerns) who receive subcontracts in excess of \$1,000,000 in the case of a contract for the construction of any public facility, or in excess of \$500,000 in the case of all other contracts, to adopt a plan in consonance with this clause;

(5) Assurances that the bidder will submit such periodic reports and cooperate in any studies or surveys as may be required by the contracting agency or the Small Business Administration in order to determine the extent of compliance by the bidder with the subcontracting plan; and

(6) A recitation of the types of records the successful bidder will maintain to demonstrate procedures which have been adopted to comply with the requirements and goals set forth in the plan, including the establishment of source lists of small business concerns and small disadvantaged business concerns; and efforts to identify and award subcontracts to such small business concerns.

(b) In order to effectively implement this plan, the Contractor shall:

(1) Issue and promulgate company wide policy statements in support of this effort, develop written procedures and work instructions, and assign specific responsibilities regarding the requirements of this clause.

(2) Demonstrate continuing management interest and involvement in support of these programs through such actions as regular reviews of progress and establishment of overall corporate and divisional goals and objectives.

(3) Train and motivate Contractor personnel in support of these programs.

(4) Assist small business and small disadvantaged business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business and disadvantaged subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(5) Provide adequate and timely consideration of the potentialities of small business and small disadvantaged business concerns in all "make-or-buy" decisions.

(6) Counsel and discuss subcontracting opportunities with representatives of small and disadvantaged business firms as are referred by the Small and Disadvantaged Business Utilization Specialist responsible for monitoring performance under this program and representatives of the SBA.

(c) The Contractor shall submit DD Form 1140-1 in accordance with instructions provided on the form.

(d) The bidder understands that:

(1) Prior compliance of the bidder with other such subcontracting plans under previous contracts will be considered by the contracting officer in determining the responsibility of the bidder for award of the contract.

(2) Subcontracting plans are not required of small business concerns.

(3) The failure of any Contractor or subcontractor to comply in good faith with (i) the clause entitled "Utilization of Small Business Concerns and Small Disadvantaged Business Concerns", or (ii) the terms of any subcontracting plan required by this Small Business and Small Disadvantaged Business Subcontracting Plan (Advertised) provision, will be a material breach of the contract or subcontract. (DAR 7-104.14(c))

42. NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (1965 JAN)

(The provisions of this clause shall be applicable only if the amount of this contract exceeds \$10,000.)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) This clause shall be included in all subcontracts. (DAR 7-103.23)

43. AUTHORIZATION AND CONSENT (1964 MAR)

The Government hereby gives its authorization and consent (without prejudice to any rights of indemnification) for all use and manufacture, in the performance of this contract or any part hereof or any amendment hereto or any subcontract hereunder (including any lower-tier subcontract), of any invention described in and covered by a patent of the United States (i) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract, or (ii) utilized in the

machinery, tools, or methods the use of which necessarily results from compliance by the Contractor or the using subcontractor with (a) specifications or written provisions now or hereafter forming a part of this contract, or (b) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clauses, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted. (DAR 7-103.22)

44. COMPOSITION OF CONTRACTOR (1965 JAN)

If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder. (DAR 7-602.32)

45. SITE INVESTIGATION (1965 JAN)

The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the work. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from information presented by the drawings and specifications made a part of this contract. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Government. (DAR 7-602.33)

46. PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES, AND IMPROVEMENTS (1965 JAN)

(a) The Contractor will preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site of work which is not to be removed and which does not unreasonably interfere with the construction work. Care will be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations or by the careless operation of equipment, or by workmen, shall be trimmed with a clean cut and painted with an approved tree pruning compound as directed by the Contracting Officer.

(b) The Contractor will protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to him, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this contract or the failure to exercise reasonable care in the performance of the work. If the Contractor fails or refuses to repair any such damage promptly, the Contracting Officer may have the necessary work performed and charge the cost thereof to the Contractor. (DAR 7-602.34)

47. OPERATIONS AND STORAGE AREAS (1965 JAN)

(a) All operations of the Contractor (including storage of materials) upon Government premises shall be confined to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by his operations.

(b) Temporary buildings (storage sheds, shops, offices, etc.) may be erected by the Contractor only with the approval of the Contracting Officer, and shall be built with labor and materials furnished by the Contractor without expense to the Government. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by him at his expense upon the completion of the work. With the written consent of the Contracting Officer, such buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways or construct and use such temporary roadways as may be authorized by the Contracting Officer. Where materials are transported in the prosecution of the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State or local law or regulation. When it is necessary to cross curbs or sidewalks, protection against damage shall be provided by the Contractor and any damaged roads, curbs, or sidewalks shall be repaired by, or at the expense of the Contractor. (DAR 7-602.35)

48. MODIFICATION PROPOSALS - PRICE BREAKDOWN (1968 APR)

The Contractor, in connection with any proposal he makes for a contract modification, shall furnish a price breakdown, itemized as required by the Contracting Officer. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract, and overhead costs, as well as profit, and shall cover all work involved in the modification, whether such work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefor shall also be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the Contracting Officer. (DAR 7-602.36)

49. SUBCONTRACTORS (1979 MAR)

(In construction contracts to be performed in United States possessions (as defined in DAR 18-703.2) and in Puerto Rico, the second sentence is modified to refer only to the clauses required by DAR 18-703.2)

Within seven days after the award of any subcontract either by himself or a subcontractor, the Contractor shall deliver to the Contracting Officer a completed DD Form 1566. The form shall include the subcontractor's acknowledgement of the inclusion in his subcontract of the clauses of this contract entitled "Davis-Bacon Act," "Contract Work Hours and Safety Standards Act-Overtime Compensation," "Apprentices and Trainees," "Compliance with Copeland Regulations," "Withholding of Funds," "Subcontracts," "Contract Termination-Debarment," and "Payrolls and Basic Records." Nothing contained in this contract shall create any contractual relation between the subcontractor and the Government. (DAR 7-602.37)

50. CLEANING UP (1965 JAN)

The Contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste material or rubbish and prior to completion of the work remove any rubbish from the premises and all tools, scaffolding, equipment, and materials not the property of the Government. Upon completion of the construction the Contractor shall

leave the work and premises in a clean, neat and workmanlike condition satisfactory to the Contracting Officer. (DAR 7-602.40)

51. ADDITIONAL DEFINITIONS (1965 JAN)

(a) Wherever in the specifications or upon the drawings the words "directed," "required," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the "direction," "requirement," "ordered," "designation," or "prescription," of the Contracting Officer is intended and similarly the words "approved," "acceptable," "satisfactory" or words of like import shall mean "approved by" or "acceptable to," or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(b) Where "as shown," "as indicated," "as detailed," or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provided complete in place," that is "furnished and installed." (DAR 7-602.41)

52. ACCIDENT PREVENTION (1977 JUN)

(a) In order to provide safety controls for protection to the life and health of employees and other persons; for prevention of damage to property, materials, supplies, and equipment; and for avoidance of work interruptions in the performance of this contract, the Contractor shall comply with all pertinent provisions of Corps of Engineers Manual, EM 385-1-1, dated 1 June 1977, entitled "General Safety Requirements", as amended, and will also take or cause to be taken such additional measures as the Contracting Officer may determine to be reasonably necessary for the purpose.

(b) The Contractor will maintain an accurate record of, and will report to the Contracting Officer in the manner and on the forms prescribed by the Contracting Officer, exposure data and all accidents resulting in death, traumatic injury, occupational disease, and damage to property, materials, supplies and equipment incident to work performed under this contract.

(c) The Contracting Officer will notify the Contractor of any noncompliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

(d) Compliance with the provisions of this clause by subcontractors will be the responsibility of the Contractor.

(e) Prior to commencement of the work the Contractor will:

- (1) submit in writing his proposals for effectuating this provision for accident prevention;
- (2) meet in conference with representatives of the Contracting Officer to discuss and develop mutual understandings relative to administration of the over-all safety program. (DAR 7-602.42(a) & (b))

53. GOVERNMENT INSPECTORS (1965 JAN)

The work will be conducted under the general direction of the Contracting Officer and is subject to inspection by his appointed inspectors to insure

strict compliance with the terms of the contract. No inspector is authorized to change any provision of the specifications without written authorization of the Contracting Officer, nor shall the presence or absence of an inspector relieve the Contractor from any requirements of the contract. (DAR 7-602.43)

54. RIGHTS IN SHOP DRAWINGS (1966 APR)

(Applicable to all contracts calling for the delivery of shop drawings)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier. (DAR 7-602.47)

55. AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (1976 JUL)

(This clause is applicable pursuant to 41 C.F.R. 60-250, if this contract is for \$10,000 or more.)

(a) The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the Contractor other than the one wherein the contract is being performed but excluding those of independently operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required.

State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs (d) and (e).

(c) Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the Contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.

(d) The reports required by paragraph (b) of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the Contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C. 1787. The Contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The Contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the Contracting Officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

(e) Whenever the Contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(f) This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(g) The provisions of paragraphs (b), (c), (d) and (e) of this clause do not apply to openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.

(h) As used in this clause:

(1) "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories: production and nonproduction; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive, administrative, and professional openings as are compensated on a salary basis of less than \$25,000 per year. This term includes full-time employment, temporary employment of more than three (3) days duration, and part-time employment. It does not include openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.

(2) "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

(3) "Openings which the Contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the Contractor proposes to fill from regularly established "recall" lists.

(4) "Openings which the Contractor proposes to fill pursuant to a customary and traditional employer-union hiring arrangement" means employment openings which the Contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the Contractor and representatives of his employees.

(i) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Vietnam Era Veterans' Readjustment Assistance Act, hereinafter referred to as the "Act" (38 U.S.C. 2012).

(j) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(k) The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, Office of Federal Contract Compliance Programs, provided by or through the Contracting Officer. Such notice shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

(l) The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.

(m) The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance. (DAR 7-103.27)

56. VALUE ENGINEERING INCENTIVE (1977 AUG)

(The following clause is applicable if this contract is in excess of \$100,000)

(a) Application. This clause applies to a Contractor developed and documented Value Engineering Change Proposal (VECP) which:

- (i) requires a change to this contract to implement the VECP; and
- (ii) reduces the contract price without impairing essential function or characteristics, provided that it is not based solely on a change in deliverable end item quantities.

(b) Documentation. As a minimum, the following information shall be submitted by the contractor with each VECP:

- (i) a description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each; justification where function or characteristics of a work item is being altered; and the effect of the change on the performance of the end item;
- (ii) an analysis and itemization of the requirements of the contract which must be changed if the VECP is accepted and a recommendation as to how to make each such change (e.g., a suggested specification revision);
- (iii) a separate detailed cost estimate for both the existing contract requirement and the proposed change to provide an estimate of the reduction in costs, if any, that will result from acceptance of the VECP, taking into account the costs of development and implementation by the Contractor (including any amount attributable to subcontracts in accordance with paragraph (f) below);
- (iv) a prediction of any effects the proposed change would have on related costs to the Military Department such as Government furnished property costs, and costs of maintenance and operation;
- (v) a statement of the time by which a change order adopting the VECP must be issued so as to obtain the maximum cost reduction during the remainder of this contract, noting any effect on the contract completion time or delivery schedule; and
- (vi) identification of any previous submission of the VECP, including the dates submitted, the agencies involved, the numbers of the Government contracts involved, and the previous actions by the Government, if known.

(c) Submission. To expedite a determination, VECPs shall be submitted to the Resident Engineer at the worksite with a copy to the Contracting Officer. Proposals shall be processed expeditiously; however, the Government shall not be liable for any delay in acting upon any proposal submitted pursuant to this clause. If the evaluation period is likely to exceed 45 calendar days, the PCO shall promptly notify the Contractor of the estimated decision date and provide the reasons for the additional time required. The Contractor has the right to withdraw, in whole or in part, any VECP not accepted by the Government within the period specified in the VECP.

(d) Acceptance. The Contracting Officer may accept, in whole or in part, by contract modification any VECP submitted pursuant to this clause. The Contracting Officer may accept the VECP even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change. Until a notice to proceed is issued or a contract modification applies a VECP to this contract, the Contractor shall remain obligated to perform in accordance with this contract. Contract modifications made pursuant to this clause will so state. The decision of the Contracting Officer as to the acceptance of any VECP under this contract shall be final and shall not be subject to the "Disputes" clause of this contract.

(e) Sharing. If a VECP submitted by the Contractor pursuant to this clause is accepted, the contract price shall be adjusted without regard to profit in accordance with the following provisions:

- (i) Definition:

- (A) Instant contract savings to the Contractor (ICS) are the estimated reduction in the Contractor's cost of performance resulting from the acceptance of the VECP. The proposed cost reduction includes estimated allowable Contractor development and implementation costs (CC). The Contractor's development and implementation costs include any subcontractor development and implementation costs (see (f) below). For purposes of this clause, Contractor development costs are those costs incurred after the Contractor has identified a specific VE project and prior to acceptance and implementation by the Government.
- (B) Government Costs (GC) are those DOD costs which directly result from development and implementation of the VECP, such as test and evaluation of the VECP.
- (ii) Calculations and Actions.
Multiply ICS by 45% and GC by 55%.
Add these two results, e.g., (.45 ICS + .55 GC) and subtract from the contract price

(f) Subcontracts. The Contractor shall include appropriate VE arrangements in any subcontract of \$50,000 or greater, and may include such arrangements in contracts of lesser value. To compute any adjustment in the contract price under paragraph (e) above, the Contractor's cost of development and implementation of a VECP which is accepted under this contract shall include any development and implementation costs of a subcontractor which clearly pertains to such VECP, but shall exclude any VE incentive payments which the Contractor may make to a subcontractor. The Contractor may make whatever VE incentive payment arrangements he chooses with his subcontractors, provided that any payments to subcontractors under such arrangements are made from Contractor's, and not the Government's, share of the savings resulting from the VECP.

(g) Data. The Contractor may restrict the Government's right to use any sheet of a VECP or of the supporting data, submitted pursuant to this clause, in accordance with the terms of the following legend if it is marked on such sheet:

"This data furnished pursuant to the Value Engineering Incentive clause of contract _____ shall not be disclosed outside the Government, or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a VECP submitted under said clause. This restriction does not limit the Government's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the Contractor or from another source, without limitations."

In the event of acceptance of the VECP, the Contractor hereby grants to the Government unlimited rights, as defined in the clause of DAR 7-104.9(a), in the VECP and supporting data, except that, with respect to data which qualifies as and is submitted as limited rights technical data in accordance with the clause of DAR 7-104.9(a), the Government shall have the rights specified in the contract modification referred to in paragraph (d) hereof and the data shall be appropriately marked. (DAR 7-602.50))

57. AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (1976 MAY)

(Contracts and subcontracts are exempt from the requirements of the following clause with regard to work performed outside the United States by employees who were not recruited within the United States.)

(a) The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(c) In the event of the Contractor's noncompliance with the requirements of this clause, action for noncompliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.

(d) The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the Contracting Officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.

(e) The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physically and mentally handicapped individuals.

(f) The Contractor will include the provisions of this clause in every subcontract or purchase order of \$2,500 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance. (DAR 7-103.28)

58. CLEAN AIR AND WATER (1975 OCT)

(Applicable only if the contract exceeds \$100,000, or the contracting officer has determined that orders under an indefinite quantity contract in any one year will exceed \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)) and is listed by EPA, or the contract is not otherwise exempt.)

(a) The Contractor agrees as follows:

(i) To comply with all the requirements of section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Public Law 91-604) and section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251, as amended by Public Law 92-500), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this contract;

(ii) That no portion of the work required by this prime contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date this contract was awarded unless and

until the EPA eliminates the name of such facility or facilities from such listing;

(iii) To use his best efforts to comply with clean air standards and clean water standards at the facilities in which the contract is being performed; and

(iv) To insert the substance of the provisions of this clause in any nonexempt subcontract, including this paragraph (iv).

(b) The terms used in this clause have the following meanings.

(i) The term "Air Act" means the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Public Law 91-604).

(ii) The term "Water Act" means Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Public Law 92-500).

(iii) The term "clean air standards" means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in section 110(d) of the Clean Air Act (42 U.S.C. 1857c-5(d), an approved implementation procedure or plan under section 111(c) or section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).

(iv) The term "clean water standards" means any enforceable limitation, control, condition, prohibition, standard or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by a local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317)

(v) The term "compliance" means compliance with clean air or water standards. Compliance shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirement of the Air Act or Water Act and regulations issued pursuant thereto.

(vi) The term "facility" means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a contractor, subcontractor, to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

(vii) The term "nonexempt contract or subcontract" means a contract or subcontract of more than \$100,000 which is not otherwise exempted pursuant to the EPA regulations implementing the Air Act and Water Act (40 CFR 15.5), as further implemented in DAR 1-2302.4 or in FPR 1-1.2302-4 (whichever is applicable) and the procedures of the Department awarding the contract. (DAR 7-103.29)

59. NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (1958 SEP)

(a) Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Contracting Officer.

(b) The Contractor agrees to insert the substance of this clause, including this paragraph (b), in any subcontract hereunder as to which a labor dispute may delay the timely performance of this contract; except that each such subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify his next higher tier subcontractor, or the prime contractor, as the case may be, of all relevant information with respect to such dispute. (DAR 7-104.4)

60. CONTRACT PRICES - BIDDING SCHEDULE (1968 APR)

(The following clause is applicable to contracts containing unit prices)

Payment for the various items listed in the Bidding Schedule shall constitute full compensation for furnishing all plant, labor, equipment, appliances, and materials, and for performing all operations required to complete the work in conformity with the drawings and specifications. All costs for work not specifically mentioned in the Bidding Schedule shall be included in the contract prices for the items listed. (DAR 7-603.5)

61. PRIORITIES, ALLOCATIONS, AND ALLOTMENTS (1975 OCT)

(The following clause is applicable to rateable contracts)

The Contractor shall follow the provisions of DMS Reg. 1 or DPS Reg. 1 and all other applicable regulations and orders of the Bureau of Domestic Commerce in obtaining controlled materials and other products and materials needed to fill this order. (DAR 7-104.18)

62. PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - PRICE ADJUSTMENT (1970 JAN)

(The following clause is applicable if this contract is in excess of \$100,000)

(a) This clause shall become operative only with respect to any modification of this contract which involves aggregate increases and/or decreases in costs plus applicable profits in excess of \$100,000 unless the modification is priced on the basis of adequate competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation. The right to price reduction under this clause is limited to defects in data relating to such modification.

(b) If any price, including profit, or fee, negotiated in connection with any price adjustment under this contract was increased by any significant sums because:

(i) the Contractor furnished cost or pricing data which was not complete, accurate and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;

(ii) a subcontractor, pursuant to the clause of this contract entitled "Subcontractor Cost or Pricing Data" or "Subcontractor Cost or Pricing Data - Price Adjustments" or any subcontract clause therein required, furnished cost or pricing data which was not complete, accurate and current as certified in the subcontractor's Certificate of Current Cost or Pricing Data;

(iii) a subcontractor or prospective subcontractor furnished cost or pricing data which was required to be complete, accurate and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which was not complete, accurate and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or

(iv) the Contractor or a subcontractor or prospective subcontractor furnished any data, not within (i), (ii) or (iii) above, which was not accurate, as submitted;

the price shall be reduced accordingly and the contract shall be modified in writing as may be necessary to reflect such reduction. However, any reduction in the contract price due to defective subcontract data of a prospective subcontractor, when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount (plus applicable overhead and profit markup) by which the actual subcontract, or actual cost to the Contractor if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor, provided the actual subcontract price was not affected by defective cost or pricing data.

Note: Since the contract is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontracts, it is expected that the contractor may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the contractor. However, the inclusion of such a clause and the terms thereof are matters for negotiation and agreement between the contractor and the subcontractor, provided that they are consistent with DAR 23-203 relating to Disputes provisions in subcontracts. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his lower tier subcontractors. (DAR 7-104.29(b))

63. INTEREST (1972 MAY)

Notwithstanding any other provision of this contract, unless paid within thirty (30) days, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code) shall bear interest from the date due until paid and shall be subject to adjustments as provided by Part 6 of Appendix E of the Defense Acquisition Regulation, as in effect on the date of this contract. The interest rate per annum shall be the interest rate in effect which has been established by the Secretary of the Treasury pursuant to Public Law 92-41; 85 STAT 97 for the Renegotiation Board, as of the date the amount becomes due as herein provided. Amounts shall be due upon the earliest one of (i) the date fixed pursuant to this contract; (ii) the date of the first written demand for payment, consistent with this contract, including demand consequent upon default termination; (iii) the date of transmittal by the Government to the Contractor of a proposed supplemental agreement to confirm completed negotiations fixing the amount; or (iv) if this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or in connection with a negotiated pricing agreement not confirmed by contract supplement. (DAR 7-104.39)

64. AUDIT BY DEPARTMENT OF DEFENSE (1978 AUG)

(The following clause is applicable unless this contract was entered into by formal advertising and is not in excess of \$100,000)

(a) General. The Contracting Officer or his representatives shall have the audit and inspection rights described in the applicable paragraphs (b), (c) and (d) below.

(b) Examination of Costs. If this is a cost reimbursement type, incentive, time and materials, labor hour, or price redeterminable contract, or any combination thereof, the Contractor shall maintain, and the Contracting Officer or his representatives shall have the right to examine books, records,

documents, and other evidence and accounting procedures and practices, sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of this contract. Such right of examination shall include inspection at all reasonable times of the Contractor's plants, or such parts thereof, as may be engaged in the performance of this contract.

(c) Cost or Pricing Data. If the Contractor submitted cost or pricing data in connection with the pricing of this contract or any change or modification thereto, unless such pricing was based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contracting Officer or his representatives who are employees of the United States Government shall have the right to examine all books, records, documents and other data of the Contractor related to the negotiation, pricing or performance of such contract, change or modification, for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data submitted. Additionally, in the case of pricing any change or modification exceeding \$100,000 to formally advertised contracts, the Comptroller General of the United States or his representatives who are employees of the United States Government shall have such rights. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein.

(d) Reports. If the Contractor is required to furnish Contractor Cost Data Reports (CCDR), Contract Fund Status Reports (CFSR), or Cost Performance Reports (CPR) the Contracting Officer or his representatives shall have the right to examine books, records, other documents, and supporting materials, for the purpose of evaluating (i) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports, and (ii) the data reported.

(e) Availability. The materials described in (b), (c) and (d) above shall be made available at the office of the Contractor, at all reasonable times, for inspection, audit, or reproduction, until the expiration of three years from the date of final payment under this contract or such lesser time specified in Appendix M of the Defense Acquisition Regulation, and for such longer period, if any, as is required by applicable statute, or by other clauses of this contract, or by (1) and (2) below:

(1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for a period of three years from the date of any resulting final settlement.

(2) Records which relate to appeals under the "Disputes" clause of this contract, or litigation or the settlement of claims arising out of the performance of this contract, shall be made available until such appeals, litigation, or claims have been disposed of.

(f) The Contractor shall insert a clause containing all the provisions of this clause, including this paragraph (f), in all subcontracts exceeding \$10,000 hereunder, except altered as necessary for proper identification of the contracting parties and the Contracting Officer under the Government prime contract. (DAR 7-104.41(a))

65. SUBCONTRACTOR COST OR PRICING DATA - PRICE ADJUSTMENTS (1970 JAN)

(The following clause is applicable if this contract is in excess of \$100,000)

(a) Paragraphs (b) and (c) of this clause shall become operative only with respect to any modification made pursuant to one or more provisions of

this contract which involves aggregate increases and/or decreases in costs plus applicable profits expected to exceed \$100,000. The requirements of this clause shall be limited to such modifications.

(b) The Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances: (i) prior to the award of any subcontract the amount of which is expected to exceed \$100,000 when entered into; (ii) prior to the pricing of any subcontract modification which involves aggregate increases and/or decreases in costs plus applicable profits expected to exceed \$100,000; except where the price is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

(c) The Contractor shall require subcontractors to certify that to the best of their knowledge and belief the cost and pricing data submitted under (b) above is accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract change or modification.

(d) The Contractor shall insert the substance of this clause including this paragraph (d) in each subcontract which exceeds \$100,000. (DAR 7-104.42(b))

66.1 GOVERNMENT-FURNISHED PROPERTY (SHORT FORM) (1964 NOV)

(The following clause is applicable when Government Property having an acquisition cost of \$50,000 or less is furnished to or acquired by the Contractor)

(a) The Government shall deliver to the Contractor, for use only in connection with this contract, the property described in the schedule or specifications (hereinafter referred to as "Government-furnished property"), at the times and locations stated therein. If the Government-furnished property, suitable for its intended use, is not so delivered to the Contractor, the Contracting Officer shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this contract pursuant to the procedures of the "Changes" clause hereof.

(b) Title to Government-furnished property shall remain in the Government. The Contractor shall maintain adequate property control records of Government-furnished property in accordance with sound industrial practice.

(c) Unless otherwise provided in this contract, the Contractor, upon delivery to him of any Government-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of this contract.

(d) The Contractor shall, upon completion of this contract, prepare for shipment, deliver f.o.b. origin, or dispose of all Government-furnished property not consumed in the performance of this contract or not theretofore delivered to the Government, as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or paid in such other manner as the Contracting Officer may direct. (DAR 7-104.24(f))

66.2 GOVERNMENT PROPERTY (FIXED PRICE) (1968 SEP)

(The following clause is applicable when Government Property having an acquisition cost in excess of \$50,000 is furnished to or acquired by the Contractor)

(a) Government-Furnished Property. The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract,

the property described as Government-furnished property in the Schedule or specifications, together with such related data and information as the Contractor may request and as may reasonably be required for the intended use of such property (hereinafter referred to as "Government-furnished property"). The delivery or performance dates for the supplies or services to be furnished by the Contractor under this contract are based upon the expectation that Government-furnished property suitable for use (except for such property furnished "as is") will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet such delivery or performance dates. In the event that Government-furnished property is not delivered to the Contractor by such time or times, the Contracting Officer shall, upon timely written request made by the Contractor, make a determination of the delay, if any, occasioned the Contractor thereby, and shall equitably adjust the delivery or performance dates or the contract price, or both, and any other contractual provision affected by any such delay, in accordance with the procedures provided for in the clause of this contract entitled "Changes." Except for Government-furnished property furnished "as is," in the event the Government-furnished property is received by the Contractor in a condition not suitable for the intended use the Contractor shall, upon receipt thereof, notify the Contracting Officer of such fact and, as directed by the Contracting Officer, either (i) return such property at the Government's expense or otherwise dispose of the property, or (ii) effect repairs or modifications. Upon the completion of (i) or (ii) above, the Contracting Officer upon written request of the Contractor shall equitably adjust the delivery or performance dates or the contract price, or both, and any other contractual provision affected by the rejection or disposition, or the repair or modification, in accordance with the procedures provided for in the clause of this contract entitled "Changes." The foregoing provisions for adjustment are exclusive and the Government shall not be liable to suit for breach of contract by reason of any delay in delivery of Government-furnished property or delivery of such property in a condition not suitable for its intended use.

(b) Changes in Government-furnished Property.

(1) By notice in writing, the Contracting Officer may (i) decrease the property provided or to be provided by the Government under this contract, or (ii) substitute other Government-owned property for property to be provided by the Government, or to be acquired by the Contractor for the Government, under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct with respect to the removal and shipping of property covered by such notice.

(2) In the event of any decrease in or substitution of property pursuant to subparagraph (1) above, or any withdrawal of authority to use property provided under any other contract or lease, which property the Government had agreed in the Schedule to make available for the performance of this contract, the Contracting Officer, upon the written request of the Contractor (or, if the substitution of property causes a decrease in the cost of performance, on his own initiative), shall equitably adjust such contractual provisions as may be affected by the decrease, substitution, or withdrawal, in accordance with the procedures provided for in the "Changes" clause of this contract.

(c) Title. Title to all property furnished by the Government shall remain in the Government. In order to define the obligations of the parties

under this clause, title to each item of facilities, special test equipment, and special tooling (other than that subject to a "Special Tooling" clause) acquired by the Contractor for the Government pursuant to this contract shall pass to and vest in the Government when its use in the performance of this contract commences, or upon payment therefor by the Government, whichever is earlier, whether or not title previously vested. All Government-furnished property, together with all property acquired by the Contractor title to which vests in the Government under this paragraph, is subject to the provisions of this clause and is hereinafter collectively referred to as "Government property." Title to Government property shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such Government property, or any part thereof, be or become a fixture or lose its identity as personalty by reason of affixation to any realty.

(d) Property Administration. The Contractor shall comply with the provisions of Appendix B, Defense Acquisition Regulation, as in effect on the date of the contract, which is hereby incorporated by reference and made a part of this contract. Material to be furnished by the Government shall be ordered or returned by the Contractor, when required, in accordance with the "Manual for Military Standard Requisitioning and Issue Procedure (MILSTRIP) for Defense Contractors" (Appendix H, Defense Acquisition Regulation) as in effect on the date of this contract, which Manual is hereby incorporated by reference and made a part of this contract.

(e) Use of Government Property. The Government property shall, unless otherwise provided herein or approved by the Contracting Officer, be used only for the performance of this contract.

(f) Utilization, Maintenance and Repair of Government Property. The Contractor shall maintain and administer, in accordance with sound industrial practice, and in accordance with applicable provisions of Appendix B, a program for the utilization, maintenance, repair, protection, and preservation of Government property until disposed of by the Contractor in accordance with this clause. In the event that any damage occurs to Government property the risk of which has been assumed by the Government under this contract, the Government shall replace such items or the Contractor shall make such repair of the property as the Government directs; provided however, that if the Contractor cannot effect such repair within the time required, the Contractor shall dispose of such property in the manner directed by the Contracting Officer. The contract price includes no compensation to the Contractor for the performance of any repair or replacement for which the Government is responsible, and an equitable adjustment will be made in any contractual provisions affected by such repair or replacement of Government property made at the direction of the Government, in accordance with the procedures provided for in the "Changes" clause of this contract. Any repair or replacement for which the Contractor is responsible under the provisions of this contract shall be accomplished by the Contractor at his own expense.

(g) Risk of Loss. Unless otherwise provided in this contract, the Contractor assumes the risk of, and shall be responsible for, any loss of or damage to Government property provided under this contract upon its delivery to him or upon passage of title thereto to the Government as provided in paragraph (c) hereof, except for reasonable wear and tear and except to the extent that such property is consumed in the performance of this contract.

(h) Access. The Government, and any persons designated by it, shall at all reasonable times have access to the premises wherein any Government property is located, for the purpose of inspecting the Government property.

(i) Final Accounting and Disposition of Government Property. Upon the completion of this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in the performance of this contract (including any resulting scrap) or not theretofore delivered to the Government, and shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property, as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid in such other manner as the Contracting Officer may direct.

(j) Restoration of Contractor's Premises and Abandonment. Unless otherwise provided herein, the Government:

(i) may abandon any Government property in place, and thereupon all obligations of the Government regarding such abandoned property shall cease; and

(ii) has no obligation to the Contractor with regard to restoration or rehabilitation of the Contractor's premises, neither in case of abandonment (paragraph (j)(i) above), disposition on completion of need or of the contract (paragraph (i) above), nor otherwise, except for restoration or rehabilitation costs which are properly included in an equitable adjustment under paragraph (b) above.

(k) Communications. All communications issued pursuant to this clause shall be in writing or in accordance with the "Manual for Military Standard Requisitioning and Issue Procedure (MILSTRIP) for Defense Contractors" (Appendix H, Defense Acquisition Regulation). (DAR 7-104.24(a))

67. VARIATIONS IN ESTIMATED QUANTITIES (1968 APR)

(The following clause is not applicable to bid items listed in the "Variations in Estimated Quantities - Subdivided Items" clause, and also is not applicable to contracts for dredging work which contain the "Variations in Estimated Quantities - Dredging" clause.)

Where the quantity of a pay item in this contract is an estimated quantity and where the actual quantity of such pay item varies more than fifteen percent (15%) above or below the estimated quantity stated in this contract, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred fifteen percent (115%) or below eighty-five percent (85%) of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contracting Officer shall, upon receipt of a written request for an extension of time within ten (10) days from the beginning of such delay, or within such further period of time which may be granted by the Contracting Officer prior to the date of final settlement of the contract, ascertain the facts and make such adjustment for extending the completion date as in his judgment the findings justify. (DAR 7-603.27)

68. PROGRESS CHARTS AND REQUIREMENTS FOR OVERTIME WORK (1965 JAN)

(a) The Contractor shall within 5 days or within such time as determined by the Contracting Officer, after date of commencement of work, prepare and submit to the Contracting Officer for approval a practicable schedule, showing the order in which the Contractor proposes to carry on the work, the date on which he will start the several salient features (including procurement of materials, plant and equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale

to indicate appropriately the percentage of work scheduled for completion at any time. The Contractor shall enter on the chart the actual progress at such intervals as directed by the Contracting Officer, and shall immediately deliver to the Contracting Officer three copies thereof. If the Contractor fails to submit a progress schedule within the time herein prescribed, the Contracting Officer may withhold approval of progress payment estimates until such time as the Contractor submits the required progress schedule.

(b) If, in the opinion of the Contracting Officer, the Contractor falls behind the progress schedule, the Contractor shall take such steps as may be necessary to improve his progress and the Contracting Officer may require him to increase the number of shifts, or overtime operations, days of work, or the amount of construction plant, or all of them, and to submit for approval such supplementary schedule or schedules in chart form as may be deemed necessary to demonstrate the manner in which the agreed rate of progress will be regained, all without additional cost to the Government.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this provision shall be grounds for determination by the Contracting Officer that the Contractor is not prosecuting the work with such diligence as will insure completion within the time specified. Upon such determination the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part thereof, in accordance with the clause of the contract entitled "Termination for Default - Damages for Delay - Time Extensions." (DAR 7-603.48)

69. HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (1977 OCT)

(a) As used in this clause, hazardous material shall be defined in Federal Standard No. 313A ("Material Safety Data Sheet, Preparation and Submission of"), in effect on the date of this contract.

(b) The Contractor shall prepare and submit Material Safety Data Sheet (Form OSHA-20 (DoD)) in accordance with Federal Standard No. 313A for all hazardous material, whether or not listed in Appendix A of the Standard, delivered pursuant to this contract or for which performance of work, use, handling, manufacture, packaging, transportation, storage, inspection or disposal of, or any other use after delivery to the Government designated destination will involve exposure to hazardous materials or items containing such materials. Material Safety Data Sheets shall be submitted five (5) days prior to delivery of the material.

(c) The requirements of this clause, or any act or failure to act by the Government in surveillance or enforcement of this clause, shall not affect or relieve the Contractor of any responsibility or liability for the safety of Government or Contractor personnel or property, or of any subcontractor or vendor personnel.

(d) Nothing contained in this clause shall relieve the Contractor from complying with applicable federal, state, and local laws, codes, ordinances and regulations (including the obtaining of licenses and permits) in connection with hazardous material in the performance of this contract.

(e) Government's rights in data furnished under this contract with respect to hazardous material:

(i) The Government shall have the right to use, duplicate and disclose any data to which this clause is applicable for the purposes of apprising personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials and for medical treatment of those affected by such material, and to have others use, duplicate, and disclose such data for the Government for such purposes.

(ii) Such data shall not be duplicated, or disclosed, or released outside the Government, in whole or in part for any procurement or manufacturing purpose, if the following legend is marked on each piece of data to which this clause is applicable:

"This is furnished under United States Government Contract No. _____ and shall not be used, duplicated or disclosed for any procurement or manufacturing purpose without the permission of _____. This legend shall be marked on any reproduction hereof."

(iii) The Contractor shall not place the legend set forth above or any other restrictive legend on any data which the Contractor or any subcontractor previously delivered to the Government without limitations or which should be delivered without limitations under the conditions prescribed by the "Rights in Technical Data and Computer Software" clause of DAR 7-104.9(a).

(iv) Notwithstanding any other provision of this contract providing for rights in data, the rights of the Government to use, duplicate, and disclose data furnished pursuant to the requirements of this clause shall be as provided by this clause. The Government is not precluded from using similar or identical data acquired from other sources.

(f) The Contractor shall insert this clause, including this paragraph (f), with appropriate changes in the designation of the parties, in any subcontract of any tier (including purchase designations or purchase orders) hereunder which involves hazardous material. (DAR 7-104.98)

70. CERTIFICATION OF REQUESTS FOR ADJUSTMENT OR RELIEF EXCEEDING \$100,000 (1980 FEB)

(The following clause is applicable if this contract is expected to exceed \$100,000 in value)

(a) Any contract claim, request for equitable adjustment to contract terms, request for relief under Public Law 85-804, or other similar request exceeding \$100,000 shall bear, at the time of submission, the following certificate given by a senior company official in charge at the plant or location involved:

I certify that the claim is made in good faith, that the supporting data are accurate and complete to the best of my knowledge and belief; and that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(Official's Name)

(Title)

(b) The certification in paragraph (a) requires full disclosure of all relevant facts, including cost and pricing data.

(c) The certification requirement in paragraph (a) does not apply to:

(i) requests for routine contract payments--for example, those for payment for accepted supplies and services, routine vouchers under cost reimbursement-type contracts and progress payment invoices;

(ii) final adjustments under incentive provisions of contracts;

(d) In those situations where no claim certification for the purposes of Section 813 has been submitted prior to the inception of a contract dispute, a single certification, using the language prescribed by the Contract Disputes Act but signed by a senior company official in charge at the plant or location involved, will be deemed to comply with both statutes. (DAR 7-104.102)

71. AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (1978 SEP)

(a) As used in this clause:

1. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

2. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

3. "Employer identification number" means the Federal social security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

4. "Minority" includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(b) Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of this clause and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitation from which this contract resulted.

(c) If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan, in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractors or subcontractors failure to take good faith efforts to achieve the Plan goals and timetables.

(d) The Contractor shall implement the specific affirmative action standards provided in paragraphs (g)(1) through 16 of this clause. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

(e) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, or the regulations promulgated pursuant thereto.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

(1) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

(2) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

(4) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under (g)(2) above.

(6) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy

with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

(7) Review, at least annually, the company's EEO policy and affirmative action obligations under this clause with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.

(9) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

(11) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

(13) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under this clause are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

(15) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

(h) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations ((g)(1) through (16)). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the

contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under (g)(1) through (16) of this clause provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

(j) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of this clause and Executive Order 11246, as amended.

(m) The Contractor, in fulfilling its obligations under this clause shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or this clause, the Director shall proceed in accordance with 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

(o) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area

residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program). (DAR 7-603.60)

72. GEOGRAPHIC DISTRIBUTION OF DEFENSE SUBCONTRACT DOLLARS (1978 SEP)

(The following clause is applicable if (1) the procurement instrument identification number is prefixed by the letters "DACA", (2) material to be acquired is noncommercial and (3) subcontracts are performed in the United States and the amount of this contract exceeds \$500,000, or when any modification increases the aggregate amount of this contract to \$500,000 or more. In the latter case the reporting requirements will not be retroactive so as to require the reporting of subcontracts awarded prior to such a modification)

(a) For each subcontract or modification thereof exceeding \$10,000, the Contractor agrees to prepare and submit the report on DoD subcontracts in accordance with DD Form 2139.

(b) Negative reports will be submitted annually to the addressee contained on the DD Form 2139, when applicable. Negative reports will be submitted not later than October 31 for the 12-month period ending September 30 of each year. Negative reporting will be continued until the contract or subcontract has been completed and the addressee contained in DD Form 2139 notified of its completion.

(c) The Contractor further agrees to insert the provisions of paragraphs (a) and (b) above in each subcontract in excess of \$100,000 except subcontracts for ores, natural gas, utilities, petroleum products and crudes, timber (logs) and subsistence. (DAR 7-104.78)

73. CONTRACT CERTIFICATION - WAGE AND PRICE STANDARDS (1979 SEP)

(This clause is applicable if the contract, an order against a basic ordering agreement or a supplemental agreement for new work is in excess of \$5 million, or indefinite delivery-type contracts when the cumulative value of orders is expected to exceed \$5 million.)

(a) The Contractor hereby certifies, as of the date of this contract, to be in compliance with the Wage and Price Standards issued by the Council on Wage and Price Stability (6 CFR 705, Appendix, and Part 706).

(b) If it is later determined, after notice and opportunity to be heard, that the Contractor was willfully not in compliance with such standards as of the date of this contract, then this contract may be terminated in accordance with the provisions of the Termination for Default clause.

(c) Should the Government determine that termination for default would not be in the public interest, the Contractor agrees to accept an equitable reduction of the contract price or cost allowance and profit or fee, as appropriate under the circumstances.

(d) The Contractor shall require a Certification - Wage and Price Standards, limited to (a) above, as a condition of award of any first-tier subcontract which exceeds \$5 million. The Contractor further agrees that should any price adjustment in subcontract prices result from the operation of this provision as to subcontracts, he will advise the Contracting Officer and an equitable adjustment of the contract price will be made. The operation of this provision in any subcontract shall not excuse the Contractor from performance of this contract in accordance with its terms and conditions. Any waiver or relaxation of the certification requirements with respect to such first-tier subcontractors can only be made by the Secretary. (DAR 7-104.101)

74. ENVIRONMENTAL LITIGATION (1974 NOV)(OCE)

(a) If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the "Suspension of Work" clause of this contract. The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

(b) The term "environmental litigation", as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment. (ECI 7-671.10)

SUPERSEDES DECISION

STATE: Arizona COUNTY: Statewide
 DECISION NUMBER: AZ79-5100 DATE: Date of Publication
 Supersedes Decision No. AZ78-5114 dated August 11, 1978, in 43 FR 35226.
 DESCRIPTION OF WORK: Building Construction (does not include single family homes and garden type apartments up to and including 4 stories), heavy and highway construction.

	Basic Hourly Rates	Fringe Benefits Payments			
		M & W	Pensions	Vacation	Education and/or Appr. Tr.
ASBESTOS WORKERS	\$11.94	.50	1.20		.02
BOILERMAKERS	14.36	1.075	1.00	1.00	.03
BRICKLAYERS; (Phoenix Area) Bricklayers; Manhole Builders; Stonemasons:					
Zone A: 0-25 miles from the City Hall in Phoenix Flagstaff and Yuma	11.77	.65	.90		.09
Zone B: 25-40 miles from the City Hall in Phoenix; and Williams AFB	12.71	.65	.90		.09
Zone C: 40-70 miles from the City Hall in Phoenix	13.30	.65	.90		.09
Zone D: 70-100 miles from City Hall in Phoenix	13.89	.65	.90		.09
Zone E: 100-200 miles from the City Hall in Phoenix	14.36	.65	.90		.09
Zone F: 200 miles and over from the City Hall in Phoenix	15.30	.65	.90		.09
BRICKLAYERS; (Tucson Area) Bricklayers; Stonemasons:					
Zone A: 0-15 miles from Tucson City limits	11.22	1.00	.90		.06
Zone B: Over 15 miles to 30 miles from Tucson City limits	11.59	1.00	.90		.06
Zone C: Over 30 miles to 40 miles from Tucson City limits	11.96	1.00	.90		.06
Zone D: Over 40 miles from Tucson City limits	12.72	1.00	.90		.06
Manhole Builders:					
Zone A: 0-15 miles from Tucson City limits	11.47	1.00	.90		.06
Zone B: Over 15 miles to 30 miles from Tucson City limits	11.84	1.00	.90		.06
Zone C: Over 30 miles to 40 miles from Tucson City limits	12.21	1.00	.90		.06
Zone D: Over 40 miles from Tucson City limits	12.97	1.00	.90		.06

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
CARPENTERS:					
Central and Southern Areas:					
Carpenters; Drywall Applicators;					
Saw Filers; Shingler	10.685	1.045	1.055		.05
Floorlayers (finish); File-					
driversmen	10.77	1.045	1.055		.05
Millwrights	10.90	1.045	1.055		.05
Northern Areas:					
Carpenters; Drywall Applicator;					
Saw Filer; Shingler	12.36	1.045	1.055		.05
Floorlayers (finish); File-					
driversmen	12.645	1.045	1.055		.05
Millwrights	12.775	1.045	1.055		.05
CEMENT MASONS:					
Apache, Coconino, Gila, Mohave,					
Navajo, Yavapai, Yuma and the					
Northern portions of Graham,					
Greenlee, Maricopa and Pinal					
Counties					
Central and Southern Areas:					
Cement Masons	10.21	.95	1.30		.05
Concrete troweling machine;					
Sawing and scoring machine;					
Curb and gutter machine	10.37	.95	1.30		.05
Northern Areas:					
Cement Masons	12.085	.95	1.30		.05
Concrete troweling machine;					
Sawing and scoring machine;					
Curb and gutter machine	12.245	.95	1.30		.05
Cochise, Pima, Santa Cruz and					
the southern portions of					
Graham, Greenlee, Maricopa and					
Pinal Counties					
Central and Southern Areas:					
Cement Masons	10.22	.85	.85		.05
Concrete troweling machine;					
Sawing and scoring machine;					
Curb and gutter machine	10.385	.85	.85		.05
DRUMMERS:					
From Court House in Phoenix,					
Mesa, including Luke and					
Williams Air Force Bases					
Tapers:					
Sone A: 0-40 miles	10.71	.59	.50		.07
Sone B: 41-60 miles	11.21	.59	.50		.07

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
DRUMMERS: (Cont'd)					
Tapers: (Cont'd)					
Sone C: 61 miles and over	12.46	.59	.50		.07
Texture Sprayers:					
Sone A: 0-40 miles	9.81	.59	.50		.07
Sone B: 41-60 miles	10.81	.59	.50		.07
Sone C: 61 miles and over	12.06	.59	.50		.07
ELECTRICIANS: (Flagstaff Area)					
Sone A: In the City of Flagstaff,					
that area lying in a square ex-					
tending 20 miles north-south,					
east and west of the Post					
Office; For Williams,					
Winslow and Sedona that area					
covering a square extending					
5 miles north-south, east					
and west of the Post Office					
in each town	12.80	.69	30+.00		1/20
Sone B: All territorial jurisdic-					
tion allotted outside of					
Sone A	15.35	.96	30+.00		1/20
ELECTRICIANS: (Gallup Area)					
Apache County north of Hwy.					
966					
Electricians	14.10	.60	30+.70		1/20
Cable Splicers	14.69	.60	30+.70		1/20
ELECTRICIANS: (Globe-Miami Area)					
Sone A: The area within 16 road					
miles beginning where the					
Southern Pacific Railroad in-					
tersects Highway 60-70 at					
Kaiser Crossing)					
Electricians	15.93	.60	110		10
Cable Splicers	14.18	.60	110		10
Sone B: 16-28 miles from					
above-mentioned base point:					
Electricians	14.67	.60	110		1/20
Cable Splicers	14.92	.60	110		1/20
Sone C: 29-46 miles from					
above-mentioned base point:					
Electricians	15.30	.60	110		1/20
Cable Splicers	15.55	.60	110		1/20
Sone D: 46 miles and over from					
above-mentioned base point					
Electricians	16.09	.60	110		1/20
Cable Splicers	16.30	.60	110		1/20

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ELECTRICIANS: (Phoenix Area)
 Zone A: Beginning at the north-east corner, a line extending southward on Bush Highway to McKellips Road; a line extending east on McKellips Road to a point one mile east of the intersection of State Highway 88 and U. S. 60 and 70 near Apache Junction; Southward to Baseline Road; west on Baseline Road to the intersection of Baseline Road and Ellsworth Road; South on Ellsworth Road to Hunt Highway; west on Hunt Highway to Powers Road; a line extending south on Powers Road five miles, then extending straight west to a point five miles west of Interstate 10, then northwest on a line parallel with Interstate 10 to intersect with Pecos Road, west on Pecos Road to intersect with Cotton Lane, North on Cotton Lane to Beloit Road. West on Beloit Road to Airport Road. North on Airport Road in a straight line to intersect Waddell Road. East on Waddell Road to intersect with Cotton Lane, North on Cotton Lane to Deer Valley Drive and east on Deer Valley Drive to intersect with Bush Highway including Luke and Williams Air Force Bases.

Basic Hourly Rates	Fringe Benefits Payments			
	N & W	Pensions	Vacation	Education and/or Appr. Tr.
13.55	.96	30+.88		1/40

ELECTRICIANS: (Cont'd)
 Zone B: Area outside of Zone A and bounded by a line formed by measuring sixteen (16) road miles from the outer boundaries of an area enclosed by the following boundaries: Power Road on the east, from Hunt Highway on the south to one mile south of Pinnacle Peak Road on the north; One mile south of Pinnacle Peak Road to Cotton Lane on the west; Cotton Lane to Pecos Road on the south. Pecos Road to Price Road and from Price Road to Hunt Highway on the south. Hunt Highway to Powers Road on the east.
 Zone C: Outside edge of Zone B and extended to the outside limits of the Union's jurisdiction

ELECTRICIANS: (Kingman)
 Zone A: The area within the 16th road mile from the City Hall
 Electricians
 Cable Splicers
 Zone B: from the 16th road mile and extend up to and including the 32nd road mile
 Electricians
 Cable Splicers
 Zone C: From the 32nd road mile extending up to the outside limits of the union's jurisdiction
 Electricians
 Cable Splicers

ELECTRICIANS: (Prescott)
 Zone A: The area within 20 road miles from the City Hall
 Electricians
 Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	N & W	Pensions	Vacation	Education and/or Appr. Tr.
15.55	.96	30+.88		1/40
16.55	.96	30+.88		1/40
12.04	.96	10+.70		1/20
13.64	.96	10+.70		1/20
14.15	.96	10+.70		1/20
14.85	.96	10+.70		1/20
15.23	.96	0+.70		1/20
15.99	.96	0+.70		1/20
12.04	.96	10+.70		1/20
13.64	.96	10+.70		1/20

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ELECTRICIANS: (Prescott) (Cont'd)
Zone B: From the 20th road mile extending up to and including the 32nd road mile
 Electricians
 Cable Splicers
Zone C: From the 32nd road mile extending to the outside limits of the union's jurisdiction
 Electricians
 Cable Splicers
ELECTRICIANS: (Tucson and Yuma Area)
Zone A: Area within 16 road miles from the City Hall in Tucson, Yuma, Douglas; Area within 16 road miles from center of town in Nogales, Sierra Vista; Area within the boundaries of the incorporated city limits of Parker, plus an area extending from the south city limits of Parker in a northeasterly direction to mile post No. 150 located on State Hwy. 95, north east of Parker from the Colorado River on the west, an area mile wide paralleling the Colorado River
 Electricians
 Cable Splicers
Zone B: Area from the outer limits of Zone A extending up to and including 12 road miles, excluding Douglas Area
 Electricians
 Cable Splicers
Zone C: Area from the outer 1 limits of Zone B extending up to and including 18 road miles, excluding Douglas Area
 Electricians
 Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$14.15	.96	18+.70		1/28
14.85	.96	18+.70		1/28
15.23	.6	18+.70		1/28
15.99	.11	18+.70		1/28
19.93	.60	118		1/28
14.18	.60	118		1/28
14.67	.60	118		1/28
14.92	.60	118		1/28
18.30	.60	118		1/28
15.55	.60	118		1/28

ELECTRICIANS: (Tucson and Yuma Areas) (Cont'd)
Zone D: Area outside of Zone C; in Douglas, the area outside of Zone A
 Electricians
 Cable Splicers
ELEVATOR CONSTRUCTORS
ELEVATOR CONSTRUCTORS' HELPERS
ELEVATOR CONSTRUCTORS' HELPERS (PROS.)
504JR
PLASTERERS
IRONWORKERS:
 Central and Southern Areas
 Northern Area
LATHERS: (Tucson Area)
 Zone A: 0-30 miles from Tucson
 Zone B: 30-40 miles from Tucson
 Zone C: 40-50 miles from Tucson
 Zone D: Area outside Zone C
LINE CONSTRUCTION:
Zone 1: Phoenix and Tucson 30 miles radius from center of town:
 Groundmen
 Equipment Operator; Powdermen; Mechanics
 Linemen; Technicians; Crane Operators
 Cable splicers
Zone 1-A: Douglas, Flagstaff, Globe, Kingman, Prescott and Yuma 10 mile radius from center of town:
 Groundmen
 Equipment Operators; Powdermen; Mechanics
 Linemen; Technicians; Crane Operators
 Cable Splicers
Zone 2: Other Areas:
 Groundmen
 Equipment Operators; Powdermen; Mechanics
 Linemen; Technicians; Crane Operators
 Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$16.05	.60	118		1/28
16.30	.60	118		1/28
11.775	.745	.56	38+a	.025
706JR	.745	.56	38+a	.025
504JR				
11.34	.85	.30		.01
12.20	1.34	2.47		.11
14.33	1.34	2.57		.11
10.88	.50	.40		
11.38	.50	.40		
11.63	.50	.40		
12.38	.50	.40		
9.97	88	38+98		1/28
11.47	88	38+98		1/28
12.90	88	38+98		1/28
13.30	88	38+98		1/28
10.81	88	38+98		1/28
12.24	88	38+98		1/28
13.72	88	38+98		1/28
14.20	88	38+98		1/28
11.59	88	38+98		1/28
13.03	88	38+98		1/28
14.52	88	38+98		1/28
14.95	88	38+98		1/28

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	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
MARBLE WORKERS:					
Phoenix Area	\$ 10.99	.65	.70		.19
PAINTERS: (Flagstaff Area)					
Zone A: From Flagstaff Court House to 20 miles					
Brush, Soft Floor Layers	10.70	.90	.60		.20
Brush, steel and bridge	11.20	.90	.60		.20
Spray	11.15	.90	.60		.20
Spray, steel and bridge	11.70	.90	.60		.20
Zone B: 20-35 miles from Court House in Flagstaff					
Brush, Soft Floor Layers	11.45	.90	.60		.20
Brush, steel and bridge	11.95	.90	.60		.20
Spray	11.85	.90	.60		.20
Spray, steel and bridge	12.45	.90	.60		.20
Zone C: 35-60 miles from Court House in Flagstaff					
Brush, Soft Floor Layers	12.45	.90	.60		.20
Brush, steel and bridge	12.95	.90	.60		.20
Spray	12.85	.90	.60		.20
Spray, steel and bridge	13.45	.90	.60		.20
Zone D: 60 miles and over from Court House in Flagstaff					
Brush, Soft Floor Layers	12.70	.90	.60		.20
Brush, steel and bridge	13.20	.90	.60		.20
Spray	13.10	.90	.60		.20
Spray, steel and bridge	13.70	.90	.60		.20
PAINTERS: (Phoenix Area)					
Zone A: 0-40 miles from Court House in Phoenix, Mesa and including Luke and Williams Air Force Bases:					
Brush and Roller; Sandblaster (Nozzleman); Sandblast (pot. Tender)	10.50	.60	.40		.08
Spray	10.75	.60	.40		.08
Creosote Applier	10.83	.60	.40		.08
Swing Stage:					
Brush, Sandblaster	10.90	.60	.40		.08
Spray	11.15	.60	.40		.08
Steeplejack	11.36	.60	.40		.08
Steel and bridge, Brush/ Steel Sandblaster	11.43	.60	.40		.08
Steel and bridge, spray	12.63	.60	.40		.08

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
PAINTERS: (Phoenix Area) (Cont'd)					
Zone B: 41-60 miles from Court House in Phoenix					
Brush and Roller; Sandblaster (Nozzleman); Sandblaster (pot. tender)	\$ 11.50	.60	.40		.08
Spray	11.75	.60	.40		.08
Creosote Applier	11.83	.60	.40		.08
Swing Stage:					
Brush, Sandblaster	11.90	.60	.40		.08
Spray	12.15	.60	.40		.08
Steeplejack	12.36	.60	.40		.08
Steel and bridge, Brush/ Steel Sandblaster	12.43	.60	.40		.08
Steel and bridge, spray	12.63	.60	.40		.08
Zone C: 60 miles and over from Court House in Phoenix					
Brush and Roller; Sandblaster (Nozzleman); Sandblaster (pot. tender)	12.75	.60	.40		.08
Spray	13.00	.60	.40		.08
Creosote Applier	13.08	.60	.40		.08
Swing Stage:					
Brush, Sandblaster	13.15	.60	.40		.08
Spray	13.40	.60	.40		.08
Steeplejack	13.61	.60	.40		.08
Steel and bridge, brush/ Steel Sandblaster	13.68	.60	.40		.08
Steel and bridge, spray	13.88	.60	.40		.08
PAINTERS: (Tucson and Yuma Areas)					
Zone A: 0-30 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma)					
Brush	9.43	.67	.40		.04
Spray and Sandblasters	9.93	.67	.40		.04
Swing Stage, under 40 ft.:					
Brush	9.73	.67	.40		.04
Spray	10.23	.67	.40		.04
Swing Stage, over 40 ft.:					
Brush	10.18	.67	.40		.04
Spray	10.68	.67	.40		.04
Structural Steel and Tanks:					
Brush	10.43	.67	.40		.04
Spray and Sandblasters	10.93	.67	.40		.04

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PAINTERS: (Tucson and Yuma Areas)
(Cont'd)

Zone B: 31-40 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
Brush	10.18	.67	.40	.04
Spray and Sandblasters	10.68	.67	.40	.04
Swing Stage, under 40 ft.:				
Brush	10.48	.67	.40	.04
Spray	10.98	.77	.40	.04
Swing Stage, over 40 ft.:				
Brush	16.93	.67	.40	.04
Spray	21.43	.67	.40	.04
Structural Steel and Tanks:				
Brush	11.18	.67	.40	.04
Spray and Sandblasters	11.68	.67	.40	.04
Zone C: 41-50 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma				
Brush	10.93	.67	.40	.04
Spray	11.43	.67	.40	.04
Swing Stage, under 40 ft.:				
Brush	11.23	.67	.40	.04
Spray	11.73	.67	.40	.04
Swing Stage, over 40 ft.:				
Brush	11.98	.67	.40	.04
Spray	12.18	.67	.40	.04
Structural Steel and Tanks:				
Brush	11.93	.67	.40	.04
Spray and Sandblasters	12.43	.67	.40	.04
Zone D: 51 miles and over from Stone and Congress in Tucson and from the County Courthouse in Yuma				
Brush	11.43	.67	.40	.04
Spray	11.93	.67	.40	.04
Swing Stage, under 40 ft.:				
Brush	11.73	.67	.40	.04
Spray	12.23	.67	.40	.04
Swing Stage, over 40 ft.:				
Brush	12.18	.67	.40	.04
Spray	12.68	.67	.40	.04
Structural Steel and Tanks:				
Brush	12.43	.67	.40	.04
Spray and Sandblasters	12.93	.67	.40	.04

PLASTERERS: (Phoenix Area)

Zone A: 0-35 miles from Phoenix
Zone B: 35-60 miles from Phoenix
Zone C: 60 miles and over from Phoenix

PLASTERERS: (Tucson Area)

Zone A: 0-30 miles from Tucson
Zone B: 30-40 miles from Tucson
Zone C: 40-50 miles from Tucson
Zone D: 50 miles and over from Tucson

PLASTERERS' TENDERS:
Central and Southern Areas

PLUMBERS; Steamfitters:

FREE ZONE 0-15 miles

The "Free Zone" (Zone 1) shall be 15 road miles from the stated base points in Flagstaff, Yuma, Tucson and Douglas. The "Free Zone" from Phoenix shall be 15 miles radius from the stated base point. In addition, all areas within the City limits of Phoenix, Chandler, Scottsdale, Tempe, Glendale, Mesa, Kingman, Navajo City, Prescott, Winslow and Holbrook will be included as Free Zones. Any work contracted for outside of these zones will be determined from the Phoenix and Tucson base points.

Zone 1: 0-15 miles
Zone 2: 15-30 miles
Zone 3: 30-40 miles
Zone 4: 40 miles and over

ROOFERS: (Tucson Area)

Asbestos; Shinglers; Tile and Waterproofing:

Zone A: 0-44 miles from Tucson
Zone B: over 44 miles from Tucson

ROOFERS: (Phoenix Area)

Roofers and Waterproofers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 11.02	.95	1.30		.06
11.77	.95	1.30		.06
12.895	.95	1.30		.06
8.57	.35	.60		
9.07	.35	.60		
9.32	.35	.60		
10.07	.35	.60		
9.16	.05	.05		.10
13.24	.75	1.35		.13
13.64	.75	1.35		.13
14.09	.75	1.35		.13
15.59	.75	1.35		.13
\$ 9.77	.845	.20		.03
11.92	.845	.20		.03
10.16	.845	.20		.03

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SHEET METAL WORKERS:
 Zone Bases: From the Administration Building or City Hall in Flagstaff, Kingman, Phoenix, Prescott and Yuma
 Zone 1: 0-25 miles including Luke and Williams Air Force Bases
 Zone 2: 25-50 miles including Luke and Williams Air Force Bases
 Zone 3: 50 miles and over
 Zone Bases: From the Administration Building or City Hall in Douglas and Tucson
 Zone A: 0-22 miles
 Zone B: 22-45 miles
 Zone C: Over 45 miles
SOFT FLOOR LAYERS: (Phoenix Area)
 Zone A: 0-40 miles from Court House in Phoenix and Flagstaff including Luke and Williams Air Force Bases
 Zone B: 41-60 miles from Court House in Phoenix and Flagstaff
 Zone C: 61 miles and over from Court House in Phoenix and Flagstaff
SOFT FLOOR LAYERS: (Tucson Area)
SPRINKLER FITTERS
TERRAZO WORKERS; Tile Setters; Marble Masons:
 Tucson Area
TERRAZO WORKERS; TILE SETTERS:
 Phoenix Area

FOOTNOTES:
 a. Employer contributes 4% of basic hourly rate for 5 years' service and 2% basic hourly rate for 6 months' to 5 years' service as vacation pay credit. Six Paid Holidays: A-Thanksgiving Day; B-Christmas Day; C-Independence Day; D-Labor Day; E-New Year's Day; F-Memorial Day; G-Thanksgiving Day; H-Christmas Day.

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 11.70	.90	\$1.30		.10
12.35	.90	1.30		.10
14.20	.98	1.30		.10
10.30	3% +1.14	1.91		.04
11.25	3% +1.14	1.91		.04
12.00	3% +1.14	1.91		.04
9.21	.58	.12		.12
10.21	.58	.12		.12
10.71	.58	.12		.12
9.25	.38			.08
12.74	.75	1.08		.08
9.27	.90	.85		
10.78	.65	.90		.16

LABORERS
 Group 1:
 Group 2:
 Group 3:
 Group 4:
 Group 5:
 Group 6:
 Group 7:
LABORERS (Tunnel and Shaft Work)
 Group 1:
 Group 2:
 Group 3:
 Group 4:
 Group 5:
 Group 5A:
POWER EQUIPMENT OPERATORS (Except Pile-driving and Steel Erection)
 Group 1:
 Group 2:
 Group 3:
 Group 4:
 Group 5:
 Group 5A:
 Group 6:
 Group 7:
TRUCK DRIVERS
 Group 1:
 Group 2:
 Group 3:
 Group 4:
 Group 5:
 Group 5A:
 Group 6:
 Group 7:
 Group 8:
 Group 8A:
 Group 8B:
 Group 8C:

Basic Hourly Rates	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$ 8.36	\$ 9.985	.92	.98		.10
8.49	10.115	.92	.98		.10
8.63	10.255	.92	.98		.10
8.74	10.365	.92	.98		.10
8.91	10.535	.92	.98		.10
9.288	10.81	.92	.98		.10
9.915	11.84	.92	.98		.10
8.605	10.23	.92	.98		.10
8.77	10.395	.92	.98		.10
8.90	10.525	.92	.98		.10
9.26	10.885	.92	.98		.10
9.435	11.06	.92	.98		.10
9.685	11.31	.92	.98		.10
8.93	10.555	1.05	1.00		.08
9.30	10.925	1.05	1.00		.08
9.74	11.385	1.05	1.00		.08
10.29	11.915	1.05	1.00		.08
10.82	12.445	1.05	1.00		.08
11.13	12.755	1.05	1.00		.08
11.46	13.045	1.05	1.00		.08
12.06	13.645	1.05	1.00		.08
8.52	10.145	.92	.98		.08
8.65	10.275	.92	.98		.08
8.87	10.495	.92	.98		.08
9.22	10.845	.92	.98		.08
9.38	11.005	.92	.98		.08
9.56	11.185	.92	.98		.08
9.70	11.325	.92	.98		.08
10.11	11.735	.92	.98		.08
10.625	12.25	.92	.98		.08
11.28	12.905	.92	.98		.08
10.97	12.595	.92	.98		.08
9.00	10.705	.92	.98		.08

LABORERS

Group 1: All Helpers not herein separately classified; Cesspool Diggers and installers; Chat Box Man; Checker, tool dispatcher; Concrete dump manbelt, pipe and/or hoseman; Dumpman and/or spotter; Fence builder, guard rail builder highway; Form strippers; Labor, general or construction; Landscape gardener and nurseryman; Packing rod steel and pans; Rip rap stoneman; Astro turf layer; Cleanup, Bull gang; Trackman-railroad

Group 2: Cement finisher tender; Concrete curer (impervious membrane); Cutting torch operator; Fine grader (highway, engineering and sewer work only); Kettleman - Tarman; Power type concrete buggy

Group 3: Bender; Chucktender (except tunnel); Creosote tieman; Glines chaser; Powderman helper; Rip-rap stone paver; Sandblaster (jet tender); Spiker and wrenchers

Group 4: Cement dumpers (Skip-type mixer or hand (ing bulk cement)); Chain saw machines (on clearing and grubbing); Concrete vibrating machines; Cribber and shorer (except tunnel); Floor sanders concrete; Hydraulic jacks, and similar mechanical tools not separately classified herein; Operators and tenders of pneumatic and electric tools; Pipe caulker and/or backup man (pipeline); Pipe wrapper; Pneumatic gopher; Rigger/Signalman (pipeline)

Group 5: Air and water wash-out nozzleman; Asphalt rakers and ironers; Driller; Grade setter (pipeline); Hand guided trencher and similar operated equipment; Jackhammer and/or pavement breaker; Pipelayers (including but not limited to non-metallic, transite and plastic pipe, water pipe, sewer pipe, drain pipe, underground tile and conduit); Rock slinger; Scaler (using Boe's chairs or safety belt); Tamers (mechanical - All types); Precast manhole erector

Group 6: Concrete Cutting Torch; Concrete saw (hand guided); Driller, (core, diamond, wagon or air track); Drill doctor and/or air tool repairman; Gunman and mixerman (gunite); Sandblaster (nozzleman)

Group 7: Concrete Road Form Setter; Gunite nozzleman or rodman; Drillers; Joy Mustang, PR 143, 220 Gardner-Denver, Hydrasonic; Powderman; Scaler (drillers); Welders and/or Pipelayers installing process piping; Form setter and/or builder

LABORERS
(Tunnel and Shaft Workers)

Group 1: Bull Gang, wickers, trackman; Dumpman; Concrete crew (includes rodders and spreaders); Grout crew; Swamper (brakeman and switchmen on tunnel work); Change house man

Group 2: Nipper; Chucktender, Cabltender, Vibratorman, Jackhammer, Pneumatic tools (except driller)

Group 3: Grout Gunman

Group 4: Timberman, Natimberman - wood or steel blaster, driller powderman; Cherry pickerman; Powderman - primer house; Steel form raiser and setter; Kemper and other pneumatic concrete placer operator; Miner - finisher; Miners - Tunnel (hand or machine)

Group 5: Diamond Drill

Group 5A: Shaft and Raise Miner Welder

POWER EQUIPMENT OPERATORS
(Except Piledriving and Steel Erection)

Group 1: Air compressor operator; Field equipment serviceman helper; Heavy duty repair helper; Heavy duty welder helper; Bluff; Pump operator

Group 2: Conveyor operator; Generator operator - portable; Power grizzly operator; Self-propelled chip spreading machine - conveyor operator; Watch fireman; Welding machine operator - gasoline and diesel power

Group 3: Concrete mixer operator - skip type; Dinky operator - (under 20 tons wt.); Driver-moto paver, Slurry seal machine, and similar type equipment; Motor crane driver; Power sweeper operator - self-propelled; Boss carrier or fork lift operator; Skip loader operator - all types with rated capacity 1-1/2 cu. yds. or less; Wheel type tractor operator (Ford, Ferguson, or similar type) with attachments such as fresno, push blade, post hole auger, mower, etc., excluding compacting equipment

Group 4: A-Frame, boom truck or winch truck operator; Asphalt plant fireman; Elevator hoist operator (including Tuskey hoist or similar type); Grade checker (excluding civil engineer); Multiple power concrete saw operator; Pavement breaker, mechanical compactor operator, power propelled; Roller operator - all types - except as otherwise classified; Screed operator; Self-propelled chip spreading machine operator (including Slurry seal machine operator) Stationary pipewrapping and cleaning machine operator; Tugger operator

Group 5: Aggregate plant operator (including crushing, screening and sand plants, etc.); Asphalt plant mixer operator; Beltcrete machine; Boring machines operator; Concrete mechanical tamping, spreading or finishing machine (including Clary, Johnson or similar types); Concrete pump operator; Concrete batch plant operator, all types and sizes; Conductor, brakeman, or handler; Drilling machine, including water wells; Elevating grader operator - all types and sizes (except as otherwise classified); Field equipment serviceman; Highline cableway signman; Kolman belt loader operator or similar, with belt width 48" or over; Locomotive engineer (including Dinky - 20 tons wt. and over); Moto-paver and similar type equipment operator; Operating engineer rigger; Pneumatic-tired scraper operator (Turnapull, Euclid, Cat, D-W, Hancock and similar equipment) up to and including 12 cu. yds.; Power jumbo form setter operator; Pressure grout machine operator (as used in heavy engineering construction); Road oil mixing machine operator; Roller operator - on all types asphalt pavement; Self-propelled compactor, with blade; Skip loader operator - all types with rated capacity over 1-1/2 but less than 4 cu. yds.; Slip form operator (power driven lifting device for concrete forms); Soil Cement road mixing machine operator - single pass type; Stationary Central generating plant operator - rated 300 K.W. or more; Surface heater and planer operator; Traveling pipewrapping machine operator

POWER EQUIPMENT OPERATORS (Cont'd)
(except Piledriving and Steel Erection)

Group 5-A: Heavy duty mechanic and/or welder; Pneumatic tired scraper; all sizes and types over 12 cu. yds. up to and including 45 cu. yds. MRC (Turnapull, Euclid, Cat, D-W, Hancock and similar equipment); Tractor operator (Pusher, Bulldozer, Scraper) up to 400 net horsepower rating; Trenching machine operator

Group 6: Auto-Grade machine (CHI and similar equipment); Boring machine operator (including Mole, Badger and similar type); Concrete Mixer operator-paving type, and mobile mixer; Concrete pump operator with boom attachment (truck mounted); Crane operator - crawler and pneumatic type, under 100 ton capacity MRC; Crawler type tractor operator - with boom attachment; Derrick operator; Forklift operator for hoisting personnel; Grade-all operator; Helicopter hoist; Highline cableway operator (less than 20 tons rated capacity); Mass excavator operator (150 Bucyrus Erie and similar types); Mechanical hoist operator (two or more drums); Motor grade operator - any type power blade; Motor grade operator with elevating grader attachment; Mucking machine operator; Overhead crane operator; Pile-driver engineer (portable, stationary or skid rig); Pneumatic-tired scraper operator - all sizes and types (Turnapull, Euclid, Cat, D-W, Hancock and similar equipment over 45 cu. yds., MRC); Power driven ditch lining or ditch trimming machine operator; Skip loader operator - all types with rated capacity 4 cu. yds., but less than 8 cu. yds.; Slip form-paving machine operator (including Gunnert, Zimmerman and similar types); Specialized power digger operator - attached to wheel-type tractor; Tower crane (or similar type) operator; Tractor operator (Pusher, Bulldozer, Scraper, 400 net horsepower and over); Tugger operator (two or more); Universal equipment operator - Shovel, Backhoe, Dragline, Clamshell, etc. up to 8 cu. yds.

Group 7: Crane operator - pneumatic or crawler (100 ton hoisting capacity and over MRC rating); Helicopter pilot - FAA qualified when used in construction work; Highline cableway operator, over 20 ton rated capacity and using traveling head and tail tower; Remote control earth moving equipment operator; Skip loader operator - all types with rated capacity of 8 cu. yds. or more; Universal equipment - Shovel, Backhoe, Dragline, Clamshell, etc., 8 cu. yds. and over

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NOTICES

DECISION NO. A579-3100

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MACHINISTS

Group 1: Mechanics; Pickups; Station Wagons; Manual Driver

Group 2: Dump or Flatrack (2 or 3 axle); Water truck (under 2500 gallons); Dugymobile (1 cu. yd. or less); Tireman; Bus drivers, ambulance driver, self-propelled street sweeper; Warehouseman

Group 3: Dump or Flatrack (4 axle); Dumpster or Dumpster (less than 7 cu. yds.); Water truck (2500 gallons but less than 4000 gallons)

Group 4: Dumpster or Dumpster (7 cu. yds. but less than 16 cu. yds.); Dump or Flatrack (5 axle); Water truck (4000 gallons and over); Slurry type equipment or leverman; Flakerty spreader or similar type equipment or leverman; Transit mix (8 cu. yds. or less)

Group 5: Dump or Flatrack (6 axle); Transit mix (over 8 cu. yds. but less than 10.5 cu. yds.); Rock truck (i.e. Dart, Euclid and other similar type and dumps, single unit less than 16 cu. yds.)

Group 6-11: Oil tanker or spreader and/or. Footman, Retortman or Leverman

Group 8: Transit mix (over 10.5 cu. yds. but less than 14 cu. yds.); Bone barrier; Fork lift or lift truck; Hydro lift, Swedish crane Iowa 300 and similar types; Concrete pump (when integral part of transit mix truck); Dump or Flatrack (7 axle)

Group 7: Dump or Flatrack (8 axle)

Group 9: Off-highway equipment driver including but not limited to: 2 or 4 wheel power unit, i.e., Cat, 95 Series, Euclid, International and similar type equipment, transporting material when top loaded or by external means including pulling water tanks, fuel tanks or other applications under Tonnage Classifications; Rock trucks (Dart, Euclid, or other similar and dump types) 15 cu. yds. and over; Hject-alls; Dumpster or Dumpster (16 cu. yds. and over); Dump or Flatrack (9 axle)

Group 10: Heavy duty mechanic/welder; Body and fender man

Group 12: Field equipped servicemen or fuel truck driver

Group 13: Heavy duty mechanic/welder helper

MODIFICATION P. 4

DECISION #A279-5100 - Mod. #1
 (43 FR 8482 - February 9, 1979)
 Statewide Arizona

Change:

Asbestos Workers:

- Zone 1: Area lying within 15 miles radius from the City Hall in Phoenix or Tucson
- Zone 2: Area lying beyond the limits of Zone 1 and within 30 miles radius from the City Hall in Phoenix or Tucson
- Zone 3: Area lying beyond the limits of Zone 2 and within 40 miles radius from the City Hall in Phoenix or Tucson
- Zone 4: Area lying beyond the limits of Zone 3 and within 50 miles radius from the City Hall in Phoenix or Tucson
- Zone 5: Area lying beyond the limits of Zone 4, within the union's jurisdiction

Electricians:

Flagstaff Area:

- Zone A: In the City of Flagstaff, that area lying in a square extending 20 miles north-south, east and west of the Post Office; For Williams, Winslow, Sedona, that area covering a square extending 9 miles north-south, east and west of the Post Office in each town
- Zone B: All territorial jurisdiction allotted outside of Zone A

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or App. Tr.
\$12.84	.82	1.30		.03
13.44	.82	1.30		.03
13.64	.82	1.30		.03
14.09	.82	1.30		.03
16.09	.82	1.30		.03
12.80	.96	3% + .88		1/2%
15.35	.96	3% + .88		1/2%

DECISION #A279-5100 (Cont'd):

Change (Cont'd):

Electricians (Cont'd):

Tucson and Yuma Area:

Zone A: Area within 16 radius miles from the City Hall in Tucson, Yuma; Area within 16 road miles from center of town in Douglas, Nogales, Sierra Vista; Area within the boundaries of the incorporated City Limits of Parker in a northeasterly direction to Milepost No. 190 located on State Hwy. 95, northeast of Parker from the Colorado River on the west, an area 1 mile wide paralleling the Colorado River:

Electricians

Cable Splicers

Zone B: Area from the outer limits of Zone A extending up to and including 12 road miles, excluding Douglas Area:

Electricians

Cable Splicers

Zone C: Area from the outer limits of Zone B extending up to and including 18 road miles, excluding Douglas Area:

Electricians

Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$13.93	.60	11%		1/2%
14.18	.60	11%		1/2%
14.67	.60	11%		1/2%
14.92	.60	11%		1/2%
15.30	.60	11%		1/2%
15.55	.60	11%		1/2%

DECISION #A279-5100 (Cont'd):

Change (Cont'd):

Electricians (Cont'd):

Tucson and Yuma Area

Zone D: Area outside of Zone C; In the Cities of Douglas, Nogales, Sierra Vista, the area outside of Zone A:

Electricians

Cable Splicers

Phoenix Area:

Zone A: Beginning at the northeast corner of the Ford McDowell Indian Reservation; a line extending southward following the Reservation boundary line to intersect with a line extending along Ellsworth Road; south on Ellsworth Road to McKellips Road; a line extending east on McKellips Road to a point 1 mile east of the intersection of State Highway 88 and U.S. 60 & 70 near Apache Junction; southward to Baseline Road; west on Baseline Road to the Maricopa County line; a line extending south on the Maricopa County Line to a point 5 miles south of Hunt Highway; then extending straight west to a point 5 miles west of Interstate 10; then northwest on a line parallel with Interstate 10 to intersect with Pecos Road; west on Pecos Road to intersect with a line extending south on Rooks Road; north on Rooks Road a line extending straight north to intersect with a line 2 miles north of Deer

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$16.05	.60	11%		1/2%
16.30	.60	11%		1/2%

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WORKS

DECISION #AZ79-5100 (Cont'd):

Change (Cont'd):
Electricians (Cont'd):
Phoenix Area (Cont'd):
Zone A (Cont'd): Valley Road straight east to intersect with a line extending north on 24th St.; straight north to intersect with the Carefree Highway; east on the Carefree Highway to Cave Creek; northeast following along Cave Creek to a point 11 miles north of Deer Valley Road; east to intersect with a line extending along Pima Road; south on Pima Road to a point 2 miles north of Deer Valley Road; straight east to the northwest corner of Fort McDowell Indian Reservation; along the northern boundary of the Reservation to the northeast corner. Also, the area within 16 road miles from the City Hall in Kingman; Also, the area within 20 road miles from the City Hall in Prescott
Zone B: That area outside of Zone A and formed by measuring 16 road miles from Pecos Road on the south; by measuring 18 road miles from the outer boundaries of the following:

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$13.55	.96	3% + .88		3/4%

DECISION #AZ79-5100 (Cont'd)

Change (Cont'd):
Electricians (Cont'd):
Phoenix Area
Zone B (Cont'd): Powers Road on the east, from Hunt Highway on the south to one mile south of Pinnacle Peake Road on the north and one mile south on Pinnacle Peak Road and from Cotton Lane on the West. Also, from the 16th road mile extending up to and including the 32nd road mile from the City Hall in Kingman; Also, from the 20th road mile and extending up to and including the 32nd road mile from the City Hall in Prescott
Zone C: That area outside of Zone B and extending to the outside limits of the union jurisdiction
Soft Floor Layers:
Phoenix Area:
Zone A: 0-40 miles from Court House in Phoenix and Flagstaff including Luke and Williams Air Force Bases
Zone B: 41-60 miles from Court House in Phoenix and Flagstaff
Zone C: 61 miles and over from Court House in Phoenix and Flagstaff

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$15.55	.96	3% + .88		3/4%
16.55	.96	3% + .88		3/4%
9.21	.59	.12		.12
10.21	.59	.12		.12
10.71	.59	.12		.12

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NOTICE

MODIFICATION P. 9

DECISION #A279-5100 (Cont'd)

Delete:

Electricians:

Kingman:

Zone A: The area within the 16th road mile from the City Hall:

Electricians
Cable Splicers

Zone B: From the 16th road mile and extending up to and including the 32nd road mile:

Electricians
Cable Splicers

Zone C: From the 32nd road mile and extending up to the outside limits of the union's jurisdiction:

Electricians
Cable Splicers

Prescott:

Zone A: The area within 20 road miles from the City Hall:

Electricians
Cable Splicers

Zone B: From the 20th road mile extending up to and including the 32nd road mile:

Electricians
Cable Splicers

Zone C: From the 32nd road mile extending to the outside limits of the union's jurisdiction:

Electricians
Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$12.04	.96	1X + .70		1/2X
12.64	.96	1X + .70		1/2X
14.15	.96	1X + .70		1/2X
14.85	.96	1X + .70		1/2X
15.23	.96	1X + .70		1/2X
15.99	.96	1X + .70		1/2X
12.04	.96	1X + .70		1/2X
12.64	.96	1X + .70		1/2X
14.15	.96	1X + .70		1/2X
14.85	.96	1X + .70		1/2X
15.23	.96	1X + .70		1/2X
15.99	.96	1X + .70		1/2X

MODIFICATIONS P. 2

DECISION #A279-5100 - Mod. #2
 (43 FR 8482 - February 9, 1979)
 Statewide Arizona

Change:	Basic Hourly Rates	Fringe Benefits Payments			
		N & W	Pensions	Vacation	Education and/or Appr. Tr.
Elevator Constructors	\$13.85	.895	.69	3% + a	.03
Elevator Constructors' Helpers	9.695	.895	.69	3% + a	.03
Elevator Constructors' Helpers (Prob.)	6.925				
Ironworkers:					
Central and Southern Areas	12.30	1.34	2.47		.11
Northern Area	14.43	1.34	2.47		.11
Painters:					
Tucson and Yuma Areas:					
Zone A: 0-30 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma:					
Brush	9.71	.67	.40		.06
Spray and Sandblasters	10.21	.67	.40		.06
Paperhangers	9.84	.67	.40		.06
Swing Stage, under 40 ft.:					
Brush	10.01	.67	.40		.06
Spray	10.51	.67	.40		.06
Swing Stage, over 40 ft.:					
Brush	10.46	.67	.40		.06
Spray	10.96	.67	.40		.06
Structural Steel and Tanks:					
Brush	10.71	.67	.40		.06
Spray and Sandblasters	11.21	.67	.40		.06
Zone B: 31-40 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma:					
Brush	10.46	.67	.40		.06
Spray and Sandblasters	10.96	.67	.40		.06
Paperhangers	10.59	.67	.40		.06
Swing Stage, under 40 ft.:					
Brush	10.76	.67	.40		.06
Spray	11.26	.67	.40		.06

FEDERAL REGISTER, VOL. 44, NO. 62 - FRIDAY, MARCH 9, 1979

DECISION #A279-5100 (Cont'd):

Change (Cont'd): Painters (Cont'd): Tucson and Yuma Areas (Cont'd): Zone B (Cont'd):	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Swing Stage, over 40 ft.:					
Brush	\$11.21	.67	.40		.06
Spray	11.71	.67	.40		.06
Structural Steel and Tanks:					
Brush	11.46	.67	.40		.06
Spray and Sandblaster	11.96	.67	.40		.06
Zone C: 41-50 miles from Stone and Congress in Tucson and from the County Courthouse in Yuma:					
Brush	11.21	.67	.40		.06
Spray	11.71	.67	.40		.06
Paperhangers	11.96	.67	.40		.06
Swing Stage, under 40 ft.:					
Brush	11.51	.67	.40		.06
Spray	12.01	.67	.40		.06
Swing Stage, over 40 ft.:					
Brush	11.96	.67	.40		.06
Spray	12.46	.67	.40		.06
Structural Steel and Tanks:					
Brush	12.21	.67	.40		.06
Spray and Sandblasters	12.71	.67	.40		.06
Zone D: 51 miles and over from Stone and Congress in Tucson and from the County Courthouse in Yuma:					
Brush	11.71	.67	.40		.06
Spray	12.21	.67	.40		.06
Paperhangers	11.84	.67	.40		.06
Swing Stage, under 40 ft.:					
Brush	12.01	.67	.40		.06
Spray	12.51	.67	.40		.06

MODIFICATIONS P. 4

DECISION #A279-5100 (Cont'd):

Change (Cont'd): Painters (Cont'd): Tucson and Yuma Areas (Cont'd): Zone D (Cont'd):	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Swing Stage, over 40 ft.:					
Brush	\$12.46	.67	.40		.06
Spray	12.96	.67	.40		.06
Structural Steel and Tanks:					
Brush	12.71	.67	.40		.06
Spray and Sandblaster	13.21	.67	.40		.06

DECISION #A279-5100 - Mod. #1
 (44 FR 8482 - February 9, 1979)
 Statewide Arizona

Change:

Bricklayers:

Phoenix Area:

Bricklayers; Manhole Builders; Stonemasons:

Zone A: 0-35 road miles from City Hall in Phoenix

Zone B: 35-50 road miles from City Hall in Phoenix

Zone C: 50-75 road miles from City Hall in Phoenix

Zone D: 75-100 road miles from City Hall in Phoenix

Zone E: 100-200 road miles from City Hall in Phoenix

Zone F: 200 road miles and over from City Hall in Phoenix

Drywall:

Apache County (south part), Coconino County (south part), Gila, Graham County (north part), Greenlee County (north part), Maricopa County (north two-thirds), Navajo County (south part), Pinal County (north part), Yavapai County (south of Wikieup-Woodruff Line):

Drywall Tapers and Texturers:

Zone A: 0-40 road miles from Courthouse in Phoenix; also Luke and Williams Air Force Bases

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$11.77	.65	.90		.09
12.71	.65	.90		.09
13.30	.65	.90		.09
13.89	.65	.90		.09
14.36	.65	.90		.09
15.30	.65	.90		.09
11.21	.59	.50		.12

DECISION #A279-5100 (Cont'd):

Drywall (Cont'd):

Apache County (south part), Coconino County (south part), Gila, Graham County (north part), Greenlee County (north part), Maricopa County (north two-thirds), Navajo County (south part), Pinal County (north part), Yavapai County (south of Wikieup-Woodruff Line) (Cont'd):

Drywall Tapers and Texturers (Cont'd):

Zone B: 41-60 road miles from Courthouse in Phoenix

Zone C: 61 road miles and over from Courthouse in Phoenix

Electricians:

Globe-Miami Area:

Zone A: The area within 16 road miles beginning where the Southern Pacific Railroad intersects Hwy. 60-70 at Kaiser Crossing:

Electricians

Zone B: 16-28 road miles from above-mentioned base point:

Electricians

Zone C: 28-46 road miles from above-mentioned base point:

Electricians

Cable Splicers

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$12.21	.59	.50		.12
13.46	.59	.50		.12
13.93	.60	11%		1%
14.18	.60	11%		1%
14.67	.60	11%		1%
14.92	.60	11%		1%
15.30	.60	11%		1%
15.55	.60	11%		1%

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DECISION #A279-5100 (Cont'd):

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Electricians (Cont'd):					
Globe-Miami Area (Cont'd):					
Zone D: 46 road miles and over from above-mentioned base point:					
Electricians	\$16.05	.60	1%		1%
Cable Splicers	16.30	.60	1%		1%
Marble Workers:					
Phoenix Area:	10.79	.65	.90		.19
Painters:					
Apache County (south half), Coconino County (south half), Gila, Graham County (north half), Greenlee County (north half), Maricopa County (northern two-thirds), Navajo County (south half), Pinal County (north half), Yavapai County (south of Wikieup-Woodruff Line):					
Zone A: 0-40 road miles from Courthouse in Phoenix, Mesa and including Luke and Williams Air Force Bases:					
Brush and Roller;					
Sandblaster (Nozzlemann); Sandblaster (pot tender)	11.00	.60	.40		.08
Spray	11.25	.60	.40		.08
Creosote Applier	11.33	.60	.40		.08
Swing Stages:					
Brush, Sandblaster	11.40	.60	.40		.08
Spray	11.65	.60	.40		.08
Steeplejack	11.86	.60	.40		.08
Steel and bridge, brush; Steel Sandblaster	11.93	.60	.40		.08
Steel and bridge, spray	12.13	.60	.40		.08

DECISION #A279-5100 (Cont'd):

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Painters (Cont'd):					
Apache County (south half), etc. (Cont'd):					
Zone B: 41-60 road miles from Courthouse in Phoenix:					
Brush and Roller;					
Sandblaster (Nozzlemann); Sandblaster (pot tender)	\$12.00	.60	.40		.08
Spray	12.25	.60	.40		.08
Creosote Applier	12.33	.60	.40		.08
Swing Stages:					
Brush, Sandblaster	12.40	.60	.40		.08
Spray	12.65	.60	.40		.08
Steeplejack	12.86	.60	.40		.08
Steel and bridge, brush; Steel Sandblaster	12.93	.60	.40		.08
Steel and bridge, spray	13.13	.60	.40		.08
Zone C: 60 road miles and over from Courthouse in Phoenix:					
Brush and Roller;					
Sandblaster (Nozzlemann); Sandblaster (pot tender)	13.25	.60	.40		.08
Spray	13.50	.60	.40		.08
Creosote Applier	13.58	.60	.40		.08
Swing Stages:					
Brush, Sandblaster	13.65	.60	.40		.08
Spray	13.90	.60	.40		.08
Steeplejack	14.11	.60	.40		.08
Steel and bridge, brush; Steel Sandblaster	14.18	.60	.40		.08
Steel and bridge, spray	14.38	.60	.40		.08

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DECISION #AZ79-5100 (Cont'd):

MODIFICATIONS P. 5

Painters (Cont'd): Flagstaff Area:	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vocation	Education and/or Appr. Tr.
<u>Zone A: From Flagstaff</u>					
Courthouse to 20 miles:					
Brush; Soft Floor Layer	\$11.60	.90	.60		.20
Brush, steel and bridge	12.10	.90	.60		.20
Spray	12.05	.90	.60		.20
Spray, steel and bridge	12.60	.90	.60		.20
<u>Zone B: 20-35 miles from</u>					
Courthouse in Flagstaff:					
Brush; Soft Floor Layer	12.35	.90	.60		.20
Brush, steel and bridge	12.85	.90	.60		.20
Spray	12.80	.90	.60		.20
Spray, steel and bridge	13.35	.90	.60		.20
<u>Zone C: 35-80 miles from</u>					
Courthouse in Flagstaff:					
Brush; Soft Floor Layer	13.35	.90	.60		.20
Brush, steel and bridge	13.85	.90	.60		.20
Spray	13.80	.90	.60		.20
Spray, steel and bridge	14.35	.90	.60		.20
<u>Zone D: 80 miles and over</u>					
from Courthouse in Flag- staff:					
Brush; Soft Floor Layer	13.60	.90	.60		.20
Brush, steel and bridge	14.10	.90	.60		.20
Spray	14.05	.90	.60		.20
Spray, steel and bridge	14.60	.90	.60		.20
Plasterers' Tenders	9.51	.92	.98		.10
<u>Add:</u>					
Lathers:					
North of a line crossing the state drawn through Ajo, Randolph and Springerville; except as follows: north- east of a line drawn from Springerville to a point 4 miles northeast of Keams Canyon	11.89	.75			.06
Mason Tender	9.05	.92	.98		.04

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
DECISION #A279-5100-Mod. #4					
(44 FR 8482 - February 9, 1979)					
Statewide, Arizona					
Change:					
Boilermakers	\$14.36	\$1.175	\$1.00	\$1.00	.03
Bricklayers:					
Phoenix Area:					
Bricklayers; Manhole					
Builders; Stonemasons					
Zone A	12.52	.65	1.10		.09
Zone B	13.54	.65	1.10		.09
Zone C	14.17	.65	1.10		.09
Zone D	14.81	.65	1.10		.09
Zone E	15.32	.65	1.10		.09
Zone F	16.34	.65	1.10		.09
Lathers:					
North of a line					
crossing the state					
drawn through Ajo,					
Randolph and					
Springerville; except					
as follows: north-east					
of a line drawn from					
Springerville to a					
point 4 miles north-					
east of Keams canyon	12.49	.75			.06
Line Construction:					
Zone 1:					
Groundmen	10.22	1.00	3%+1.50		1/2%
Equipment Operator;					
Powdermen; Mechanics	12.07	1.00	3%+1.50		1/2%
Linemen; Technicians;					
Crane Operators	13.60	1.00	3%+1.50		1/2%
Cable Splicers	14.00	1.00	3%+1.50		1/2%
Zone 1-A:					
Groundmen	11.06	1.00	3%+1.50		1/2%
Equipment Operators;					
Powdermen; Mechanics	12.84	1.00	3%+1.50		1/2%
Linemen; Technicians;					
Crane Operators	14.42	1.00	3%+1.50		1/2%
Cable Splicers	14.90	1.00	3%+1.50		1/2%

DECISION #A279-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Zone 2:					
Groundmen	\$11.84	\$1.00	3¢+1.50		1/2¢
Equipment Operators; Powdermen; Mechanics; Linemen; Technicians; Crane Operators	13.63	1.00	3¢+1.50		1/2¢
Cable Splicers	15.22	1.00	3¢+1.50		1/2¢
Painters:	15.65	1.00	3¢+1.50		1/2¢
Flagstaff Area:					
Zone A:					
Brush; Soft Floor Layers	11.60	.90	.80		.20
Brush, steel & bridge	12.10	.90	.80		.20
Spray	12.05	.90	.80		.20
Spray, steel & bridge	12.60	.90	.80		.20
Zone B:					
Brush; Soft Floor Layers	12.35	.90	.80		.20
Brush, steel & bridge	12.85	.90	.80		.20
Spray	12.80	.90	.80		.20
Spray, steel & bridge	13.35	.90	.80		.20
Zone C:					
Brush; Soft Floor Layers	13.35	.90	.80		.20
Brush, steel & bridge	13.85	.90	.80		.20
Spray	13.80	.90	.80		.20
Spray, steel & bridge	14.35	.90	.80		.20
Zone D:					
Brush; Soft Floor Layers	13.60	.90	.80		.20
Brush, steel & bridge	14.10	.90	.80		.20
Spray	14.05	.90	.80		.20
Spray, steel & bridge	14.60	.90	.80		.20
Terrazzo Workers; Tile Setters:					
Phoenix Area	10.91	.65	1.10		.19

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Omit:

Sheet Metal Workers:
Zone Bases: From the Administration Building or City Hall in Flagstaff, Kingman; Phoenix, Prescott and Yuma:

Zone 1: 0-25 miles excluding Luke and Williams Air Force Bases

Zone 2: 25-50 miles including Luke and Williams Air Force Bases

Zone 3: 50 miles and over

Add:

Sheet Metal Workers:
Apache, Coconino, Gila, Graham County (north of 33rd Parallel), Greenlee County (north of 33rd Parallel), Maricopa, Mohave, Navajo, Pinal County (north of 33rd Parallel), Yavapai, Yuma Counties:

Zone 1: 0 to 25 radius miles, excluding Luke and Williams Air Force Bases, from the following base points: the intersection of 56th St. and Indian School Road in Phoenix, and the City Hall in Flagstaff, Kingman, Prescott and Yuma

Zone 2: 25 to 50 radius miles from the base points listed in Zone 1; also Luke and Williams Air Force Bases

Zone 3: 50 radius miles and over from the base points listed in Zone 1

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$11.70	.90	\$1.30		.10
12.35	.90	1.30		.10
14.20	.90	1.30		.10
13.23	1.00	1.40		.12
\$13.88	\$1.00	\$1.40		.12
15.73	1.00	1.40		.12

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
DECISION #A279-5100 - Mod. #5					
(44 FR 8492 - February 9, 1979)					
Statewide, Arizona					
Change:					
Electricians:					
Cochise, Graham, Greenlee, Pima, Pinal County (south part), Santa Cruz, Yuma Cos.,					
Zone A:					
Electricians	\$14.94	.60	11%		1/2%
Cable Splicers	15.19	.60	11%		1/2%
Zone B:					
Electricians	15.68	.60	11%		1/2%
Cable Splicers	15.93	.60	11%		1/2%
Zone C:					
Electricians	16.31	.60	11%		1/2%
Cable Splicers	16.56	.60	11%		1/2%

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
DECISION #A279-5100-Mod. #6 (44 FR 8482 - February 9, 1979) Statewide, Arizona					
Change: Electricians: Cochise, Graham, Greenlee, Pima, Pinal County (south part), Santa Cruz, Yuma Counties: Zone D: Electricians Cable Splicers					
	\$17.06	.60	11%		1/2%
	17.31	.60	11%		1/2%

DECISION #A279-5100 - Mod. #7

(44 FR 8482 - February 9, 1979)

Statewide, Arizona

Change:

Carpenters:
Central and Southern Areas:
Carpenters; Drywall Applicators; Saw Filers; Shinglers
Floorlayers (finish); Piledrivermen
Millwrights
Northern Area:
Carpenters; Drywall Applicators; Saw Filers; Shinglers
Floorlayers (finish); Piledrivermen
Millwrights
Cement Masons:
Apache, Coconino, Gila, Mohave, Navajo, Yavapai, Yuma and the Northern portions of Graham, Greenlee, Maricopa and Pinal Counties:
Central and Southern Areas:
Cement Masons
Concrete troweling machine; Sawing and scoring machine; Curb and gutter machine
Northern Area:
Cement Masons
Concrete troweling machine; Sawing and scoring machine; Curb and gutter machine
Electricians:
Phoenix Area:
Zone A
Zone B

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$11.435	\$1.075	\$1.085		.05
11.74	1.075	1.085		.05
11.88	1.075	1.085		.05
13.56	1.075	1.085		.05
13.865	1.075	1.085		.05
14.005	1.075	1.085		.05
11.21	.95	1.30		.05
11.38	.95	1.30		.05
13.085	.95	1.30		.05
13.255	.95	1.30		.05
14.55	.96	38+.88		3/48
16.55	.96	38+.88		3/48

DECISION NO. A279-5100 (Cont'd)

Phoenix Area (Cont'd)

Zone C
Globe-Miami Area:
Zone A:
Electricians
Cable Splicers
Zone B:
Electricians
Cable Splicers
Zone C:
Electricians
Cable Splicers
Zone D:
Electricians
Cable Splicers
Laborers:
Central and Southern Areas: (See Attached)
Northern Area: (See Attached)
Tunnel and Shaft Work: (See Attached)
Painters:
Tucson and Yuma Areas:
Zone A:
Brush
Spray & Sandblasters
Paperhangers
Swing Stage, under 40 ft.:
Brush
Spray
Swing Stage, over 40 ft.:
Brush
Spray
Structural Steel and Tanks:
Brush
Spray & Sandblaster
Zone B:
Brush
Spray & Sandblaster

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
\$17.55	.96	38+.88		3/48
14.49	.60	118		18
14.74	.60	118		18
15.23	.60	118		18
15.48	.60	118		18
15.86	.60	118		18
16.11	.60	118		18
16.61	.60	118		18
16.86	.60	118		18
9.96	.77	.45		.06
10.46	.77	.45		.06
10.09	.77	.45		.06
10.26	.77	.45		.06
10.76	.77	.45		.06
10.71	.77	.45		.06
11.21	.77	.45		.06
10.96	.77	.45		.06
11.46	.77	.45		.06
10.71	.77	.45		.06
11.21	.77	.45		.06

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MODIFICATIONS P. 3

DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Paperhangers	\$10.84	.77	.45		.06
Swing Stage, under 40 ft.:					
Brush	11.01	.77	.45		.06
Spray	11.51	.77	.45		.06
Swing Stage, over 40 ft.:					
Brush	11.46	.77	.45		.06
Spray	11.96	.77	.45		.06
Structural Steel and Tanks:					
Brush	11.71	.77	.45		.06
Spray and Sandblaster	12.21	.77	.45		.06
Zone C:					
Brush	11.46	.77	.45		.06
Spray and Sandblaster	11.96	.77	.45		.06
Paperhangers	11.59	.77	.45		.06
Swing Stage, under 40 ft.:					
Brush	11.76	.77	.45		.06
Spray	12.26	.77	.45		.06
Swing Stage, over 40 Ft.:					
Brush	12.12	.77	.45		.06
Spray	12.71	.77	.45		.06
Structural Steel and Tanks:					
Brush	12.46	.77	.45		.06
Spray and Sandblasters	12.96	.77	.45		.06
Zone D:					
Brush	11.96	.77	.45		.06
Spray	12.46	.77	.45		.06
Paperhangers	12.09	.77	.45		.06
Swing Stage, under 40 ft.:					
Brush	12.26	.77	.45		.06
Spray	12.76	.77	.45		.06
Swing Stage, over 40 ft.:					
Brush	12.71	.77	.45		.06
Spray	13.21	.77	.45		.06

MODIFICATIONS P. 4

DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Structural Steel and Tanks:					
Brush	\$12.96	.77	.45		.06
Spray and Sandblasters	13.46	.77	.45		.06
Plasterers' Tenders	10.30	.92	1.10		.10
Power Equipment Operators: (Except Piledriving and Steel Erection):					
Central and Southern Areas: (See Attached)					
Northern Area: (See Attached)					
Sheet Metal Workers:					
Zone Bases: from the Administration Bldg. or City Hall in Douglas and Tucson:					
Zone A	11.42	3¢+1.14	1.92		.02
Zone B	12.37	3¢+1.14	1.92		.02
Zone C	13.92	3¢+1.14	1.92		.02
Sprinkler Fitters	13.76	.75	1.05		.08
Truck Drivers:					
Central and Southern Areas: (See Attached)					
Northern Area: (See Attached)					

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DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Basic Hourly Rates	Fringe Benefits Payments			
			H & W	Pensions	Vacation	Education and/or Appr. Tr.
	C&SAREA	N AREA				
Laborers:						
Group 1	\$9.06	\$10.935	.92	\$1.10	.10	
Group 2	9.20	11.075	.92	1.10	.10	
Group 3	9.35	11.225	.92	1.10	.10	
Group 4	9.47	11.345	.92	1.10	.10	
Group 5	9.65	11.525	.92	1.10	.10	
Group 6	10.055	11.93	.92	1.10	.10	
Group 7	10.745	12.62	.92	1.10	.10	
Tunnel and Shaft Work:						
Group 1	9.325	11.20	.92	1.10	.10	
Group 2	9.50	11.375	.92	1.10	.10	
Group 3	9.64	11.515	.92	1.10	.10	
Group 4	10.03	11.905	.92	1.10	.10	
Group 5	10.225	12.10	.92	1.10	.10	
Group 5-A	10.495	12.37	.92	1.10	.10	
Power Equipment Operators: (Except Piledriving and Steel Erection):						
Group 1	9.66	11.535	1.10	1.10	.08	
Group 2	10.06	11.935	1.10	1.10	.08	
Group 3	10.55	12.425	1.10	1.10	.08	
Group 4	11.13	13.005	1.10	1.10	.08	
Group 5	11.70	13.575	1.10	1.10	.08	
Group 5-A	12.03	13.905	1.10	1.10	.08	
Group 6	12.39	14.265	1.10	1.10	.08	
Group 7	13.04	14.915	1.10	1.10	.08	
Truck Drivers:						
Group 1	9.23	11.105	.92	1.10	.08	
Group 2	9.37	11.245	.92	1.10	.08	
Group 3	9.61	11.485	.92	1.10	.08	
Group 4	9.99	11.865	.92	1.10	.08	
Group 5	10.16	12.035	.92	1.10	.08	
Group 5-A	10.36	12.235	.92	1.10	.08	
Group 6	10.51	12.385	.92	1.10	.08	
Group 7	10.95	12.825	.92	1.10	.08	
Group 8	11.505	13.38	.92	1.10	.08	
Group 8-A	12.21	14.085	.92	1.10	.08	
Group 8-B	9.84	11.715	.92	1.10	.08	
Group 8-C	11.88	13.755	.92	1.10	.08	

DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Omit:					
Asbestos Workers	\$11.94	.50	\$1.20		.02
Bricklayers: (Tucson Area):					
Bricklayers; Stone-masons:					
Zone A: 0-15 miles from Tucson City limits	11.22	1.00	.90		.06
Zone B: Over 15 miles to 30 miles from Tucson City limits	11.59	1.00	.90		.06
Zone C: Over 30 miles to 40 miles from Tucson City limits	11.96	1.00	.90		.06
Zone D: Over 40 miles from Tucson City limits	12.72	1.00	.90		.06
Manhole Builders:					
Zone A: 0-15 miles from Tucson City limits	11.47	1.00	.90		.06
Zone B: Over 15 miles to 30 miles from Tucson City limits	11.84	1.00	.90		.06
Zone C: Over 30 miles to 40 miles Tucson City limits	12.21	1.00	.90		.06
Zone D: Over 40 miles from Tucson City limits	12.97	1.00	.90		.06
Cement Masons:					
Cochise, Pima, Santa Cruz and the Southern portions of Graham, Greenlee, Maricopa, and Pinal Counties; Central and Southern Areas:	10.22	.85	.85		.05

MODIFICATIONS P. 7

DECISION NO. A279-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Concrete troweling machine; Sawing and scoring machine; Curb and gutter machine	\$10.385	.85	.85		.05
Drywall: From Court House in Phoenix, Mesa, including Luke and Williams Air Force Bases:					
Tapers:					
Zone A: 0-40 miles	10.21	.59	.50		.07
Zone B: 41-60 miles	11.21	.59	.50		.07
Zone C: 61 miles and over	12.46	.59	.50		.07
Texture Spraymen:					
Zone A: 0-40 miles	9.81	.59	.50		.07
Zone B: 41-60 miles	10.81	.59	.50		.07
Zone C: 61 miles and over	12.06	.59	.50		.07
Electricians: (Gallup Area - Apache County north of Hwy. #66):					
Electricians	14.10	.60	38+.70		1/24
Cable Splicers	14.69	.60	38+.70		1/24
Soft Floor Layers: (Phoenix Area):					
Zone A: 0-40 miles from Court House in Phoenix and Flagstaff including Luke and Williams Air Force Bases	9.21	.59	.12		.12
Zone B: 41-60 miles from Court House in Phoenix and Flagstaff	10.21	.59	.12		.12
Zone C: 61 miles and over from Court House in Phoenix and Flagstaff	10.71	.59	.12		.12
(Tucson Area)	9.25	.38			

MODIFICATIONS P. 8

DECISION NO. A279-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
<u>Add:</u> Asbestos Workers:					
Zone 1: Area lying within 15 miles radius from the City Hall in Phoenix or Tucson	\$14.19	.82	\$1.30		.03
Zone 2: Area lying beyond the limits of Zone 1 and within 30 miles radius from the City Hall in Phoenix or Tucson	14.89	.82	1.30		.03
Zone 3: Area lying beyond the limits of Zone 2 and within 40 miles radius from the City Hall in Phoenix or Tucson	15.09	.82	1.30		.03
Zone 4: Area lying beyond the limits of Zone 3 and within 50 miles radius from the City Hall in Phoenix or Tucson	15.54	.82	1.30		.03
Zone 5: Area lying beyond the limits of Zone 4	17.69	.82	1.30		.03
Bricklayers: Cochise, Graham County (Southern part), Greenlee County (Southern part), Pima, Pinal County (southern part), Santa Cruz Counties:					
Zone A: 0-15 road miles from Tucson City limits:					
Bricklayers:	11.96	1.00	.95		.06
Stonemasons	12.21	1.00	.95		.06
Manhole Builders					

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DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Zone B: 15-30 road miles from Tucson City limits: Bricklayers; Stonemasons	\$12.33 12.58	\$1.00 1.00	.95 .95		.06 .06
Manhole Builders Zone C: 30-40 road miles from Tucson City limits: Bricklayers; Stonemasons	12.71 12.96	1.00 1.00	.95 .95		.06 .06
Manhole Builders Zone D: Over 40 road miles from Tucson City limits: Bricklayers; Stonemasons	13.46 13.71	1.00 1.00	.95 .95		.06 .06
Manhole Builders Cement Masons: Cochise, Pima, Santa Cruz and the southern portions of Graham, Greenlee, Maricopa, and Pinal Counties: Cement Masons Concrete troweling machine; Sawing and scoring machine; Curb and gutter machine	11.44 11.61	.92 .92	1.10 1.10		.05 .05
Drywall Tapers & Texturers Zone A: 0-40 road miles from Courthouse in Phoenix; also Luke and Williams Air Force Bases Zone B: 41-60 road miles from Courthouse in Phoenix Zone C: 61 road miles and over from Courthouse in Phoenix	11.96 12.96 14.21	.59 .59 .59	.50 .50 .50		.12 .12 .12

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DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Electricians: Apache County (north of Interstate 40): Electricians Cable Splicers	\$14.58 15.19	.60 .60	38+.70 38+.70		1/2% 1/2%
Lathers: South of a line crossing the State drawn through Ajo, Randolph and Springerville: Zone A: Area within a 30 mile radius of the City Hall in Tucson Zone B: Area within a 30 to 40 mile radius of the City Hall in Tucson Zone C: Area within a 40 to 50 mile radius of the City Hall in Tucson Zone D: Area outside of Zone C Soft Floor Layers	12.53 13.03 13.28 14.03 10.87	.50 .50 .50 .50 .69			.12 .12

DECISION NO. A279-5100 - Mod. #8

(44 FR 8482 - February 9, 1979)

Statewide, Arizona

Change:

Electricians:

Apache County (north of Interstate #40):

Electricians

\$15.06 .60 3%+.70 1/2%

Cable Splicers

15.69 .60 3%+.70 1/2%

Globe-Miami Area:

Zone A:

Electricians

15.07 .60 11% 1%

Cable Splicers

15.32 .60 11% 1%

Zone B:

Electricians

15.81 .60 11% 1%

Cable Splicers

16.06 .60 11% 1%

Zone C:

Electricians

16.44 .60 11% 1%

Cable Splicers

16.69 .60 11% 1%

Zone D:

Electricians

17.19 .60 11% 1%

Cable Splicers

17.44 .60 11% 1%

Ironworkers:

Central and Southern Areas

13.10 1.54 2.57 .11

Northern Area

15.36 1.54 2.57 .11

Mason Tender

9.80 .92 1.10 .06

Painters:

Apache County (south half), Coconino Co.

(south half), Gila,

Graham County (north

half), Greenlee Co.

(north half),

Maricopa County

(northern two-thirds),

Navajo County (south

half), Pinal County

(north half),

Yavapai County

(south of Wikieup-

Woodruff Line):

Zone A:

Brush and Roller;

Sandblaster

(nozzleman); Sand-

blaster (Pot

Tender)

11.50 .60 .40 .08

DECISION NO. A279-5100 (Cont'd)

Basic Hourly Rates	Fringe Benefits Payments			
	H & W	Pensions	Vacation	Education and/or Appr. Tr.
Spray	\$11.75	.60	.40	.08
Creosote Applier	11.83	.60	.40	.08
Swing Stage:				
Brush, Sandblaster	11.90	.60	.40	.08
Spray	12.15	.60	.40	.08
Steeplejack	12.36	.60	.40	.08
Steel and bridge, brush; Steel Sandblaster	12.43	.60	.40	.08
Steel and bridge, Spray	12.63	.60	.40	.08
Zone B:				
Brush and Roller; Sandblaster (Nozzleman); Sandblaster (Pot Tender)	12.50	.60	.40	.08
Spray	12.75	.60	.40	.08
Creosote Applier	12.83	.60	.40	.08
Swing Stage:				
Brush, Sandblaster	12.90	.60	.40	.08
Spray	13.15	.60	.40	.08
Steeplejack	13.36	.60	.40	.08
Steel and bridge, brush; Steel Sandblaster	13.43	.60	.40	.08
Steel and bridge, Spray	13.63	.60	.40	.08
Zone C:				
Brush and Roller; Sandblaster (Nozzleman); Sandblaster (Pot Tender)	14.00	.60	.40	.08
Spray	14.25	.60	.40	.08
Creosote Applier	14.83	.60	.40	.08
Swing Stage:				
Brush, Sandblaster	14.40	.60	.40	.08
Spray	14.65	.60	.40	.08
Steeplejack	14.86	.60	.40	.08
Steel and bridge, brush; Steel Sandblaster	14.93	.60	.40	.08

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MODIFICATION PAGE #3

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DECISION NO. A279-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Steel and Bridge, Spray Plasterers: Phoenix Area:	\$15.13	.60	.40		.08
Zone A	11.77	.95	1.30		.06
Zone B	12.52	.95	1.30		.06
Zone C	13.645	.95	1.30		.06
Plumbers; Steamfitters:					
Zone 1	14.24	.75	1.35		.13
Zone 2	14.64	.75	1.35		.13
Zone 3	15.09	.75	1.35		.13
Zone 4	16.59	.75	1.35		.13

DECISION NO. AZ79-5100 - Mod. #9 (44 FR 8482-February 9, 1979) Statewide, Arizona					
Change:	Basic Hourly Rates	Fringe Benefits Payments			
		N & W	Pensions	Vacation	Education and/or Appr. Tr.
Electricians:					
Flagstaff Area:					
Zone A	\$13.80	.96	3%+.88		1/2%
Zone B	16.35	.96	3%+.88		1/2%
Phoenix Area:					
Zone A	14.85	.96	3%+.88		3/4%
Zone B	16.85	.96	3%+.88		3/4%
Zone C	17.85	.96	3%+.88		3/4%
Glaziers	12.17	.90	.30		.01
Ironworkers:					
Central and Southern Areas	13.35	1.54	2.57		.11
Northern Area	15.61	1.54	2.57		.11
Line Construction:					
Zone 1:					
Groundmen	11.09	1.00	3%+2.00		1/2%
Equipment Operator; Powdermen; Mechanics	13.10	1.00	3%+2.00		1/2%
Linemen; Technicians; Crane Operators	14.76	1.00	3%+2.00		1/2%
Cable Splicers	15.19	1.00	3%+2.00		1/2%
Zone 1-A:					
Groundmen	12.00	1.00	3%+2.00		1/2%
Equipment Operator; Powdermen; Mechanics	13.93	1.00	3%+2.00		1/2%
Linemen; Technicians; Crane Operators	15.65	1.00	3%+2.00		1/2%
Cable Splicers	16.17	1.00	3%+2.00		1/2%
Zone 2:					
Groundmen	12.85	1.00	3%+2.00		1/2%
Equipment Operator; Powdermen; Mechanics	14.79	1.00	3%+2.00		1/2%
Linemen; Technicians; Crane Operators	16.51	1.00	3%+2.00		1/2%
Cable Splicers	16.98	1.00	3%+2.00		1/2%
Painters:					
Tucson and Yuma Areas:					
Zone A:					
Brush	10.29	.77	.45		.08
Spray & Sandblasters	10.79	.77	.45		.08
Paperhangers	10.43	.77	.45		.08

DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Swing Stage, under 40 ft.:					
Brush	\$10.59	.77	.45	.08	
Spray	11.09	.77	.45	.08	
Swing Stage, over 40 ft.:					
Brush	11.04	.77	.45	.08	
Spray	11.54	.77	.45	.08	
Structural Steel and Tanks:					
Brush	11.29	.77	.45	.08	
Spray & Sandblasters	11.79	.77	.45	.08	
Zone B:					
Brush	11.04	.77	.45	.08	
Spray and Sandblasters	11.54	.77	.45	.08	
Paperhangers	11.18	.77	.45	.08	
Swing Stage, under 40 ft.:					
Brush	11.34	.77	.45	.08	
Spray	11.84	.77	.45	.08	
Swing Stage, over 40 ft.:					
Brush	11.79	.77	.45	.08	
Spray	12.29	.77	.45	.08	
Structural Steel and Tanks:					
Brush	12.04	.77	.45	.08	
Spray & Sandblasters	12.54	.77	.45	.08	
Zone C:					
Brush	11.79	.77	.45	.08	
Spray	12.29	.77	.45	.08	
Paperhangers	11.93	.77	.45	.08	
Swing Stage, under 40 ft.:					
Brush	12.09	.77	.45	.08	
Spray	12.59	.77	.45	.08	
Swing Stage, over 40 ft.:					
Brush	12.54	.77	.45	.08	
Spray	13.04	.77	.45	.08	
Structural Steel and Tanks:					
Brush	12.79	.77	.45	.08	
Spray & Sandblasters	13.29	.77	.45	.08	

DECISION NO. AZ79-5100 (Cont'd)

	Basic Hourly Rates	Fringe Benefits Payments			
		H & W	Pensions	Vacation	Education and/or Appr. Tr.
Zone D:					
Brush	\$12.29	.77	.45	.08	
Spray	12.79	.77	.45	.08	
Paperhangers	12.43	.77	.45	.08	
Swing Stage, under 40 ft.:					
Brush	12.59	.77	.45	.08	
Spray	13.09	.77	.45	.08	
Swing Stage, over 40 ft.:					
Brush	13.04	.77	.45	.08	
Spray	13.54	.77	.45	.08	
Structural Steel and Tanks:					
Brush	13.29	.77	.45	.08	
Spray & Sandblasters	13.79	.77	.45	.08	
Roofers:					
Phoenix Area:					
Roofers and Waterproofers	11.66	1.095	.45	.05	
Tucson Area:					
Asbestos; Shinglers; Tile and Water-proofing:					
Zone A	10.77	1.095	.20	.03	
Zone B	13.02	1.095	.20	.03	
Sheet Metal Workers:					
Apache, Coconino, Gila, Graham County (north of 33rd Parallel), Greenlee County (north of 33rd Parallel), Maricopa, Mohave, Navajo, Pinal County (north of 33rd Parallel), Yavapai, Yuma Counties:					
Zone 1	13.865	1.00	1.515	.12	
Zone 2	14.515	1.00	1.515	.12	
Zone 3	16.365	1.00	1.515	.12	
Sprinkler Fitters	14.48	.75	1.05	.08	

RW-32

SPECIFICATIONS

FOR

MODIFICATIONS TO FACILITIES, MCDOWELL EXHIBIT PLAZA

INDIAN BEND WASH,

GILA RIVER BASIN,

ARIZONA

Authority: 96x3122 Construction, General
Corps of Engineers, Civil

U.S. ARMY ENGINEER DISTRICT, LOS ANGELES
CORPS OF ENGINEERS

T A B L E O F C O N T E N T S

PART I SPECIAL PROVISIONS

PART II TECHNICAL PROVISIONS

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1D	Environmental Protection
2A	Earthwork
2D	Excavation, Trenching and Backfilling
2E	Filter Fabric
2L	Drainage Piping and Appurtenances
2O	Ground Cover
2P	Irrigation
3A	Concrete
3C	Pneumatically Placed Concrete
5A	Miscellaneous Metalwork

PART I

SPECIAL PROVISIONS

Index

- | | |
|---|---|
| 1. Commencement Prosecution and
Completion of Work | 5. Layout of Work |
| 2. Contract Drawings, Maps and
Specifications | 6. Damage to Work |
| 3. Contractor Submittals | 7. Performance of Work by
Contractor |
| 4. Physical Data | 8. Time Extension |
| | 9. Continuing Contracts |

1. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (1965 JAN). The Contractor will be required to commence work under this contract within 5 calendar days after the date of receipt by him of notice to proceed, to prosecute said work diligently, and to complete the entire work ready for use not later than 60 calendar days after the date of receipt of notice to proceed except planting. Planting shall be accomplished as soon as practicable and within time limits stated in the Technical Provisions or directed by the Contracting Officer. The time stated for completion shall include final clean-up of the premises.

1.1 LIQUIDATED DAMAGES (1965 JAN.). In case of failure on the part of the Contractor to complete the work within the time fixed in the contract or any extensions thereof, the Contractor shall pay the Government as liquidated damages, pursuant to the clause of this contract entitled "Terminations for Default-Damages for Delay-Time Extensions," the sum of \$130.00 for each day of delay.

2. CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS (1965 JAN).

2.1 Ten sets of large scale contract drawings, maps and specifications will be furnished the Contractor without charge, except applicable publications incorporated into the Technical Provisions by reference. Additional sets will be furnished on request at the cost of reproduction. The work shall conform to the following contract drawings and maps, all of which form a part of these specifications and are available in the office of the U.S. Army Engineer District, Los Angeles, 300 North Los Angeles Street, Los Angeles, California.

Drawing No. (Plate No.)	Title
1	Irrigation Plan and Details
2	Landscape Plan, Ground Covers and Schedule
3	Revision to Drainage, McDowell Exhibit Plaza
4	Revision to Irrigation Pump Station McDowell Exhibit Plaza

REFERENCE DRAWING

(District File No.)	Title
241/67 Rev. B	Irrigation Pump Station and Intake Plan, Profile and Detail

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

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

3. CONTRACTOR SUBMITTALS.

3.1 General. Reference is made to the General Provision entitled "Shop Drawings". The Contractor shall submit for approval all shop drawings, certificates of compliance and/or equipment lists called for under the various headings of these specifications. These drawings, certificates and lists shall be complete and detailed. If approved by the Contracting Officer, each copy of the drawings, certificates, or lists will be identified as having received such approval by being so stamped and dated. The Contractor shall make any corrections required by the Contracting Officer. Unless otherwise specified in the Technical Provisions, the number of copies to be submitted shall be as stated herein. The Contractor shall complete ENG Form 4025, "Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance for Approval" and forward 6 copies of same with each set of shop drawings, certificates of compliance, or equipment lists submitted. Blank ENG Forms 4025 will be furnished by the Contracting Officer on request. Each shop drawing submitted for approval shall have, in the lower right hand corner just above the title, a white space 3 inches x 4 inches in which the Contracting Officer can indicate the action taken. Shop drawings for submittal shall be either blue line or black line prints on a white background. Blueprints are not acceptable. Each shop drawing, certificate of compliance, and/or equipment list shall be identified with the following information as applicable:

Contract Number
Project Title and Location
Subcontractor's Name
Supplier's Name
Manufacturer's Name
Contract Specification and Paragraph Number
Contract Drawing File Number

3.1.1 Contractor Certification. Each submittal of the shop drawings shall contain the following certification on the face of the ENG Form 4025 accompanying the submittal:

"Have reviewed the shop drawings in detail and they are correct and in strict conformance with the contract drawings and specifications except as otherwise explicitly stated.

Authorized Prime Contractor Representative"

3.2 Shop Drawings and Materials Submittal Register. Within 15 calendar days after commencement of work under this contract, the Contractor shall submit a preliminary register showing all shop drawings, certificates of compliance, equipment lists, samples, and other data required to be submitted under the various headings of these specifications. The register shall be submitted in duplicate. The preliminary register shall show the submittal identification number, the type of submittal, and the description for all items to be submitted under this contract and, for all items needed prior to submittal of the Project Progress Schedule, the scheduled submittal date, approval need date, and the material/equipment need date shall also be included. The register shall be expanded to include all Contractor scheduled dates and shall be resubmitted within 15 calendar days after submittal of the project progress schedule. After original approval the register shall be updated to indicate actual dates, actions completed, and any additional submittals or resubmittals required, and two copies of all updated sheets shall be submitted on or before the fifteenth of each month. The register shall provide adequate time for review and approval of the submitted material and shall be coordinated with the construction progress schedule to assure that all equipment and materials will be available for incorporation into the work in accordance with approved schedule of construction operations. Payment for materials incorporated into the work will not be allowed until required approvals have been obtained.

3.3 Shop Drawings. The Contractor shall submit to the Contracting Officer for approval 10 copies of all shop drawings as called for under the various headings of these specifications. Nine sets of all shop drawings will be retained by the Contracting Officer and one set will be returned to the Contractor.

3.4 Certificates of Compliance (1969 MAY OCE). Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in six copies. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

3.5 Resubmittals. If a submittal is returned for correction or is not satisfactory and is disapproved by the Contracting Officer, the Contractor shall resubmit the corrected material in the same quantity, as specified for the original submittal, for approval within 14 calendar days after receipt by him of the disapproved material.

4. PHYSICAL DATA (1965 JAN).

4.1 General. Information and data furnished or referred to below are furnished for the Contractor's information. However, it is expressly understood that the Government will not be responsible for any interpretation or conclusion drawn therefrom by the Contractor.

4.2 The physical conditions indicated on the drawings and in the specifications are the result of site investigations by surveys.

4.3 Weather Conditions. Complete monthly average temperatures and rainfall data based on a 30 year period is maintained at the National Weather Service, Sky Harbor International Airport, Phoenix, Arizona.

5. LAYOUT OF WORK (1965 APR OCE).

5.1 The Government has established bench marks at the site of the work.

5.2 From the bench marks established, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

5.3 The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the bench marks established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them and if such marks are destroyed, by the Contractor or through his negligence prior to their authorized removal they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

6. DAMAGE TO WORK (1966 MAR OCE). The responsibility for damage to any part of the permanent work shall be as set forth in the clause of the contract entitled "Permits and Responsibilities." However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work an equitable adjustment pursuant to Clause 3, Changes, of the contract, will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

7. PERFORMANCE OF WORK BY CONTRACTOR (1965 JAN). The Contractor shall perform on the site, and with his own organization, work equivalent to at least thirty-five percent (35%) of the total amount of work to be performed under the contract. If, during the progress of the work hereunder the Contractor requests a reduction in such percentage and the Contracting Officer determines

that it would be to the Government's advantage, the percentage of the work required to be performed by the Contractor may be reduced; provided, written approval of such reduction is obtained by the Contractor from the Contracting Officer.

8. TIME EXTENSION (1965 JAN). Notwithstanding any other provisions of this contract it is mutually understood that the time extensions for changes in the work depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages pursuant to the new completion schedule.

9. CONTINUING CONTRACTS (1978 MAR OCE).

9.1 Funds are not available at the inception of this contract to cover the entire contract price. The sum of \$30,000.00 has been reserved for this contract and is available for payments to the Contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds will be reserved for this contract. The liability of the United States for payments beyond the funds reserved for this contract is contingent on the reservation of additional funds.

9.2 Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not be considered a breach of this contract, and shall not entitle the Contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs 9.5, 9.6, 9.7, and 9.8 below.

9.3 The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The Contracting Officer will promptly notify the Contractor in writing of any additional funds reserved for the contract.

9.4 If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the Contractor shall give written notice to the Contracting Officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during this fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

9.5 No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. If and when sufficient additional funds are reserved, the Contractor shall be entitled to simple interest on any payment that the Contracting Officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Stat 97, for the Renegotiation Board, as in effect on the first day of the delay in such payment.

9.6 Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the Contractor to any price adjustment under a "Suspension of Work" or similar clause or in any other manner under this contract.

9.7 An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.

9.8 If, upon expiration of 60 days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the Contractor, by written notice delivered to the Contracting Officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be at no cost to the Government, except that, to the extent that additional funds to make payment therefor are allocated to this contract, it may be treated as a termination for the convenience of the Government.

9.9 If at any time it becomes that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the Contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the Contractor, to reduce said reservation by the amount of such excess.

9.10 The term "Reservation" means monies that have been set aside and made available for payment under this contract.

* * * * *

PART II

TECHNICAL PROVISIONS

SECTION 1A

GENERAL REQUIREMENTS

Index

- | | |
|---|--|
| 1. Project Facilities | 6. Restrictions |
| 2. Bulletin Board | 7. Public Safety |
| 3. Maintenance and Disposal of Project Facilities | 8. Occupation Safety and Health Act (OSHA) Standards |
| 4. Scrap Materials | 9. Quality Control |
| 5. Archaeological Findings During Construction | 10. Water Contamination |
| | 11. Dust Control |

1. PROJECT FACILITIES. The Contractor shall construct and/or erect the following project facilities.

1.1 Bulletin Board at the Contractor's office.

1.2 Sanitary Facilities.

2. BULLETIN BOARD. A weatherproof bulletin board, approximately 36 inches wide and 30 inches high, with hinged glass door shall be provided adjacent to or mounted on the Contractor's project office. If adjacent to the office, the bulletin board shall be securely mounted on no less than 2 posts. Bulletin board and posts shall be painted or have other approved factory finish. The bulletin board shall be easily accessible at all times and shall contain wage rates, equal opportunity notice, and such other items required to be posted.

3. MAINTENANCE AND DISPOSAL OF PROJECT FACILITIES. The Contractor shall maintain the project facilities in good condition throughout the life of the project. Upon completion of work under this contract, the facilities covered under this section will remain the property of the Contractor and shall be removed from the site at his expense.

4. SCRAP MATERIAL. Materials indicated to be removed and not indicated to be salvaged, stored or reinstalled are designated as scrap and shall become the property of the Contractor and be removed from the site of the work. The Contractor by signing this contract hereby acknowledges that he made due allowance for value, if any, of such scrap in the contract price.

5. ARCHAEOLOGICAL FINDINGS DURING CONSTRUCTION. Should the Contractor or any of his employees in the performance of this contract find or uncover any archaeological remains, he shall notify the Project Engineer immediately. Such notifications will be a brief statement in writing giving the location and the nature of the findings. Should the discovery site require archaeological studies resulting in delays and/or additional work, the Contractor will be compensated by an equitable adjustment under the General Provisions of the contract.

6. RESTRICTIONS.

6.1 Representatives of Other Agencies. Personnel representing owners and agencies may be present for various portions of the work. However, the Contractor will be responsible only to the Contracting Officer.

7. PUBLIC SAFETY. Attention is invited to the general provision: PERMITS AND RESPONSIBILITIES. The Contractor shall provide temporary fencing, barricades, and/or guards, as required, to provide protection in the interest of public safety. Whenever the Contractor's operations create a condition hazardous to the public, he shall furnish at his own expense and without cost to the Government, such flagmen and guards as are necessary to give adequate warning to the public of any dangerous conditions to be encountered and he shall furnish, erect, or maintain such fences, barricades, lights, signs and other devices as are necessary to prevent accidents and avoid damage or injury to the public. Flagmen and guards, while on duty and assigned to give warning and safety devices shall conform to applicable city, county, and state requirements. Should the Contractor appear to be neglectful or negligent in furnishing adequate warning and protection measures, the Contracting Officer may direct attention to the existence of a hazard and the necessary warning and protective measures shall be furnished and installed by the Contractor without additional cost to the Government. Should the Contracting Officer point out the inadequacy of warning and protective measures, such action of the Contracting Officer shall not relieve the Contractor from any responsibility for public safety or abrogate his obligation to furnish and pay for those devices. The installation of any general illumination shall not relieve the Contractor of his responsibility for furnishing and maintaining any protective facility.

8. OCCUPATION SAFETY AND HEALTH ACT (OSHA) STANDARDS. The OCCUPATIONAL SAFETY and HEALTH ACT (OSHA) STANDARDS for CONSTRUCTION (Title 29, Code of Federal Regulations Part 1926 as revised from time to time) and the Corps of Engineers General Safety Requirements Manual, EM 385-1-1, are both applicable to this contract. The most stringent requirement of the two standards will be applicable.

9. QUALITY CONTROL. The Contractor shall inspect the work of his own forces and the work of all subcontractors for compliance with the contract requirements and record the results of the inspections. Legible copies of the daily inspection reports shall be maintained by the Contractor at the project site at all times and the original copies of the "Construction Quality Control Report" shall be delivered to the Contracting Officer on the work day following the date of the report.

9.1 Control of on-site construction. The Contractor's control shall include three phases of inspection for all definable features of work, as follows.

9.1.1 Preparatory inspection shall be performed prior to beginning any work on any definable feature of work. It shall include a review of contract requirements; a check to assure that all materials and/or equipment have been tested, submitted, and approved; a check to assure that provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical

examination of material and equipment to assure that they conform to approved shop drawings or submittal data and that all material and/or equipment are on hand.

9.1.2 Initial inspection shall be performed as soon as work begins on a representative portion of the particular feature of work and shall include examination of the quality of workmanship as well as a review of control testing for compliance with contract requirements.

9.1.3 Follow-up inspections shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work.

9.2 The specified reports must be factual records of the Contractor's daily quality control activities and resulting actions. As such, they shall stress as major components of the report, the following:

(a) Phase(s) of construction underway during the time frame of the report. (i.e. earthwork, concrete work, structural steel erection, etc.)

(b) Phase (preparatory, initial, or follow-up), and locations of inspections and/or check tests that were made.

(c) Results of inspection, including nature of deficiencies observed and corrective actions taken or to be taken. If no inspections are listed on the report, it must be assumed that no inspections were made and that CQC is not being implemented.

(d) Report of tests performed, including those specified, with the results of the tests, including failures and remedial action to be taken. Test results, including all computations should be attached to the report form. Where test results cannot be completed by the time the report is submitted, a notation should be made that the test was performed and the approximate date test results will be available. Delayed test results should be submitted with the report form on the date received.

(e) Monitoring of materials and equipment upon arrival at the jobsite and prior to incorporation into the work for compliance with submittal approvals, damage and proper storage.

(f) Offsite surveillance activities.

(g) Job Safety.

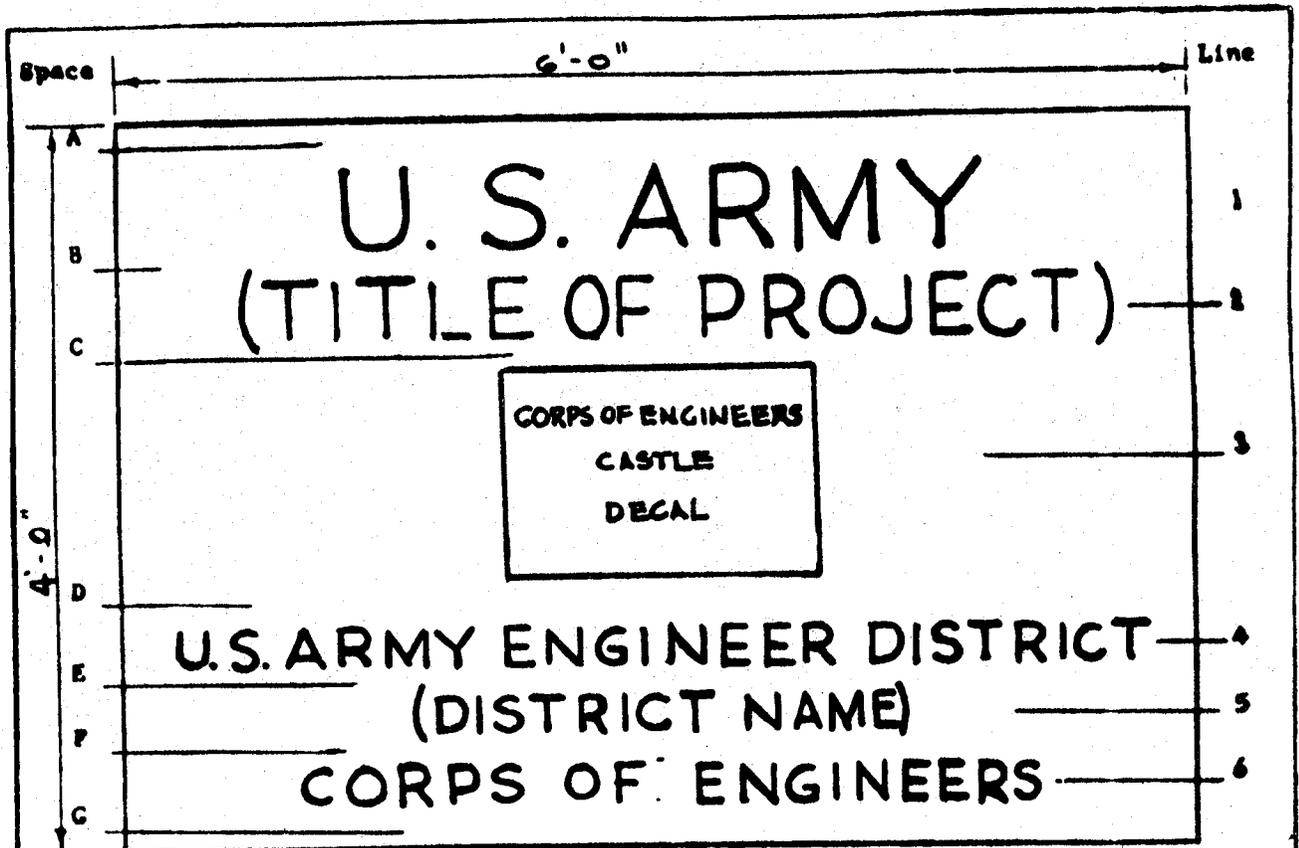
9.3 The report must contain a record of inspections and tests for all work accomplished subsequent to the previous report. Separate reports in different phases of the work may be submitted by the responsible CQC inspectors or they may be combined into one consolidated report if all CQC activities and results are covered and the responsible CQC inspectors are identified.

9.4 In all cases, the report or reports must be verified and signed by the one person delegated this responsibility by the Contractor. The verification should contain the statement that all supplies and materials incorporated in the work are in compliance with the terms of the contract except as noted.

10. WATER CONTAMINATION. In order to prevent contamination of water along beaches and waterways, all refuse, oil, greases, and other petroleum products; all toxic materials; all cement or concrete; or water containing such materials shall be disposed of in a manner to prevent their entry into water along beaches and waterways.

11. DUST CONTROL. The Contractor shall provide an acceptable plan for preventing the generation of dust due to his operation in construction zones, along haul routes, in equipment parking areas, and in waste areas located on the Base. This plan may consist of water sprinkling or an equivalent service.

* * * * *



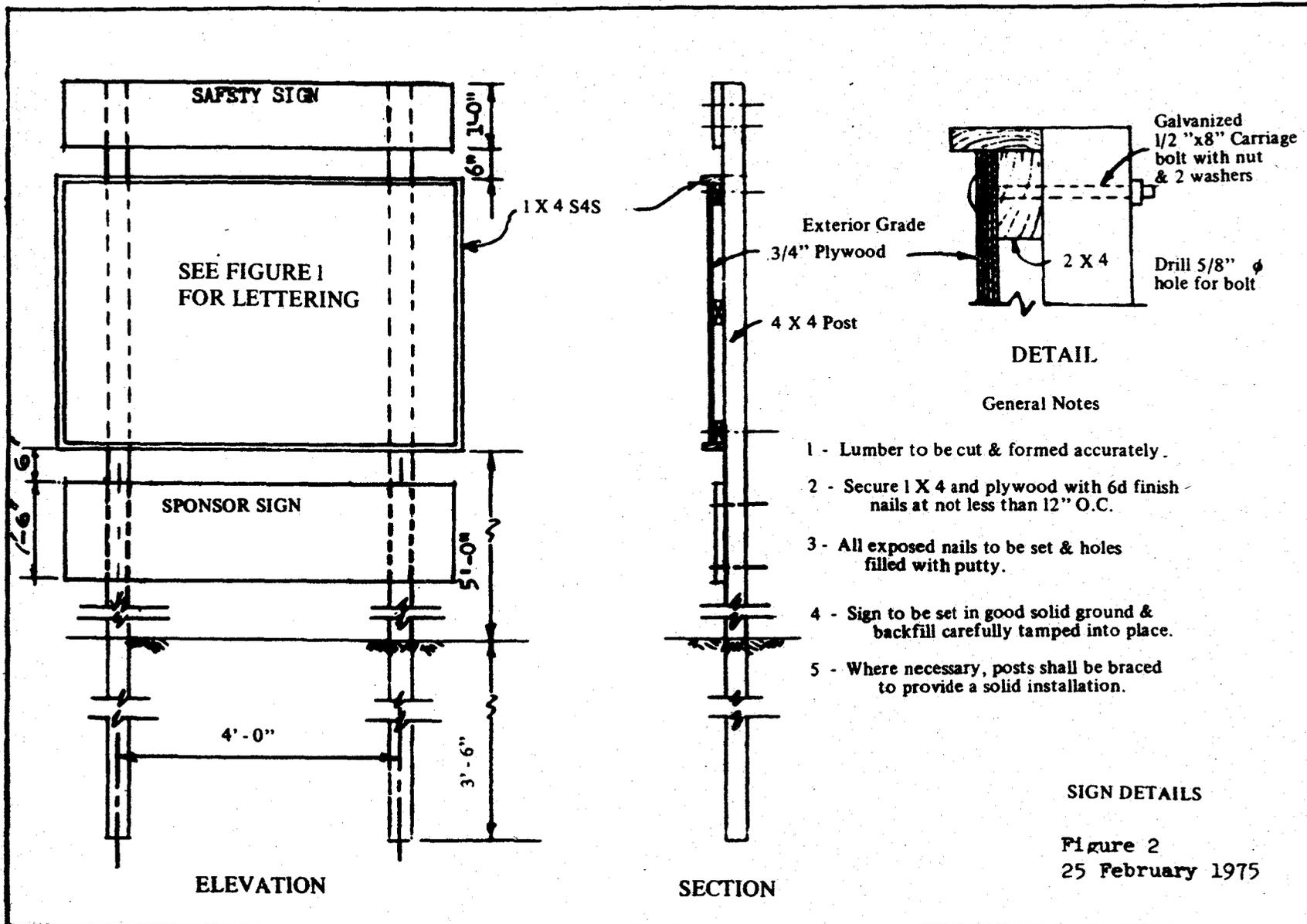
SCHEDULE

<u>Space</u>	<u>Height</u>	<u>Line</u>	<u>Description</u>	<u>Letter Height</u>	<u>Stroke</u>
A	3"	1	U. S. ARMY	5 1/2"	7/8"
B	2"	2	PROJECT NOMENCLATURE	4"	5/8"
C	2"	3	CORPS OF ENGINEERS CASTLE (DECAL)	1 1/2"	--
D	3"	4	U. S. ARMY ENGINEER DISTRICT	2 3/4"	3/8"
E	2"	5	DISTRICT NAME	2 1/4"	1/4"
F	2"	6	CORPS OF ENGINEERS	2 1/2"	3/8"
G	3"				

Lettering Color -- Black

PROJECT SIGN
(Army-Civil Works)

Figure 1
14 August 1972



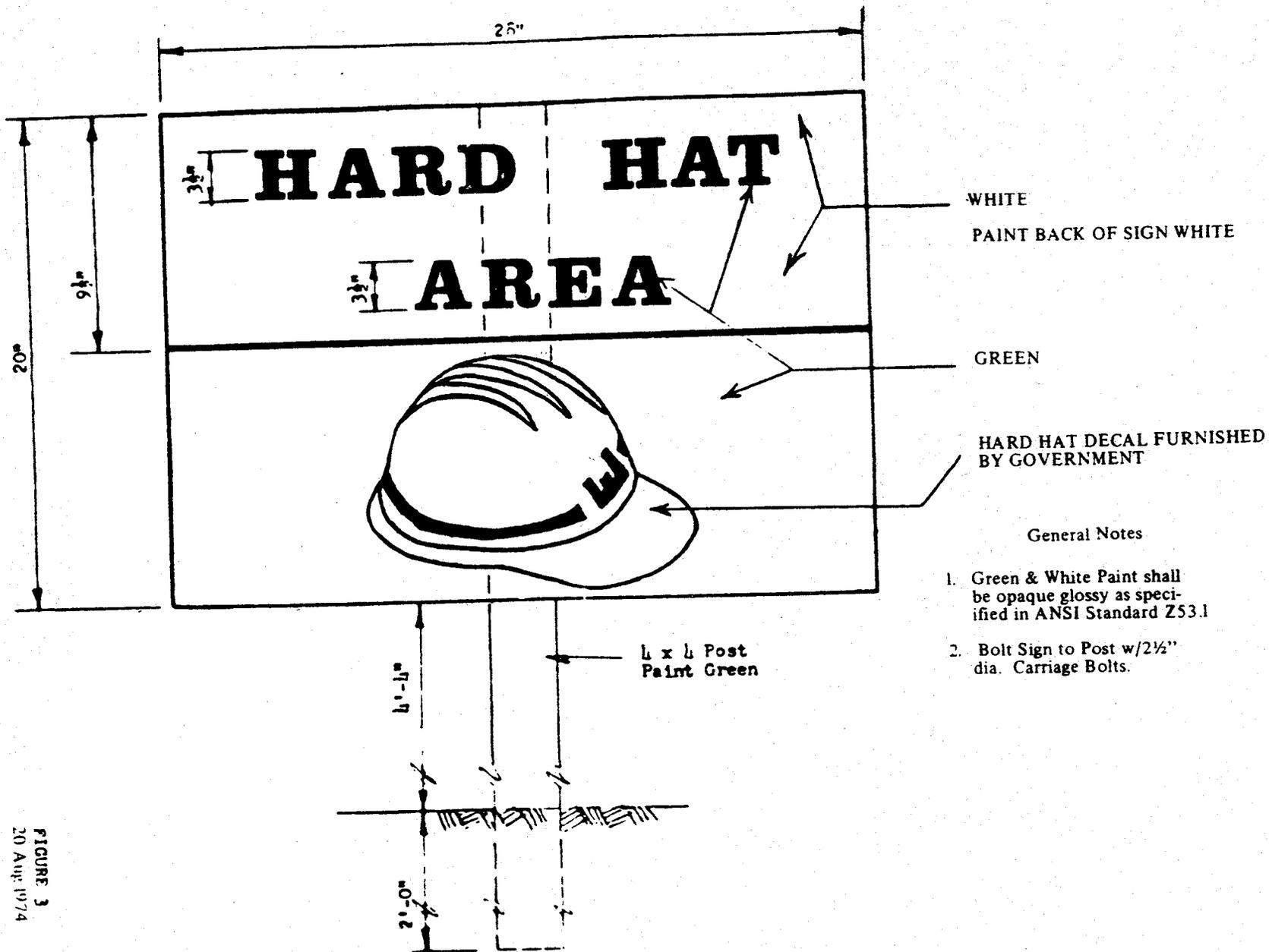


FIGURE 3
20 Apr 1974

SECTION 1D

ENVIRONMENT PROTECTION

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- | | |
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| 1. Scope | 10. Protection of Fish and Wildlife |
| 2. Reference | 11. Disposal of Cleared and Grubbed Material and Other Debris |
| 3. General | 12. Dust Control |
| 4. Notification | 13. Maintenance of Pollution Control Facilities During Construction |
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| 7. Protection of Land Resources | |
| 8. Recording and Preserving Historical and Archaeological Finds | |
| 9. Protection of Water Resources | |

1. SCOPE. This section covers the furnishing of all labor, materials and equipment and performing all work required for the protection of the environment during construction operations except for those measures set forth in other Technical Provisions of these specifications.

2. REFERENCE. "Standard Methods for the Examination of Water, Sewage, and Industrial Wastes," Thirteenth Edition, 1971, published by American Public Health Association, 1015 Eighteenth Street, N.W., Washington, D.C. 20036.

3. GENERAL. For the purpose of this specification, environment protection is defined as the retention of the environment in its natural state to the greatest possible extent during project construction and to enhance the natural appearance in its final condition. Environment protection requires consideration of air, water, and land, and involves noise, solid waste-management of radiant energy and radioactive materials, as well as other pollutants. In order to prevent, and to provide for abatement and control of, any environmental pollution arising from the construction activities in the performance of this contract, the Contractor and his subcontractors shall comply with all applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement.

4. NOTIFICATION. The Contracting Officer will notify the Contractor in writing of any noncompliance with the aforementioned Federal, State, or local laws or regulations. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. The Contractor shall, after receipt of such notice, immediately inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor.

5. SUBCONTRACTORS. Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

6. IMPLEMENTATION. Prior to commencement of the work the Contractor will:

(1) submit in writing his proposals for implementing this section for environment protection;

(2) meet with representatives of the Contracting Officer to develop mutual understandings relative to compliance with this provision and administration of the environment protection program.

Approval of the Contractor's plan for environment protection will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants.

7. PROTECTION OF LAND RESOURCES.

7.1 General. The land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the project. The Contractor shall confine his construction activities to areas defined by the plans or specifications. The following additional requirements are intended to supplement the requirements of General Provisions 49, 50, and 53.

7.2 Prevention of Landscape Defacement. Except in areas indicated on the plans or specified to be cleared, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without the authority of the Contracting Officer. Ropes, cables, or guys shall not be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized. Where such special emergency use is permitted, it shall be performed in such a manner as to avoid damage to the trees. The Contractor shall in any event be responsible for any damage resulting from such use. Where the possibility exists that trees may be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or operations, the Contractor shall adequately protect such trees. Stone, earth or other material that is displaced into uncleared areas shall be removed. Monuments and markers shall be protected before construction operations commence.

7.3 Restoration of Landscape Damage. Any trees or other landscape features scarred or damaged by the Contractor's equipment or operations shall be restored to a condition satisfactory to the Contracting Officer. Restoration of scarred and damaged trees shall be performed in an approved manner by experienced workmen. Trees damaged beyond restoration shall be removed and disposed of under requirements for clearing and grubbing. Trees that are to be removed because of damage shall be replaced at the Contractor's expense by nursery-grown trees of the same species or a species approved by the Contracting Officer. The size and quality of nursery-grown trees shall also be approved by the Contracting Officer.

7.4 Location of Storage Facilities. Contractor's storage, and other construction buildings, located on Government property, which is required in the performance of the work, shall be located upon cleared portions of the jobsite or areas to be cleared, and shall require written approval of the

Contracting Officer. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. Plans showing storage facilities shall be submitted for approval of the Contracting Officer. Where buildings or platforms are constructed on sidehills, the Contracting Officer may require cribbing to be used to obtain level foundations. Benching or leveling of earth may be permitted, depending on the location of the proposed facility.

7.5 Temporary Excavation and Embankments. If the Contractor proposes to construct temporary roads or embankments and excavations for plant and/or work areas, he shall submit the following for approval prior to scheduled start of such temporary work.

7.5.1 A layout of all temporary roads, excavations and embankments to be constructed within the work area.

7.5.2 A landscaping plan showing the proposed restoration of the area. The plan shall provide for the obliteration of construction scars as such and shall provide for a reasonably natural appearing final condition of the area. No unauthorized road construction, excavation or embankment construction (including borrow and disposal areas) will be permitted.

7.6 Post-Construction Cleanup or Obliteration. The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures or stockpiles of excess or waste materials, as directed by the Contracting Officer. The area will be restored to near natural conditions which will permit the growth of vegetation thereon. Except in specific cases, restoration to original contours will not be required, however, all restored areas shall be smoothly and evenly dressed and sloped to drain.

8. RECORDING AND PRESERVING HISTORICAL AND ARCHAEOLOGICAL FINDS. All items having any apparent historical or archaeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archaeological find undisturbed and shall immediately report the find to the Contracting Officer so that the proper authorities may be notified.

9. PROTECTION OF WATER RESOURCES.

9.1 General. The Contractor shall not pollute streams, lakes, or reservoirs with fuels, oils, bitumens, calcium chloride, acids, insecticides, herbicides or other harmful materials. The Contractor shall investigate and comply with all applicable Federal, State, County, and Municipal laws concerning pollution of rivers and streams.

9.2 Erosion Control. Prior to any major construction the Contractor shall submit a plan for approval of the Contracting Officer showing his scheme for controlling erosion and disposing of wastes.

9.2.1 Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation

ponds or shall be graded to control erosion within the acceptable limits. Temporary erosion and sediment control measures such as berms, dikes, drains, immediate seeding of cut and fill slopes, or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operative. The area of bare soil exposed at any one time by construction operations should be held to a minimum. Stream crossings by fording with equipment shall be limited to control turbidity. Any temporary culverts or bridge structures shall be removed upon completion of the project. Fills and waste areas shall be constructed by selective placement to eliminate silts or clays on the surface that will erode and contaminate adjacent streams.

9.3 Spillages. Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, and concrete drainage from entering public waters.

9.4 Washing and Curing Water. Water used in concrete curing, and other waste waters shall not be allowed to reenter the water course if a significant increase in the turbidity of the water course will result therefrom. The Contractor shall remove from within the cofferdam all wash, curing and waste waters derived from sources either within or outside the cofferdam.

9.5 Disposal. Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., in areas adjacent to streams shall not be permitted. If any waste material is dumped in unauthorized areas the Contractor shall remove the material and restore the area to the original condition before being disturbed. If necessary, contaminated ground shall be excavated, disposed of as directed by the Contracting Officer, and replaced with suitable fill material, compacted and finished with topsoil and planted as required to reestablish vegetation.

10. PROTECTION OF FISH AND WILDLIFE. The Contractor shall at all times perform all work and take such steps required to minimize interference with or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flows or otherwise disturb native habitat adjacent to the project area which, in the opinion of the Contracting Officer, are critical to fish or wildlife.

11. DISPOSAL OF CLEARED AND GRUBBED MATERIAL AND OTHER DEBRIS.

11.1 General. Except as specified herein, all debris resulting from construction operations on this contract shall be disposed of in accordance with the requirements of the section: EARTHWORK.

11.2 Burning will not be permitted.

12. DUST CONTROL. The Contractor will be required to maintain all excavations, embankments, stock piles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which would cause a hazard or nuisance to others. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods will be permitted to control dust. Sprinkling, to be approved, must be

repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs. No separate or direct payment will be made for dust control and the cost thereof shall be considered incidental to and included in the contract prices for excavation and embankments.

13. MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION. During the life of this contract, the Contractor shall maintain all facilities constructed for pollution control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. During the construction period the Contractor should conduct frequent training periods on environment protection. The curricula should include methods of detecting and avoiding pollution; familiarity with pollution standards; both statutory and contractual; and installation and care of vegetative covers, plants and other facilities to prevent and correct environmental pollution.

* * * * *

SECTION 2A

EARTHWORK

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- | | |
|--|----------------------------------|
| 1. Applicable Publications | 6. General Backfilling |
| 2. Existing Service Lines and Utility Structures | 7. Slab at Grade |
| 3. Site Preparation | 8. Finished Excavation and Fills |
| 4. General Excavation | 9. Protection |
| 5. Excavation for Structures | 10. Field Testing Control |

1. **APPLICABLE PUBLICATIONS.** The publications listed below, form a part of this specification to the extent referenced thereto. The publications are referred to in the text by the basic designation only:

1.1 American Society for Testing and Materials (ASTM) Publications.

D 1556-64 (R 1974)	Density of Soil in Place by the Sand-Cone Method
D 2167-66 (R 1977)	Density of Soil in Place by the Rubber-Balloon Method
D 2922-78	Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

2. **EXISTING SERVICE LINES AND UTILITY STRUCTURES.** The existing service lines and utility structures shown on the drawings, the location of which is known to the Contractor prior to excavation or construction of fills or embankments, shall be protected and safeguarded from damage during grading operations and if damaged, shall be repaired by the Contractor at his expense. In the event that the Contractor damages any existing utility lines that are not shown on the drawing or the locations of which are now known to the Contractor, report thereof shall be made immediately to the Contracting Officer. If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs will be ordered under the "Change" clause of the contract. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Contracting Officer in ample time for the necessary measures to be taken to prevent interruption of the service.

3. **SITE PREPARATION.**

3.1 **General.** Except as otherwise specified, and/or indicated areas to be cleared will be limited to actual excavation areas or areas on which fills and/or structures are to be placed. The removal of trees, shrubs, turf, and other vegetation outside of these areas shall be held to minimum and care shall be exercised not to damage any trees, shrubs, or vegetation which can be left in place.

3.2 Clearing. Vegetation shall be cut off 6 inches below the indicated subgrade or slightly below the original ground surface whichever is lower. Clearing operations shall be conducted so as to prevent damage to trees, structures, and installations under construction, or to remain in place, and to provide for the safety of employees and others.

3.3 Disposal of Cleared Material. Materials from clearing operations shall become the property of the Contractor and shall be removed from the site of the work.

3.4 Stripping. Soil material containing sod, grass or other vegetation shall be removed, to a depth of 6 inches, from all areas to receive fill or pavement and from the areas within lines 5 feet outside all structure walls. The stripped material shall be wasted in such locations as are directed by the Contracting Officer or, if approved, the material may be used in areas to be planted or may be mixed with sand and used in the upper portion of drainage trenches.

3.5 Conservation of Topsoil. Existing suitable topsoil shall be carefully removed and stockpiled for use in areas to be planted or mixed with sand for use in the upper portion of drainage trenches.

4. GENERAL EXCAVATION. Excavation shall comprise and include the satisfactory removal and disposition of all materials excavated regardless of the nature of the materials encountered, and which shall therefore, be understood to include both rock excavation and common excavation when both classes are present. All suitable excavated materials shall be transported to and placed in the fill areas within the limits of the work except as otherwise directed by the Contracting Officer. Excavated material conforming to the requirements specified hereinafter for materials to be used for backfills shall be considered as suitable by the Contracting Officer. Where material encountered within the limits of work is considered unsuitable by the Contracting Officer such material shall be excavated below the grade shown on the drawings as directed, and replaced with suitable material and an adjustment in contract price will be made. All excavated materials which are considered unsuitable by the Contracting Officer and any surplus excavated material which is not required for fill shall be known as waste and shall be disposed of by the Contractor at his own expense and responsibility, and to the satisfaction of the Contracting Officer. During construction, excavation and filling shall be performed in a manner and sequence that will provide drainage at all times.

4.1 Blasting will not be permitted.

5. EXCAVATION FOR STRUCTURES. The excavation shall conform to the dimensions and elevations indicated for each structure, except as specified hereinafter, and shall include trenching for utility system to a point 5 feet beyond the building line of each structure, and all work incidental thereto. Excavation shall extend a sufficient distance from walls and footings to allow for placing and removal of forms, installation of services, and for inspection, except where the concrete for walls and footings is authorized to be deposited directly against excavated surfaces. Undercutting will not be permitted. Excavations carried below indicated depths will not be permitted except to

remove unsatisfactory material and care shall be taken not to disturb the bottom of the excavation. Unsatisfactory material encountered below the grades shown shall be removed as directed and replaced with satisfactory material and payment therefor will be made in accordance with the Changes clause of the contract. Where the excavation is made below the elevations indicated on the drawings without the specific direction of the Contracting Officer, the excavation, if under slabs, shall be restored to the proper elevation in accordance with the procedure hereinafter specified for backfill, or if under footings, the heights of the walls or footings shall be increased to the bottom of the overdepth excavation, at no additional cost to the Government. The Contractor shall control the grading in the vicinity of structures so that the surface of the ground will be properly sloped to prevent water from running into the excavated areas. Any water that accumulates in the excavation shall be removed promptly. Shoring, including sheet piling, where required, shall be installed to protect workmen and the banks, adjacent to paving, structures and utilities.

5.1 Utility Trenches. Trenches for underground utilities system shall conform to section: EXCAVATION, TRENCHING, AND BACKFILLING.

6. GENERAL BACKFILLING. After completion of foundation and walls and other construction including pipe laying, below the elevation of the final grades, and prior to backfilling all forms and shoring if used shall be removed and the excavation shall be cleaned of all trash and debris. Material for backfilling shall consist of the excavation, or borrow of sand, gravel or other materials approved by the Contracting Officer, and shall be free of rock larger than $\frac{2}{3}$ the thickness of the layer in which the material is to be placed, trash, lumber, or other debris. Backfill shall be brought to indicated finish grade and shall be placed symmetrically to prevent eccentric loading upon or against structures. Backfill shall be placed in horizontal layers not in excess of 8 inches in thickness when machine or equipment compacted and 4 inches in thickness when hand compacted, and shall have the proper moisture content for the required degree of compaction. Each layer shall be compacted, by hand or machine tampers or by other suitable equipment to at least 95 percent maximum density for areas under concrete slabs and footing and to at least 90 percent maximum density for other areas.

7. SLABS AT GRADE. Except as otherwise specified for structures, where concrete slabs are placed without fill, the prepared ground shall be uniformly moistened or aerated as required, and compacted to at least 95 percent maximum density.

8. FINISHED EXCAVATION AND FILLS. All areas covered by the project, including excavated and filled sections and adjacent transition areas, shall be uniformly smooth-graded. The finished surface shall be reasonably smooth, compacted, and free from irregular surface changes. The degree of finish shall be that ordinarily obtainable from blade-grader operations, except as otherwise specified. Ditches shall be finished to permit adequate drainage.

9. PROTECTION. Newly graded areas shall be protected from traffic and from erosion, and any settlement or washing away that may occur from any cause, prior to acceptance, shall be repaired and grades reestablished to the required elevations and slopes. All work shall be conducted in accordance with the environmental protection requirements of the contract.

10. FIELD TESTING CONTROL. Testing shall be the responsibility of the Contractor and shall be performed by an approved commercial testing laboratory or by the Contractor subject to approval. Field density tests shall be performed in sufficient number to insure that the specified density is being obtained. Field in-place density shall be determined in accordance with ASTM Methods D 1556 or D 2167 or D 2922. Test results shall be furnished to the Contracting Officer on the day each test is taken. When test results indicate that compaction is not as specified, the material shall be removed and replaced or recompacted to meet specification requirements at no expense to the Government. Subsequent tests on recompacted areas shall be performed to determine conformance with specification requirements.

* * * * *

SECTION 2D

EXCAVATION, TRENCHING, AND BACKFILLING

Index

1. General
2. Excavation
3. Backfilling

1. GENERAL. This section covers the excavation, trenching, and backfilling for drain lines to the points of connection with the drain structure or outlet.

2. EXCAVATION.

2.1 General. All excavation of every description and of whatever substances encountered shall be performed to the depths indicated or as otherwise specified. During excavation, material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the banks of the trench to avoid overloading and to prevent slides or cave-ins. All excavated materials not required or suitable for backfill shall be removed and disposed of as specified in section: EARTHWORK. Grading shall be done as may be necessary to prevent surface water from flowing into trenches or other excavations, and any water accumulating therein shall be removed by pumping or other approved methods. Unless otherwise indicated, excavation shall be by open cut. Earth excavation shall comprise all materials not classified as rock excavation. Rock excavation shall comprise the following: boulders measuring 1/3 cubic yard or more in volume; rock material in ledges, bedded deposits, unstratified masses, and conglomerate deposits so firmly cemented as to possess the characteristics of solid rock that cannot be removed without systematic drilling and blasting; and concrete or masonry structures except sidewalks and paving.

2.2 Trench Excavation. Trenches shall be of the width indicated. Care shall be taken not to overexcavate. The bottom of the trenches shall be accurately graded. Existing suitable topsoil shall be carefully removed and stockpiled for use in the upper portion of the trench backfill as specified hereinafter. Where rock excavation, as defined hereinbefore, is required in trenches for pipe, the rock shall be excavated to a minimum overdepth of 6 inches below the trench depths indicated or specified. Except as hereinafter specified for wet or otherwise unstable material, overdepths shall be backfilled as and with materials specified for backfilling the lower portion of trenches. The trench shall be backfilled to the proper grade with materials as specified hereinafter.

2.2.1 Excavation for Appurtenances. Excavation for structures shall be sufficient to leave at least 12 inches in the clear between the outer surfaces and the embankment or timber that may be used to hold and protect the banks. Any overdepth excavation below such appurtenances that has not been directed will be considered unauthorized and shall be refilled with sand, gravel, or concrete, as directed, at no additional cost to the Government.

3. BACKFILLING. Trenches shall be backfilled to the ground surface with selected material as hereinafter specified. Trenches improperly backfilled shall be reopened to the depth required then refilled as specified, or the condition shall be otherwise corrected as approved. Pavement, base course, and

compacted subgrade disturbed by trenching operations shall be replaced in an acceptable manner with materials equal to the adjacent compacted subgrade, base course, and pavement for a minimum distance of 12 inches on each side of the trench. Filter fabric as specified in section: FILTER FABRIC shall be placed about perimeter of trench backfill as shown on the drawings.

3.1 Lower Portion of Trench. Backfill material as specified hereinafter, shall be mixed and deposited in 4-inch-maximum-thickness layers. The backfill material in this portion of the trench shall consist of a mixture of gravel and sand material. Special care shall be taken not to damage the pipes.

3.2 Remainder of Trench. Except for special materials for pavements the remainder of the trench shall be backfilled with a mixture of 50 percent topsoil and 50 percent sand. Backfill material shall be deposited in a single layer compacted to 90 percent maximum density.

3.3 Gravel shall be clean, hard, sound, durable, uniform in quality, and free of any detrimental quantity of soft, friable, thin, elongated or laminated pieces, disintegrated material, organic matter, oil, alkali, or other deleterious substance. Gravel shall be composed entirely of particles that have no more than one fractured face and shall conform to the following gradation:

U.S. Standard Sieve Size	Percentage Passing by weight
3/4	100
1/2	90-100
3/8	40-70
No. 4	0-15
No. 8	0-5

3.4 Sand shall consist of natural or manufactured granular material or a combination thereof, free of deleterious amounts of organic material, mica, loam, clay and other unsuitable substances and have a minimum sand equivalent of not less than 50 and shall conform to the following gradation:

U.S. Standard Sieve Size	Percentage Passing by Weight
3/8"	100
No. 8	75-100
No. 200	0-8

3.5 Topsoil shall consist of existing suitable topsoil from trench excavation or other required excavations stockpiled and used in the work.

3.6 Determination of Density. Field density shall be determined in accordance with the requirement of section: EARTHWORK

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SECTION 2E

FILTER FABRIC

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- | | |
|----------------------------|--|
| 1. Scope | 4. Shipment and Storage |
| 2. Applicable Publications | 5. Installation of Plastic Filter Fabric |
| 3. Materials | |

1. SCOPE. This section, in conjunction with the contract drawings, covers filter fabric complete.

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

2.1 American Society for Testing and Materials (ASTM) Standards.

D 751-73	Testing Coated Fabrics
D 1175-71	Abrasion Resistance of Textile Fabrics
D 1682-64	Breaking Load and Elongation of Textile Fabrics
D 1683-68	Seam Breaking Strength of Woven Textile Fabrics

3. MATERIALS.

3.1 Fabric. Filter fabric shall be a pervious sheet of rotproof plastic or polymeric fibers oriented into a stable and uniform pattern with distinct and measurable openings. The filter fabric shall provide an Equivalent Opening Size (EOS) no finer than the U.S. Standard Sieve No. 200 and no coarser than the U.S. Standard Sieve No. EOS is defined as the number of the U.S. Standard sieve having openings closest in size to the filter fabric openings. The percent open area provided shall not be less than 4 percent and not more than 36 percent. Percent open area is defined as the summation of the open areas divided by the total area of the filter fabric and expressed as a percent. The fibers shall consist of a long-chain synthetic polymer composed of a least 85 percent by weight of propylene, ethylene or vinylidene-chloride, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra-violet and heat exposure. The fabric shall conform to the physical strength requirements in Table No.1. The fabric should be calendered or otherwise finished so that the yarns will retain their relative position with respect to each other. The edges of the fabric shall be selvaged or otherwise finished to prevent the outer yarn from pulling away from the fabric. The fabric shall be in widths sufficient to provide encirclement of of pipe trench without seams. The Contractor shall provide to the Government filter fabric samples for testing to determine compliance with any or all of the requirements in this specification.

3.2 Seams. The seams of the fabric shall be sewn with thread of a material meeting the chemical requirements given above for plastic yarn or shall be

bonded by cementing or by heat. The sheets of filter fabric shall be attached at the factory or another approved location to form sections of the required width. Seams shall be tested in accordance with method ASTM D 1683, using one inch square jaws and 12 inches per minute constant rate of traverse. The strengths shall be not less than 90 percent of the required tensile strength (Table 1) of the unaged fabric in any principal direction.

3.3 Acceptance Requirements. All brands of plastic filter fabric and all seams to be used shall be accepted on the following basis. The Contractor shall furnish the Contracting Officer, in duplicate, a mill certificate or affidavit signed by a legally authorized official from the company manufacturing the fabric. The mill certificate or affidavit shall attest that the fabric meets the chemical, physical and manufacturing requirements stated in this specification.

4. SHIPMENT AND STORAGE. During all periods of shipment and storage, the fabric shall be protected from direct sunlight, ultraviolet rays, temperatures greater than 140°F, mud, dirt, dust and debris. To extent possible, the fabric shall be maintained wrapped in heavy duty protective covering.

5. INSTALLATION OF PLASTIC FILTER FABRIC. The plastic filter fabric shall be placed in the manner and at the locations shown on the drawings. At the time of installation, fabric shall be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation or storage. The surface to receive fabric shall be prepared to a relatively smooth condition free of obstructions, depressions, debris, and soft or low density pockets of material. The fabric shall be placed with the long dimension parallel perpendicular to the trench and shall be laid smooth and free of tension, stress, folds, wrinkles or creases. The strips shall be placed to provide a minimum width of 18 inches of overlap for each joint. Securing pins with washers shall be inserted through both strips of overlapped fabric at not greater than 2 foot intervals along a line through the midpoint of the overlap. The fabric shall be protected at all times during construction from contamination by surface runoff and any fabric so contaminated shall be removed and replaced with uncontaminated fabric. Any damage to the fabric during its installation or during placement of bedding materials shall be replaced by the Contractor at no cost to the Government. The work shall be scheduled so that the covering of the fabric with a layer of the specified material is accomplished within 30 days after placement of the fabric.

Table No. 1 - Physical Strength Requirements

<u>Physical Property</u>	<u>Test Procedure</u>	<u>**Acceptable Test Results</u>
Tensile Strength +(unaged fabric)	ASTM D 1682 Grab Test Method using one inch square jaws and a travel rate of 12 inches per minute	200 pounds minimum in any principle direction
Puncture Strength +(unaged fabric)	ASTM D 751 Tension Testing Machine with Ring Clamp; steel ball replaced with a 5/16-inch diameter solid steel cylinder with a hemispherical tip centered within the ring clamp	80 pound minimum
Abrasion Resistance	ASTM D 1682 as above, after abraded as in ASTM D 1175 Rotary Platform, Double Head Method; rubber-base abrasive wheels equal to CS-17 "Calibrase" by Taber Instrument Co; one kilogram load per wheel; 1000 revolutions	55 pound minimum in any principle direction

**Acceptance test results strengths may be reduced 50 percent for fabric to be used in drainage trenches, beneath concrete slabs or to be cushioned from rock placement by a layer of sand or by zero drop height placement.

+Unaged fabric is defined as fabric in the condition received from the manufacturer or distributor.

SECTION 2L

DRAINAGE PIPING AND APPURTENANCES

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| 1. Applicable Publications | 7. Materials for Drainage Structures and Outlet |
| 2. Delivery, Storage, and Handling of Materials | 8. Excavation and Trenching for Pipe Culverts |
| 3. Manufacturer's Recommendations | 9. Bedding and Backfill |
| 4. Deleted | 10. Placing Pipe |
| 5. Pipe | |
| 6. Valves | |

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

1.1 Federal Specifications (Fed. Spec.).

RR-G-661 C

Grating, Metal, Bar Type
(Floor, Except for Naval Vessels)

1.2 American Association of State Highway and Transportation Officials (AASHTO), Standards.

M 176-76

Porous Concrete Pipe

1.3 American Society for Testing and Materials (ASTM), Publications.

A 36-77a

Structural Steel

A 123-78

Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strip

A 153-78

Zinc Coating (Hot-Dip) on Iron and Steel Hardware

C 270-73

Mortar for Unit Masonry

C 508-78a

Asbestos-Cement Underdrain Pipe

D 2311-77

Perforated Homogeneous Bituminized Fiber Pipe for General Drainage

D 2417-77

Laminated-Wall Bituminized Fiber Perforated Pipe for Agricultural, Land, and General Drainage

F 405-77a

Corrugated Polyethylene (PE) Tubing and Fittings

1.4 American Water Works ASSN (AWWA) Standard.

C 500-71

Gate Valves-3 in. Through 48 in. for
Water and Other Liquids

2. DELIVERY, STORAGE, AND HANDLING OF MATERIALS.

2.1 Delivery and Storage. Materials delivered to site shall be inspected for damage, unloaded, and stored with the minimum of handling. Do not store materials directly on the ground. Inside of pipes and fittings shall be kept free of dirt and debris.

2.2 Handling. Materials shall be handled in such a manner as to insure delivery to the trench in sound undamaged condition. Pipe shall be carried to the trench not dragged. Plastic materials that are not to be installed immediately shall not be stored in the directed sunlight.

3. MANUFACTURER'S RECOMMENDATIONS. Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the Contracting Officer prior to installation. Installation of the item will not be allowed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

4. DELETED.

5. PIPE shall be as indicated and shall conform to requirements for one of the following types.

5.1 Perforated Corrugated Polyethylene Drainage Tubing shall conform to ASTM F 405. Fittings shall be tubing manufacture's standard type.

5.2 Porous Concrete Pipe shall conform to AASHTO M 176, standard strength. Fittings shall be pipe manufacturer's standard types and of corresponding materials and weights.

5.3 Perforated Asbestos-Cement Underdrain Pipe and Couplings shall conform to ASTM C 508, type I.

5.4 Perforated & Bituminized-Fiber Pipe and Couplings shall conform to ASTM D 2311 or D 2417.

6. Valves.

6.1 Gate Valves shall be designed for a working pressure or not less an 150 psi. Valve connections shall be as required for the piping in which they are installed. Valves shall have a clear waterway equal to the full nominal diameter of the valve, and shall be opened by turning counterclockwise. The operating nut or wheel shall have an arrow, cast in the metal, indicating the direction of opening.

6.1.1 Valves 3 inches and larger shall be iron body, bronze mounted, and shall conform to AWWA C500.

6.2 Valve Box and Cover shall conform to City of Phoenix Standard Detail 490 included herewith.

7. MATERIALS FOR DRAINAGE STRUCTURES AND OUTLET.

7.1 Concrete. Unless otherwise specified, concrete and reinforced concrete shall conform to the requirements of the section: CONCRETE. The concrete covering over steel reinforcing shall be not less than 1-1/2 inches thick for walls and flooring. Concrete covering deposited directly against the ground shall have a thickness of at least three inches between steel and ground.

7.2 Mortar. Mortar for pipe joints and connections to other drainage structures shall conform to ASTM C 270, Type M, except the maximum placement time shall be one hour.

7.2.1 Water shall be clean and free of harmful acids, alkalies, and organic impurities.

7.2.2 The inside of the joint shall be wiped clean and finished smooth. In pipe too small for a man to work inside, wiping may be done by dragging a suitable swan or long-handled brush through the pipe as work progresses. The mortar bead on the outside shall be protected from air and sun with a proper covering until satisfactorily cured.

7.3 Catch basin grating shall conform to Fed. Spec. RR-G-661, Type I, steel. Bearing bars shall be not less than 1-1/2 inches by 3/16 inches and all cross members shall be welded.

7.4 Sidewalk grating shall be manufactured from steel tubing of the sizes indicated. Tubing shall be steel conforming to ASTM A 36. The wall thickness shall be not less than 0.12 inches. Anchor bolts shall be securely welded to the grating and fasteners shall be zinc-coated in accordance with ASTM A 153. Grating shall be zinc-coated in accordance with ASTM A 123, after fabrication.

7.5 Automatic Drainage Gate shall be of the diameter indicated and shall be constructed for seating head to 10 feet. Seat and cover shall be cast iron. Links shall be galvanized steel with commercial grade bronze bushings at pivot points. Fasteners for bolting the gate to the wall shall be corrosion-resisting steel bolts in expansion type anchors. Bolts shall be of the size recommended by the manufacturer.

8. EXCAVATION AND TRENCHING FOR PIPE CULVERTS. Excavation of trenches and backfilling for drain lines shall be in accordance with the applicable portions of sections: EXCAVATION, TRENCHING, AND BACKFILLING.

9. BEDDING AND BACKFILL. Bedding and Backfill for drain lines shall conform to the applicable requirements of section: EXCAVATION, TRENCHING AND BACKFILL.

10. PLACING PIPE. Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Pipelines shall be laid to the grades and alinement indicated. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. All pipe in place shall be

inspected before backfilling, and those damaged during placement shall be removed and replaced at no additional cost to the Government.

10.1 Perforated pipe shall be laid with the perforated side uppermost. Pipe shall be laid to the grades and alinement shown on the drawings or as directed. Laying shall proceed upgrade from the lower end of the pipeline. Pipe grade shall be maintained within 1/4 inch in 10 feet of that shown on the drawings. Joints between sections of perforated pipe shall be of a type that will hold the pipe securely in alinement and maintain the inner surfaces of abutting pipes flush and even.

* * * * *

STANDARD DETAIL 490

CITY OF PHOENIX

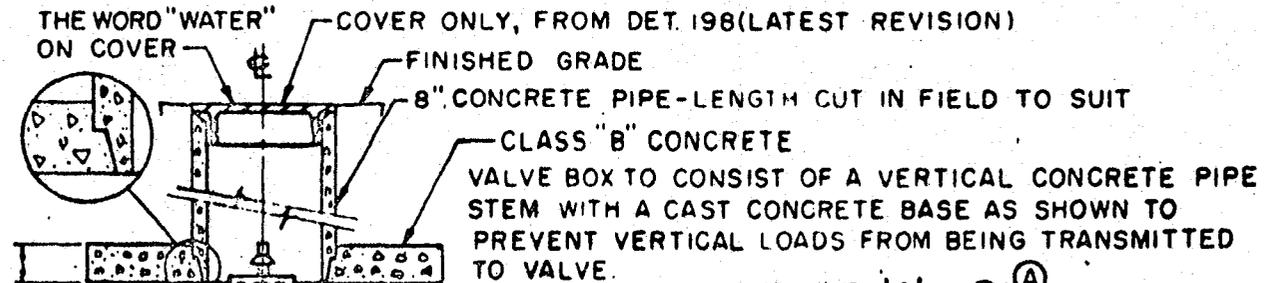
ENGINEERING DEPARTMENT

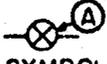
VALVE BOX INSTALLATION

APPROVED *[Signature]* Oct 1, 1968 APPROVED *[Signature]* Oct 1, 1968
 CITY ENGINEER DATE WATER & SEWERS DIRECTOR DATE

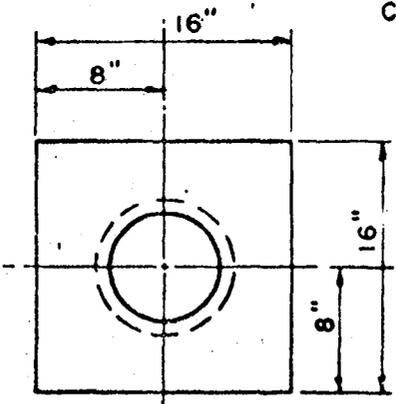
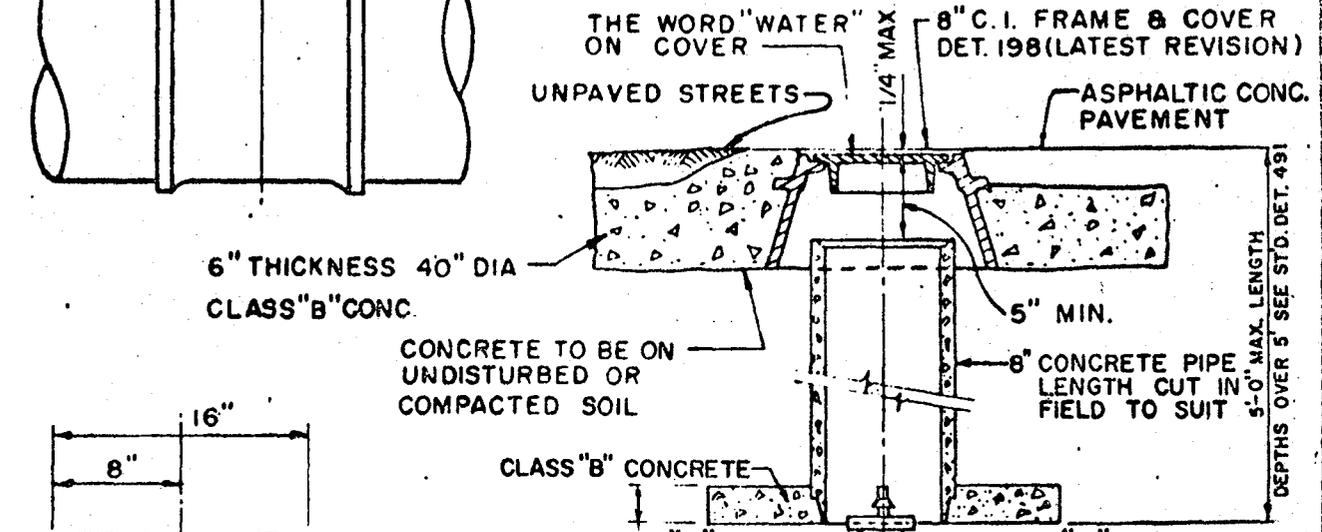
TYPE 'B' 
 SYMBOL

TO BE USED IN AREAS NOT
 SUBJECT TO VEHICULAR TRAFFIC



TYPE 'A' 
 SYMBOL

TO BE USED IN AREAS
 SUBJECT TO VEHICULAR TRAFFIC



VIEW "A-A"

REV. 11/72 WF Δ
 REV. 10-1-68

SCALE 1"=1'-0"

SECTION 20

GROUND COVER

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| 1. Applicable Publications | 5. Environmental Protection |
| 2. Source Inspections | 6. Materials |
| 3. Submittals | 7. Installation |
| 4. Delivery, Storage, and Handling | 8. Plant Establishment Period |

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

1.1 Federal Specifications (Fed. Spec.).

O-F-241D

Fertilizers, Mixed, Commercial

1.2 American National Standards Institute (ANSI) Publication.

Z60.1-1973

Nursery Stock

1.3 American Joint Committee on Horticultural Nomenclature (AJCHN) Publications.

Second Edition-1942

Standardized Plant Names

2. SOURCE INSPECTIONS.

2.1 Plant Materials. Plant materials will be inspected by the Contracting Officer at the growing site and tagged or otherwise approved for delivery. Such inspection does not preclude right of rejection at the project site.

3. SUBMITTALS.

3.1 Certificates of Conformance or Compliance. Before delivery, notarized certificates attesting that the following materials meet the requirements specified, shall be submitted in triplicate for approval.

- a. Plant Materials.
- b. Fertilizers.
- c. Soil Conditioners.

4. DELIVERY, STORAGE, AND HANDLING.

4.1 Delivery.

4.1.1 The Contractor shall notify the Contracting Officer of the delivery schedule in advance so the plant material may be inspected upon arrival at the jobsite. Unacceptable plant material shall be removed from the jobsite immediately.

4.1.2 Plants shall be protected during delivery to prevent desiccation of leaves.

4.1.3 Fertilizer shall be delivered to the site in the original, unopened containers bearing the manufacturer's guaranteed chemical analysis, name, trade name or trademark, and in conformance to state and Federal law.

4.2 Storage.

4.2.1 Plants not installed on the day of arrival at the site shall be stored and protected as follows.

a. Outside storage shall be shaded and protected from the wind.

b. Plants stored on the project shall be protected from drying out at all times.

c. Plants, including those in containers, shall be kept in a moist condition until planted by watering with a fine mist spray.

4.2.2 Fertilizers shall be kept in dry storage away from contaminants.

4.2.3 Storage of materials shall be in areas designated or as approved by the Contracting Officer.

4.3 Handling. Care shall be taken to avoid damaging plants being moved from the nursery or storage area to the planting site. Plants shall be protected from drying out. Plants shall not be handled by the trunk or stems. Plants shall be protected from freezing or drying out by a covering of burlap, tarpaulin, or mulching material during transportation. Damaged plants will be rejected and shall be removed from the site.

5. ENVIRONMENTAL PROTECTION. All work and Contractor operations shall comply with the requirements of section: ENVIRONMENTAL PROTECTION.

6. MATERIALS.

6.1 Plants.

6.1.1 Plants shall conform to the varieties specified in the plant list and be true to botanical names as listed in AJCHN Standardized Plant Names. Plants shall be in accordance with ANSI Z60.1 except as otherwise stated in the specifications of shown on the plans. Where the drawings or specifications are in conflict with ANSI Z60.1, the drawings and specifications shall prevail.

6.1.2 Planting stock shall be well-branched and well-formed, sound, vigorous, healthy, and free from disease, sun-scald, windburn, abrasion, and harmful insects or insect eggs and shall have healthy, normal and unbroken root systems. Ground covers shall be vigorous, have the number and length of runners and clump size specified, and be the proper age for the grade of plants specified. Only ground cover plants well established in removable containers, integral containers, or formed homogeneous soil sections shall be used. Plants shall have been grown under climatic conditions similar to those in the locality of the project.

6.1.3 The Contractor shall facilitate inspection and identification by labeling containers of the same ground cover with a durable waterproof label and weather-resistant ink. Labels shall state the correct plant name and size as specified in the list of required plants. Labels shall be securely attached to containers of plants and shall be legible for 60 days after delivery to the planting site.

6.1.4 Plant material shall be nursery grown unless otherwise indicated and shall conform to the requirements and recommendations of ANSI Z60.1. Plants shall be dug and prepared for shipment in a manner that will not cause damage to branches, shape, and future development after planting.

6.1.5 Containers grown plants shall have sufficient root growth to hold the earth intact when removed from containers but shall not be root bound.

6.1.6 Substitutions shall be made only when a plant (or its alternates as specified) is not obtainable and the Contracting Officer authorizes a change order providing for use of the nearest equivalent obtainable size or variety of plant having the same essential characteristics with an equitable adjustment of the contract price. If all other requirements are met, any plant may be furnished container-grown.

6.2 Topsoil.

6.2.1 Topsoil shall be the existing surface soil stripped and stockpiled on the site.

6.2.2 If additional topsoil is required, it shall be furnished by the Contractor and shall be a natural, friable soil representative and productive soils in the vicinity. It shall be obtained from well-drained areas and shall be free of admixture of subsoil and foreign matter or objects larger than one inch in any dimension, toxic substances, and any material or substances that may be harmful to plant growth.

6.3 Soil Conditioner shall be rotted sawdust.

6.3.1 Rotted sawdust shall have 7.5 pounds of nitrogen added uniformly to each cubic yard and shall be free of chips, stones, sticks, soil and toxic substances.

6.4 Fertilizer. Fertilizer shall be commercial grade and uniform in composition and shall conform to applicable state and Federal regulations and shall be as shown on plan in planting detail.

6.4.1 Granular fertilizer shall conform to Fed. Spec. O-F-241, Type I, Level B, and shall bear the manufacturer's guaranteed statement of analysis. Granular fertilizer shall contain a minimum percentage by weight of: 10 nitrogen (of which 50 percent shall be organic), 6 available phosphoric acid, and 4 potash.

6.5 Mulch. Mulch shall be free from deleterious materials and shall be stored so as to prevent inclusion of foreign materials.

6.5.1 Organic mulch materials shall be rotted sawdust.

6.6 Water. Water shall not contain elements toxic to plant life. It shall be obtained from water supply within the construction site.

7. INSTALLATION.

7.1 Planting Seasons and Conditions. Planting shall be done immediately after completion of all other work under this contract.

7.1.1 Planting shall be done with the approval of the Contracting Officer only when the ground is in a suitable condition for planting. If special conditions exist that may warrant a variance in the above planting dates or conditions, a written request shall be submitted to the Contracting Officer stating the special conditions and proposed variance.

7.2 Layout. Bed outlines shall be staked on the project site by the Contractor and approved by the Contracting Officer before any beds are dug.

7.3 Excavation for Planting.

7.3.1 Existing trees, turf, shrubbery, and beds that are to be preserved shall be barricaded in a manner that will effectively protect them during planting operations.

7.3.2 Rocks and other underground obstructions shall be removed to a depth necessary to permit proper planting according to plans and specifications. If underground utilities, construction, or solid rock ledges are encountered, other locations may be selected by the Contracting Officer.

7.3.3 Plant beds shall be tilled to a depth of 6 inches. Rotted sawdust shall be spread uniformly over the bed to a depth of 2 inches and thoroughly incorporated into the existing soil to a depth of 6 inches using a rototiller or similar type of equipment to obtain a uniform and well pulverized soil mix. During tillage operations all sticks, stones, roots, and other objectionable materials shall be removed. Plant beds shall be brought to a smooth and even surface conforming to established grades.

7.4 Setting Plants. Plants shall be set in relation to surrounding grade so that they are in accordance with the planting detail as shown on plan. Container grown stock shall be removed from containers in such a way so as to prevent damage to plant or root system.

7.5 Mulching.

7.5.1 Ground Cover Mulching shall take place within 48 hours after planting.

7.5.2 Placing Organic Material. A ground cover mulch of rotted sawdust shall be spread to a uniform thickness of 2 inches.

7.5.3 Mulch shall be kept out of the crowns of shrubs and off buildings, sidewalks, light standards, and other structures.

7.6 Restoration and Clean-Up. Excess and waste material shall be removed daily. When planting in an area has been completed, the area shall be cleared of all debris, spoil piles, and containers. Where existing grass areas have been damaged or scarred during planting operations, the Contractor shall

restore disturbed areas to their original condition at his expense. All paving shall be cleaned when work in adjacent areas completed.

7.7 Maintenance During Installation. Maintenance operations shall begin immediately after each plant is planted and shall continue as required until final acceptance. Plants shall be kept in a healthy, growing condition by watering, pruning, spraying, weeding, and any other necessary operations of maintenance. Plant beds shall be kept free of weeds, grass, and other undesired vegetation. Plants shall be inspected at least once per week by the Contractor during the installation period and needed maintenance performed promptly.

8. PLANT ESTABLISHMENT PERIOD. Final acceptance of all work and materials under this section shall be at the end of a period of establishment to be determined as follows.

8.1 Beginning of the Plant Establishment Period. The period of establishment shall begin on the date that an inspection by the Contracting Officer shows that all plants are in place and have been installed in accordance with the specifications and plans. Loss through Contractor negligence, however, shall require replacement in kind and size per specification and shall be at the Contractor's expense.

8.2 During the Plant Establishment Period.

8.2.1 During the plant establishment period, the Contractor shall water all plants as necessary to maintain an adequate supply of moisture within the root zone. An adequate supply of moisture is estimated to be the equivalent of one inch of absorbed water per week that is delivered at intervals in the form of natural rain or as required by periodic waterings. Water shall not be applied with a force sufficient to displace mulch and shall not be applied so quickly that it cannot be absorbed by the mulch and plants.

8.2.2 Plants shall be pruned and mulch replaced as required.

8.2.3 In plant beds, grass and weeds shall not be allowed to reach a height of an inch before being completely removed, including the root growth. When plants are in groups other than cultivated beds, the Contractor shall not permit grass or other vegetation between them to become more than 3 inches in height.

8.2.4 Other work, such as spraying with approved insecticides and fungicides to control pests, shall be done to ensure plant survival in a healthy growing condition.

8.2.5 Plants shall be fertilized at least once during the period of establishment. Fertilization shall be either by topdressing at 10 pounds per 1,000 square feet of plant bed area or by tablet or packet form fertilizer applied as per manufacturer's recommendations. Formula for the application shall be 10N-6P-4K.

8.2.6 Dead plants shall be removed immediately at the Contractor's expense. The Contractor will not be responsible for theft or damage to plants by vehicles or vandalism following completion and approval of the installation portion of the planting contract.

8.3 Termination of the Plant Establishment Period.

8.3.1 A preliminary inspection by the Contractor and the Contracting Officer will be held 2 months from the date of the beginning of the plant establishment period to determine plant acceptability and the number of replacements. Alternate or substituted varieties of plants shall be used only if approved by the Contracting Officer.

8.3.2 A final inspection of all plants will be held after the replacement planting has been completed. No additional plant establishment period will be required for replacement plants. The establishment period will end on the date of this inspection and said inspection will be considered final acceptance provided the Contractor has complied with the following requirements.

a. Dead, missing, and defective plant material shall have been replaced as directed by the Contracting Officer, otherwise, final acceptance will be delayed until such replacements have been satisfactorily accomplished.

b. Plant beds shall have been properly mulched and shall be free of weeds.

c. Remedial measures directed by the Contracting Officer to insure plant survival shall have been carried out.

d. Plant material shall have been fertilized as required prior to acceptance.

* * * * *

SECTION 2P

IRRIGATION SYSTEM

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| 1. Applicable Publications | 6. Tools |
| 2. General | 7. Variation in Arrangement of Sprinklers |
| 3. Materials | 8. Guarantee |
| 4. Installation | |
| 5. Tests | |

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

1.1 American Society for Testing and Materials (ASTM) Standards.

D 1785-74e	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
D 2241-74	Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)
D 2464-74	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
D 2466-74	Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
D 2564-73a	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings

2. GENERAL. This section covers irrigation piping including connection to source of water supply, complete. Excavation, trenching, and backfill are specified in sections: EARTHWORK and EXCAVATION, TRENCHING, And BACKFILLING.

2.1 Below Ground Piping. Pipe smaller than 3 inch shall be plastic. Pipe for sleeving shall be corrugated metal or plastic. The minimum cover for laterals and branches shall be 12 inches. The minimum cover for pressure lines shall be 2.5 feet except under roadways, parking and paved areas the minimum cover shall be 3 feet.

2.2 Sprinkler heads and control valves shall not be located within 5 feet of building or structure foundations.

3. MATERIALS shall conform to the respective specifications and other requirements specified below.

3.1 Pipe.

3.1.1 Plastic Pipe shall conform to ASTM D 1785, schedule 40 for pipe with solvent welded joints and schedule 80 for pipe with threaded joints, or to

ASTM 2241, Type 1, grade 1, 315 psi for pressure lines and 200 psi for other lines for pipe with solvent welded joints. Pipe and fittings shall bear the seal of approval (nsf mark) of the National Sanitation Foundation's standard for plastic pipe and fittings for potable water service.

3.2 Joints.

3.2.1 Plastic Pipe Joints shall be solvent welded or threaded. Solvent for welded joints shall conform to ASTM D 2564. Use of pipe dope or solvents on threaded joints will not be permitted.

3.3 Fittings and Specials.

3.3.1 For Plastic Pipe. Fittings shall conform to ASTM D 2464 or D 2466.

3.4 Sprinklers.

3.4.1 General. Sprinkler heads of the types indicated shall be installed on pipe risers and furnished for installation as indicated. Size of riser pipe, minimum spacing of heads, radius of coverage, nozzle diameter, rate of water application and the available pressure at the riser, shall be as indicated for each type and size of head. Sprinkler units of each type shall be the product of manufacturers regularly engaged in the production of lawn sprinkler or irrigation equipment.

3.4.2 Fixed Single-Nozzle, Rotary Sprinklers. The Contractor shall furnish that normally rotate in a complete circle sprinklers but the construction shall be such that adjustments can be made for oscillating in any arc between 20 and 340 degrees. Bearings shall be of low friction type, water lubricated, with replaceable parts. Sprinklers shall be fabricated of non-corrosive material such as bronze, copper or brass, except that minor parts may be of stainless steel, aluminum or other suitable material.

4. INSTALLATION.

4.1 General. Unless otherwise specified, installation of sprinklers, shall conform to the standard details shown on drawings.

4.2 Handling. Pipe and accessories shall be handled so as to insure delivery to the trench in sound, undamaged condition. The interior of pipe and accessories shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations by plugging or other approved method. Before installation, the pipe shall be inspected for defects. Material found to be defective before or after laying shall be replaced with sound material at no additional cost to the Government.

4.3 Cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe. Unless otherwise recommended by the manufacturer and authorized by the Contracting Officer, cutting shall be done with an approved type mechanical cutter. Wheel cutters shall be used when practicable.

4.3.1 Plastic Pipe shall be cut square and all burrs, particles and curls shall be removed.

4.4 Plastic Pipe shall be installed in accordance with the procedures recommended in ASTM D 2774 and as herein specified.

4.5 Pipe Sleeves shall be installed with a minimum of off-set at the joints to permit easy installation and removal of the irrigation lines. All plastic lines shall be installed in sleeves under paved areas. Sleeves shall extend at least 12 inches beyond the edges of the pavement. Sizes of sleeves shall be as follows.

Pipe Size (inches)	Minumum Sleeve Size (inches)
1/2	2
3/4	2-1/2
1, 1-1/4 and 1-1/2	3
2 and 2-1/2	4
3 and 4	6

5. TESTS.

5.1 After completion of the piping system and prior to backfilling and the installation of the sprinkler heads, the entire system shall be tested for leaks and thoroughly flushed under pressure to remove any dirt, scale or other material. Lines shall be tested at 200 psi for one hour duration. Cracked or defective pipe, fittings, or accessories disclosed in the pressure test shall be replaced by the Contractor with sound material at no additional cost to the Government, and the test shall be repeated until are satisfactory to the Contracting Officer.

5.1.1 No line shall be covered until inspection and approval has been given by the Contracting Officer.

5.1.2 Testing of plastic pipe shall not be done until all joints have had at least 24 hours to set and cure. During cold weather, 48 hours elapsed time shall be allowed for setting prior to testing. No water under pressure shall come in contact with any joint during the specified curing period. In hot weather, water shall not be permitted to stand in pipes until after backfilling is completed. Water used in testing shall be drained from pipes after completion of testing.

5.2 Coverage Test. When the irrigation system is completed the entire shall be adjusted and operated to demonstrate the water coverage is complete and adequate and that the system conforms to the requirements of the plans and specifications. All deficiencies and inadequacies resulting from defective or inadequate materials and/or workmanship shall be corrected at no additional cost to the Government. In the event any modifications to the system or deviation from the approved plans and specifications are directed, an adjustment in contract price will be made.

6. TOOLS. Three sets of special wrenches for removal and/or installation of sprinkler heads shall be provided at locations designated by the Contracting Officer.

7. VARIATION IN ARRANGEMENT OF SPRINKLERS from those shown on drawings will be permitted. If such variation is made, the Contractor shall submit a shop drawings for approval in accordance with the Special Provisions. If any conflicts occur necessitating departures from the contract drawings, details of departures, hydraulic calculations and reasons shall be submitted as soon as practicable for written approval of the Contracting Officer. Hydraulic calculations shall include application rate per hour, maximum triangular spacing of heads for design flow rate and pressure, overlap including wind loss allowance and friction loss through pipe fittings, valves and accessories.

8. GUARANTEE. The following equipment to be furnished under this specification shall be guaranteed for a period of one year from the date of acceptance thereof, either for beneficial use or final acceptance, whichever is earlier, against defective materials, design, and workmanship.

* * * * *

SECTION 3A

CONCRETE

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| 7. Reinforcement | 16. Concrete Swale and Slab Option |
| 8. Installation of Anchorage Items | |
| 9. Placing | |

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

1.1 American Concrete Institute (ACI) Standards.

ACI 315-74

Manual of Standard Practice for
Detailing Reinforced Concrete
Structures (6th Ed.; 3d Prtg., Mar
77)

ACI 318-77

Building Code Requirements for
Reinforced Concrete

1.2 American Society for Testing and Materials (ASTM) Publication.

C 94-78

Ready-Mixed Concrete

2. GENERAL. The work shall be in conformance with ACI 318, part entitled "Construction Requirement", except as specified herein. Concrete shall conform to ASTM C 94.

3. STORAGE. Materials shall be stored so as not to deteriorate or become contaminated.

4. MATERIALS.

4.1 Anchorage Items. Anchorage items for anchoring work of other trades to concrete shall be of standard manufacture and of types to engage with anchors provided and installed under other section.

4.2 Concrete Materials. Concrete materials shall conform to ASTM C 94, cement type optional. Only one brand of any one type of cement shall be used for exposed concrete surfaces of any individual structure.

4.3 Curing Materials. Curing materials shall be impervious sheet or membrane-forming curing compound. Impervious sheet shall be white opaque polyethylene 4 mil thick, waterproof kraft paper, or polyethylene-coated burlap. Membrane-forming curing compound shall be of commercial formulation, sprayable,

nontoxic, and will form a film highly resistant to moisture loss from concrete while curing and will dry within 4 hours. Compound shall be clear with fugitive dye, resin-base or chlorinated-rubber-base-type.

4.4 Form Coating. Form coating shall be nonstaining form oil or form release agent that will not deleteriously affect concrete surfaces nor impair subsequent applications.

4.5 Form Materials. Form materials shall be plywood or hardboard especially made for concrete form use or other materials that will produce the specified finishes without adversely affecting the concrete surfaces.

4.6 Form Ties. Form ties shall be metal, factory-fabricated removable or snap-off, that will leave holes 1/2 to one inch in diameter and not less than 1-1/2 inches deep in surfaces to be exposed or painted and shall not project beyond the concrete elsewhere.

4.7 Joint Sealant. Joint sealant shall be hot- or cold-applied, made specifically for sealing joints in concrete against moisture infiltration.

4.8 Reinforcement. Reinforcement bars shall be deformed, Grade 40 billet or axle steel, or Grade 50 rail steel unless otherwise indicated. Mesh shall be welded steel wire fabric with wires at right angles to each other.

5. CONCRETE QUALITY. Proportioning of concrete mixes to meet the requirements specified below shall be the Contractor's responsibility.

5.1 Compressive Strength. Compressive strength in 28 days shall be 3,000 psi (Type A) for reinforced concrete and 2,500 psi (Type B) for other concrete unless otherwise specified.

5.2 Entrained-Air Content. Entrained-air content of exterior concrete shall be maintained at 3 to 5 percent by volume of concrete.

5.3 Slump. Slump shall be 3 to 4 inches for walls and 2 to 3 inches for other work.

6. FORMWORK. Formwork shall provide for concrete conforming accurately to the indicated shapes, lines, dimensions, and with surfaces free of offset, waviness, or bulges. Where surfaces are to be exposed or painted, panels shall be manufacturer's stock size material, using smaller panels cut to required dimensions only where required by openings and joints. Panel joints in exposed or painted work shall occur at control joints, including alignment with masonry control joints and construction joints. Exposed corners shall be chamfered, beveled, or rounded by moldings placed in the forms. Surfaces shall be thoroughly cleaned and coated before each use. Forms shall be removed at a time and in a manner that will not injure the concrete.

7. REINFORCEMENT. Reinforcement detailing and placement shall conform to ACI 315 and ACI 318. Reinforcement shall be interrupted 2-inches clear on each side of joints in slabs on grade and perimeter joints.

8. INSTALLATION OF ANCHORAGE ITEMS. Anchorage items shall be of number, size, and location to insure sufficient anchorage for purpose intended.

9. PLACING. Concrete footings and exterior slabs be placed upon clean undisturbed surfaces free from frost, ice, and water. Dry or pervious surfaces receiving concrete shall be covered with impervious sheet materials. Concrete may be placed directly on impervious surfaces that are thoroughly moistened but not muddy.

10. CONSOLIDATION OF CONCRETE. Consolidation of concrete shall be with internal concrete vibrators supplemented by handspading, rodding, and tamping. Vibrating equipment shall be adequate to thoroughly consolidate the concrete.

11. SLABS ON GRADE. Concrete shall be compacted, screeded to grade, and prepared for the specified finish.

12. FINISHES OF CONCRETE OTHER THAN SLABS. Fins and loose material shall be removed. Unsound concrete, voids over 1/2 inch in diameter, and tie-rod and bolt holes shall be cut back to solid concrete, reamed, brush-coated with cement grout, and filled solid with a stiff Portland-cement-sand mortar mix. Patchwork shall finish flush with adjoining concrete surfaces and where exposed, shall match adjoining surfaces in texture and color. Patchwork shall be cured for 72 hours. White Portland cement shall be used as needed to attain color match.

13. CONCRETE SLAB FINISHES. Slab shall be finished to a true plane with no deviation exceeding 1/8 inch when tested with a 10-foot straightedge. Surfaces shall be pitched to drains. Surfaces shall be screeded and floated to the required finish level with no coarse aggregate visible and finished to a smooth and uniformly fine granular or sandy texture, free of waves, irregularities, or tool marks.

14. CURING shall start as soon as free water has disappeared from concrete surfaces after placing and finishing. Curing materials shall be applied and maintained so as to protect the concrete from moisture loss for 7 days. Curing shall be accomplished by impervious sheet or membrane-forming curing compound. Concrete surfaces shall be thoroughly wetted before covering with impervious-sheet materials. Membrane-forming curing compound shall be applied with mechanical spraying equipment at a coverage of not more than 300 square feet per gallon. Surfaces damaged during curing shall be resprayed. The compound shall not be used on surfaces to receive floor hardener.

15. SAW CUTTING. Concrete pavement shall be removed to neatly sawed edges. Saw cuts shall be made to a minimum depth of 1-1/2 inches. Exposed reinforcing steel and the entire surface of the existing concrete to be joined shall be thoroughly cleaned of surface laitance, curing compound and other materials foreign to the concrete and clean, coarse aggregate exposed. Surfaces of concrete shall be cleaned by abrasive blast methods. Immediately prior to placing fresh concrete, the old concrete shall be cleaned of all dust, abrasive material etc., and then thoroughly saturated with water and the surface either sprinkled with dry cement or painted with a thick coat of neat cement and water.

16. CONCRETE SWALE AND SLAB OPTION. In lieu of concrete specified herein, the Contractor may use pneumatically placed concrete on side slopes steeper than one vertical to one and one-half horizontal. Pneumatically placed concrete shall conform to the requirements of section: PNEUMATICALLY PLACED CONCRETE.

* * * * *

SECTION 3C

PNEUMATICALLY PLACED CONCRETE

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- | | |
|-----------------------------|-------------------------------|
| 1. Applicable Publications | 6. Foundation Preparation |
| 2. Usage | 7. Placing |
| 3. Description | 8. Finishing |
| 4. Materials | 9. Contractor Quality Control |
| 5. Proportioning and Mixing | |

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

1.1 American Society for Testing and Materials (ASTM) Publications.

C 94-78a	Ready Mixed Concrete
C 150-78a	Portland Cement
C 33	

1.2 American Concrete Institute (ACI) Standard.

ACI 304-73	Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete
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2. **USAGE.** At the option of the Contractor pneumatically placed concrete may be used in lieu of poured-in-place concrete for swales and slabs.

3. **DESCRIPTION.** Pneumatically placed concrete shall be produced by either the dry mixed process in which most of the mixing water is added to the dry materials immediately prior to its expulsion from the nozzle, or the wet mix process in which all of the materials (including water) are premixed before entering the delivery hose.

3.1 Reinforcement and Curing shall conform to the requirements specified in the section: CONCRETE.

4. **MATERIALS.**

4.1 Portland cement shall conform to the requirements of ASTM C 150, Type I or Type II, low alkali. Cement shall meet requirements for false set.

4.2 Fine Aggregate shall conform to the requirements of ASTM C33. Fine aggregate shall contain not less than 3 percent nor more than 6 percent moisture by weight. The proportions of fine aggregate and cement shall be corrected to allow for bulking due to sand moisture content.

4.3 Water for mixing and curing shall conform to the requirements of ASTM C 94.

5. PROPORTIONING AND MIXING.

5.1 Dry Mix Process. The dry mixture shall consist of one part Portland cement to not more than 4-1/2 parts of fine aggregate. Measurement may be either by volume or weight. The materials shall be mixed dry in an approved power batch mixer equipped with accurate measuring and timing devices and capable of thoroughly mixing the fine aggregate and sand in sufficient quantity to maintain placing continuity. The mixing time shall be as recommended by the manufacturer of the mixer except that the mixing time shall be not less than one minute in drum-type mixers. Mixers shall be capable of discharging all mixed material without any carry over between batches. Materials that have been mixed for more than 45 minutes have not been incorporated into the work shall not be used.

5.2 Wet Mix Process. The premixed concrete shall contain not less than 6-1/2 sacks of Portland cement per cubic yard of fine aggregate and water. A maximum of 30 percent pea gravel may be substituted for an equal amount of fine aggregate. The maximum size of pea gravel shall be such that 100 percent passes the 1/2 inch screen and at least 90 percent passes the 3/8 inch screen. Measurement may be either by volume or weight. The mixing equipment shall be capable of thoroughly mixing the materials in sufficient quantity to maintain continuous placing. The required mixing time shall depend on the mix being used and the efficiency of the mixer. Mixing shall conform to ACI 304. Non-agitating hauling equipment may be used subject to the approval of the Contracting Officer.

5.3 Strength. Pneumatically placed concrete shall have a minimum compressive strength of not less than 3,000 pounds per square inch at 28 days.

6. FOUNDATION PREPARATION. Areas to receive pneumatically placed concrete shall be thoroughly compacted and trimmed to line and grade with sufficient moisture to provide a firm foundation and prevent absorption of water from the concrete. No free water shall be present on the surface. Ground or gaging wires shall be used where necessary to establish thicknesses, surface planes and finish lines.

7. PLACING.

7.1 Workmen. Only experienced foremen, gunmen, nozzle men, and rodmen shall be employed and satisfactory written evidence of such experience shall be furnished the Contracting Officer or his representative upon demand.

7.2 Equipment. The Contractor shall provide delivery equipment of approved design which will apply the material by means of pneumatic pressure. Air shall be supplied in sufficient volume and under such pressure as may be necessary for the best operating conditions. Air pressure at the nozzle shall be steady and without pulsation. A constant pressure of not less than 45 pounds per square inch shall be maintained in the placing machine where the hose length is 100 feet or less and the pressure shall be increased at least 5 pounds for

each additional 50 feet of hose or fraction thereof. Water used for hydration at the nozzle shall be maintained at a uniform pressure not less than 15 pounds per square inch greater than the air pressure at the machine.

7.3 Applying. The nozzle shall be held as nearly perpendicular as possible to the surface to which the mortar is applied, at such distance and narrow range of movement as will a spreading effect over a small area. The velocity of discharge from the nozzle, the distance of the nozzle from the face, and the amount of water used shall be regulated by the nozzleman in such a way as will produce a dense coating resulting in a minimum rebound of materials and no sloughing. Rebound material shall not be used again but shall be removed from the work. The maximum thickness of each layer will be limited to the thickness which can be placed without the material sagging. Time between application of layers shall be only sufficient to insure against sloughing. In case a portion of the previous layer has set to such hardness or has become coated in a manner preventing adequate bonding, the surface of that layer shall be cleaned by air and waterjets before starting the next layer. Construction joints shall be avoided. Where necessary, at the end of the day's work or similar stopping periods, the concrete shall be tapered to a thin edge. Before applying the adjacent section, this tapered portion shall be thoroughly cleaned and wetted.

7.4 Clean-Up. At the completion of each day's work, or as otherwise directed, all accumulations of pneumatically placed concrete on adjacent surfaces shall be removed.

8. FINISHING. After the concrete has been placed to the required thickness the surface shall be checked with a straightedge and any low spots or depressions shall be filled. Except as otherwise specified, surfaces shall be left in a natural finish as left by the nozzle.

9. CONTRACTOR QUALITY CONTROL.

9.1 General. The Contractor shall perform the following inspections and tests, and based upon the results of these inspections and tests, he shall take such action and submit reports as hereinafter specified.

9.2 Inspection Details and Frequency of Testing.

9.2.1 Preparation for Placing. Foundation, forms and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor in order to certify to the Contracting Officer it is ready to receive concrete. The results of each inspection shall be reported in writing.

9.2.2 Placing. The placing foreman shall supervise all placing operations and shall be responsible for measuring and recording ambient temperature, weather conditions, time of placement, yardage placed, and method of placement.

9.2.3 Compressive Strength. The Contractor shall provide for test purposes 2 test panels from each 8-hour shift. Each panel shall be not less than 12 inches square and 3 inches in thickness. Cubes, 3 x 3 x 3 inches in size shall

be sawed from the panels for testing. One half of the cubes shall be tested at 7 days and one half at 28 days. Panels shall be cured, stored and tested by and at the expense of the Contractor. Cube strengths may be reported as determined or converted to cylinder strengths by multiplying by the factor 0.85. Test results shall be reported in writing.

* * * * *

SECTION 5A

MISCELLANEOUS METALWORK

Index

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| 1. Applicable Publications | 9. Wire Mesh Screens |
| 2. General | 10. Steel Plates (Baffle) |
| 3. Dissimilar Materials | 11. Inlet Cover Plate and Frame |
| 4. Materials | 12. Expanded Metal Screen |
| 5. Shop Drawings | 13. Precast Reinforced Concrete Pipe |
| 6. Samples | 14. Miscellaneous Plates and Shapes |
| 7. Workmanship | 15. Shop Painting |
| 8. Anchorage | |

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

1.1 Federal Specifications (Fed. Spec.).

FF-B-588C & Am-1	Bolt, Toggle; and Expansion Sleeve, Screw
FF-H-00111b (GSA-FSS)	Hardware, Builders'; Shelf and Miscellaneous
FF-S-85C & Am-1	Screw, Cap, Slotted and Hexagon Head
FF-S-92B & Am-1	Screw, Machine: Slotted, Cross-Recessed or Hexagon Head
FF-S-111D	Screw, Wood
FF-S-325 & Int. Am-3 (GSA-FSS)	Shield, Expansion; Nail Expansion; and Nail, Drive Screw (Devices, Anchoring, Masonry)
FF-W-84a & Am-2	Washers, Lock (Spring)
QQ-F-461C & Am-1	Floor Plate, Steel, Rolled
RR-W--360A	Wire Fabric, Industrial
TT-V-51F	Varnish: Asphalt

1.2 Military Specifications (Mil. Spec.).

MIL-C-18480A (DOCKS) & Am-3	Coating Compound, Bituminous, Solvent; Coal Tar Base
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1.3 American Society for Testing and Materials (ASTM) Standards.

A 36-77a	Structural Steel
A 123-78	Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and forged Steel Shapes, Plates, Bars, and Strip
A 386-78	Zinc Coating (Hot-Dip) on Assembled Steel Products
A 525-78a	Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements
C 478-78a	Precast Reinforced Concrete Manhole Sections

2. GENERAL. The Contractor shall verify all measurements and shall take all field measurements necessary before fabrication. Welding to or on structural steel shall be in accordance with the Structural Welding Code of the American Welding Society. Items specified to be galvanized, when practicable and not indicated otherwise, shall be hot-dip processed after fabrication. Galvanizing shall be in accordance with ASTM A 123, A 386, or A525, as applicable. Exposed fastenings shall be compatible materials, shall generally match in color and finish, and shall harmonize with the material to which fastenings are applied. Materials and parts necessary to complete each item, even though such work is not definitely shown or specified, shall be included. Miscellaneous bolts and anchors, supports, braces, and connections necessary for completion of the miscellaneous metalwork shall be provided. The necessary rebates, lugs, and brackets shall be provided so that the work can be assembled in a neat and substantial manner. Edges of flanged items shall be turned to form plaster keys where plaster occurs. Holes for bolts and screws shall be drilled or punched. Poor matching of holes shall be cause for rejection. Fastenings shall be concealed where practicable. Thickness of metal and details of assembly and supports shall give ample strength and stiffness. Joints exposed to the weather shall be formed to exclude water.

3. DISSIMILAR MATERIALS. Where dissimilar metals are in contact, or where aluminum is in contact with concrete, mortar, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint conforming to Mil. Spec. MIL-C-18480 or to Fed. Spec. TT-V-51, unless otherwise specified, to prevent galvanic or corrosive action.

4. MATERIALS shall conform to the requirements specified for the particular item; and where these requirements are not specified in detail, the materials shall be suitable for the intended usage of the item. The materials listed below shall conform to the respective specifications and other requirements as designated below.

4.1 Anchors.

4.1.1 Expansion Shields. Fed. Spec. FF-S-325.

4.1.2 Toggle Bolts. Fed. Spec. FF-B-588.

4.2 Fasteners.

4.2.1 Bolts and Nuts shall be suitable for use intended, or as specified elsewhere.

4.2.2 Powder-Driven Fasteners may be used only when approved in writing.

4.2.3 Screws. Fed. Spec. FF-S-85, FF-S-92, and FF-S-111, as best suited for use intended.

4.2.4 Washers. Fed. Spec. FF-W-84 for lock washers. Flat washers shall be suitable for use intended.

4.3 Hardware. Unless otherwise specified, hardware provided as an integral part of miscellaneous metal items shall conform to Fed. Spec. FF-H-111.

5. SHOP DRAWINGS, along with catalog cuts, templates, and erection and installation details, as appropriate, for all miscellaneous metal items shall be submitted for approval in accordance with the SPECIAL PROVISIONS. Submittals shall be complete in detail; shall indicate thickness, type, grade, class of metal, and dimensions; and shall show construction details, reinforcement, anchorage, and installation with relation to the building construction.

6. SAMPLES shall be full size, shall be taken from manufacturer's stock, and shall be complete as required for installation in the structure. After approval, samples may be installed in the work, provided each sample is clearly identified and its location recorded. One sample of any item shall be submitted for approval upon request by the Contracting Officer.

7. WORKMANSHIP. Miscellaneous metalwork shall be well formed to shape and size, with sharp lines and angles and true curves. Drilling and punching shall produce clean true lines and surfaces. Welding shall be continuous along the entire area of contact except where tack welding is permitted. Exposed connections of work in place shall not be tack welded. Exposed welds shall be ground smooth. Exposed surfaces of work in place shall have a smooth finish, and unless otherwise approved. Where tight fits are required, joints shall be milled to a close fit. Corner joints shall be coped or mitered, well formed, and in true alinement. Work shall be accurately set to established lines and elevations and securely fastened in place. Work shall be executed and finished in accordance with approved drawings, cuts, details, and samples.

8. ANCHORAGE shall be provided where necessary for fastening miscellaneous metal items securely in place. Anchorage not otherwise specified in indicated shall include slotted inserts, expansion shields, and powder-driven fasteners when approved for concrete; machine and carriage bolts for steel. Slotted inserts shall be of types required to engage with the anchors and shall be approved.

9. WIRE MESH SCREENS. Screens shall be constructed of wire mesh conforming to Fed. Spec. RR-W-360, type III, stainless steel. Sizes shall be as indicated. Frames shall be of the size indicated and shall be galvanized after fabrication. Corners of frames shall be mitered and welded. Bolts and nuts shall be stainless steel.

10. STEEL PLATES (BAFFLE). Plate shall be steel conforming to ASTM A 36, galvanized after fabrication.

11. INLET COVER PLATE AND FRAME. Cover plate shall be 1/4 inch plate conforming to Fed. Specs. QQ-F-461. Frame of all steel shapes and welded construction finished to match cover plate shall be provided. Frame shall be provided with welded-on anchors. Cover plate and frame shall be galvanized. Doors shall be equipped with heavy forged brass hinges, stainless steel pins and hardware. A snap lock with removable handle may be provided in lieu of drop lift handles as indicated. Cover plate shall be designed to withstand a live load of not less than 300 pounds per square foot.

12. EXPANDED METAL SCREEN. Expanded metal shall be stainless steel, regular mesh, of the size indicated. Frame shall be all-welded steel construction. All bolts shall be corrosion resisting metal.

13. PRECAST REINFORCED CONCRETE PIPE. Reinforced concrete pipe and concrete cover shall conform to ASTM C 478.

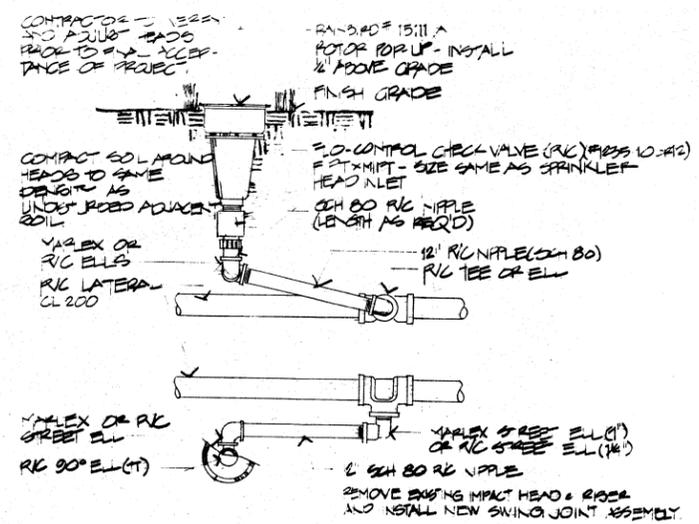
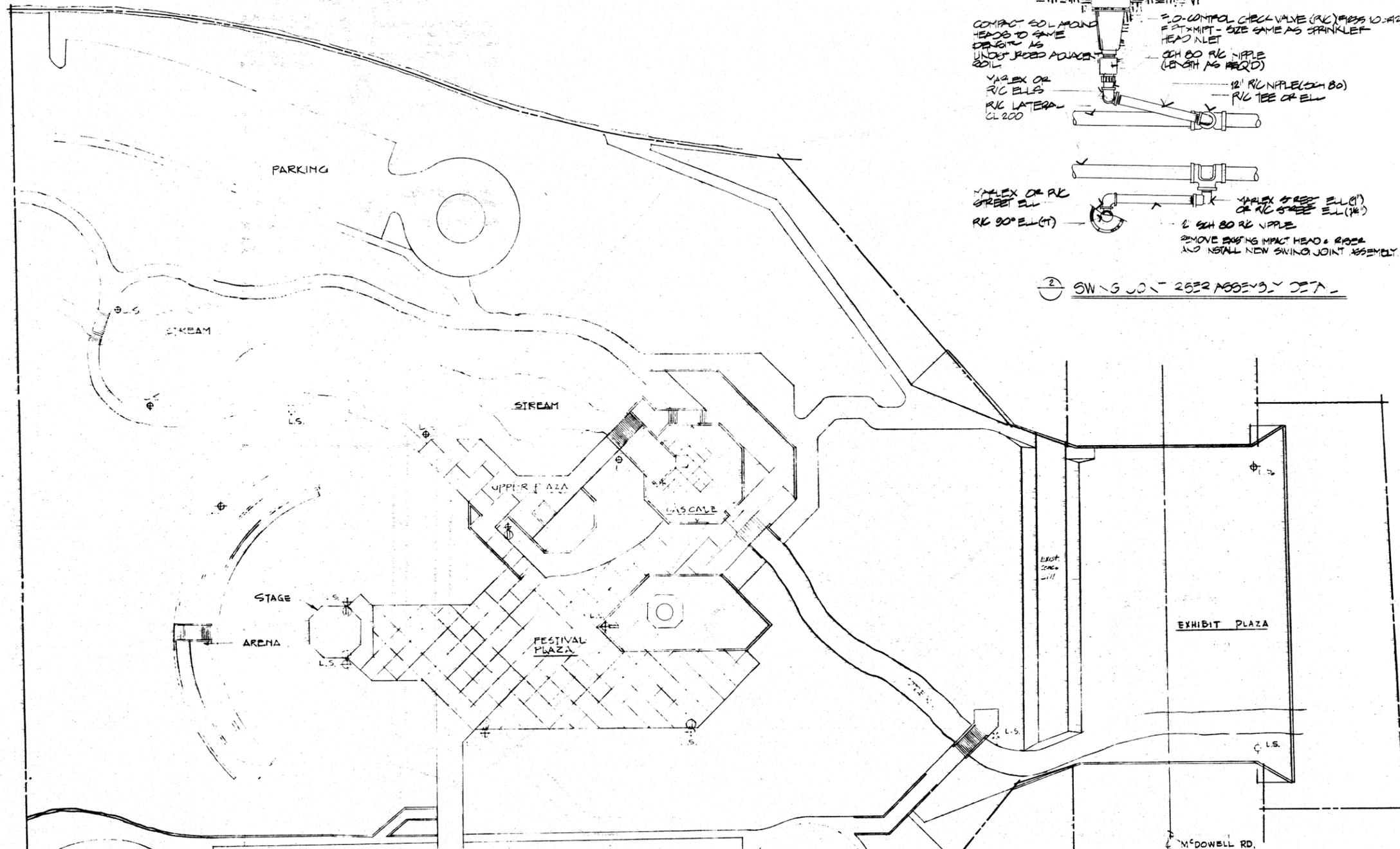
14. MISCELLANEOUS PLATES AND SHAPES for items that do not form a part of the structural steel framework, such as lintels, sill angles, miscellaneous mountings, and frames, shall be provided to complete the work. Miscellaneous plates and shapes shall conform to ASTM A 36.

15. SHOP PAINTING. Unless otherwise specified, surfaces of ferrous metal, except galvanized surfaces, shall be cleaned and shop coated with the manufacturer's standard protective coating. Items to be finish painted shall not be given a bituminous protective coating. Surfaces shall be cleaned with solvents to remove grease and oil and with power wire-brushing or sandblasting to remove loose rust, loose mill scale, and other foreign substances. Surfaces of items embedded in concrete shall be painted. Bituminous primer shall conform to Fed. Spec. TT-V-51 or to Mil. Spec. MIL-C-18480.

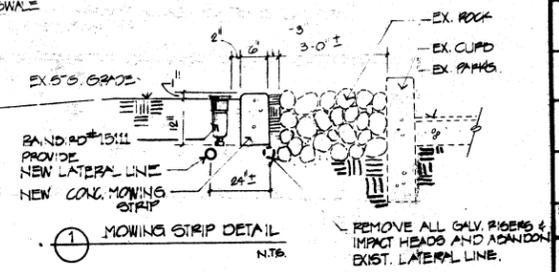
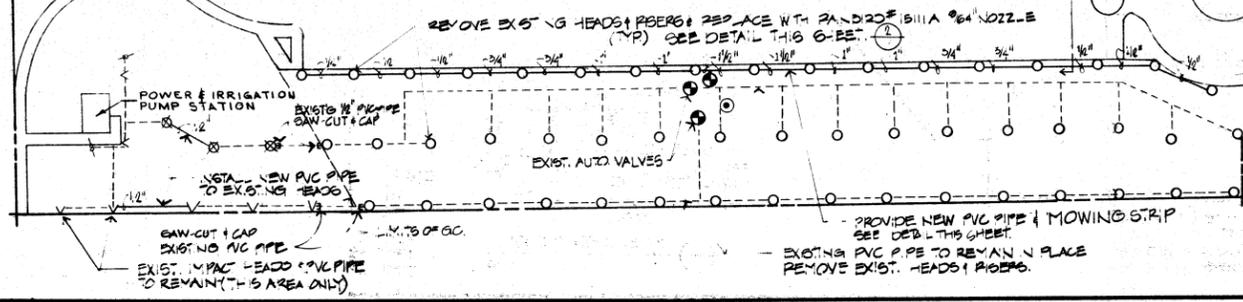
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U. S. ARMY ENGINEER DISTRICT, LOS ANGELES
300 North Los Angeles Street
Los Angeles, California

ARMY - C. of E. - Los Angeles



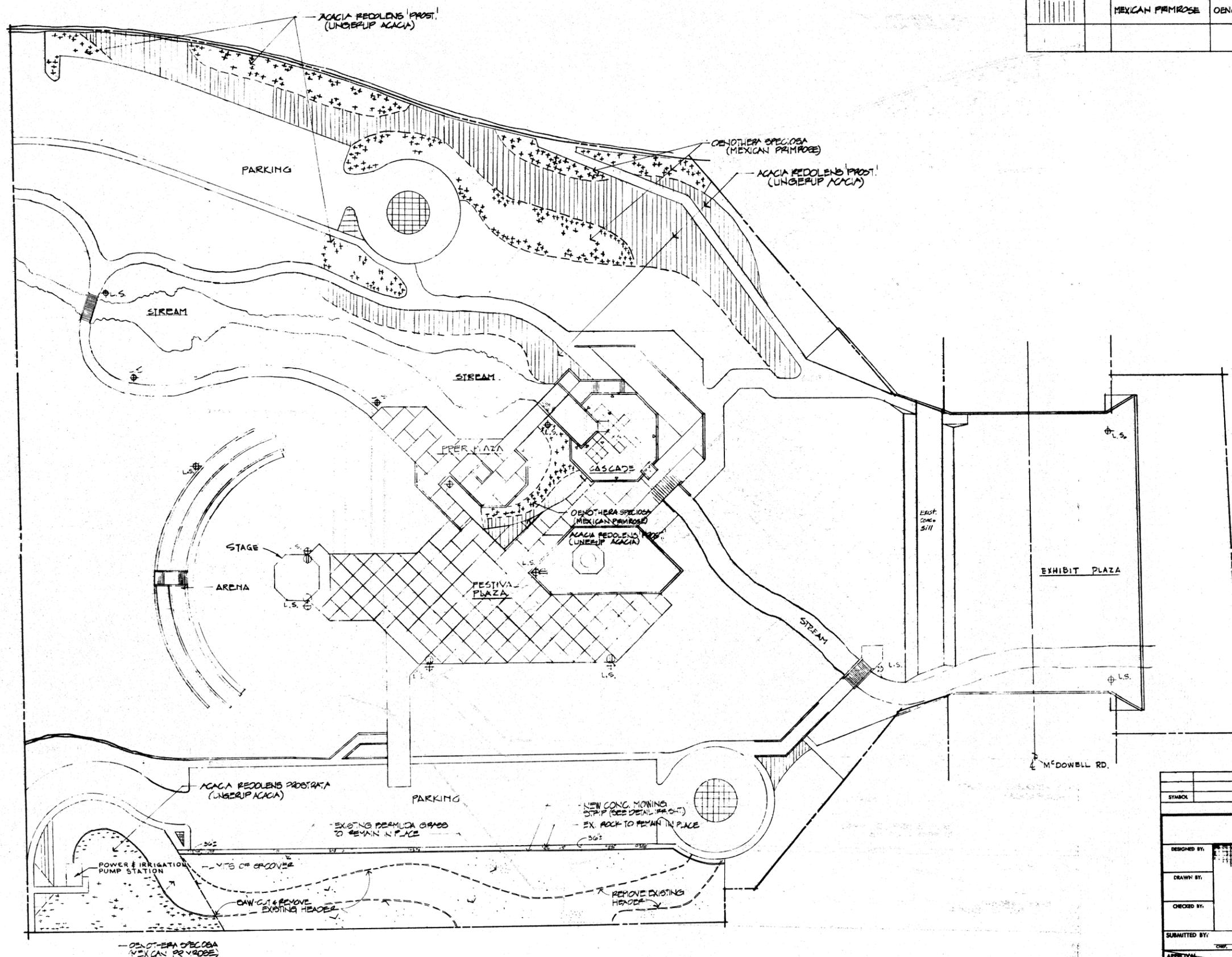
2 SWING JOINT ASSEMBLY DET.



SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS			
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DRAWN BY:			
CHECKED BY:			
SUBMITTED BY:	APPROVED:	SHEET	
APPROVAL RECOMMENDED:	SPEC. NO. DACW 09-80-B-0036 DISTRICT FILE NO. DATE:	OF SHEETS	

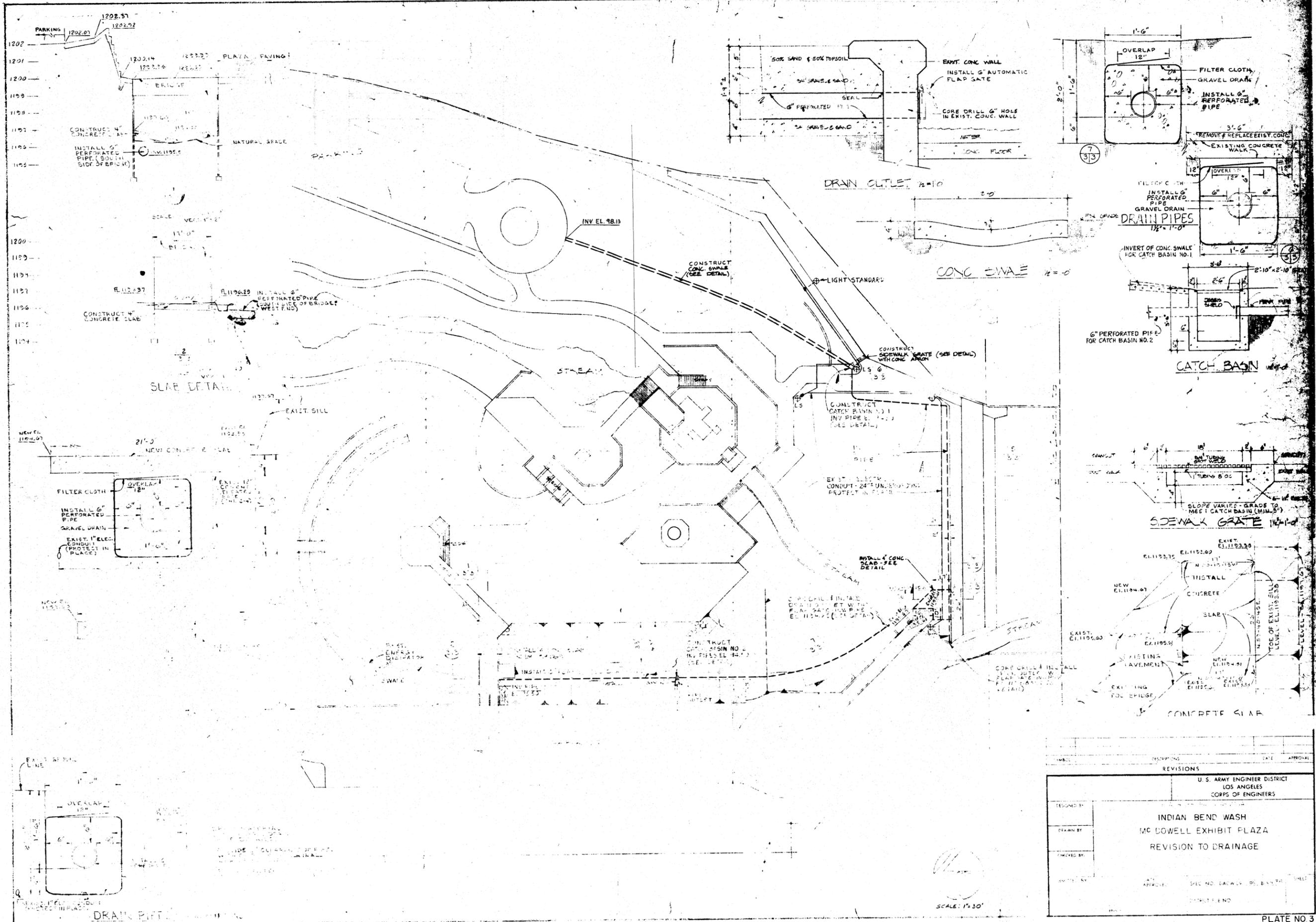
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	MEXICAN PRIMROSE	OENOTERA SPECIOSA	PLANT	PLANT 18" O.C.

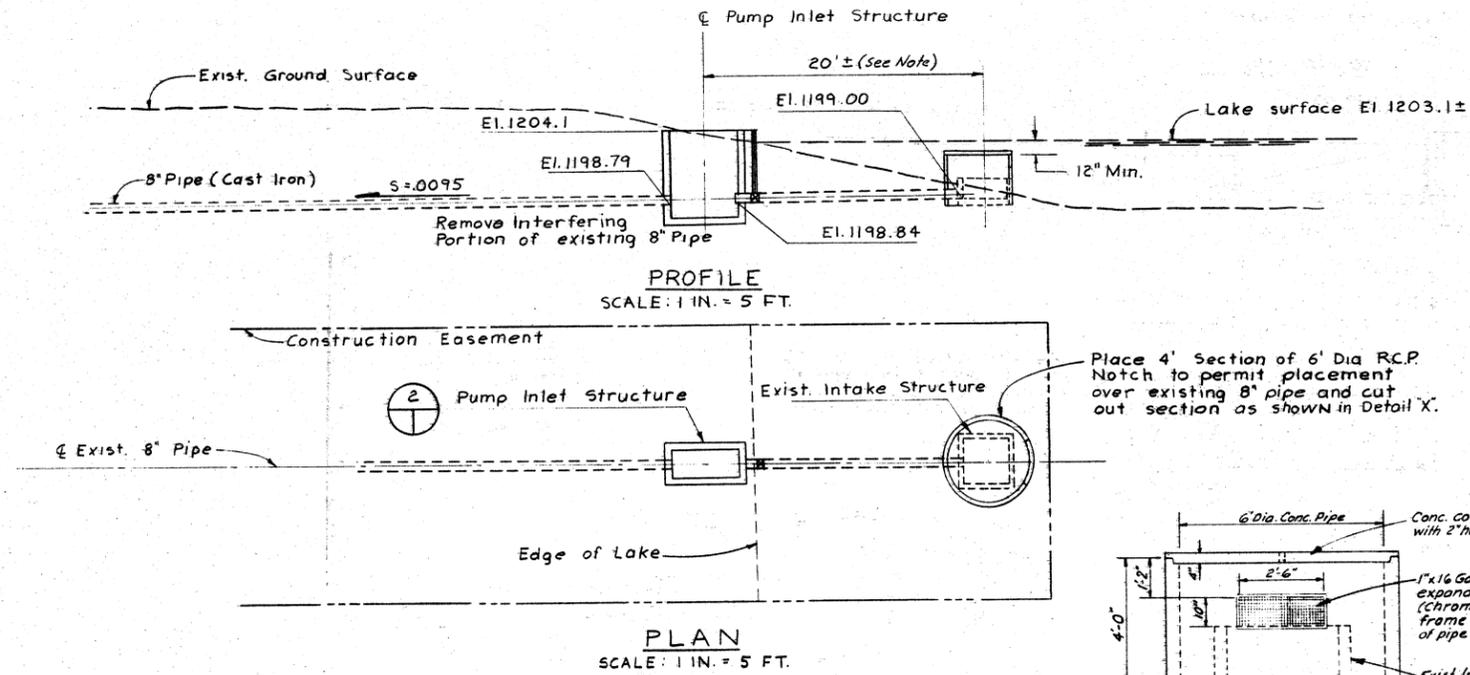


10 0 30
1" = 30'-0"

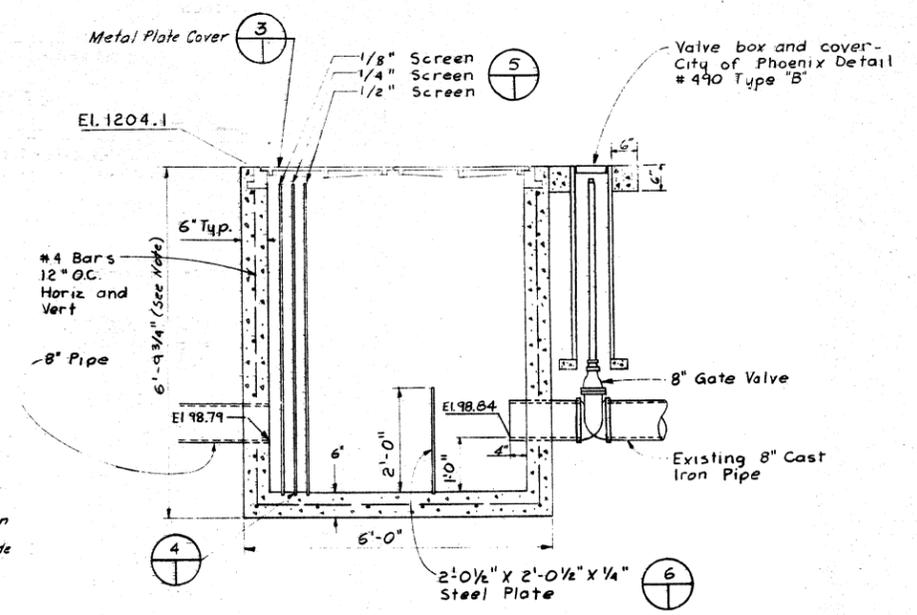
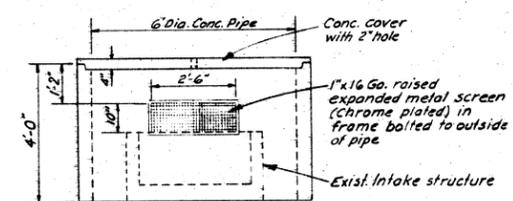
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REVISIONS			
U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS			
DESIGNED BY:	Mc DOWELL EXHIBIT PLAZA LANDSCAPE PLAN, GROUNDCOVERS AND SCHEDULES		
DRAWN BY:			
CHECKED BY:			
SUBMITTED BY:	APPROVED:	SHEET	
APPROVAL RECOMMENDED:	SPEC. NO. DACW 05-80-B-0036 DISTRICT FILE NO. DATE:	DATE:	



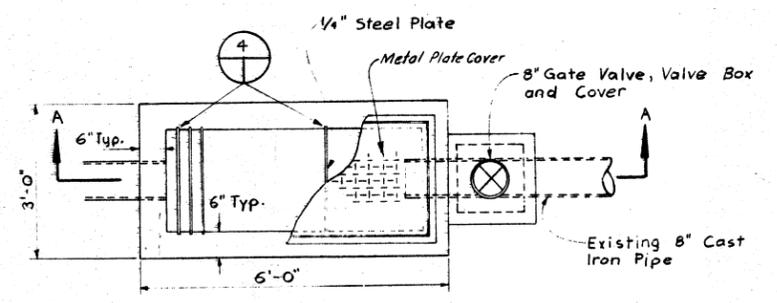
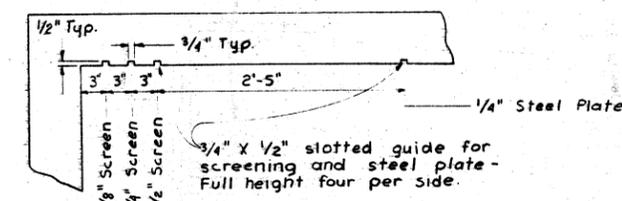
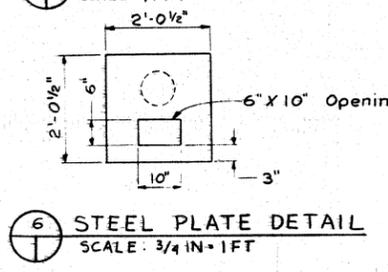
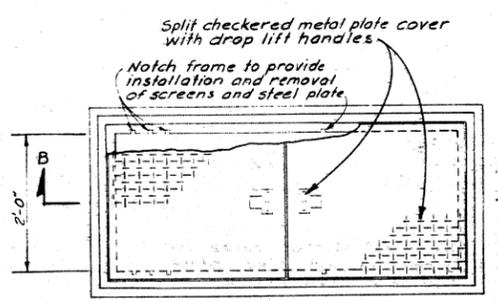
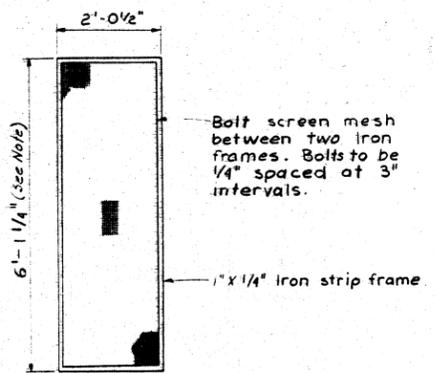
NO.	DESCRIPTION	DATE	APPROVAL
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U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS			
DESIGNED BY:	INDIAN BEND WASH MC DOWELL EXHIBIT PLAZA REVISION TO DRAINAGE		
DRAWN BY:			
CHECKED BY:			
APPROVED BY:			
APPROVED:	SPEC. NO. 100-100-100-100-100	DATE: 10/1/50	SHEET: 1



Place 4' Section of 6' Dia R.C.P. Notch to permit placement over existing 8" pipe and cut out section as shown in Detail 'X'.



2 PUMP INLET STRUCTURE



NOTE:
For more exact location and height of inlet structure and screen, determine field elevation of existing 8" pipe.

SYMBOL	DESCRIPTIONS	DATE	APPROVAL
REVISIONS			
U. S. ARMY ENGINEER DISTRICT LOS ANGELES CORPS OF ENGINEERS			
GILA RIVER BASIN, ARIZONA			
INDIAN BEND WASH MC DOWELL EXHIBIT PLAZA REVISION TO IRRIGATION PUMP STATION			
DESIGNED BY:			
DRAWN BY: <i>S. D. B.</i>			
CHECKED BY:			
SUBMITTED BY:	DATE APPROVED:	SPEC. NO. DACW 09-80-1-0036	SHEET
		DISTRICT FILE NO.	

