

1

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

CONSTRUCTION SPECIFICATIONS

FOR

CONTRACT FCD 94-09

White Tanks #4 FRS, Inlet Improvement Channel



(Engineer's
Seal)

Prepared By

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Recommended by: Edward A. Raleigh Date: 1/8/98
Edward A. Raleigh, P.E., Manager
Engineering Division

Issued for Public Bidding by: Michael S. Ellegood Date: 1/13/98
Michael S. Ellegood, P.E.
Chief Engineer and General Manager

SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EDITION OF 1992 AND REVISIONS AND SUPPLEMENTS THERETO THROUGH 1997.

WHITE TANKS #4, INLET CHANNEL IMPROVEMENTS
CONTRACT No. FCD 94-09

PROJECT MANAGER: RAJ SHAH

PRE-BID MEETING AGENDA

- INTRODUCTION
- PROJECT LOCATION
- PROJECT DESCRIPTION
- UTILITIES/PERMITS
- MBE/WBE REQUIREMENTS
- QUESTIONS (Note: Please state your name, your company name and your question)
- ADJOURN

WHITE TANKS #4, INLET CHANNEL

PRE-BID MEETING NOTES

INTRODUCTION:

- GOOD AFTERNOON, This is a "PRE-BID" meeting for "White Tanks #4, Inlet"
- I am Raj Shah, ----- and next to me is Heidi Birch, Contracting Branch Manager.

PROJECT LOCATION:

- Located in Town of Buckeye and county Island, T1N, R2W, Section 5, and 32
- Channel starts about 1200' north of McDowell Road to south of Roosevelt street into the White Tanks #4 FRS

PROJECT DESCRIPTION:

- Project includes approximately 1 mile of open channel:
 - 370' of grouted riprap channel
 - 4660' of concrete lined channel with 6" or 9" lining
- Approximately 5 drop structures
- Trap channel w/ 36' bottom width, 5' to 7' depth, and 2:1 sideslopes
- Sideslopes with the weep holes to drain the slopes
- Channel has 4:1 sideslope collector channels.
- We also have 12' ABC maintenance road
- There is an existing concrete lined channel under the I-10 freeway. Our channel will tie into the existing ADOT channel.
- The District owns the land north of the FRS structure, which can be used as a Contractor's marshalling yard. (Note: This area could be subjected to flooding. It is under 100-yr flood inundation limit.
- It is contractor's responsibility to keep his equipment out of the wash when the wash is flooded. Also, Contractor is responsible for providing existing conveyance capacity of the channel.

Utilities/Permits:

- There are no known utilities in the vicinity. Even than the contractor shall contact Blue Stake before digging
- The ADOT permit is already obtained and MCDOT permit will be granted before construction begins.
- The District is waiting for 404 permit from COE. The District has obtained 401 clearance from ADEQ. The 404 permit is anticipated to arrive in mid or late February.
- The Contractor will be responsible for obtaining all other necessary permits for this project.

MBE/WBE participation:

- Heidi Birch would say few words about MBE?WBE participation.

QUESTIONS:

- Please have your questions to us 5 days before the bid opening. Any questions after that time will not be answered.
- All addendum (if any) shall be recognized and turned in with the bid package. Bid package without addendum will be rejected.

CONSTRUCTION SPECIFICATIONS

FOR

CONTRACT FCD 94-09

White Tanks #4 FRS, Inlet Improvement Channel



(Engineer's
Seal)

Prepared By

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Recommended by: Edward A. Raleigh Date: 1/8/98
Edward A. Raleigh, P.E., Manager
Engineering Division

Issued for Public Bidding by: 1/5/98 Date: 1/13/98
Michael S. Ellegood, P.E.
Chief Engineer and General Manager

SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EDITION OF 1992 AND REVISIONS AND SUPPLEMENTS THERETO THROUGH 1997.

ATTENTION

ALL PROSPECTIVE BIDDERS

A.R.S. Section 34-201 requires that construction bid proposals be accompanied by a certified check, cashiers check or surety bond for **ten percent (10%)** of the total amount of the bid.

All bonds must be executed solely by a surety company or companies holding a Certificate of Authority to transact surety business in Arizona, issued by the Director of the (State) Department of Insurance.

Bonds (bid, payment and performance) executed by an individual surety or sureties are not in compliance with the Arizona Revised Statutes. Bids received containing bid bonds not in compliance with the Arizona Revised Statutes will be considered as being non-responsive. The use of District-supplied bond forms is required.

Please submit your bids accordingly.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

CONTRACT FCD 94-09
White Tanks #4 FRS, Inlet Improvement Channel

TABLE OF CONTENTS

	Page
1. Invitation for Bids	1
2. Bid Form (Proposal)	4
3. Bidding Schedule	6
4. Subcontractor Listing	8
5. Surety Bond	9
6. No Collusion Affidavit	10
7. Verification of License	11
8. Minority and Women-Owned Business (MBE/WBE) Program	12
9. Contractor Certificate of Good Faith	16
10. MBE/WBE Assurances Affidavit	18
11. MBE/WBE Participation Affidavit, Sample	19
12. MBE/WBE Participation Report (Form)	20
13. Contract	21
14. Statutory Payment Bond	24
15. Statutory Performance Bond	25
16. Indemnification and Insurance Requirements	26
17. Certificate of Insurance	29
18. Supplementary General Conditions (SGC)	1 - 13
19. Special Provisions (SP)	1 - 17
20. Drawings: 17 Plan Sheets	(Separate)

(Area to left reserved
for Engineer's Seal)



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

INVITATION FOR BID

BID OPENING DATE: February 12, 1998

LOCATION: The Project is located within the City of Buckeye and on unincorporated Maricopa County land.

PROPOSED WORK: The proposed project includes concrete lining the existing earth lined channel from 1400 feet north of McDowell Road to Roosevelt Street west of Jackrabbit Road. The existing channel is under the ADOT freeway and box culvert at McDowell Road. The proposed channel ties into the ADOT improvements under the freeway. The channel daylights into the White Tanks #4 Flood Retarding Structure (FRS).

BIDS:

SEALED BIDS for the proposed work will be received by the Flood Control District of Maricopa County, 2801 West Durango Street, Phoenix, Arizona 85009 until 2:00 p.m. (Phoenix time) on February 12, 1998 and then publicly opened and read at 2801 West Durango Street, Phoenix, Arizona 85009. All bids are to be marked in accordance with Section 102.9 of the MAG Uniform Standard Specifications and addressed to the Chief Engineer and General Manager, Flood Control District of Maricopa County, 2801 West Durango Street, Phoenix, Arizona 85009. No bids will be received after the time specified for bid opening. All bids must be submitted on proposal forms furnished by the Flood Control District and included in the Proposal Pamphlet. The Board of Directors reserves the right to reject any and all bids and to waive any informality in any bid received.

PRE-BID CONFERENCE:

A **Pre-Bid conference will be held on February 3, 1998 at 1:00 p.m.** in the Flood Control District, 2801 West Durango Street, Phoenix, Arizona. All potential contractors and subcontractors are encouraged to attend this pre-bid conference and be prepared at that time to submit in writing and discuss any comments concerning this solicitation.

Questions or items for clarification may be addressed to the Contract Manager, in writing, at least five (5) days prior to bid opening date. Questions received after this deadline may not be accepted. Responses to all questions submitted will be sent to all planholders by addenda. Verbal interpretations, unless specifically addressed by addendum, shall not be binding nor have any legal effect.

ELIGIBILITY OF CONTRACTOR:

The bidder shall be required to certify that it has the appropriate "A" Contractor's license in the State of Arizona to perform the before-mentioned type of work. Certification shall be on the form provided herein.

The bidder may be required to furnish an affidavit as evidence of previous satisfactory performance in the above-mentioned type of work.

CONTRACT TIME:

All work on this Contract is to be completed within two hundred forty (240) calendar days after date of Notice to Proceed.

MBE/WBE PARTICIPATION:

It is the policy of the Flood Control District of Maricopa County to endeavor to ensure in every way possible that minority and women-owned business enterprises have every opportunity to participate in providing professional services, purchased goods, and contractual services without being discriminated against on the grounds of race, religion, sex, age, disability, or national origin.

For this contract, a goal of ten percent (10%) MBE/WBE is established for Minority/Women-Owned Business Enterprises. Instructions and required forms are included in the Minority and Women-Owned Business Enterprise Program Contracting Requirements section. The Maricopa County Minority and Women-Owned Business Enterprise Program, effective January 1, 1992, is incorporated by reference.

PROJECT PLANS, SPECIAL PROVISIONS AND CONTRACT DOCUMENTS:

Plans and Construction Specifications may be obtained from the Flood Control District of Maricopa County, 2801 West Durango Street, Phoenix, Arizona 85009 upon payment of \$17.00 by check, payable to the Flood Control District of Maricopa County. This payment will not be refunded. Mail orders for project documents must include an additional \$7.50 for first class U.S. postage and handling. The total \$24.50 will not be refunded. Regardless of circumstances, we cannot guarantee mail delivery.

Each bid must be accompanied by a Bid Bond executed on the District-supplied bond form, cashier's or certified check or postal money order equal to 10 percent (10%) of the bid, made payable to the Flood Control District of Maricopa County as a guarantee that if the work is awarded to the bidder, the bidder will within ten (10) days of receipt of the Proposal Acceptance, enter into proper contract and bond condition for the faithful performance of the work, otherwise, said amount may be forfeited to the said Board of Directors.

PRINCIPLE ITEMS AND APPROXIMATE QUANTITIES

QUANTITY	UNIT	DESCRIPTION
59,825	CY	Channel Excavation
3,240	SY	Grouted Riprap
1,315	Tons	Aggregate Base Course
21,118	SY	6" Concrete Channel Liner
7,245	SY	7" Concrete Channel Liner
5,435	SY	9" Concrete Channel Liner
10,334	LF	Concrete Cut-off Wall

BID

TO THE BOARD OF DIRECTORS
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
PHOENIX, ARIZONA

Gentlemen:

The following Bid is made for the **White Tanks #4 FRS, Inlet Improvement Channel, Contract FCD 94-09** in the County of Maricopa, State of Arizona.

The following Bid is made on behalf of

and no others. Evidence of authority to submit the bid is herewith furnished. The bid is in all respects fair and is made without collusion on the part of any person, firm, or corporation mentioned above, and no member or employee of the Board of Directors is personally or financially interested, directly or indirectly, in the bid, or in any purchase or sale of any materials or supplies for the work in which it relates, or in any portion of the profits thereof.

The Undersigned certifies that the approved Plans, Supplementary General Conditions, Special Provisions, Forms of Contract, Bonds, and Sureties authorized by the Board of Directors and constituting essential parts of the bid, have been carefully examined and also that the work site has been personally inspected.

The Undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, Construction Specifications, Special Provisions, Supplementary General Conditions, or conditions to be overcome, be pled. On the basis of the Plans, Construction Specifications, Special Provisions, Supplementary General Conditions, the Forms of Contract, Bonds, and Sureties proposed for use, the Undersigned proposes to furnish all the necessary machinery, equipment, tools, apparatus, and other means of construction, to do all the work and to furnish all the materials in the manner specified and to finish the entire project within the time hereinafter proposed and to accept, as full compensation therefore, the sum of various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the Engineer or Architect.

The Undersigned understands that the quantities mentioned herein are approximate only and are subject to increase or decrease and hereby proposes to perform all quantities of work, as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

The Undersigned further proposes to perform all extra work that may be required on the basis provided in the Specifications and to give such work personal attention and to secure economical performance.

The Undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bonds and Sureties within ten (10) days of receipt of Notice of Bid acceptance, **TIME BEING OF THE ESSENCE**. The Undersigned further proposes to begin work as specified in the Contract attached hereto, and to complete the work within two hundred forty (240) calendar days from the effective date specified in the Notice to Proceed, and maintain at all times a Payment and Performance Bond, approved by the Board of Directors, each in an amount equal to one hundred percent of the contract amount. This Bond shall serve not only to guarantee the completion of the work on the part of the Undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, said Bonds and Sureties to be in full force and effect until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled.

A bid bond in the amount and character named in the Invitation to Bid, and amounting to not less than ten (10) percent of the total bid, is enclosed. The bid bond is submitted as a guaranty of good faith that the Bidder will enter into a written contract to do the work, as provided, if successful in securing the award thereof. It is therefore agreed that if the Undersigned withdraws its bid at any time except as herein provided or if the bid is accepted and the Undersigned fails to execute the Contract and furnish satisfactory Bonds and Sureties as herein provided, the Flood Control District of Maricopa County shall be entitled and is hereby given the right to retain the said Bid Bond as liquidated damages.

The Undersigned acknowledges receipt of the following addenda, attached these to the bid package, and has included their provisions in the bid:

Addendum No. _____	Dated _____

The Undersigned has enclosed the required bid security to this Bid.

BID SCHEDULE

PROJECT: WHITE TANKS FRS #4

CONTRACT: FCD 94-09

ITEM NO.	DESCRIPTION	UNIT	APPROX QTY.	UNIT COST NUMBERS	EXTENDED AMOUNT
105 - 1	Partnering	LS	1	\$5,000.00	\$5,000.00
107 - 1	NPDES/ SWPPP Permits	LS	1		
107 - 2	Project Signs Allowance	LS	1	\$3,000.00	\$3,000.00
202 - 1	Mobilization	LS	1		
215 - 1	Earthwork for Open Channel	CY	59,825		
220 - 1	Grouted Riprap	SY	3,240		
310 - 1	Aggregate Base Course (Maintenance Road)	TON	1,315		
350 - 1	Removal of Existing Improvements	LS	1		
401 - 1	Traffic Control	LS	1		
415 - 1	Guard Rail	LF	388		
421 - 1	Wire Fence	LF	8,085		
421 - 2	14' Type 1 Single Gate	EA	5		
421 - 3	22' Type 1 Double Gate	EA	1		
505 - 1	Concrete Retaining Walls	CY	130		
505 - 2	Concrete Channel Lining 6"	SY	21,118		
505 - 3	Concrete Channel Lining 7"	SY	7,245		
505 - 4	Concrete Channel Lining 9"	SY	5,435		
505 - 5	Concrete Cut-off Walls	LF	10,334		
618 - 1	Storm Drain Extension	LF	10		
618 - 2	Storm Drain Flap Gates	EA	2		
TOTAL IN WORDS AND NUMBERS					

IF BY AN INDIVIDUAL:

By: _____ (Printed Name - Title) _____ (Address)

(Signature) (Date) (Telephone Number)

IF BY A FIRM, PARTNERSHIP OR L.L.C. (LIMITED LIABILITY COMPANY)

(Firm Name) (Firm Address)
By: _____ (Signature - Title) _____ (Date) _____ (Telephone Number)

** Name and Address of Each Member, or each Manager of L.L.C. per Operating Agreement

** The Name and Post Office Address of each Member of the Firm or Partnership must be shown, or of each Manager of an L.L.C., also address of the registered office of the L.L.C.

IF BY A CORPORATION:

(Corporate Name) (Corporation Address)

(Printed Name - Title) (Telephone Number)
By: _____ (Signature) _____ (Date)

* Incorporated under the Laws of the State of _____. Names and Addresses of Officers:

(President) (Address)

(Secretary) (Address)

(Treasurer) (Address)

* The Name of the State under which the Laws of the Corporation was Chartered and Name, Title, and Business Address of the President, Secretary, and Treasurer must be shown.

SUBCONTRACTOR LISTING

As required in Section 102.6 of the Supplementary General Conditions, the following is a listing of Subcontractors and material suppliers (including any M/WBE participation) that are to be used in the event the undersigned should enter into contract with the Owner. Although this list will not be considered as final commitment on the part of the successful proposer, any Subcontractor changes from those listed must have Owner's written approval prior to commencement of Subcontractor work on site.

(Signature)

SURETY BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, (hereinafter called the Principal), and the _____, a corporation duly organized under the laws of the State of _____, as Surety, (hereinafter called the Surety), are held and firmly bound unto the Flood Control District of Maricopa County as Obligee, in the sum of **ten percent (10%)** of the total amount of the bid of Principal, submitted by him to the Flood Control District of Maricopa County, for the work described below, for the payment of which sum, well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, and administrators, successors and assigns, jointly and severally, firmly by these presents, and in conformance with the Arizona Revised Statutes.

WHEREAS, the said Principal is herewith submitting its proposal for **Contract FCD-94-09, White Tanks #4 FRS, Inlet Improvement Channel.**

NOW, THEREFORE, if the Flood Control District of Maricopa County shall accept the proposal of the Principal and the Principal shall enter into a contract with the Flood Control District of Maricopa County in accordance with the terms of the proposal and give the Bonds and Certificates of Insurance as specified in the Standard Specifications with good and sufficient Surety for the faithful performance of the contract and for the prompt payment of labor and material furnished in the prosecution of the contract, or in the event of the failure of the Principal to enter into the contract and give such Bond and Certificate of Insurance, if the Principal pays to the Flood Control District of Maricopa County the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Flood Control District of Maricopa County may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise it remains in full force and effect, provided, however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of the section to the extent as if it were copied at length herein.

Signed and sealed this _____ day of _____, A.D., 1998.

Agency of Record, State of Arizona

Principal

Agency Address

By: _____
(Printed Name) (Signature)

Title: _____

Surety

By: _____

Bond Number: _____

Title: _____

ATTACH SURETY POWER OF ATTORNEY

**AFFIDAVIT BY CONTRACTOR
CERTIFYING THAT THERE WAS NO COLLUSION
IN BIDDING FOR CONTRACT**

STATE OF _____)
County of _____)SS

_____ being first duly sworn, deposes and says:

That he/she is _____ of _____ bidding on Contract FCD 94-09 for White Tanks #4 FRS, Inlet Improvement Channel, in the County of Maricopa, State of Arizona.

That, in connection with the above-mentioned project, neither he/she, nor anyone associated with the aforesaid business, has, directly or indirectly, participated in any collusion, entered into any contract, combination, conspiracy or other act in restraint of trade or commerce in violation of the provisions of A.R.S. Section 34-251, Article 4, as amended.

(Signature of Affiant)

Subscribed and sworn to before me this ___ day of _____, 1998.

(Notary Public)

My Commission Expires

CERTIFICATION OF LICENSE

Pursuant to A.R.S. Section 32-1169, I hereby state that I hold a current contractor's license, duly issued by the office of the Registrar of Contractors for the State of Arizona, said license has not been revoked, that the license number is: _____ that my privilege license number (as required by A.R.S. Section 42-1305) is: _____; and that, if any exemption to the above licensing requirements is claimed;

(1) The basis for the claimed exemption is: _____ and;

(2) The name(s) and license number(s) of any general, mechanical, electrical, or plumbing contractor(s) to be employed on the work are:

IT IS UNDERSTOOD THAT THE FILING OF AN APPLICATION CONTAINING FALSE OR INCORRECT INFORMATION CONCERNING AN APPLICANT'S CONTRACTOR'S LICENSE OR PRIVILEGE LICENSE WITH THE INTENT TO VOID SUCH LICENSING REQUIREMENTS IS UNSWORN FALSIFICATION PUNISHABLE ACCORDING TO A.R.S. SECTION 13-2704.

Signature of Licensee

Date: _____

Company: _____

**MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
CONSTRUCTION CONTRACTING REQUIREMENTS**

A. The following conditions will apply in the calculations of the percentage attainment:

1. All M/WBE firms used in attainment of the goal must be certified with the Maricopa County Minority Business Office (MBO). The MBO is located at 2901 West Durango Street, Phoenix, Arizona 85009, telephone 506-8656. In addition, only those firms certified prior to the bid opening will be considered in the attainment of the goal.
2. Prime contractor subcontracts to MBE or WBE:
The M/WBE amount to be applied to the goal will be based on that portion (dollar value) of the contract that the M/WBE performs. For example, if a prime contractor subcontracts work amounting to \$100,000 of a contract for which the total project cost is \$1,000,000 the M/WBE participation will be credited as 10 percent.
3. Prime Minority Contractor:
An M/WBE prime contractor will be credited with the M/WBE participation for that portion of the contract which they themselves perform plus that portion subcontracted to other M/WBE firms. For example, if an M/WBE prime contractor proposes to perform 50 percent of a project quoted as \$1,000,000 and subcontracts 25 percent to an MBE firm and 25 percent to a non-M/WBE firm, M/WBE participation will be credited as 75 percent, or \$750,000.
4. Minority-Non Minority Joint Venture:
A joint venture consisting of M/WBE participation and non-M/WBE business enterprises, functioning as a prime contractor, will be credited with minority participation on the basis of the percentage of profit accruing to the M/WBE firm. For example, if a M/WBE and non-M/WBE joint venture proposes to perform 50 percent of a \$1,000,000 project and 50 percent of the joint venture profits (\$500,000) are to accrue to the M/WBE partner in the joint venture, M/WBE participation will be credited at 25 percent or \$250,000.
5. Lower Tier Non-M/WBE Participation:
M/WBE subcontractors proposing to further subcontract to non-M/WBE contractors shall not have that portion of subcontracting activity considered when determining the percentage of M/WBE participation.
6. M/WBE Suppliers:
Any M/WBE supplier that performs a commercially useful function, manufactures or substantially alters the material or product it supplies will have that portion of activity considered when determining the percentage of M/WBE participation.
7. M/WBE Trucking:
Credit for trucking by MBEs or WBEs will be the amount to be paid when the MBE or WBE trucker will perform the trucking with his/her trucks, tractors, and employees or when a MBE or WBE trucking broker has signed agreements with MBE and WBE truckers.

B. Required forms:

Two Affidavits are included as part of this section. The first form, the "M/WBE Assurances Affidavit", must be completed and submitted with the bid - **Failure to do so may be cause for rejection of the bid.**

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

Owner's representative in accordance with instructions provided elsewhere in this document.

C. Good Faith Efforts:

Bids which fail to meet MBE or WBE minimum goals at levels which equal or exceed established goals may be considered nonresponsive unless good faith efforts can be determined. Only MBE and WBE firms certified by Maricopa County prior to the bid submittal date, and which will perform a commercially useful function will be counted toward meeting the participation goals. Any portion of the work that a proposed MBE or WBE firm will subcontract to other than a certified firm, regardless of tier, will not be counted toward the applicable goals.

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

The County minority Business Office (MBO) will assist prime contractors in identifying possible qualified and interested MBE and WBE subcontractors to meet designated MBE and WBE goals. **A M/WBE listing will be furnished with the bidding documents**, which contractors must utilize in identifying M/WBE firms. It will be the responsibility of the prime contractors to obtain the MBE and WBE firms necessary to meet the MBE and WBE goals. Failure to contact the MBO for assistance in complying with these goals may result in not having implemented "good faith" efforts. Contact may be in writing, by telephone, or in person. If by phone or in person, name of MBO person spoken to should be obtained and written within the "Contractor Certificate of Good Faith" submittal form (supplied if a contract has M/WBE goals).

(The Minority Business Office is located at 2901 West Durango Street, Phoenix, Arizona. Telephone number is 506-8656.

Failure to implement "good faith" efforts in accordance with the Maricopa County Minority Business Enterprise Program to the satisfaction of maricopa county may result in the rejection of the bid.

If information submitted by a prime contractor indicates that established MBE and WBE goals have not been met, the contractor must be required to provide sufficient documentation to demonstrate that he/she has complied with MBE and WBE requirements or good faith efforts. Good faith efforts will be determined by both quality and intensity of these efforts. Documentation provided to the MBO must include:

1. The date bidder requested assistance in writing, in person, or by telephone from the MBO. The bidder should request assistance from the MBO office in order for a determination to be made. **As Maricopa County M/WBE listings are updated frequently, bidders shall contact the MBO to ensure that they have the most recent edition.**
2. Names, addresses and telephone numbers; and dates of notification of Maricopa County certified MBEs and WBEs solicited by direct mail for this project; and dates and methods used for follow up of initial solicitations to determine with certainty whether MBEs or WBEs were interested in subcontracting.
3. Items of work for which bidder requested subbids, proposals or materials to be supplied by MBEs and WBEs; information furnished to interested MBEs and WBEs such as specifications and requirements of the work; plans; and any breakdown of items of work into economically feasible units to facilitate MBE and WBE participation.
4. Names of MBEs and WBEs who submitted bids for any of the work indicated above and were not accepted by the prime contractor. An explanation of why MBEs or WBEs contacted will not be awarded subcontracts. If price was the reason for rejection of the bid, the price bid of rejected MBEs or WBEs and price bid of the selected subcontractor shall be submitted. Since utilization of available MBEs and WBEs is the program objective, price differences will not automatically be considered as cause for a prime contractor's rejection of MBE and WBE bids.

5. Documentation of written notices or telephone calls to a reasonable number of M/WBEs soliciting their participation in sufficient time to allow M/WBEs to participate effectively. All M/WBEs listed on the Maricopa County Certification list which provide applicable goods and services for subject procurement/project should be contacted.

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

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

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

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

D. Appeal Process for Bid Award:

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

E. Contract Compliance:

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

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

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

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

concerning this project.

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

F. Substitution of Subcontractors:

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

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

G. Requests for Pay:

Each Request for Pay must be accompanied by a Maricopa County Minority/Women-Owned Business Enterprise Program "MBE/WBE PARTICIPATION REPORT" in the form as provided by the Flood Control District of Maricopa County.

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

CONTRACTOR CERTIFICATE OF GOOD FAITH*

The intent of this certification is to document the good faith efforts implemented by the apparent low bidder in soliciting and utilizing M/WBE firms to meet the established M/WBE goals for County contracts. This certificate will assist Maricopa County in determining whether the apparent low bidder has implemented "good faith" efforts in accordance with the Maricopa County Minority Business Program. The burden of proof rests with the apparent low bidder.

(NOTE: Prior to filling out this certificate it is important that contractors review the "good faith" efforts requirements in the M/WBE section of the project specification booklet).

Failure to implement "good faith" efforts to the satisfaction of Maricopa County may result in rejection of the proposal.

I, _____, do hereby acknowledge that I am the _____ of _____ who has been identified as the selected contractor on Flood Control District Project/Contract FCD_____.

Provide a brief summary of why the established M/WBE goal for this project has not been met. (Attach additional sheets if necessary).

I hereby certify that I have made comprehensive "good faith" efforts to solicit and utilize County certified M/WBEs to meet the established M/WBE goal of this project as demonstrated by my responses to the following questions:

A. IDENTIFYING SUBCONTRACTOR WORK ITEMS

Contractors are encouraged to select portions of work to be subcontracted in a manner which will increase the likelihood of meeting the established M/WBE goal for the project. In selecting work to be performed, contractors will consider, where appropriate, breaking down the project into economically feasible units to facilitate M/WBE participation. Contractors are reminded that only M/WBE certified by the County can be used as participants towards meeting the project goals. A County M/WBE Certification listing will be provided to all contractors interested in submitting bids for projects. This listing is the only authorized source from which to select M/WBEs for project participation. Current copies of this listing may be obtained by calling the Minority Business Office at (602) 506-4068.

1. Which portions of the contract proposal, in terms of the nature of the work were selected to be subcontracted to M/WBE firms?

B. NOTIFYING M/WBE FIRMS OR CONTRACTING OPPORTUNITIES

1. Solicitations by mail/fax must be made to all M/WBE firms identified on the M/WBE Certification Listing that perform the type of work which is proposed for subcontracting. Following this initial solicitation, at least one follow-up telephone call must be made to any of the M/WBE firms who have not responded to the mailing.

2. In the spaces provided below, indicate which firms received written notification of work items to be subcontracted. In the appropriate space, also indicate when the M/WBE firms received subsequent telephone solicitations. Please attach additional sheets so that all firms contacted are listed and attach photo copies of all written/fax solicitations to M/WBEs to this documentation.

M/WBE Firm Contacted No.	Date	Name	Tel.
-----------------------------	------	------	------

3. Were the services of the County Minority Business Office used to assist the contractor in the

recruitment of M/WBEs or to assist in solving other problems? Yes _____ No _____

Contact was made by _____ Telephone _____

Written correspondence _____ Date contacted _____

Staff person contacted _____

C. PROVIDING M/WBES WITH ASSISTANCE

1. Explain any efforts undertaken to provide M/WBEs with information regarding project plans, specifications and requirements of the project:

2. Describe any efforts initiated to provide special assistance to M/WBE firms interested in participating in this project:

3. Describe any efforts undertaken to assist M/WBE firms in obtaining bonding, lines of credit, or insurance required by the County for this project:

4. Was solicitation for M/WBEs advertised in local papers, ethnic periodicals, or trade journals? If YES, please list the name of the periodical and dates advertised.

D. SOLICITING QUOTES FROM M/WBE FIRMS

Contractors must solicit quotes in good faith with interested M/WBE firms. Quotes and bids from interested M/WBEs must not be rejected by bidders without sound justification based upon a thorough investigation of the capabilities of the M/WBE firms.

1. Indicate in the space provided below, which M/WBE firms submitted quotes on the project proposal. Also provide a brief explanation of why any of these M/WBE quotes were rejected. If price was a determining factor, provide documentation showing the non-minority quotes. Please attach additional sheets if necessary.

Name of M/WBE Firm

Explanation for rejecting quote

* To be included in contract documents or those procurements which have M/WBE contract goals.

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
MBE/WBE ASSURANCES AFFIDAVIT**

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

The undersigned, fully cognizant of the Flood Control District of Maricopa County MBE/WBE Program requirements and of the goal established, hereby certifies that in the preparation of this bid,

_____ (the entity submitting the bid)

(CHECK ONE)

- Will meet the **established** goal for participation by Minority/Women-Owned Business Enterprises.
- Will provide the necessary documentation to Minority Business Office to establish that a good faith effort was made.

The first and second low bidders will specify their MBE/WBE participation on the Actual Participation affidavit or provide documentation of their good faith efforts not later than 4:00 p.m., the seventh calendar day following the bid opening. If participation is "None", the documentation shall provide bidder's good faith efforts to obtain the participation. This documentation will be reviewed by the MBO to determine whether in fact a comprehensive "good faith" effort has been implemented. The required affidavit shall be obtained by the apparent first and second low bidders from the Minority Business Office, 2901 West Durango Street, Phoenix, Arizona 85009, Telephone 506-8656, following the bid opening and verbal notification from the Procurement Officer of the Procurement Agency; a SAMPLE affidavit form for reference purposes follows.

Name of Firm

By: _____
Signature

Title

STATE OF _____)
County of _____))ss

Subscribed and sworn to before me this __ day of __, 199__.

Notary Public

My Commission Expires: _____

**MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISES PROGRAM**

**D/M/WBE PARTICIPATION REPORT
(To be attached with Each Request for Pay)**

Date: _____

General Contractor/Prime Consultant: _____
Contact Person: _____
Address: _____
Telephone Number: _____
Fax Number: _____

Project Description: _____
Contract Number: _____
For Pay Period of (indicate dates): _____

D/M/WBE Subcontractor/Subconsultant Name: _____
Contact Person: _____
Address: _____
Telephone Number: _____

Type of Firm: _____
Type of Work performed for this project: _____

Total D/M/WBE Subcontract Amount: \$ _____

Amount Paid to this D/M/WBE
Subcontractor this invoice: \$ _____

Total paid to this Subcontractor to date: \$ _____

Total D/M/WBE Contract Goal this project = ____%

Total D/M/WBE Participation
on this contract to date = ____%

cc: Maricopa County Infrastructure
Contracts and D/W/MBE Office
2901 West Durango Street
Phoenix, Arizona 85009

CONTRACT AGREEMENT

THIS AGREEMENT, made and entered into this ___ day of _____, 1998 by and between the FLOOD CONTROL DISTRICT OF MARICOPA COUNTY, hereinafter called the OWNER, acting by and through its BOARD OF DIRECTORS, and _____, hereinafter called the CONTRACTOR.

WITNESSETH: That the said CONTRACTOR, for and in the consideration of the sum of _____ (\$) to be paid to him by the OWNER, in the manner and at the times hereinafter provided, and of the other covenants and agreements herein contained, hereby agrees for himself, heirs, executors, administrators, successors, and assigns as follows:

ARTICLE I - SCOPE OF WORK: THE CONTRACTOR shall construct, and complete in a workmanlike and substantial manner and to the satisfaction of the Chief Engineer and General Manager, a project for the Flood Control District of Maricopa County, designated as **Contract FCD 94-09, White Tanks #4 FRS, Inlet Improvement Channel** and furnish at its own cost and expense all necessary machinery, equipment, tools, apparatus, materials, and labor to complete the work in the most substantial and workmanlike manner according to the Plans and Construction Specifications on file with the Flood Control District of Maricopa County, 2801 West Durango Street, Phoenix, Arizona, and such modifications of the same and other directions that may be made by the Flood Control District of Maricopa County as provided herein.

ARTICLE II - CONTRACT DOCUMENTS: The Construction Specifications, i.e. Invitation to Bid, Plans, Standard Specifications and Details, Supplementary General Conditions, Special Provisions, Addenda, if any, Proposal, Affidavits, Performance Bond, Payment Bond, Certificates of Insurance, and Change Orders, if any, are by this reference made a part of this Contract and shall have the same effect as though all of the same were fully inserted herein.

ARTICLE III - TIME OF COMPLETION: The CONTRACTOR further covenants and agrees at its own proper cost and expense, to do all work as aforesaid for the construction of said improvements and to completely construct the same and install the material therein, as called for by this agreement free and clear of all claims, liens, and charges whatsoever, in the manner and under the conditions specified within two hundred forty (240) calendar days following notice to proceed.

ARTICLE IV - PAYMENTS: For and in consideration of the faithful performance of the work herein embraced as set forth in the Contract Documents, which are a part hereof and in accordance with the directions of the OWNER, through its Engineer and to its satisfaction, the OWNER agrees to pay the said CONTRACTOR the amount earned, computed from actual quantities of work performed and accepted or materials furnished at the unit bid price on the Proposal made a part hereof, and to make such payment in accordance with the requirements of A.R.S. Section 34-221, as amended. The CONTRACTOR agrees to discharge its obligations and make payments to its subcontractors and suppliers in accordance with A.R.S. Section 34-221.

ARTICLE V - TERMINATION: The OWNER hereby gives notice that pursuant to A.R.S. Section 38-511(A) this contract may be canceled without penalty or further obligation within three years after execution if any person significantly involved in initiation, negotiation, securing, drafting or creating a contract on behalf of the OWNER is, at any time while the contract or any extension of the contract is in effect, an employee or agent of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract. Cancellation under this section shall be effective when written notice from the Chief Engineer and General Manager of the OWNER is received by all of the parties to the contract. In addition, the OWNER may recoup any fee for commission paid or due to any person significantly involved in initiation, negotiation, securing, drafting or creating the contract on behalf of the OWNER from any other party to the contract arising as a result of the contract.

ARTICLE VI - NEGOTIATION CLAUSE: Recovery of damages related to expenses incurred by the CONTRACTOR for a delay for which the OWNER is responsible, which is unreasonable under the circumstances and which was not within the contemplation of the parties to the contract, shall be negotiated between the CONTRACTOR and the OWNER. This provision shall be construed so as to give full effect to any provision in the contract which requires notice of delays, provides for arbitration or other procedure for settlement or provides for liquidated damages.

ARTICLE VII - COMPLIANCE WITH LAWS: The CONTRACTOR is required to comply with all Federal, State and local ordinances and regulation. The CONTRACTOR's signature on this contract certifies compliance with the provisions of the I-9 requirements of the Immigration Reform Control Act of 1986 for all personnel that the CONTRACTOR and any subcontractors employ to complete this project. It is understood that the OWNER shall conduct itself in accordance with the provisions of the Maricopa County Procurement Code.

ARTICLE VIII - MBE/WBE PROGRAM: The OWNER will endeavor to ensure in every way possible that minority and women-owned business enterprises shall have every opportunity to participate in providing professional services, purchased goods, and contractual services to the OWNER without being discriminated against on the grounds of race, religion, sex, age, disability, or national origin. The Maricopa County Minority Business Program implemented January 1, 1992, is incorporated by reference.

ARTICLE IX - ANTI-DISCRIMINATION PROVISION: The CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, or disability and further agrees not to engage in any unlawful employment practices. The CONTRACTOR further agrees to insert the foregoing provision in all subcontracts hereunder.

IN WITNESS WHEREOF: Five (5) identical counterparts of this Contract, each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on the date and year first above written.

Party of the First Part

By _____
(Printed Name) (Signature)

Title: _____

Date: _____

Tax Identification Number

FLOOD CONTROL DISTRICT OF
MARICOPA COUNTY
PARTY OF THE SECOND PART

By: _____
Chairman, Board of Directors Date

ATTEST:

Clerk of the Board Date

RECOMMENDED BY:

Chief Engineer and General Manager Date
Flood Control District of Maricopa County

LEGAL REVIEW

Approved as to form and within the powers and authority granted under the laws of the State of Arizona to the Flood Control District.

By: District, General Counsel Date

**STATUTORY PAYMENT BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)**

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter called the Principal), as Principal, and _____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ (hereinafter called the Surety), as Surety, are held and firmly bound unto the Flood Control District of Maricopa County, in the County of Maricopa, State of Arizona (hereinafter called the Obligee), in the amount of _____ (\$ _____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Flood Control District of Maricopa County, dated the ____ day of _____, 1997 for **Contract FCD 94-09, White Tanks #4 FRS, Inlet Improvement Channel**, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's Subcontractors in the prosecution of the work provided for in the contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of the Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if they were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as a part of the judgment reasonable attorney fees that may be fixed by a judge of the court.

Witness our hands this _____ day of _____, 1998.

Agency of Record, State of Arizona

Agency Address and Phone Number:

BOND NUMBER:

ATTACH SURETY POWER OF ATTORNEY

Principal
By:

(Printed Name) (Signature)

Title: _____

Surety Seal

By: _____

Title: _____

**STATUTORY PERFORMANCE BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)**

KNOW ALL MEN BY THESE PRESENTS:

That, _____ hereinafter called the Principal, as Principal, and _____
_____ a corporation organized and existing under the laws of the State of _____, with its
principal office in the City of _____ (hereinafter called the Surety), as Surety, are held and firmly
bound unto the Flood Control District of Maricopa County, in the County of Maricopa, State of Arizona,
in the amount of _____ (\$ _____), for the payment whereof, the said Principal and
Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and
severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Flood Control District
of Maricopa County, dated the ____ day of _____, 1998, for **Contract FCD 94-09, White Tanks #4
FRS, Inlet Improvement Channel**, which contract is hereby referred to and made a part hereof as fully
and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal
faithfully performs and fulfills all of the undertakings, covenants, terms, conditions and agreements of the
contract during the original term of the contract and any extension of the contract, with or without notice
to the Surety, and during the life of any guaranty required under the contract, and also performs and
fulfills all of the undertakings, covenants, terms, conditions and agreements of all duly authorized
modifications of the contract that may hereafter be made, notice of which modifications to the Surety
being hereby waived; the above obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter
2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance
with the provisions, conditions and limitations of Title 34, Chapter 2, and Article 2, Arizona Revised
Statutes, to the same extent as if they were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney
fees that may be fixed by a judge of the court.

Witness our hands this _____ day of _____, 1998.

Agency of Record, State of Arizona

Agency Address and Phone Number:

BOND NUMBER: _____

ATTACH SURETY POWER OF ATTORNEY

Principal

By: _____
(Printed Name) (Signature)

Title: _____

Surety Seal

By: _____

Title: _____

INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Flood Control District of Maricopa County, Maricopa County, the Arizona Department of Transportation, and the City of Buckeye, Arizona, their agents, representatives, officers, directors, officials, and employees from and against all claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or resulting from the Contractor's work or services. The Contractor's duty to defend, hold harmless and indemnify the District, its agents, representatives, officers, directors, officials, and employees shall arise in connection with any claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property including loss of use resulting therefrom, caused in whole or in part by any act or omission by the Contractor, anyone the Contractor directly or indirectly employs, or anyone for whose acts the Contractor may be liable, regardless of whether it is caused in part by a party indemnified hereunder, including the District.

The amount and type of insurance coverage requirements set forth below will in no way be construed as limiting the scope of the indemnity in this paragraph.

For all other hazards, liabilities, and exposures: To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the District, its agents, representatives, officers, directors, officials, and employees from and against all claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of or resulting from the Contractor's work or services. Contractor's duty to defend, hold harmless, and indemnify the District, its agents, representatives, officers, directors, officials, and employees shall arise in connection with any claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, injury to, impairment or destruction of property including loss of use resulting therefrom, caused in whole or in part by any act or omission of the Contractor, anyone the Contractor directly or indirectly employs, or anyone for whose acts the Contractor may be liable, regardless of whether it is caused in part by a party indemnified hereunder, including the District.

The amount and type of insurance coverage requirements set forth below will in no way be construed as limiting the scope of the indemnity in this paragraph.

INSURANCE REQUIREMENTS

Without limiting any of its obligations or liabilities, the Contractor, at the Contractor's own expense, shall purchase and maintain the hereafter stipulated minimum insurance with companies duly licensed, possessing a current A.M. Best, Inc. rating of B++6, or approved unlicensed to do business in the State of Arizona with policies and forms satisfactory to the County.

All insurance required herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and formally accepted; failure to do so may, at the sole discretion of the District, constitute a material breach of this Contract.

The Contractor's insurance shall be primary insurance as respects the District, and any insurance or self insurance maintained by the District shall not contribute to it.

Any failure to comply with the claim reporting provisions of the policies or any breach of the policy warranty shall not affect coverage afforded under the policies to protect the District.

The policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the District, its agents, representatives, directors, officers, and employees for any claims arising out of the Contractor's work or service.

The policies may provide coverage which contain deductibles or self insured retentions. Such deductible

Builders' Risk (Property) Insurance. The Contractor shall purchase and maintain, on a replacement cost basis, Builders' Risk insurance in the amount of the initial Contract amount as well as subsequent modifications thereto for the entire work at the site. Such Builders' Risk insurance shall be maintained until final payment has been made or until no person or entity other than the District has an insurable interest in the property required to be covered, whichever is earlier. This insurance shall include interests of the District, the Contractor, and all subcontractors and sub-subcontractors in the work during the life of the Contract and course of construction, and shall continue until the work is completed and accepted by the District. For new construction projects, the Contractor agrees to assume full responsibility for loss or damage to the work being performed and to the structures under construction. For renovation construction projects, the Contractor agrees to assume responsibility for loss or damage to the work being performed at least up to the full Contract amount, unless otherwise required by the Contract documents or amendments thereto.

Builders' Risk insurance shall be on an all-risk policy form and shall also cover false work and temporary buildings and shall insure against risk of direct physical loss or damage from external causes including debris removal, demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's service and expenses required as a result of such insured loss and other "soft costs" as required by the Contract.

Builders' Risk insurance must provide coverage from the time any covered property becomes Contractor's control and/or responsibility, and continue without interruption during construction or renovation or installation, including any time during which the covered property is being transported to the construction installation site, and while on the construction or installation site awaiting installation. The policy will provide coverage while the covered premises or any part thereof are occupied. Builders' Risk insurance shall be primary and not contributory.

If the Contract requires testing of equipment or other similar operations, at the option of the District, the Contractor will be responsible for providing property insurance for these exposures under a Boiler Machinery insurance policy.

Required coverages may be modified by an amendment to the Contract documents.

Certificates of Insurance

Prior to commencing work or services under this Contract, the Contractor shall furnish the District with Certificates of Insurance, or formal endorsements as required by the contract, issued by the Contractor's insurer(s), as evidence that policies providing the required coverages, conditions and limits required by this Contract are in full force and effect. Such certificates shall identify this Contract number and title.

Subcontractor: The Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. If a policy does expire during the life of the Contract, a renewal Certificate of the required coverage must be sent to the District at least thirty (30) days prior to the expiration date.

In the event any insurance policy(ies) required by this Contract is(are) written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the work or services and as evidenced by annual Certificates of Insurance.

Insurance evidenced by this Certificate shall not expire, be canceled, or materially changed without thirty (30) days prior written notice to the District. If a policy does expire during the life of the contract, a renewal Certificate must be sent to the District thirty (30) days prior to the expiration date.

All Certificates of Insurance required by this Contract shall be identified with a contract number and title.

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CERTIFICATE OF INSURANCE**

CONTRACT FCD 94-09

PROJECT TITLE: White Tanks #4 FRS

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES	
	Company Letter	A
	Company Letter	B
	Company Letter	C
	Company Letter	D
	Company Letter	E
NAME AND ADDRESS OF INURED	Company Letter	D
	Company Letter	E
	Company Letter	F

This is to certify that policies of insurance listed below have been issued to the insured named above and are in force at this time

CO. LTR	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE (MM/DD/YY)	EXPIRATION DATE (MM/DD/YY)	LIMITS	
	COMMERCIAL GENERAL <input checked="" type="checkbox"/> LIABILITY FORM <input checked="" type="checkbox"/> PREMISES OPERATIONS <input checked="" type="checkbox"/> CONTRACTUAL <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input checked="" type="checkbox"/> EXPLOSION & COLLAPSE <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD <input checked="" type="checkbox"/> UNDERGROUND HAZARD <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> PERSONAL INJURY				GENERAL AGGREGATE PRODUCTS/COMPLETED OPERATIONS BODILY INJURY AND PROPERTY DAMAGE PERSONAL INJURY EACH OCCURRENCE	\$2,000,000 \$2,000,000 \$2,000,000 \$2,000,000 \$2,000,000 \$2,000,000
	COMPREHENSIVE AUTO <input checked="" type="checkbox"/> LIABILITY & NON-OWNED				EACH OCCURRENCE	\$2,000,000
	<input type="checkbox"/> EXCESS LIABILITY				NECESSARY IF UNDERLYING NOT ABOVE MINIMUM	
	<input checked="" type="checkbox"/> WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY each accident	\$500,000
	<input type="checkbox"/> ENGINEERS PROFESSIONAL LIABILITY				EACH CLAIM AND ANNUAL AGGREGATE	
	<input checked="" type="checkbox"/> OTHER	In addition to the Flood Control District, add Maricopa County, the Arizona Department of Transportation, and the City of Buckeye as additional named insured.				

Except for Professional Liability Insurance and Workers' Compensation Insurance, the Flood Control District of Maricopa County is added as an additional insured on those types of policies described herein which are required to be furnished by this contract entered into between the insured and the Flood Control District. To the extent provided in this contract, insured shall hold harmless the Flood Control District of Maricopa County from liability arising out of any services provided or duty performed by insured as required by statute, law, purchase order or otherwise required, with the exception of liability for loss or damage resulting from the sole negligence of Flood Control District, its agents, employees or indemnities. It is agreed that any insurance available to the named insured shall be primary of other sources that may be available. It is further agreed that no policy shall expire, be canceled, or materially changed to affect the coverage available to the District without thirty (30) days written notice to the District. THIS CERTIFICATE IS NOT VALID UNLESS COUNTERSIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE COMPANY.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 2801 West Durango Street Phoenix, Arizona 85009	DATE ISSUED _____ _____ AUTHORIZED REPRESENTATIVE
---	---

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CONTRACT No. FCD 94-09
PROJECT No. 470050
WHITE TANKS #4, INLET CHANNEL IMPROVEMENTS

SUPPLEMENTARY GENERAL CONDITIONS

SPECIFICATIONS:

Except as otherwise amended by these Supplementary General Conditions and the Construction Special Provisions, construction of this project shall be in accordance with all applicable Maricopa Association of Governments (MAG) Uniform Standard Specifications and Uniform Standard Details dated 1992, including all revisions through 1997 together with the Maricopa County Department of Transportation (MCDOT) Supplement to the Uniform Standard Details.

PRECEDENCE OF CONTRACT DOCUMENTS:

This Contract and its designated documents, whether taken separately or together, are to be interpreted according to full intent, meaning, and spirit, and shall be deemed to mutually explain each other and to be descriptive of any materials to be furnished and the work to be performed under this Contract. In cases of any difference or discrepancy between the Contract documents, the order of precedence shall be a) Addendum to the Invitation for Bid, b) the Contract form, c) Supplementary General Conditions, d) Construction Special Provisions, e) Project Plans, f) MCDOT Supplements to the Uniform Standard Details, and g) MAG Uniform Standard Specifications and Uniform Standard Details.

Subsection 101.2 - Definitions and Terms:

1. Change the definition of the phrase "Board of Supervisors" to being the Board of Directors acting under the authority of the laws of the State of Arizona and in their capacity of the Board of Directors of the Flood Control District of Maricopa County.
2. Change the definition of the phrase "Budget Project" to being a project financed by funds set aside in the annual budget or otherwise approved by the Flood Control District of Maricopa County Board of Directors.
3. Add to the definition of the phrase "Contract Documents", the phrase "Supplementary General Conditions".
4. Change the definition of the term "Engineer" to being the person appointed by the Flood Control District of Maricopa County Board of Directors to the office of Chief Engineer and General Manager of the Flood Control District of Maricopa County acting directly or through its authorized representative, the Manager of the Flood Control District of Maricopa County Planning and Project Management Division.
5. Change the definition for the phrase "Notice of Award" to a letter from the Flood Control District of Maricopa County advising Contractor that it is the successful bidder and the Flood Control District of Maricopa County has accepted its proposal.
6. Change the definition of the term "Owner" to the Flood Control District of Maricopa County, acting through its legally constituted officials, officers, or employees.
7. Add the definition for Maricopa County Minority Business Office (MBO); the office responsible for administering the Maricopa County Minority and Women Owned Business Enterprise Program.

8. Add the definition for the Maricopa County Minority and Women-Owned Business Enterprise Program as being the Program adopted by the Board of Supervisors effective January 1, 1992.

Subsection 102.5 - Preparation of Bid: Add the following:

Bids, including the Bidding Schedule, must be legibly written in ink or typed, with all prices given in numerals. In case of a conflict between the unit bid price and the extension, the unit bid price shall govern.

It shall be the responsibility of prospective bidders to determine, prior to submission of a bid, if any addenda have been issued by the Flood Control District. This may be accomplished by calling 602-506-1501. Any addendum issued, if not already bound into the Special Provisions, **shall be attached and included as part of the Specifications** and any quantities on the Bidding Schedule requiring change shall be adjusted to the new figure by pen and ink. **Bids which do not have appropriate addenda attached, show appropriate changes to the Bidding Schedule, and acknowledge receipt of addenda in the Proposal may be invalid.**

The bidder's Arizona State Contractor's License number and the classification under which it proposes to perform the work shall be shown on the proposal. An "A" **General Engineering** License is required for this contract. The two lowest bidders may be required to provide certification of prior satisfactory completion for similar construction and to furnish a copy of their license and the renewal certificate.

Subsection 102.6 - Subcontractors' List: Add the following:

A list of subcontractors and suppliers (including any M/WBE participation) intended to be used on the project shall be submitted with the bid, on the form provided in the Proposal. Although this list will not be considered as final commitment on the part of the successful proposer, any subcontractor changes from those listed must have Owner's written approval prior to work performed on site by a subcontractor.

Subsection 102.7 - Irregular Proposals: Add the following:

- (F) If the Maricopa County Minority and Women-Owned Business Enterprises Assurances Affidavit is not completed and submitted.
- (G) If any addenda are not acknowledged and attached.
- (H) If Owner's bond forms are not used.
- (I) If the entire specifications document is not returned.
- (J) If the statement from bidder's insurance carrier as required by Subsection 103.6 is not included.

Subsection 103.6 - Contractor's Insurance: Add the following:

A statement from bidder's insurance carrier shall be included in the proposal certifying that it will furnish the specified kind and amounts of insurance to the bidder if it is awarded the contract; and that it will execute the Certificate of Insurance included in the documents. As required by law, the statement will be from an insurance carrier or carriers authorized to do business in the State of Arizona, or countersigned by an agent of the carrier authorized to do business in the State of Arizona. Concurrently with the execution of the contract, Contractor shall furnish a Certificate of Insurance, using the included Certificate, that names the additional insureds as set out in the Certificate. The Certificate shall also name the additional insureds as Certificate Holders. The types of insurance and the limits of liability shall be as indicated on the included form.

Subsection 103.6.1(D) - Contractor's Insurance: Add the following:

Include additional insured as indicated on the included Certificate of Insurance.

Subsection 104.1 - Work to be Done: Add the following sentence to 104.1.1:

All water for construction purposes, drinking water, lighting, temporary electric power, heat and telephone service shall be arranged and provided for as per requirements of the work by Contractor at his expense.

Add the following to 104.1.2:

No interruption of traffic will be permitted on Jackrabbit Road, McDowell Road, or East or West bound on or off ramps of the I-10 freeway. See Section 401 for traffic control requirements.

The Contractor shall notify the ADOT at least 7 calendar days in advance of any work activities to be done within ADOT right-of-way as shown on the plans.

The Contractor shall notify the MCDOT at least 7 days in advance of any work activities to be done within MCDOT right-of-way as shown on the plans.

Subsection 104.2.3 - Changes:

The Owner may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

- A) Drawings, designs, or specifications;
- B) Method or manner of performance of the work;
- C) Owner-furnished facilities, equipment, materials, services, or site;
- D) Directing acceleration in the performance of the work.

Any other written or oral order from the Owner that causes a change shall be treated as a change order under this section provided that the Contractor gives the Owner written notification within two work days after receipt of such direction stating:

- A) The date, nature, and circumstances of the conduct regarded as a change;
- B) The particular elements of the contract performance for which the Contractor is seeking an equitable adjustment under this section, including any price or schedule adjustments;
- C) The Contractor's estimate of the time by which the Owner must respond to the Contractor's notice to minimize cost, delay, or disruption of performance.

The Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its provisions. Except as provided in this section, no order, statement, or conduct of the Owner shall be treated as a change or entitle the Contractor to an equitable adjustment. If any change under this section 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, the Owner shall make an equitable adjustment and modify the contract in writing.

The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide notice or to diligently continue performance. No proposal for the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

Subsection 104.2.4 - Cost Estimates or Price Proposals:

The Contractor and any lower-tier subcontractors shall submit itemized cost estimates or price proposals for any owner-directed change order or Contractor-initiated claim.

Cost estimates or pricing proposals shall be itemized to include direct labor by man-hours, individual craft, hourly wage rate and verifiable labor burden. Other direct costs shall include rental and operator rates for rented or owned equipment, material trucking expenses and other costs clearly identified and directly allocable to contract performance. Material costs shall be itemized by item description, quantity of each

item, unit price per item, including applicable sales tax markup, and extended total price per item. The Contractor shall provide copies of material supplier quote sheets, invoices or purchase orders, as appropriate.

Lump sum cost estimates or price proposals shall be rejected and returned to the Contractor for itemization as described above. Failure of the Contractor to submit properly itemized cost estimates or price proposals shall not constitute an excusable delay and result in a change order being unilaterally priced as the Owner's fair estimated price.

Subsection 104.2.6 - Value Engineering:

A) **General.** The Contractor is encouraged to voluntarily develop, prepare, and submit value engineering change proposals (VECPs). The Contractor shall share in any instant contract savings realized from accepted VECPs, in accordance with paragraph (f) below. The Owner reserves the right to make alterations to the contract, in accordance with procedures elsewhere within this contract. Such alterations will not be eligible for inclusion in any VECP.

B) **Definitions.**

Contractor's development and implementation costs means those costs the Contractor incurs on a VECP in developing, testing, preparing, and submitting the VECP as well as those costs incurred by the Contractor to make the changes required by the Owner's acceptance of the VECP.

Owner costs means those owner costs that result directly from developing, evaluating, reviewing, and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistical support. The term does not include the normal administrative costs of processing the VECP.

Instant contract savings means the estimated reduction in Contract cost of performance resulting from acceptance of the VECP, minus the allowable Contractor's development and implementation costs, minus subcontractors' development and implementation costs (see paragraph (g) below).

Value engineering change proposal (VECP) means a proposal that (1) requires a change to the contract; (2) results in reducing the contract price or estimated cost without impairing essential functions or characteristics; and (3) does not involve a change in deliverable end item quantities, schedule, or a change to the contract type.

C) **VECP Preparation.** As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (7) below. If the proposed change affects contractually required schedule and cost reporting, it shall be revised to incorporate proposed VECP modifications. The VECP shall include the following:

- (1) A description of the difference between the existing contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effects of the change on the end item's performance. All design changes must be submitted on 24"x 36" standard drawing sheets along with supporting calculations. Each drawing sheet and at least the content sheet of the calculations shall be sealed by an Engineer registered in the State of Arizona.
- (2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revision.

- (3) A separate, detailed cost estimate for the affected portions of the existing contract requirements and the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under paragraph (g) below.
- (4) A description and estimate of costs the Owner may incur implementing the VECP, such as test and evaluation and operating and support costs. This is an estimate based only on the Contractor's understanding of additional efforts to be expended by the Owner, should the VECP be accepted. The final cost will be determined by the Owner.
- (5) A prediction of any effects the proposed change would have on collateral costs to the agency, i.e., costs of operation or maintenance.
- (6) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.
- (7) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved and previous Owner actions, if known.

D) **Submission.** The Contractor shall submit VECPs to the Owner's Engineer.

E) **Owner Action.**

- (1) The Owner shall notify the Contractor of the status of the VECP within 15 calendar days after receipt from the Contractor. If additional time is required, the Owner shall notify the Contractor within the 15-day period and provide the reason for the delay and the expected date of the decision. The Owner will process VECPs expeditiously; however, it shall not be liable for any delay in acting upon a VECP.
- (2) If the VECP is not accepted, the Owner shall notify the Contractor in writing, explaining the reasons for rejection.
- (3) The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Owner.
- (4) Any VECP may be accepted, in whole or in part, by the Owner's award of a change order to this contract, citing this subsection. The Owner 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 change order incorporates a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The Owner's decision to accept or reject all or any part of any VECP shall be final and not subject to disputes or otherwise subject to litigation.

F) **Cost Sharing.**

- (1) **Rates.** The Owner's share of savings is determined by subtracting the Owner's costs from instant contract savings and multiplying the result by 50 percent. The Contractor's share shall be the remaining 50 percent.
- (2) **Payment.** Payment of any share due the Contractor for use of a VECP on this contract shall be authorized by a change order to this contract to accept the VECP, reduce the contract price or

estimated cost by the amount of instant contract savings, and provide the Contractor's share of savings by adding the amount calculated to the contract price.

- G) **Subcontracts.** The Contractor may include an appropriate value engineering clause in any subcontract. In computing any adjustment in this contract's price under paragraph (f) above, the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs clearly resulting from a VECP accepted by the Owner under this contract, but shall exclude any value engineering incentive payments; provided that these payments shall not reduce the Owner's share of the savings resulting from the VECP.

105.1 - Authority of Engineer: Add the following:

105.1.1 - Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to subsections 105.3.1 and 106.4, but such time shall not exceed 14 calendar days. Engineer will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any "or-equal" or substitute. Engineer will record time required by Engineer and Engineer's Consultants in evaluating substitutes proposed or submitted by Contractor pursuant to subparagraphs 105.3.1 and 106.4(B) and in making changes in the Contract Documents (or in the provisions of any other direct contract with Owner for work on the project) occasioned thereby. Whether or not Engineer accepts a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer and Engineer's Consultants for evaluating each such proposed substitute item.

105.3 - Conformity with Plans and Specifications: Add the following :

105.3.1 - Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence or procedure of construction is shown or indicated and expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by Engineer will be similar to that provided in subparagraph 106.4(B).

Subsection 105.5 - Cooperation of Contractor: Add the following:

105.5.1 - Partnering

The Owner intends to encourage the foundation of a partnering relationship with the Contractor and its subcontractors. This partnering relationship will be structured to draw on the strength of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance, intended to achieve completion within budget, on schedule, and in accordance with plans and specifications.

This partnering relationship will be bilateral in makeup. Any cost associated with effectuating partnering will be covered by the Bid Item. The initial partnering workshop shall be scheduled after award of the contract, and prior to the Notice to Proceed, and shall be facilitated by a third party competent in the fundamentals of partnering, and mutually acceptable to Contractor and Owner. The Contractor shall be responsible for scheduling, coordinating, and hiring the third party facilitator, and planning all of the partnering meetings in consultation with the Engineer. The Owner will be responsible to notify and coordinate attendance at the partnering meetings by other agencies. To achieve the desired partnering relationships, the Contractor will need to encourage attendance by its major subcontractors on the project.

Follow-up workshops will be held periodically throughout the duration of the contract as agreed to by the Contractor and Owner.

An integral aspect of partnering is the resolution of disputes in a timely, professional, and non-adversarial manner. Alternative dispute resolution (ADR) methodologies will be encouraged in place of the more formal dispute resolution procedures. ADR will assist in promoting and maintaining an amicable working relationship to preserve the partnering relationship. ADR in this context is intended to be a voluntary, non-binding procedure available for use by the parties to this contract to resolve any dispute that may arise during performance.

Payment for Partnering will be made on the basis of invoices, and will be for a total amount not to exceed the amount shown in the bid schedule for the item.

ITEM 105-1 - PARTNERING

Subsection 105.6 - Cooperation with Utilities: Add the following:

An attempt has been made to determine the location of all underground utilities, drainage pipes, and structures; however, it shall be the Contractor's responsibility to cooperate with the pertinent utility companies so that any obstructing utility installation(s) may be adjusted. The location of the underground and overhead utilities as shown on the plans is based on the best available information. The Contractor shall not assume that this represents an exact location of the line. No guarantee is made to the accuracy of the location shown on the plans. The Contractor shall determine for himself the exact location of all utilities. Should Contractor's operations result in damage to any utility the location of which has been brought to its attention, he shall assume full responsibility for such damage. Contractor shall contact Arizona Blue Stake (telephone number 263-1100) a minimum of two (2) working days before beginning any underground work. In addition, Blue Stake notification(s) shall be maintained on a current basis.

The following phone numbers should put the Contractor in contact with the proper personnel:

<u>Utility</u>	<u>Contact Person</u>	<u>Phone No.</u>
Arizona Public Service Company (APS)	Bob Bott	371-7086
Cox Communications	Angie Hardiss	352-5860 x-179
MCI Communication	Pat Kavanaugh	222-1244
Arizona Water Company	William D. Kerley	240-6860
Southwest Gas Corporation	Dominique Mitchell	484-5306
U.S. West Communications	Bob Friess	630-5473

Subsection 105.8 - Construction Stakes, Lines, and Grades: Add the following:

- A. Engineer will furnish the project survey control line together with a Bench Mark which the construction contractor will use to set line and grade for all construction. All other surveying required for the project shall be the contractor's responsibility. Engineer will not set any construction stakes.
- B. Before any construction work is started, Engineer shall perform all base surveys and cross sections of existing conditions that may be required as a basis for quantity determination.

C. The Contractor shall submit original construction surveyor's notes duly signed by a Registered Land Surveyor to the Engineer at the end of the project. Copies of the survey notes shall be submitted to the Engineer during construction as and when requested.

D. As-built plans shall be provided by the Contractor to the Owner prior to project close out.

Subsection 106.1 - Source of Materials and Quality: Add the following:

Select Material, Aggregate Base, Mineral Aggregate, concrete, steel products and pipe shall be obtained from commercial sources. Contractor shall pay all royalties, or any other charges or expenses, incurred in connection with the securing and hauling of the material. Contractor will be required to furnish Engineer with a list of its proposed commercial sources prior to use, and shall present certificates stating that the material produced from any commercial sources is in accordance with the Uniform Standard Specifications and these Supplementary General Conditions.

Subsection 106.4 - Trade Names and Substitutions: Replace with the following:

Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quantity required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment of other Suppliers may be accepted by Engineer under the following circumstances:

A) "Or-Equal": If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

B) Substitute Items: If in Engineer's sole discretion an item does not qualify as an "or-equal" item under subparagraph 106.4 (A), it will be considered a proposed substitute item. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. The procedure for review by Engineer will include the following and may be supplemented in the Special Provisions and as Engineer may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall first make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice contractor's achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for work on the project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish additional data about the proposed substitute.

C) Contractor's Expense: All data to be provided by Contractor in support of any proposed "or-equal" or substitute item will be at Contractor's expense.

Subsection 107.2 - Permits: Replace with the following:

Contractor shall obtain all permits and licenses, including those required by the Cities of Buckeye, Goodyear, and MCDOT and ADOT; pay all charges, fees, taxes, and provide all notices necessary and incidental to the due and lawful prosecution of the work.

Subsection 107.2.1 - NPDES Permit Requirements: Add the following:

- A) This project is subject to the National Pollutant Discharge Elimination System (NPDES) Storm water requirements for construction sites under the Environmental Protection Agency (EPA) General Permit for Arizona. Under provisions of that permit, the contractor shall be designated as permittee, and shall take all necessary measures to assure compliance with the NPDES General Permit for Arizona as well as all other applicable Federal, State and local laws, ordinances, statutes, rules and regulations pertaining to storm water discharge. As the permittee, the contractor is responsible for preparing, in a manner acceptable to the EPA, all documents required by this regulation, including but not necessarily limited to:
1. Storm water Pollution Prevention Plan (SWPPP) for the project, including certification of compliance form. Contractor shall be required to develop, implement, update and revise the SWPPP, as necessary, in order to assure compliance with the EPA permit requirements. The SWPPP shall be retained on the project site at all times during construction.
 2. Notice of Intent (NOI) to assure compliance with the NPDES General Permit for Arizona, including certification of signatures.
 3. Notice of Termination (NOT) of coverage under NPDES General Permit for Arizona.
- B) Preliminary copies of the NOI and the SWPPP shall be submitted to Owner during the preconstruction meeting and shall be subject to review by Owner prior to implementation.
- C) Contractor shall submit the completed and duly signed NOI forms not less than forty-eight (48) hours prior to the initial start of construction on the project to the following agencies:

EPA Storm water Notice of Intent
P.O. Box 1215
Newington, VA 22122

A copy of the completed NOI form shall be submitted to the following:

Storm water Coordinator
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600

Maricopa County, Current Planning
Planning and Development Division
301 West Jefferson, Third Floor
Phoenix, Arizona 85003
(602) 506-3301

Failure by the contractor (or subcontractors of any tier) to submit NOI's within the mandated time frame shall result in delay of the construction start date, and no claim for extension of time will be granted for such delay. A copy of the completed NOI shall be posted at the construction site.

- D) Inspections of all storm water pollution control devices on the project shall be performed by Contractor on a monthly basis and following each rainfall of 0.50 inches or more in a 24-hour period at the project site as required under provisions of the NPDES General Permit for Arizona. Contractor shall prepare reports on such inspections and retain the reports for a period of three years following the completion of the project. Inspection reports shall be submitted monthly to Owner along with progress payment requests. Additionally, contractor shall maintain all storm water pollution control devices on the project in proper working order, which shall include cleaning and/or repair during the duration of the project.
- E) Contractor warrants that its employees and subcontractors of any tier and their employees shall at all times comply with all applicable laws, ordinances, statutes, rules and regulations set forth by all federal, state and local governments and the Environmental Protection Agency in connection with NPDES Permitting requirements and laws and regulations pertaining to air, groundwater and surface water quality.

Fines and penalties imposed by the EPA against Owner or the contractor, for contractor's failure to comply with any of the requirements of NPDES General Permit of Arizona, shall be borne by the contractor.

- F) Upon project completion, acceptance and demobilization, contractor shall submit its completed, duly executed NOT form to the EPA, with a copy to the Arizona Department of Environmental Quality (and the appropriate municipality), at the address listed in Section (B) above, thereby terminating all NPDES permit coverage for the project. Contractor shall then surrender to Owner copies of the SWPPP, inspection information and all other documents prepared and maintained by the contractor in compliance of the NPDES General Permit. Contractor shall retain the originals of such documents for a period of three (3) years following the completion of the project.
- G) The Lump Sum price for the SWPPP shall include all material, labor, and all other costs relating to the preparation, installation and maintenance of the SWPPP during project construction, including assuring proper operation of the pollution control devices installed, and all maintenance, cleaning, and disposal costs associated with clean-up and repair following storm events, runoff or releases on the project. The Lump Sum price for the SWPPP shall be inclusive of all costs, and no additional claims shall be made by Contractor under any other specification provision of these documents, including Change Conditions. Payment for this bid item shall be upon final completion and acceptance of the project, as per Section 109.1.
- H) Copies of all required forms and guidance for preparing the SWPPP are available in the "Drainage Design Manual for Maricopa County, Volume III Erosion Control". The manual is available at the Flood Control District, 2801 West Durango Street, Phoenix, Arizona 85009.

Payment for NPDES/SWPPP permit requirements shall be made on the basis of lump sum for all work described in Subsection 107.2.1.

ITEM 107-1 - NPDES/SWPPP PERMITS

Subsection 107.4 - Archeological Reports: Add the following:

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the Contractor, or any person working on his behalf, shall be immediately reported to the Engineer. The Contractor shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Engineer. An evaluation of the discovery will be made by authorized personnel and the Engineer to determine appropriate actions to prevent the loss of significant cultural or scientific resources.

Subsection 107.5: Add the following:

The entire construction site shall be considered a "Hard Hat Area" and all personnel in the area will be required to wear a hard hat.

Subsection 107.5.2 - Compliance with the Arizona Communication Standard: Add the following:

Owner will provide Contractor with Material Safety Data Sheets (MSDS) for any products known to exist on the site that are deemed health hazards. Contractor will provide a copy of Owner-provided MSDS to all subcontractors.

Contractor will provide Owner and all subcontractors with MSDS for any products that have or are deemed health hazards that will be brought onto the site or created on the site by either Contractor or by any subcontractors.

Contractor will provide Owner with a statement certifying that all personnel (Contractor and subcontractor) employed by Contractor or by a subcontractor on the job site have received the required Hazard Communication Standard training.

Subsection 107.6.4 - Project Signs:

Contractor shall provide and install two project information signs at each end of the project before beginning construction to inform the public of the forthcoming project, construction dates, and suggested alternate routes. Project signs shall include the names of all agencies participating in the project. Signs shall be constructed in accordance with the "Project Sign Information" drawing to be provided to the Contractor at the pre-construction meeting. The signs shall be installed at the location(s) approved by the Engineer. Contractor shall maintain the signs as necessary and update the information as requested by the Engineer. Payment shall be made according to the allowance in the Bidding Schedule in installments of 50% upon installation, and the remaining 50% upon final payment for the work.

ITEM 107-2 - PROJECT SIGNS ALLOWANCE

Subsection 107.9 - Protection and Restoration of Property: Add the following:

The Contractor shall protect-in-place all existing structures and other features as identified on the plans. This includes but is not limited to all structures and improvements constructed by ADOT and MCDOT.

The Contractor will grade all Temporary Construction and Permanent Easement areas, and project areas which are disturbed during construction to the lines and grades shown on the plans, or as a minimum, where no lines and grades are shown, to a condition similar to or better than the pre-existing condition.

Subsection 107.10 - Contractor's Responsibility for Work: Add the following:

- A) Storm water runoff in the project area flows to the south, in the existing channel. The Contractor shall take all necessary precautions to protect his work from damage that may be caused by such runoff.
- B) The Contractor shall take all necessary action to protect the public from the construction work area.

Subsection 108.1 - Notice to Proceed: Delete Paragraph (A) and replace with the following:

A) Contractor shall commence work within seven (7) calendar days after the date of the Notice to Proceed and complete all work within two hundred forty (240) calendar days beginning the day following the effective date specified in the Notice to Proceed.

Subsection 108.2 - Subletting of Contract: Add the following:

For this project, Contractor shall perform, with its own organization, work amounting to 50 percent or more of the total contract cost.

Subsection 108.4 - Contractor's Construction Schedule: Delete in its entirety and replace with the following:

Contractor shall submit a proposed work schedule to the Engineer for review before starting work, using the Primavera or other program that is acceptable to the Engineer. Weekly updates shall be submitted to the District's Construction Coordinator at the weekly coordination meeting.

Subsection 108.4.1 - Contractor's Billing Schedule: Add the following:

Contractor shall furnish the Engineer an Estimated Billing Schedule which shall include the estimated amount of each billing for the total project at the preconstruction conference, and thereafter at monthly intervals as agreed to between Contractor and Engineer.

Subsection 108.5 - Limitation of Operations: Add the following:

Should Contractor elect to perform any work after regular working hours, on weekends, or legal holidays, "with or without written approval of Engineer", any charges incurred by Owner for inspection of the work, surveys or tests of materials will be deducted from monies due or to become due to Contractor.

Subsection 108.9 - Failure to Complete on Time: Add the following:

The actual cost per calendar day incurred by Owner for Consultant Administrative and Inspection Services on this project will be added to the daily charges as indicated by TABLE 108, LIQUIDATED DAMAGES, and will be deducted from monies due or to become due to Contractor for each and every calendar day that work shall remain incomplete after the time specified for the completion of the work in the proposal, or as adjusted by Engineer. Nothing contained in this provision shall prohibit Owner from deducting from monies due or to become due to Contractor for any other costs incurred by Owner directly attributable to the delay in completing this contract.

Subsection 109.2 - Scope of Payment: Add the following:

In addition to the contained provisions, the work under this section shall consist of preparatory work and operations, including but not limited to, the movement of personnel, equipment, supplies and incidentals to the project site; the establishment of all offices, buildings and other facilities necessary for work on the project, and for all other work operations that must be performed and costs incurred prior to beginning work on the various items on the project site.

Subsection 109.7 - Payment for Bond Issue and Budget Projects: Add the following.

(A) To third paragraph, add: Payment or release of retained funds shall be made to the contractor within thirty (30) days following final payment to the contractor (reference (B) following), and contractor furnishing to Engineer satisfactory receipts for all labor and material billed and waivers of liens from any and all persons and subcontractors holding claims against the work. Additionally, Contractor shall furnish a completed Certificate of Performance to Engineer evidencing it has satisfactorily discharged all its duties in connection with the work to be performed under this Contract. The form of Certificate of Performance shall be provided to Contractor by the Engineer.

- (B) Delete second and third paragraphs and replace with: The final payment will be made to Contractor by Owner within thirty (30) days following receipt of Engineer's final estimate and receipt by Owner of Consent of Contractor's Surety to said final payment.
If payment will be longer than thirty (30) days as aforesaid, Owner will provide Contractor specific written findings for reasons justifying the delay in payment.
- (C) The Contractor's representative and the Engineer shall make a determination of the monthly pay quantities on the last Wednesday of each month. The monthly pay estimate shall then be signed by the Contractor and submitted to the Engineer on the first day of the next month.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
CONTRACT No. FCD 94-09
PROJECT No. 470050
WHITE TANKS FRS #4, INLET CHANNEL IMPROVEMENTS

SPECIAL PROVISIONS

SECTION 201 - CLEARING AND GRUBBING

Clearing and grubbing shall conform to Section 201 of the MAG Uniform Standard Specifications.

Subsection 201.5 - Payment

No payment will be made for clearing and grubbing as such; the cost thereof shall be included in the bid price for the construction or installation of the items to which said clearing and grubbing are incidental or appurtenant.

SECTION 202 - MOBILIZATION

Subsection 202.1 - Description

Add the following:

The work under this section shall consist of preparatory work and operations, including but not limited to, the movement of personnel, equipment, supplies and incidentals to the project site; the establishment of all offices, buildings and other facilities necessary for work on the project, and for all other work and operations that must be performed and costs incurred prior to beginning work on various items on the project site.

Field Office:

This work shall consist of providing and maintaining a furnished Field Office for the exclusive use of and occupancy by the Engineer and the Engineer's staff.

The office shall be a building or mobile trailer erected at a location convenient to the project. The office may be in the same building or mobile trailer as office space of the Contractor, provided that such office is separated from the area used by the Contractor by a wall or door with an adequate locking device and has at least two doors to the outside.

The Contractor shall obtain approval from the property owner upon site selection of the field office.

The Contractor may furnish equivalent facilities in an existing building provided such facilities and building are located to provide convenient service.

The field office shall be an approved and weatherproof building or mobile trailer providing a minimum of 300 square feet of clear floor space, not including the toilet area. The structure shall have a minimum ceiling height of seven (7) feet and shall be provided with weatherproof doors equipped with adequate locking devices. Windows shall also be provided with adequate locking devices. The Contractor shall also provide the following:

- a. Lighting - Electric light, non-glare type luminaries to provide a minimum illumination level at desk height level.

- b. Heating & Cooling - Adequate electrically powered equipment to maintain an ambient air temperature of 72 degrees F plus or minus 8 degrees.
- c. Telephone, answering, FAX machine, and copy machine - A telephone with an outside line for the exclusive use of the Engineer. The Contractor will pay for the cost of the line and local calling charges. Long distance charges made on this line will be paid for by the District.
- d. Toilet - A commode and wash sink in a separately enclosed room within the building or mobile trailer, properly ventilated and complying with applicable sanitary codes. Contractor shall provide water service.
- e. Maintenance - The contractor shall maintain all facilities and furnished equipment in good working condition.
- f. Fire Extinguisher - Two non-toxic, dry chemical, fire extinguishers meeting Underwriters Laboratories, Inc. approval for Class A, Class B, and Class C fires with a minimum rating of 2A: 2B: 10C.
- g. Electricity - Contractor shall provide electric power and pay for all electric services.
- h. Furnishings - Two office desks with drawers, two office chairs (padded, swivel type), one drafting table (adjustable height 3 feet by 6 feet), one conference table, eight folding chairs, one draftsman's stool, and a four drawer legal file cabinet.

The office shall be fully equipped and made available for the Engineer's use and occupancy prior to the start of any Contract work and not later than 10 days after the date of notice to proceed. The Engineer will notify the Contractor, in writing, of the acceptability of the Field Office provided. The Contractor shall maintain the field office in operating condition until seven (7) days after acceptance of the Contract work.

All facilities shall be maintained in good operating condition and appearance by the Contractor for the designated period, after which all portable buildings or trailers, fencing, surfacing, and utilities shall be removed from the site, the areas cleaned and seeded if required and left in a neat and acceptable condition.

Subsection 202.1 - Payment

Payment shall be made on the basis of the lump sum price bid and shall be full compensation for supplying and furnishing all materials, facilities, and services and performing all work involved as specified herein. The lump sum price bid shall not exceed three (3%) percent of the total project bid amount exclusive of mobilization. No additional payment will be made for occupancy and services during periods of contract extension of time due to engineering changes.

ITEM 202-1 - MOBILIZATION

SECTION 206 - STRUCTURE EXCAVATION AND BACKFILL

Structure excavation and backfill shall conform to Section 206 of the MAG Uniform Standard Specifications except as modified herein.

The work consists of the removal, placing and compaction of material around walls and other miscellaneous items to the lines designated on the plans or as directed by the Engineer.

All backfill shall be compacted to not less than 95 percent of the maximum density as determined in accordance with ASTM D-698.

Subsection 206.5 - Payment

No separate payment will be made for structure excavation and backfill. The cost thereof shall be considered as being included in the price bid for ITEM 215-1: EARTHWORK FOR OPEN CHANNELS.

SECTION 211 - FILL CONSTRUCTION

Fill construction shall conform to Section 211 of the MAG Uniform Standard Specifications except as modified herein.

The work consists of placing and compacting all material wherever necessary according to the construction drawings, beyond the limits of structure backfill.

Prior to the placement of fill material, all loose soil, vegetation, any roadside or other debris, pavement, and existing structures within the proposed fill areas shall be completely removed. Depressions and ditches shall be cleaned of all loose or wet soils and widened to accommodate compaction equipment. Sloping surfaces shall be benched to provide a level surface for fill placement. All exposed subgrade surfaces shall be scarified to a depth of eight (8) inches, brought to the proper moisture content (+/- 2% of optimum) and compacted to a density of 95% (ASTM D-698).

The fill shall be compacted in horizontal lifts to a minimum of 95 percent of the maximum density as determined in accordance with ASTM D-698 within a moisture content range of plus or minus 2 percent of optimum. The depth of the lifts shall not exceed eight (8) inches.

Subsection 211.6 - Payment

No separate payment or measurement will be made for fill construction. The cost thereof shall be included in the bid price for the construction of the items to which fill is incidental or appurtenant.

SECTION 215 - EARTHWORK FOR OPEN CHANNELS

Earthwork shall conform to Section 215 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 215.1 - Description

Replace this subsection with the following:

Open channel for the purpose of this section shall mean concrete lined or unlined trapezoidal channels. The work in this section consist of excavation, fill, grading, and disposal of excavated and removed material for the construction of the channel. Excess material shall be the property of the Contractor and shall be removed from the site.

Subsection 215.5 - Grading

Replace this subsection with the following:

Grading of lined channels and access roads shall conform to the following tolerances:

(A) A vertical tolerance of none above and 1 inch below the specified grade will be allowed on:

- 1) Channel bottom

- 2) Channel side slopes in both cut and fill

(B) A vertical tolerance of none below and 2 inches above the specified grade will be allowed on:

- 1) Top surface of channel banks and access road in both cut and fill
- 2) Channel bank and access road side slopes in fill

Regardless of the construction tolerances specified, excavation and grading shall be performed so that finished surfaces are in uniform planes with no abrupt breaks in the surface.

Construction tolerances specified above for grading are solely for purposes of field control.

Subsection 215.7 - Measurement

Add the following:

The quantity of earthwork for open channels used will be based upon the required excavation volumes for channel excavation from the existing ground line to channel subgrade within limits of dimensions shown on the plans. The Engineer will compute the excavation quantities by a method which in his opinion is best suited to obtain an accurate determination.

Excavation for drainage swales shall be incidental to channel excavation.

Subsection 215.8 - Payment

Replace this subsection with following:

Earthwork for open channels shall be paid for at the contract price bid per cubic yard. Such price shall include excavation, fill, backfill, compaction, grading, hauling, removal and disposal of excess excavated material and debris.

ITEM 215-1 - EARTHWORK FOR OPEN CHANNELS

SECTION 220 - RIPRAP CONSTRUCTION

Riprap construction shall conform to Section 220 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 220.1 - Description

Add the following:

Riprap construction for this project shall consist of furnishing and installing grouted riprap as shown on the plans. Sacked concrete riprap shall not be permitted.

Subsection 220.2 - Materials

Add the following:

Grout for grouted riprap shall be an approved batch per MAG Uniform Standard Specifications and shall develop a minimum 2,000 psi compressive strength within 28 days and the slump shall be within a range of 5 to 7 inches. The grouted riprap shall be 14 inches thick plus turndown. Grouted riprap shall conform to the requirements set forth in Section 703. Riprap Gradation shall conform to the following:

Percent Passing	Size	Gradation
100	1.5 Dmin	14"

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

White Tanks #4 FRS, Inlet Improvement Channel

Contract FCD 94-09

Project No. 470050

February 6, 1998

ADDENDUM NO. 1

To Contract Documents

FCD 94-09

Title: White Tanks #4 FRS, Inlet Improvement Channel

Owner: Flood Control District of Maricopa County

This Addendum No. 1 modifies or clarifies Contract FCD 94-09. All other provisions of the contract remain unchanged unless specifically modified herein. The Addendum No. 1 forms a part of the Contract Documents and modifies them as follows:

I. Revisions to Construction Specifications

Special Provisions:

SECTION 201 - CLEARING AND GRUBBING

Subsection 201.1 - Description

Add the following to this subsection

The Contractor shall remove and dispose of all trees, stumps, vegetation, rubbish, debris, and other objectional material as necessary for the construction of the proposed channel and prior to filling the existing channel.

SECTION 215 - EARTHWORK FOR OPEN CHANNELS

Subsection 215.1 - Description

Add the following to this subsection:

The total channel excavation quantity is 59,825 CY. It is estimated that approximately 22,129 CY of excavated material shall be utilized to fill the existing channel east of the excavated channel. Any remaining excavated material shall be the property of the Contractor and shall be removed from the site.

Subsection 215.4 - Fill and Backfill

Add the following to this subsection:

The fill material for the existing channel shall be compacted in horizontal lifts to a minimum of 95% of the maximum density as determined in accordance with ASTM D-698 within a moisture content range of plus or minus 2% of optimum. The depth of the compacted lifts shall not exceed 8 inches.

Subsection 215.8 - Payment

Add the following to this subsection:

The fill compaction and shaping required to facilitate construction of the new channel shall be incidental to price bid for ITEM 215-1:EARTHWORK FOR OPEN CHANNELS.

SECTION 505 - CONCRETE STRUCTURES

Subsection 505.8 - Curing:

Delete the following from this subsection:

Moist cure method shall be used for all exposed concrete surfaces. Curing compound shall not be used because of the adverse affects on the concrete color and the Graffiti Protector #GP-44.

A clear protective water based coating shall be applied to all exposed concrete surface areas which may be subject to graffiti vandalism. The coating shall be Duro-Wall Graffiti Protector #GP-44, produced by Dayton Superior, or approved equal. The coating shall be clear and contain no coloring. The cost of the coating shall also be incidental to the cost of the concrete.

SECTION 505 - CONCRETE STRUCTURES

Subsection 505.8 - Curing:

Add the following to this subsection:

Use the following methods as approved by the Engineer:

1) Continuously sprinkle with water 100 percent of exposed surfaces for 10 days starting immediately after pouring; 2) Cover with burlap or cotton mats and keep continuously wet for 10 days; 3) Cover with 1" layer of wet sand, earth or sawdust, and keep continuously wet for 10 days; 4) Liquid-membrane forming compound method.

Note that the due date of all bids under this Invitation For Bids remains scheduled for February 12, 1998 at 2:00 pm. Bidders are reminded that each addenda must be acknowledged on page 5 of 30 of the bid and a copy of addenda attached to the bid package.

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY

FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY

By: _____
Michael S. Ellegood, P.E.
Chief Engineer and General Manager

By: _____
Raju C. Shah, P.E.
Project Manager

.85 - 70
0

1.25 Dmin
1.00 Dmin

11"
9"

Subsection 220.3 -Preparation of Ground Surfaces

Add the following:

Existing subgrade on which grouted riprap shall be placed shall first be proof-rolled with a minimum of two passes of a non-vibratory roller.

Subsection 220.5 - Grouted Riprap

Add the following:

Grouted riprap shall conform to the requirements set forth in Section 703.

Place grouted riprap to line and grade as shown on plans. Stone placement methods shall not damage prepared subgrade. Riprap shall be washed prior to placement so riprap stones are free of soil and fines. The concrete grout shall be placed by injection methods by pumping under low pressure, positive displacement methods, through a 2-inch maximum diameter hose to ensure complete penetration of the grout into the stone layer. The grout thickness shall be as shown on the plans, with a clean rock projection above the grout of 1-inch minimum and 3-inches maximum.

The operator shall be able to stop the flow and will place grout in the voids and not on the surface rock. Clean and wash any spillage before the grout sets. A "pencil" vibrator will be used to make sure all voids are filled between and under rock. The intent is to fill all voids from the subgrade level through the rock layer. In all cases, grout must penetrate to subgrade. A broom will be used to smooth the appearance of the surface.

The grout mix shall be stiffened and other measures taken to retain the grout in steep locations.

Excess grout and grout splatter shall be removed from the exposed surfaces of the riprap without causing damage to the grouted riprap placement. Removal and cleanup of grout from the exposed surfaces of the riprap shall be done so that the exposed rock surface is clean and free of splatter, and shall be done in such a manner and to a level of quality to enhance the aesthetics of the completed project.

Subsection 220.7 - Measurement

Add the following:

Grouted riprap shall be measured per square yard in place.

Subsection 220.8 - Payment

Payment for riprap construction shall be made on the basis of the price bid per square yard to the neat lines shown on the plans, and shall include all labor, materials, excavation, grout and tools, and equipment required to install the riprap.

ITEM 220-1 - GROUTED RIPRAP

SECTION 225 - WATERING

Watering shall conform to Section 215 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 225.1 - Description

Add the following:

The work under this section shall consist of furnishing and applying all water required for the control of dust, for the safety and convenience of the traveling public, and for the reduction of the dust nuisance to adjacent properties.

The Contractor shall obtain the necessary permits under the County Air Pollution Statutes. It shall be the responsibility of the Contractor to keep the construction site moistened to prevent dust pollution to the air and adjacent properties.

Subsection 225.5 - Payment

No payment shall be made for the cost of watering. The cost of watering shall be included in the price bid for the construction operation to which such watering is incidental or appurtenant.

SECTION 301 - SUBGRADE PREPARATION

Subgrade preparation shall conform to Section 301 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 301.1 - Description

Add the following:

Subgrade preparation for the side slopes of the concrete lined channels and grade control structures shall include proof rolling of the soils.

Subsection 301.8 - Payment

No separate payment will be made for subgrade preparation. The cost thereof shall be considered as being included in the price bid for the construction or installation of items to which subgrade preparation is incidental or appurtenant.

SECTION 310 - UNTREATED BASE

Untreated base shall conform to Section 310 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 310.1 - Description

Add the following:

The work under this section consists of furnishing labor, materials and equipment to install aggregate base course for the Operation and Maintenance roads as shown on the plans.

Subsection 310.3 Measurement

Add the following:

Aggregate base course and granular bedding material shall be measured in-place tons, within the limits of dimensions shown on the plans.

Subsection 310.4 - Payment

Payment for aggregate base course shall be made on the basis of the price bid per ton. Price bid shall include all labor, material, and equipment necessary to place aggregate base course in accordance with the plans.

ITEM 310-1 - AGGREGATE BASE COURSE

SECTION 350 - REMOVAL OF EXISTING IMPROVEMENTS

Removal of existing improvements shall conform to Section 350 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 350.1 - Description

Add the following:

Removal of existing improvements shall conform to Section 350 of the Uniform Standard Specifications except as modified herein. The work includes removal and disposal of existing structures, guardrails, Rail bank protection, slope pavers, concrete wing walls, signs, and any other obstacle to construction, as shown on the plans. Holes, cavities and trenches resulting from the removal of improvements shall be backfilled to proposed finish grade in accordance with Sections 206 and 211. The project construction limits shall be cleared of all trash and construction debris.

The disposal of all waste material removed under this item shall be the responsibility of the Contractor. The Contractor shall provide documentation to the Engineer that all waste material has been properly disposed. Documentation shall include copies of permits, receipts, and landfill weigh tickets. Letters of acceptance from public agencies, businesses, or private property owners will be accepted as proof of proper disposal for clean fill.

If a Maricopa County landfill is selected for disposition of waste materials and/or debris, a Maricopa County Landfill Use Permit is required. Application for permit can be made at the Maricopa County Landfill Office, located at 2801 West Durango Street, Phoenix, Arizona 85009 (telephone (602) 506-7060). Charges will be levied on a volume basis for each load delivered to the landfill in accordance with the current fee schedule.

All collected material shall be disposed of at an approved landfill site and shall be subject to landfill fees so assessed, which will be included in the unit price bid for this item.

Subsection 350.4 - Payment

Payment for the removal and disposal of existing structures, etc. shall be made on the basis of the lump sum price bid, and shall include all labor, materials and equipment necessary to remove and dispose of the items.

ITEM 350-1 - REMOVAL OF EXISTING IMPROVEMENTS

SECTION 401 - TRAFFIC CONTROL

Traffic control shall conform to Section 401 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 401.1 - Description

Add the following:

All traffic control shall conform to the Construction Specifications for this project, Part IV of the "Manual On Uniform Traffic Control Devices For Streets And Highways" (U.S. Department of Transportation, Federal Highway Division) and all revisions thereto, and the request of the Engineer.

It shall be Contractor's responsibility to provide, erect and maintain and remove after completion of the work all necessary signs, barricades, barriers, berms, lights, high level warning devices, delineators, and any other required devices, uniformed officers, and flagmen necessary to properly mark and control the construction area for the safe and efficient movement of traffic.

Temporary traffic control devices shall be installed as required prior to the start of any work. The approval of Contractor's traffic control method shall not relieve Contractor of his responsibility to protect the work, Contractor's personnel, or the general public.

Contractor shall provide and maintain all necessary signs, barricades and centerline vertical panels for five (5) working days beyond the concrete cure time or acceptance of the project by the Engineer, whichever period is greater.

Subsection 401.5 General Traffic regulations

Add the following:

A lane(s) closure for the convenience of the Contractor is not authorized, except as specified in these Special Provisions, without the prior approval of the MCDOT (Tony Perez at 506-2907).

Channelization, including "KEEP RIGHT" signs, shall be provided whenever traffic is moved across the street center line, the existing center line is removed or opposing traffic is maintained in other than the normal traffic lanes.

All temporary traffic control devices shall be ballasted with sandbags or other approved ballast.

For construction or trenching diversions that require movement of traffic from the normal through lanes, temporary bypasses shall be utilized only during daylight hours and the normal traffic shall be restored during nighttime hours. Traffic plates and temporary pavement shall be used to restore traffic lanes. Exceptions may be authorized by the Engineer under unusual conditions.

The "SPEED LIMIT 25" sign shall be used where traffic is maintained on unpaved shoulders, on temporary detour roads, on road sections where the existing pavement has been removed, or on traffic lanes that are severely restricted.

Access to all adjacent properties shall be maintained. When access cannot be maintained, Contractor shall notify the adjacent residents at least 48 hours in advance of the access closure. In no case shall the access be closed for more than four hours. Access for fire stations, hospitals, sheriff stations and schools shall be maintained at all times. The Contractor shall notify the Rural/metro Fire Department and the Maricopa County Sheriffs Office of any road closures.

Contractor shall maintain or relocate all existing signal indications, warning signs, STOP, YIELD, and street name signs erect, clean and in full view of the intended traffic at all times. Portable signs should be used to supplement blocked or removed signs. In the event the Contractor removes any permanent signing which will not be reinstalled immediately, the Contractor shall store permanent signs in a secure location at the project site and request removal by County forces. MCDOT will reset all permanent signing removed or relocated during construction at the Contractor's expense. The Contractor is responsible for all costs incurred in replacing lost or damaged traffic control devices.

Rope, flagging, fencing and woven plastic tape may be used between barricades and channeling devices to provide additional safety.

Contractor shall install deceleration sand berms in the blocked traffic path or at other hazardous sites in order to prevent vehicles from entering the construction and/or hazard area. The deceleration sand berms shall be constructed of washed sand and shall be approximately five feet (5') high.

Advance Project Notification signing shall be installed at least 14 days prior to the start of construction. The location for Advance Notification Signing shall be determined at the time of the Pre-Construction meeting. Signing shall be updated as restrictions change.

Traffic shall be maintained on pavement at all times, utilizing temporary twelve (12) foot wide lanes when required.

Construction shall not commence or proceed without an approved Traffic Control Plan. At the pre-construction conference, the Contractor shall submit for review his plan for the sequence of construction, any planned lane closures, signing for construction, and the traffic flow. A Traffic Control Plan (TCP) covering the signing and staging shall be submitted and approved prior to the start of each stage of construction. The Traffic Control Plans shall address all construction staging and special provisions requirements, including any flagging to be used on the project.

At the time of the Pre-Construction conference, the Contractor shall designate an employee, other than the Project Superintendent, who is well qualified and experienced in construction traffic control and safety, to be available on the project site during all periods of construction to set up, maintain and coordinate safe barricading whenever construction restricts traffic. This individual shall be authorized to receive and fulfill instructions from the Engineer and shall supervise and direct the work. Instructions and information given by the Engineer to this individual shall be considered as having been given to the Contractor.

Subsection 401.7 - Payment

Payment for traffic control, including all mobilization, placing, flagging personnel, storing, removal and maintenance incidental to the approved traffic control plan, and uniformed police officer shall be made on the basis of the lump sum price bid.

ITEM 401-1 - TRAFFIC CONTROL

SECTION 415 - GUARDRAIL

Guardrail shall conform to Section 415 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 415.1 - Description

Add the following:

The work under this section shall consist of furnishing all labor, materials, and equipment for the construction of guardrail along the Jackrabbit Road between I-10 west bound on ramp and McDowell Road as shown in the plans. Detail and drawing number references on the plans to guardrail construction details, methods of guardrail installation, guardrail transition requirements and attachment to concrete barrier, and flared breakaway sections are from the most current version of the Arizona Department of Transportation (ADOT) Division of Highways Standard Construction Drawings, 1997 edition.

Section 415.5 - Payment

Payment for furnishing materials and installing guardrail complete, in place, including excavation and backfill for posts shall be made on the basis of the unit price bid per linear foot, and shall include costs for all labor and equipment necessary for construction of the guardrail in accordance with the plans

ITEM 415-1 - GUARDRAIL

SECTION 421 - WIRE FENCES

Subsection 421.1 - Description

The work under this section shall consist of furnishing all materials and constructing plain wire fence at the location and in accordance with the details shown on the plans. Fence shall be of the type and size shown on the plans and shall be constructed in accordance with the requirements of these specifications.

Subsection 421.2 - Materials

Plain wire shall be 12-1/2 gauge steel wire and shall be either zinc-coated or aluminum coated. Zinc-coated steel wire shall conform to the requirements of ASTM A 121, Class 1 coating. Aluminum-coated steel wire shall conform to the requirements of ASTM A 585, Type 1, Class 1 coating.

Posts, rails, braces, and bars shall conform to the requirements of Section 725.

Portland cement concrete shall conform to the requirements of Section 725.

Subsection 421.3 - Construction

The Contractor shall clear the fence lines of all earth trees, brush, and other obstructions which interfere with the proper construction of the fences. Clearing the fence line shall be along and within the project right-of-way. Disposal of removed material shall be in accordance with the requirements of Section 201.

Fence shall be constructed as shown on the plans.

Fence posts shall be spaced at the intervals and set to the depths shown on the plans.

In determining the post spacing, measurements shall be made parallel to the ground slope, and all posts shall be placed in a vertical position, except in unusual locations where the Engineer may direct that the posts be set perpendicular to the ground surface.

Line posts may be driven into undisturbed earth provided driving does not injure the posts. All voids around the post shall be backfilled and the material thoroughly tamped.

End, corner, pull, posts, and braces shall be set in concrete footings and crowned at the top to shed water.

Any high points which interfere with the placing of fence wire shall be excavated to provide the clearance shown on the plans.

Changes in the horizontal alignment of the fence line where the angle of deflection is fifteen (15) degrees or more shall be considered as corners and a corner post assembly shall be installed. Changes in fence alignment where the angle of deflection is less than fifteen (15) degrees, but more than five (5) degrees shall be considered as alignment angles and diagonal tension wires shall be installed. The diagonal tension wires shall consist of two (2) twisted steel wires and shall be attached to the adjacent posts.

Intermediate post assemblies shall be installed at not more than five hundred (500) foot intervals between other braced posts. After post assemblies have been placed, the wire shall be pulled taut to the satisfaction of the Engineer, and each longitudinal wire shall be cut and securely fastened to the braced post with devices suited for the purpose. Wire shall not be carried past a post assembly, but shall be cut and fastened to the post independently of the adjacent spans. A maximum of two (2) splices of wire will be permitted between post assemblies, but not on the same wire. No splice shall be placed closer than one hundred (100) feet to any post assembly.

After the tensioning of the wire between the post assemblies, all longitudinal wires shall be attached to each intervening line post at the height and spacing as shown on the plans. The distance from the bottom wire to the ground may vary at one point from that shown on the plans four (4) inches plus or minus. Where abrupt changes occur in the fence line grade, intermediate line posts may be required to maintain proper distances between the bottom wire and the ground.

Spacing of the twisted vertical wire stays shall be as shown on the plans for each type of fence. The vertical wire stays shall be woven into every horizontal wire.

At all grade depressions where stresses tend to pull the posts from the ground, the affected fence posts shall be anchored in concrete or the fence wires shall be weighted with concrete sag weights.

The volume of concrete required to anchor the posts shall be not less than one (1) cubic foot. Fence sag weights shall weigh not less than one hundred (100) pounds and shall be made with a wire loop hanger embedded in the concrete. A double strand of wire shall be attached to each horizontal line of wire and tied to the wire loop hanger of the sag weight.

The Contractor shall install flood gates per ADOT Detail C-12.10 at the locations shown on the plans.

Subsection 421.4 - Measurement

Wire fence shall be measured on the fence line along the top of the completed fence from center of end posts.

Subsection 421.5 - Payment

Payment for fences, including flood gates, shall be made per Pay Item 421-1 Wire Fence, at the contract price bid per lineal foot, and shall be full compensation for furnishing and installing the wire fence as specified, including removal of obstructions and all incidental costs not specifically covered in other items.

Payment for gates shall be made per Pay Item 421-2 and 421-3, at the contract price bid per each, and shall be full compensation for furnishing and installing the gate as specified, including removal of obstructions and all incidental costs not specifically covered in other items.

ITEM 421-1 - WIRE FENCE

ITEM 421-2 - 14' TYPE 1 SINGLE GATE

ITEM 421-3 - 22' TYPE 1 DOUBLE GATE

SECTION 505 - CONCRETE STRUCTURES

Concrete structures shall conform to Section 505 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 505.1 - Description

Add the following:

The work under this section shall consist of furnishing all labor, materials and equipment for the construction of all cast-in-place concrete including, but not limited to the retaining walls, cut-off walls, and channel lining.

Concrete shall conform to the requirements of Section 725 of the MAG Standard Specifications, and mix designs shall additionally meet the requirements of Chapter 5, Section 5.3 of ACI STANDARD 318-89. The Contractor shall submit mix designs and certifications of conformance with the above requirements for the written approval of the Engineer.

Class "A" Concrete, $f'_c = 3,000$ psi, shall be used for all concrete structures and concrete lining. The use of Class F fly ash will be permitted in all concrete mixes, subject to approval of mix design by Engineer.

Transit concrete mixers used on the project must carry current certification from ADOT or Arizona Rock Products Association.

The reinforcing steel shall conform to Section 727, Grade 60, of the MAG Standard Specifications.

Subsection 505.6 - Placing Concrete

Add the following:

Place concrete in accordance with ACI 301-89. Prior to placing concrete, remove loose soil and water from excavation and subgrade and debris and foreign material from forms. Obtain Engineer's approval of subgrade before placing reinforcing steel. Check reinforcing steel for proper placement and correct discrepancies. Before depositing new concrete on old concrete, clean surface using sandblast or bushhammer or mechanical means to obtain a 1/4-inch rough profile. Maximum vertical drop to final placement shall be 6 feet, when not guided with chutes or other devices to prevent segregation caused by impact with reinforcing. Do not use aluminum pipe or aluminum conveying devices.

Steps performed in preparation for placing concrete shall meet requirements and recommendations of ACI 304R-89 and ACI 304-89, except as modified herein. Ends of chutes, piping, hopper gates, and other points of concrete discharge throughout the conveying, hoisting, pumping, and placing system

AUSTON STRUCTURAL CONCRETE

FACSIMILE TRANSMISSION

DATE: 7/23/98

TO: Maricopa County Flood Control District

ATTENTION: Raju Shah

FAX NO: 506-4601

FROM: Don Auston

FAX NO: (602) 870-8832

Comments: Re: White Tanks #4 FLS, Inlet Improvement Channel.

Total pages including this cover page: ~~3~~ 4

Any difficulty in receiving this transmission, please call (602) 870-8755



AUSTON STRUCTURAL CONCRETE
COMMERCIAL & RESIDENTIAL CONCRETE

2432 W. Peoria, Bldg. 14, Ste. 1240 • Phoenix, AZ 85029 • (602) 870-8755 Fax (602) 870-8832

July 23, 1998

Mr. Raju Shah
Maricopa County Flood Control District
2801 W. Durango Street
Phoenix, AZ 85009-63009

RE: White Tanks #4 FRS, Inlet Improvement Channel

Mr. Shah:

We are proposing to use the Ceramar flexible foam expansion joint in lieu of the rubber expansion product called for at the I-10 box culvert. Availability is the reason for the proposed substitution.

A copy of the product description is attached for your review.

If you have any questions, please contact this office.

Best regards,

A handwritten signature in black ink, appearing to read 'Tom Auston', is written over a horizontal line.

Tom Auston

W. R. MEADOWS,
SEALTIGHT

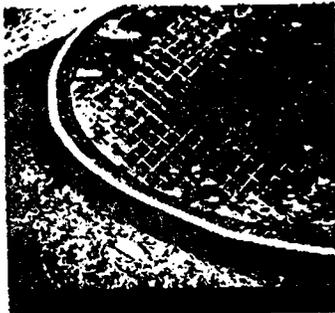
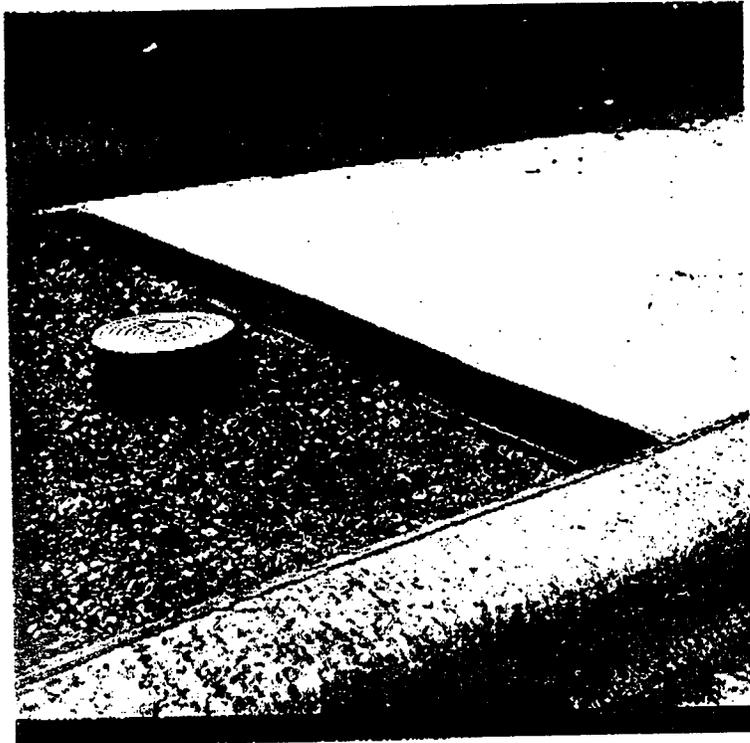
NO. 323

CERAMAR®

FLEXIBLE FOAM EXPANSION JOINT

Provides recovery qualities of over 99% with virtually no water absorption.

SEALTIGHT CERAMAR Flexible Foam Expansion Joint provides an excellent joint filler and back-up material for either horizontal or vertical expansion/contraction joints and for stress and pressure relief in concrete pavements.



Flexible and resilient

Technical Description

SEALTIGHT CERAMAR Flexible Foam Expansion Joint Filler is composed of a unique synthetic foam of isomeric polymers in a very small, closed-cell structure. Gray in color, CERAMAR is a lightweight, flexible, highly resilient material offering recovery qualities of over 99%. The compact, closed-cell structure will absorb almost no water.

Uses

SEALTIGHT CERAMAR Flexible Foam Expansion Joint Filler provides an excellent joint filler and back-up material for use in either horizontal or vertical applications where expansion and contraction movements must be accommodated. CERAMAR is compatible with all currently popular

cold-applied sealants, caulks and hot-pour joint sealing compounds. It is lightweight and easy to cut or form in the field without waste.

CERAMAR compresses easily for use with shrinkage-compensating concrete and it may be used to relieve stress and pressure in concrete pavements.

HIGHLY FUNCTIONAL JOINTING AND SEALING SYSTEM: Two excellent SEALTIGHT Products, CERAMAR and GARDOX Horizontal Sealant, may be used together to provide an excellent horizontal sealing system for plaza decks, sidewalks, driveways, commercial and industrial floors. Refer to SEALTIGHT GARDOX Catalog No. 226



W. R. MEADOWS, INC.
January 1986
(Supersedes September 1983)
3
03251
CONCRETE
Expansion/Contraction Joints

CERAMAR®

FLEXIBLE FOAM EXPANSION JOINT



Packaging

Furnished in standard sheets 48" (1.22m) wide, 10' (3.05m) long. It is also available in precut widths of 2" to 46" (50.8mm to 1.17m).

Specifications:

CERAMAR meets the requirements of ASTM D 1752, Sections 5.1 through 5.4, with the compression requirement modified to 10 psi (7.03 g/mm²) minimum and 25 psi (17.58 g/mm²) maximum. It is non-gassing and is compatible with hot-pour joint sealants.

Advantages and Benefits

- May be sealed with hot- or cold-applied sealants
- User friendly, lightweight, flexible foam...forms or wraps around curved or circular surfaces
- Cuts easily on the job with a razor knife...no breakage or waste
- Offers high resiliency and 99% recovery qualities...low compression values...non-extruding...minimal water absorption
- Resists ultraviolet degradation...will not rot or deteriorate
- Non-impregnated...no staining or bleeding
- Bonds easily with common cartridge adhesives
- Non-gassing

Application

For horizontal applications, position CERAMAR against the forms, at interrupting columns and objects or adjacent to abutting structures before placing the concrete. Vertical applications may call for CERAMAR to be placed between panels, panel-to-column joints or in block wall joints prior to sealing.

CERAMAR may be used with all hot- and cold-applied sealants.

Application Tool



Utility Knife

Thickness	Approx. Wt./100 SF	Approx Wt./100m ²	Pcs. Per Per Bundle	Shipping Wt. Per Bundle
1/4" (6.4mm)	3.13 lbs.	15.29 kg	100	160 lbs. (72.58 kg)
3/8" (9.5 mm)	4.70 lbs.	22.93 kg	100	240 lbs. (108.86 kg)
1/2" (9.5mm)	6.25 lbs.	30.52 kg	75	250 lbs. (113.40 kg)
3/4" (19.1mm)	9.40 lbs.	45.90 kg	50	240 lbs. (108.86 kg)
1" (25.4mm)	12.50 lbs.	61.03 kg	40	260 lbs. (117.94 kg)

Typical Physical Properties*

(1/8" (12.7mm) thick test specimen)

1. COMPRESSION, 50% 13 PSI (240 g/mm²)
 2. EXTRUSION 0.1 inch (2.5mm)
 3. RECOVERY 99.21%
 4. WATER ABSORPTION, VOLUME % 0.246
- *Test Method — ASTM D 545

To assist you in the specification of this product, Guide Specifications are available through your local SEALTIGHT Distributor, or contact: W. R. Meadows, Inc. direct
Phone: 1-800-342-5976

LIMITED WARRANTY...

W. R. Meadows, Inc. warrants that, at the time and place we make shipment, our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete Warranty, copy furnished upon request.

DISCLAIMER... The information contained herein is included for illustrative purposes only and, to the best of our knowledge, is accurate and reliable. W. R. Meadows, Inc. cannot however, under any circumstance make any guarantee of results or assume any obligation or liability in connection with the use of this information. As W. R. Meadows, Inc. has no control over the use to which others may put its products, it is recommended that the products be tested to determine if suitable for a specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine suitability of products for specific application and assume all responsibilities in connection therewith.

Precautions

Due to its light weight, CERAMAR will float and must be held in place by compression or with a sealant. Read and follow application information, precautions and Material Safety Data information.

- W. R. MEADOWS OF AZ, INC.**
2616 S. Sarlow Avenue
PO Box 124
Goodyear, AZ 85338
(602) 932-9393
FAX: (602) 932-1547
- W. R. MEADOWS OF NO. CA**
665 Teal Drive
PO Box 907
Benning, CA 96510
(707) 745-5666
FAX: (707) 747-6200
- W. R. MEADOWS OF SO CA**
2100 W. Valley Boulevard
Pomona, CA 91768
Maple to 9th, Box 607
Wenatche, CA 91780
(909) 869-2600
FAX: (909) 869-2611
- W. R. MEADOWS OF GA**
3055 Pacific Avenue
PO Box 280
Austell, GA 30001
(404) 944-1934
FAX: (404) 941-5058
- W. R. MEADOWS OF PA**
2100 Marple Street
40th Fl. 17404
Maple to 4th, Box 2284
York, PA 17403
(717) 792-2927
FAX: (717) 792-9151
- W. R. MEADOWS OF TX**
2555 NE 34th Street
PO Box 7752
Ft. Worth, TX 76111
817-534-1069
FAX: (817) 834-0144
- W. R. MEADOWS OF CANADA, LTD.**
700 Mountain Court
Milton, Ontario L9T 1G1
CANADA
(905) 878-4122
FAX: (905) 878-4125



BORDER PRODUCTS CORP
3880 E. BROADWAY
PHOENIX, AZ 85040
602/437-1900

W. R. MEADOWS, INC.
P.O. Box 843 - ELGIN, IL 60121
Phone: 708/663-4500 • Fax: 708/663-4546

ALABAMA ALASKA ARIZONA ARKANSAS CALIFORNIA
CONNECTICUT DELAWARE FLORIDA GEORGIA ILLINOIS
INDIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE
MARYLAND MASSACHUSETTS MICHIGAN MINNESOTA MISSISSIPPI
MISSOURI MONTANA NEBRASKA NEVADA NEW HAMPSHIRE
NEW JERSEY NEW YORK NORTH CAROLINA NORTH DAKOTA
OHIO OKLAHOMA OREGON PENNSYLVANIA RHODE ISLAND
SOUTH CAROLINA SOUTH DAKOTA TENNESSEE TEXAS
UTAH VERMONT VIRGINIA WASHINGTON WEST VIRGINIA
WISCONSIN WYOMING

shall be designed and arranged for concrete to pass without becoming segregated. Do not use chutes longer than 50 feet. The minimum slopes of chutes shall be angled to allow concrete to readily flow without segregation. Conveyor belts shall be approved by Engineer; wiped clean with device which does not allow mortar to adhere to belt; and conveyor belts and chutes covered.

Provide intermediate construction joints at maximum spacing of 30 feet. Should placement sequence result in cold joint, install water stop in joint.

Limit size of each placement to allow for strength gain and volume change caused by shrinkage. Minimum time between adjacent placements for construction of spillway floor slab shall be seven (7) days.

Consolidate concrete with internal vibrators with minimum frequency of 8,000 cycles per minute and amplitude required to consolidate concrete in section being placed. Provide at least one standby vibrator in operable condition at placement site prior to placing concrete. Consolidation equipment and methods shall conform with the requirements of ACI 309R-87. Vibration consolidation shall not exceed a distance of 5 feet from point of placement. Vibrate concrete in vicinity of joints to obtain impervious concrete there.

When vibrating concrete, apply approved vibrator at points spaced not farther apart than vibrator's effective radius. Apply close enough to forms to vibrate surface effectively but not damage form surfaces. Vibrate until concrete becomes uniformly plastic. Vibrator must penetrate fresh placed concrete and into previous layer of fresh concrete below.

No concrete shall be placed until all form work, installation of items to be embedded, and preparation of surfaces involved in the placement have been approved.

All surfaces of forms and embedded materials shall be free from curing compound, dried mortar from previous placements, and other foreign substances before the adjacent or surrounding concrete placement is begun.

Subsection 505.6.1 - Joints

Add the following:

A construction joint is defined as a planned joint where two placements of concrete meet, across which development and maintenance of bond are required, and through which any reinforcement that may be present is not interrupted. Construction joints shall be located at the end of a day's pour or when concrete placement stops for more than 45 minutes. Reinforcing steel shall be continuous through lining construction joints for a minimum of 2'-0" beyond the end of pour unless noted otherwise on the plans. The end of the pour shall be a roughened surface.

After initial cleanup and at the last opportunity prior to placing concrete, concrete surface shall be thoroughly washed with water or air-water jets, and shall be uniformly surface dried. Elastomeric (mastic) sealant designated on the construction joint detail shall be Sikaflex 1-a as manufactured by Sika Corporation, Santa Fe Springs, California, or an approved equal.

When concrete drainage channel lining and placing operations are stopped for the day, interrupted because of breakdown, or delayed by other causes, the edge of the fresh concrete lining shall be

bulkheaded to a surface normal to the placement along transverse or longitudinal lines. Before placing operations are resumed, the surface of the hardened concrete shall be cleaned as specified for a construction joint.

Expansion joints - Expansion joints shall be constructed between the canal lining and structures as shown on the drawings.

The surfaces of all joints shall be cleaned thoroughly of accretions of concrete or other foreign material by scraping, chipping, or other means approved by the Engineer. All concrete expansion joint concrete surfaces shall be free of curing compound when adjoining concrete is placed. Sponge rubber filler shall be placed in all expansion joints. The Contractor shall furnish and place the sponge rubber filler in the joints between the concrete canal lining and structures as shown on the drawings.

The sponge rubber filler shall be cut to the size and shape of the joint surface. The filler shall be secured to the concrete in an approved manner, with copper nails embedded in the first-placed concrete in such a manner that the nails will protrude from the joint surface to be covered at approximately 12-inch centers, or by adhesive applied between the filler and the first-placed concrete.

Joints between adjoining portions of the filler material shall be sufficiently tight to prevent concrete from seeping through such joints. Where elastomeric (mastic) sealer material is required, the joint filler shall be set back from the edge of the joint to provide the proper recess for installing elastomeric (mastic) sealer. Elsewhere, unless otherwise shown on the drawings or directed, the edges of the sponge rubber filler shall be placed flush with the finished surface of the concrete or to the bottom edge of chamfers.

Materials

Sponge rubber - Sponge rubber shall conform to Federal Specification HH-F-341F, type 2, class A, sponge rubber; provided, that the load required to compress the test specimen to 50 percent of its thickness before test shall be not less than 50 pounds per square inch nor greater than 150 pounds per square inch. Sponge rubber shall be stored in as cool a place as practicable, preferably at 70°F or less and in no case shall the rubber be stored in the open, exposed to the direct rays of the sun.

Copper nails - Copper nails shall conform to Federal Specification FF-N-105B for common copper wire nails.

Adhesive - Adhesive for fastening the sponge rubber in place shall be a nonbituminous adhesive as recommended by the manufacturer of the filler material.

Elastomeric sealer - Elastomeric (mastic) sealer shall be Sikaflex 1-a as manufactured by Sika Corporation, Santa Fe Springs, California, or approved equal.

Subsection 505.8 - Curing

Add the following:

Moist cure methods shall be used for all exposed concrete surfaces. Curing compound shall not be used because of the adverse affects on the concrete color and the Graffiti Protector #GP-44.

Kevin

No vehicular loads will be permitted on structures before the period of twenty-one (21) days from the date of the last pour of concrete unless approval is obtained in writing from the Engineer. In no case shall traffic be allowed on the structure until the specified concrete strength has been attained. The Contractor shall take special precautions to keep the area properly barricaded, lighted, and marked to prevent automotive traffic from crossing the new box culvert structures prior to the Engineer's approval.

A clear protective water based coating shall be applied to all exposed concrete surface areas which may be subject to graffiti vandalism. The coating shall be Duro-Wall Graffiti Protector #GP-44, produced by Dayton Superior, or approved equal. The coating shall be clear and contain no coloring. The cost of the coating shall also be incidental to the cost of the concrete.

Subsection 505.10 - Payment

Replace this Subsection with the following:

Concrete retaining wall shall be paid for at the contract unit price per cubic yards per Pay Item 505-1. Such payment shall be full compensation for the item complete in place, including costs of materials, labor, tools, equipments, concrete, rebars, ties, form work, bracing, shoring, excavation, removal of obstructions, backfilling, compaction, testing, and performing all other work necessary to complete the items in accordance with the details shown in the plans.

Channel lining shall be paid for at the contract unit price bid per square yard of exposed face per Pay Items 505-2 through 505-4. Such payment shall be full compensation for furnishing all materials, labor, tools, equipment and accomplishing all work in conformity with the plans and specifications.

Concrete cut-off walls shall be paid at the contract unit price bid per linear foot of cut-off wall per Pay Item 505-5. Such payment shall be full compensation for furnishing all materials, labor, tools, equipment and accomplishing all work in conformity with the plans and specifications.

ITEM 505-1 - CONCRETE RETAINING WALLS

ITEM 505-2 - CONCRETE CHANNEL LINING - 6"

ITEM 505-3 - CONCRETE CHANNEL LINING - 7"

ITEM 505-4 - CONCRETE CHANNEL LINING - 9"

ITEM 505-5 - CONCRETE CUT-OFF WALLS

SECTION 618 - STORM DRAIN CONSTRUCTION

The work under this section shall conform to Section 618 of the Uniform Standard Specifications except as modified herein.

Subsection 618.1 - Description

Replace this subsection with the following:

The work consists of extending existing pipe furnishing and installing matching pipe and installing automatic drainage (flap) gates at the locations shown in the plans.

Subsection 618.2 - Materials

Add the following:

The 48"X30" Storm Drain flap gate shall be constructed with a cast-iron flatback frame and cover,

with machined seating surfaces, bronze hinge bushings, stainless steel hinge pins, studs and nuts, and anchor bolts. Gate shall be Waterman Model F-20-f or approved equal.

The 24" diameter Storm Drain Flap Gate shall be constructed with a cast iron flatback frame and cover, with machined cast iron seating surfaces, bronze bushings, stainless steel studs, bolts and pins, and anchor bolts. Gate shall be Waterman Model F-25-f or approved equal.

Subsection 618.5 - Measurement:

Add the following:

The Storm Drain culvert extension will be measured per linear foot, in place, within the limits of dimensions shown on the plans and the Storm drain flap gates will be by the unit each of the various types of flap gates.

Subsection 618.6 - Payment:

Add the following:

Payment for pipe extensions shall be per unit bid price per linear foot per Pay Item 618-1. Such payment shall be compensation in full for furnishing and installing the pipe complete in place, and shall include all costs of excavation, removal of obstruction, shoring and bracing, bedding, backfilling, compaction, pipe collars, reinforcing, connections, and all other work not specifically covered that is incidental.

Payment for the storm drain flap gate shall be per unit price bid for each flap gate per Pay Item 618-2. Such payment shall be compensation in full for furnishing and installing each flap gate complete in place as shown on the plans.

ITEM 618-1 - STORM DRAIN CULVERT EXTENSION

ITEM 618-2 - STORM DRAIN FLAP GATES

SECTION 703 - RIPRAP

Riprap shall conform to Section 703 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 703.1 - Stone

Add the following:

In addition to the requirements of Section 703.1, stone for riprap shall have a minimum apparent specific gravity of 2.4 per ASTM C-127. Waste concrete shall not be used for riprap.

The rock used for the grouted riprap shall be clean, washed river run stone, and shall be rounded, hard, durable, resistant to weathering and to water action, free from overburden, spoil, shale, and organic material, and shall meet the gradation requirements for the type specified.

Subsection 703.2 - Size of Stone

Add the following:

Section 703.2 of the MAG Standard Specifications is replaced with the following:

$$D_{\min} = 9", D_{\max} = 14", D_{50} = 11"$$

SECTION 725 - PORTLAND CEMENT CONCRETE

Portland cement concrete shall conform to Section 725 of the MAG Uniform Standard Specifications except as modified herein.

Subsection 725.2 - Portland Cement

Add the following:

Cement shall be Portland cement, conforming to the requirements of ASTM C-150, Type II, unless noted otherwise on the plans or in the specifications.