

STREET TRANSPORTATION DEPARTMENT

City of Phoenix, Arizona

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Engineering & Architectural Services Department

PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

INDEX NO. ST-930305

UTOPIA ROAD STORM DRAIN LATERAL
27TH STREET TO 32ND STREET

MAYOR
SKIP RIMSZA

CITY COUNCIL

DISTRICT NO. 1 - THELDA WILLIAMS	DISTRICT NO. 5 - JOHN NELSON
DISTRICT NO. 2 - FRANCES BARWOOD	DISTRICT NO. 6 - SAL DICICCIO
DISTRICT NO. 3 - PEGGY BILSTEN	DISTRICT NO. 7 - SALOMON LEIJA
DISTRICT NO. 4 - CRAIG TRIBKEN	DISTRICT NO. 8 - CODY WILLIAMS

CITY MANAGER
CITY ENGINEER

FRANK FAIRBANKS
KENNY W. HARRIS, P.E.



A026.506

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SEAL

CALL FOR BIDS
BIDS WILL BE DUE TUESDAY, JULY 18, 1995, AT 2:00 P.M.
BIDS WILL BE OPENED WEDNESDAY, JULY 19, 1995, AT 2:00 P.M.

INDEX NO. ST-930305

Sealed bids will be received at the Engineering & Architectural Services Department's Central Records Counter, Second Floor, Phoenix City Hall, 200 West Washington Street, Phoenix, Arizona, 85003, until the hour indicated for the Utopia Road Storm Drain Lateral from 27th Street to 32nd Street, Index No. ST-930305. Work will include 127 LF of 48" storm drain pipe; 1,277 LF of 54" storm drain pipe; 1,255 LF of 60" storm drain pipe; 343 LF of 90" storm drain pipe; 190 LF of 96" storm drain pipe; 40 LF Double 6' x 3' Box Culvert; inlet and outlet headwalls; curb and gutter; sidewalk; asphalt pavement replacement; catch basins; and other miscellaneous items.

Prospective bidders may examine and/or purchase plans, special provisions and proposal pamphlets at the City Engineer's office. All contractors will be provided one set of free plans and specifications upon request. Additional sets may be purchased for \$45 per set. There will be no refund for additional sets purchased.

This project is subject to the City of Phoenix's Code, Chapter 18, Article IV, as amended pertaining to nondiscrimination in employment by Contractors and subcontractors. The Affirmative Action Requirements are included as a part of the specification on page A.A.R. - 1. Additional copies will be provided to the successful contractor upon execution of a satisfactory contract.

Bid Security. No proposal will be read unless accompanied by a proposal guarantee of cash, certified check, or on the surety bond provided, for an amount not less than ten (10%) percent of the amount bid included in the proposal as a guarantee that the contractor will enter into a contract to perform the proposal in accordance with the plans and specifications. Notwithstanding any other statute, the surety bond shall be executed solely by a surety company or companies holding a certificate of authority to transact surety business in this state, issued by the Director of the Department of Insurance pursuant to Title 20, Chapter 2, Article 1. The surety bond shall not be executed by an individual surety or sureties even if the requirements of Section 7-101 are satisfied. The cash, certified check, or surety bond shall be returned to the contractors whose proposals are not accepted, and to the successful contractor upon the execution of a satisfactory bond and contract.

Minority and Woman Owned Business Enterprises (MBE and WBE).

This project is subject to the City of Phoenix Code, Chapter 18, Article VI, (Ordinance Number G-3694) pertaining to participation of MBE and WBE firms. Only firms whose physical business is located within the Phoenix Metropolitan Statistical Area (Maricopa County) are eligible to meet the MBE/WBE goals on this project.

The minimum MBE goal is 4 %

The minimum WBE goal is 2 %

These goals must be met in order to have the bid considered. For further information contact the Engineering and Architectural Services Department at (602) 534-1423.

The Council of the City of Phoenix reserves the right to award the contract to the lowest and/or best responsible bidder or all bids will be rejected, as soon as practicable after the date of opening bids.

FRANK FAIRBANKS
City Manager

By 
Kenny W. Harris, P.E.
City Engineer

Published: Arizona Business Gazette
June 22, 1995
June 29, 1995

C.D. 2

INFORMATION FOR BIDDERS

.01 PREBID CONFERENCE AND QUESTIONS ON PLANS AND SPECIFICATIONS

A Pre-Bid Conference will be held in the DCM Conference Room A, 1034 East Madison Street, Phoenix, Arizona on July 6, 1995 at 9:00 AM.

The purpose of this conference will be to discuss questions you may have on the project and clarify the plans and specifications.

Neither the Engineer nor the City of Phoenix shall be held responsible for any oral instructions. Any changes to the plans and specifications will be in the form of an addendum which will be furnished to all plan holders.

Should you desire additional information prior to submitting your bid, please call the following for questions on:

Plans, Technical/Special Provisions, Proposal or Specifications: Project Manager, John Bethell, 495-2050.

General Conditions, Bid Bonds, Insurance, Payment and Performance Bonds and Contracts: 262-4951.

MBE/WBE Utilization:

Prior to bidding - Bids and Specifications Section: 534-1423

MBE/WBE Contract Compliance:

After Bidding - M/WBE Goals Compliance Office: 495-0887

.02 REFUNDS FOR PLANS AND SPECIFICATIONS

Prospective bidders may examine and/or purchase plans, special provisions and proposal pamphlets at the City Engineer's office. All contractors will be provided one set of free plans and specifications upon request. Additional sets may be purchased at the price indicated on the Call for Bids (Page C.B.-1). There will be no refund for additional sets purchased.

.03 SUBMITTING BIDS

Contractors shall acknowledge all addenda. No proposal will be read unless all issued addenda for this project are acknowledged in writing on page P-1.

No proposal will be read unless accompanied by a proposal guarantee of cash, certified check, cashier's check or on the surety bond provided, for an amount not less than ten (10) percent of the amount bid.

MAG Section 102-10, Withdrawal or Revision of Proposal is hereby deleted and the following paragraph is substituted:

"No bidder may withdraw or revise a proposal after it has been deposited with the City. Proposals, read or unread, will not be returned to the bidders until after determination of award has been made."

The completed proposal with the ten (10) percent proposal guarantee shall be submitted in a sealed envelope. The outside, lower right hand corner of which shall be marked as follows:

Bid of (Firm's Name, Address and Phone Number)

For: Utopia Road Storm Drain Lateral, 27th Street to 32nd Street.

City of Phoenix Index Number: ST-930305

Sealed bids shall be delivered to the Engineering & Architectural Services Department's Central Records Counter, Second Floor, Phoenix City Hall, 200 West Washington Street, Phoenix, Arizona, 85003 prior to the time and date specified for bid submittal.

This project is subject to the City of Phoenix's Code, Chapter 18, Article IV, as amended pertaining to nondiscrimination in employment by Contractors. The Affirmative Action Requirements are included as a part of the specification on page A.A.R. - 1.

.04 CONTRACT AWARD

Contract award will be made based on the lowest bid amount for the sum of all the bid items for this project. This figure is the dollar amount which will be publicly read at the bid opening. Additionally, the Contractor shall meet the minimum MBE/WBE goals set for this project and have submitted letters of intent as instructed herein.

.05 CANCELLATION OF CONTRACT

All parties hereto acknowledge that this agreement is subject to cancellation by the City of Phoenix pursuant to the provisions of Section 38-511, Arizona Revised Statutes.

.06 RECORD DRAWINGS

The Contractor shall maintain a record set of plans at the job site. These shall be kept legible and current and shall show all changes or work added in a contrasting, reproducible color. When the project is substantially complete, the Contractor shall submit these plans to the Engineer for approval. When landscaping is included, the Contractor shall submit, prior to final inspection, corrected landscape drawings showing the location of all utility services, controller, pipe, valves and wiring. The Engineer shall be the sole judge as to the acceptability of the record plans and receipt of an acceptable set is a pre-requisite for final payment.

.07 EQUAL ECONOMIC OPPORTUNITY CLAUSE

Pursuant to City of Phoenix Code, Chapter 18, Article IV as amended, on Equal Employment Opportunity, all prime Contractors and subcontractors are required to take affirmative action toward equal employment opportunity. All prime Contractors must have Affirmative Action reports on file with the Equal Opportunity Department prior to bid.

.08 PRECONSTRUCTION CONFERENCE

After completion of the contract documents, to include bonds, insurance and signatures and prior to the commencement of any work on the project, the Street Transportation Department, DCM Division, (telephone 495-2050), will schedule a Pre-Construction Conference. This will be held at 1034 East Madison Street, Phoenix, Arizona.

The purpose of this conference is to establish a working relationship between the Contractor, utility firms and various City agencies. The agenda will include critical elements of the work schedule, submittal schedule, cost breakdown of major lump sum items, payment application and processing, coordination with the involved utility

firms, emergency telephone numbers for all representatives involved in the course of construction and establishment of the notice to proceed date. The Contractor shall also provide copies of all purchase orders and/or contracts with MBE/WBE subcontractors and suppliers used to meet the subcontract goals programmed for this project.

Minimum attendance by the Contractor shall be a responsible company/corporate official, who is authorized to execute and sign documents on behalf of the firm, the job superintendent and the Contractor's safety officer.

.09 IMMIGRATION REFORM AND CONTROL ACT

Compliance with the Immigration Reform and Control Act of 1986 (IRCA) Required. Contractor understands and acknowledges the applicability of the IRCA to him. Contractor agrees to comply with the IRCA in performing under this agreement and to permit City inspection of his personnel records to verify such compliance.

.10 CONTRACTOR'S LICENSE AND PRIVILEGE LICENSE

Each bidder shall include, on the proposal sheet, his Contractor's License Classification and Number (ARS Title 32, Chapter 10). In addition, the bidder must include his City of Phoenix Privilege License Number (ARS 42-1305).

Failure to provide this information will be just cause for declaring the bid non-responsive.

.11 CONTRACTOR'S TAX LIABILITY

The successful bidder shall be liable for payment of all State of Arizona and Maricopa County Transaction Taxes (ARS 41-1305) and City of Phoenix Privilege Taxes (Phoenix City Code 14-415) on the successful bidders' construction contracting receipts. Failure to remit the proper taxes to the City may result in the withholding of payment until all delinquent privilege taxes, interest and penalty have been paid.

.12 UTILITY-RELATED CONSTRUCTION DELAY DAMAGES CLAIM PROCEDURES

The following procedure is intended to provide a fair and impartial process for the settlement of construction delay claims associated with unknown or improperly located utility facilities.

The Contractor shall immediately notify, in writing, the Project Engineer of any potential utility-related delay claim. The Project Engineer will immediately notify the Utility Coordination Section of the Engineering & Architectural Services Department.

The Contractor shall immediately notify the appropriate liaison of the affected utility verbally, followed by a written notification.

The Contractor shall coordinate the investigation with the affected utility of the situation and provide the City with written notification of their decision on the settlement of the claim.

If the affected utility makes a decision to handle negotiations for a claim, their personnel will be responsible for monitoring the project and all negotiations with the Contractor regarding the claim.

The Contractor shall determine to document requirements of the affected utility for their acceptance of responsibility for the claims. The Contractor shall provide four (4) copies of the required documentation to the utility involved and two (2) copies of this documentation to the Project Engineer. The Contractor shall obtain written confirmation from the utility company involved of their documentation requirements.

.13 MBE/WBE UTILIZATION

The minority and women participation goals for this project are as follows:

MBE = 4% WBE = 2%

ONLY firms certified by the City of Phoenix under Chapter 18, Article VI, Section 18-106. A. (1) of the Phoenix City Code are eligible to fulfill MBE/WBE subcontracting goals for City of Phoenix projects. The City of Phoenix Construction Directory for Maricopa County dated June 1995 contains the complete listing of those firms which may be used on this project. If the name of a MBE/WBE firm does not appear in this directory, they will be ineligible to satisfy the subcontracting goals for this project.

If the awarded contract is less than \$250,000 a certified MBE/WBE prime contractor may meet the respective MBE/WBE goal by claiming credit for the value of the work actually performed by its employees. No MBE/WBE prime contractor may claim credit toward the MBE/WBE subcontracting goals if the awarded contract is greater than \$250,000. If the project proposal contains alternates which could shift the value of the awarded contract above \$250,000, the bidder should plan their MBE/WBE subcontracting utilization accordingly.

BROKERS AND SUPPLIERS: - MBE or WBE firms which are classified as suppliers or brokers may not satisfy more than 25% of the applicable goal. A supplier is defined as a firm which does not directly manufacture the product supplied for the project. A broker is defined as a firm supplying services or labor through the use of individuals not directly employed by the broker, i.e., employment taxes and insurance are not paid directly by the broker.

MANUFACTURERS AND FABRICATORS - The following conditions define the type and amount of expenditures made to certified M/WBE firms for materials and supplies which may be claimed toward satisfaction of the subcontracting goals set for the project.

1. The bidder may count one hundred (100) percent of its expenditures to a certified M/WBE which operates and maintains an establishment or factory to produce, on the premises, the material or supplies obtained for the project.
2. The bidder may count one hundred (100) percent of its expenditures to a certified M/WBE fabricator which operates and maintains a factory to substantially alter materials or supplies before resale.
3. The bidder may count up to twenty-five (25) percent of its expenditures to certified M/WBE dealers or wholesalers which operate, own, and maintain a store, warehouse, or other establishment in which the materials or supplies required for the completion of the project are bought, kept in stock, and regularly sold to the public in the usual course of business. To be considered as a dealer, the firm shall be engaged in, as its principal business, and in its own name, the purchase and sale of the products in question. A dealer or wholesaler in such bulk items as steel, cement, gravel, stone, and petroleum products shall keep such products in stock and available for sale.

OTHERS: - The bidder may count toward the subcontracting goals the following expenditures which are not made to subcontractors, brokers, dealers, manufacturers, or fabricators:

1. The total cost, including fees and commissions, charges to provide bona fide technical and professional personnel recruitment for the contract. The total cost paid shall be determined by the recipient and shall be comparable to costs customarily charged for similar services.
2. The total cost, including fees and commissions, charged for providing bonds and insurance specifically required for the performance contract. The total cost paid will be determined by the recipient and shall be comparable to costs customarily charged for similar services.

GENERAL - The prime contractor may count only expenditures to certified MBE or WBE firms performing a commercially useful function. A commercially useful function is defined as being responsible for execution of a distinct element of the work on a project and discharging its responsibilities by actually performing, managing, and supervising the work involved.

The bidder must identify the material to be supplied and/or the function of each MBE and/or WBE on the Bidder's Statement of Proposed MBE/WBE Utilization.

Each Bidder shall submit a sealed Bid Envelope and a sealed Subcontracting Goals Envelope at the time and place designated on page C.B.-1. Each Subcontracting Goals Envelope will be reviewed and evaluated to determine if the Bid Envelope will be opened and read at a later specified time.

Contracts with second and third tier minority subcontractors may be counted toward satisfaction of the subcontracting goals. It is strongly suggested that each bidder become familiar with the definition of "Commercially Useful Function" contained in Chapter 18-101 of the City Code. Bidders are further cautioned that all subcontracts are subject to verification.

The Subcontracting Goals Envelope shall contain the following items:

- * A completed "Bidder's Statement of Proposed MBE/WBE Utilization" form. The information requested on the form must be supplied for all MBE and WBE firms proposed to be contracted for this project. The proposed MBE and WBE firms may be subcontractors, suppliers, and/or joint ventures. More information on the value of the subcontracts to be credited toward the goal is contained in Section 18-106 of the City Code. The numbers entered in the "total boxes" will be used to determine if the bidder has met the goals. This form is attached at the end of this I.B. Section. When completed, detach the form, and insert it into the Subcontracting Goals Envelope.
- * If the bidder is unable to meet the MBE/WBE goals, the bidder may request a waiver of the goals by completing the "Request for Waiver of MBE/WBE Goals" form, and inserting it into the Subcontracting Goals Envelope, along with the "Bidders Statement of Proposed MBE/WBE Utilization" form described in the previous paragraph.

Attachments to the "Request for Waiver of MBE/WBE Goals" shall clearly state the reasons why a waiver should be granted, and shall include the additional evidence and records required in Article VI, Section 18-106 C of the City Code.

The Bid Envelope shall contain all other information and documents required with the bids, such as bid bonds, powers of attorney, lists of equipment vendors, lists of subcontractors, bidders questionnaires, etc.

The "Contractor's Statement of MBE/WBE Utilization" form is included for the contractor who is awarded the project. This form shall be completed and submitted with each pay request.

.14 BID OPENING PROCEDURES

The Bid Envelope and the Subcontracting Goals Envelope will be due at the time and place specified. Late submissions will be rejected.

A Bid Panel composed of Engineering and Architectural Services Department (EASD), and the Equal Opportunity Department (EOD), will open the Subcontracting Goals Envelopes, and process them as follows:

The Subcontracting Goals Envelopes will be sorted by project, opened, and further sorted into the following categories:

CATEGORY A. The bidders have met the MBE and WBE subcontracting goals, and have completed the "Bidder's Statement of Proposed MBE/WBE Utilization" form.

CATEGORY B. The bidders have not met the subcontracting goals, and have completed a "Bidder's Statement of MBE/WBE Utilization" form, and have submitted a "Request for Waiver of MBE/WBE Goals" form, along with the supporting data described in the previous Section, MBE/WBE UTILIZATION.

CATEGORY C. The bidders have not met the subcontracting goals, and have not submitted a "Request for Waiver of MBE/WBE Goals" form.

CATEGORY A: If all the project bidders fall into Category 'A', the bids will be publicly opened, and read on the Wednesday following the day the bid proposals are submitted. Processing and recommendation for award will proceed in the traditional manner.

CATEGORY B: All Subcontracting Goals Envelopes in Category 'B' will be reviewed and evaluated by the Bid Panel. If the Panel rejects a waiver request, that bidder will be notified by FAX, and will have until 10:00 AM the following day to file a written notice of appeal with the Bids and Specification Section of the EASD. All other bidders will be notified by FAX that opening of the Bid Envelopes, and reading of the bids will be delayed until 2:00 PM the following Wednesday. If a notice of appeal is not received by 10:00 AM the following day, that bid will be rejected, and opening of the remaining bids will proceed at 2:00 PM the following Wednesday.

If one waiver request is deemed valid, all bids for the project will be rejected, and the project will be re-advertised with revised goals. If at least one bidder meets the subcontracting goals, subject to City review and confirmation, the subcontracting goals will be deemed reasonable and attainable, and no waiver will be granted.

If no bidder meets the subcontracting goals, all bids will be rejected, and the project will be re-advertised with revised goals.

If the bid opening does not occur on Wednesday, or any of the subsequent days fall on a legal holiday, the schedule will be adjusted accordingly, and the bidders will be notified by FAX.

If a notice of appeal of the Bid Panel's decision is timely received, staff will schedule a hearing for 10:00 AM the following Friday. The Hearing Officer's decision shall be final, and no further appeal will be considered.

If the Hearing Officer denies the waiver request, the remaining bids will be opened and read the following Wednesday at 2:00 PM. If the Hearing Officer grants a waiver request, all bids for the project will be rejected, and the project will be re-advertised with revised goals.

CATEGORY C: All bidders in the "C" category will be notified by EASD staff that they have not met the goal and their bid will not be read the following day. These bidders will have until 9:00 a.m. the following day to appeal this decision in writing to the EASD. If a timely appeal is submitted, a hearing conducted by the City Engineer or his designee will be held the following day prior to bid opening. The results of the hearing will be final and will be announced at the bid opening.

.15 CONTRACT ADMINISTRATION

With the exception of the reference to "Engineering & Architectural Services" and "Call for Bids", all references to the City Engineer shall be replaced with the words "Street Transportation Director". The definition of "Engineer" shall read as follows:

"Engineer": All references to "Engineer" in these contract bid documents, including the MAG Specifications, shall mean Street Transportation Director.

.16 LETTER OF INTENT

The apparent low bid contractor and any other bidder who wishes to remain in contention are to submit Letters of Intent to contract for each of the MBE and WBE subcontractors, suppliers and manufacturers listed on the Bidders Statement of Proposed MBE/WBE Utilization Form. The letters should clearly indicate the scope of work to be performed and agreed price to perform the work. They should be signed by both parties to the proposed subcontract. The letters are to be submitted no later than the close of business the day following the bid opening. Submit the letters to:

Engineering and Architectural Services Department
c/o Mr. Francisco M. Badilla, P.E.
200 West Washington - 7th Floor
Phoenix, AZ 85003
FAX: 495-5514

.17 PAY WHEN PAID

The Contractor shall make partial payments to their subcontractor(s) and/or supplier(s) for work completed and accepted by the City through the preceding month within seven (7) calendar days of receipt of payment from the City of Phoenix.

.18 PIPE PRICE ADJUSTMENT

A provisional bid item has been included to allow bidders to make last-minute addition (+) or deduction (-) adjustments in pipe prices, if desired. The addition (+) or deduction (-) bid item, if used, will be a lump sum amount, and shall be shown under the proposal item, "PIPE PRICE ADJUSTMENT, +/-, PER SPECIFICATIONS". **If left blank, it will be assumed that the Contractor does not wish to make a pipe price adjustment.**

Addition (+) or Deduction (-) payments will be made on a lump sum basis, as determined by the Engineer, under the bid item "PIPE PRICE ADJUSTMENT, +/-, PER SPECIFICATIONS".

**CITY OF PHOENIX
 BIDDER'S STATEMENT OF PROPOSED MBE/WBE UTILIZATION**

INDEX NO. _____

PROJECT DESCRIPTION _____

M B E	C.O.P. VERIFICATION	COMPANY'S NAME	CONTACT PERSON	PHONE NO.	SERVICES TO BE PROVIDED	*SUPPLIER Y/N	% OF BASE BID	

MBE TOTAL

W B E	C.O.P. VERIFICATION	COMPANY'S NAME	CONTACT PERSON	PHONE NO.	SERVICES TO BE PROVIDED	*SUPPLIER Y/N	% OF BASE BID	

WBE TOTAL

*MBE or WBE firms which are classified as suppliers or brokers may not satisfy more than 25 percent of the applicable goal. A supplier is defined as a firm which does not directly manufacture the project. A broker is defined as a firm supplying service or labor through the use of individuals not directly employed by the broker i.e., employment taxes and insurance are not paid directly by the broker.

I hereby certify by signing below that the foregoing M/WBE firms shall be contracted to work on the trades identified above and/or supply material and/or equipment for this project. The information shown above is a true reflection of the proposed subcontracts expressed as a percentage of the base bid.

BIDDER: _____
 SIGNATURE: _____ DATE _____
 NAME AND TITLE: _____ PHONE NUMBER: _____

CITY OF PHOENIX

REQUEST FOR WAIVER OF MBE/WBE GOALS

INDEX NO. _____

DESCRIPTION _____

I hereby request a waiver of the MBE subcontracting goal and/or the WBE subcontracting goal for this project.

My bid reflects ___ % MBE subcontractor participation and/or ___ % WBE subcontractor participation.

The documentation prescribed by Chapter 18, Section 106C of the City Code is attached and submitted as part of this request for waiver of the MBE and/or WBE goal.

I understand if one or more bidders meet the required subcontracting goals, the goals will be considered reasonable and attainable under this circumstance. Requests for waivers will be granted for only the most extreme or unusual circumstances.

BIDDER: _____

SIGNATURE: _____ DATE: _____

NAME AND TITLE: _____



City of Phoenix

EQUAL OPPORTUNITY DEPARTMENT
AFFIRMATIVE ACTION DIVISION

IMPORTANT NOTICE PHOENIX CITY CODE AFFIRMATIVE ACTION REQUIREMENTS

Suppliers, Contractors & Lessees wishing to enter into a business relationship with the City of Phoenix must comply with either Article IV or V of Chapter 18 of the City Code, as appropriate.

Compliance is achieved by submission of the affirmative action reporting forms as indicated below:

**Individuals or Firms Who Employ Fewer Than 15 People:
Certificate of Less Than 15 (Part D)**

Firms Who Employ 15 or More People:

1. Employer Information Report (Part A)
2. Employer EEO Workforce Profile (Part B)
3. An Affirmative Action Plan (Part C)

These reports must be completed accurately and on file with Equal Opportunity Department prior to bid opening, proposal submission, response to a request for quotation, response to a request for qualification or the date set forth as part of any other request-response process initiated by the City.

The above referenced reports must be submitted to:

Equal Opportunity Department
Affirmative Action Division
550 W. Washington Street
Phoenix, AZ 85003-2107

Failure to comply with the affirmative action requirements outlined in the Articles will result in your being considered ineligible for any City business.

Questions may be directed to the City of Phoenix Equal Opportunity Department, Affirmative Action Division at V/(602) 262-6790, TDD/5334-1557, FAX 534-1785.

Thank you for your cooperation.

SUPPLEMENTARY CONDITIONS

.01 STANDARD SPECIFICATIONS AND DETAILS

Except as otherwise required in these specifications, construction of this project shall be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest revision, and the City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details.

.02 PRECEDENCE OF CONTRACT DOCUMENTS

The City of Phoenix Supplements will govern over the MAG Standard Specifications and Details. In case of a discrepancy or conflict, plans will govern over both the City of Phoenix Supplements and MAG Standard Specifications and Details; Supplementary Conditions, Technical Provisions, Special Provisions, will govern over the City of Phoenix Supplements, the MAG Standard Specifications and Details and Plans.

.03 PARTIAL PAYMENTS

The contracting agency will make a partial payment to the Contractor on the basis of an estimate prepared by the Engineer for work completed and accepted through the preceding month. The notice to proceed date, which is designated for the specific project involved, will be used as the closing date of each partial pay period. Payment will be made no later than fourteen (14) days after the work is certified and approved. The City shall review payment requests and make recommendations for approval or denial within seven (7) calendar days.

.04 INDEMNIFICATION OF CITY AGAINST LIABILITY

The Contractor agrees to indemnify and save harmless the City of Phoenix and the Flood Control district of Maricopa County, their officers, agents and employees, and any jurisdiction or agency issuing permits for any work included in the project, their officers, agents and employees, hereinafter referred to as indemnitee, from all suits, including attorney's fees and cost of litigation, actions, loss, damage, expense, cost or claims of any character or any nature arising out of the work done in fulfillment of the terms of this contract or on account of any act, claim or amount arising or recovered under Workmen's Compensation Law or arising out of the failure of the Contractor to conform to any statutes, ordinances, regulation, law or court decree. It is the intent of the parties to this contract that the indemnitee shall, in all instances except for loss or damage resulting from the sole negligence of the indemnitee, be indemnified against all liability, loss or damage of any nature whatever for or on account of any injuries to or death of person or damages to or destruction of property belonging to

any person arising, out of or in any way connected with the performance of this contract, regardless of whether or not the liability, loss or damage is caused by, or alleged to be caused in part by the negligence, gross negligence or fault of the indemnitee. It is agreed that the Contractor will be responsible for primary loss investigation, defense and judgement costs where this contract of indemnity applies.

.05 CONTRACTOR'S INSURANCE REQUIREMENTS

Concurrently with the execution of the contract, the Contractor shall furnish the City of Phoenix and the Flood Control District of Maricopa County a Certificate of Insurance on a standard insurance industry ACORD form. The minimum limits of liability shall be \$1,000,000.00 for General Liability and Automobile Liability and statutory amounts for Workmen's Compensation (Employer's Liability with a minimum limit of \$100,000.00 each accident). The ACORD form shall be issued by an insurance company authorized to transact business in the State of Arizona, or one that is named on the List of Qualified Unauthorized Insurers maintained by the Arizona Department of Insurance.

The Contractor shall maintain during the life of the contract such public liability and property damage insurance, both general and automobile liability, as shall protect him and any subcontractor performing work under the contract from all claims for bodily injury, including accidental death, as well as for property damage arising from operations under the contract--whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. These policies shall not expire until all the work has been completed and the project has been accepted by the City of Phoenix. If a policy does expire during the life of the contract, the Contractor shall provide a renewal certificate of the required insurance coverage to the City of Phoenix not less than five (5) days prior to the expiration date.

The City of Phoenix, a municipal corporation, its officers, agents and employees shall be named as additional insureds on all Public Liability and Property Damage Insurance and Builder's Risk/Course of Construction Insurance (new buildings and additions to old buildings only) and this shall also be indicated on Certificates of Insurance issued to the City. The Contractor's coverage shall be primary for any and all losses arising out of the performance of this contract.

.06 PERFORMANCE AND LABOR AND MATERIAL BOND

Prior to the execution of a contract, the successful bidder must provide a performance bond and a labor and material bond, each in an amount equal to the full amount of the contract. Each such bond shall be executed by a surety company or companies holding a certificate of authority to transact surety business in the State of Arizona issued by the Director of the Department of Insurance. A copy of the Certificate of Authority shall accompany the bonds. The Certificate shall have been issued or updated within two years prior to the execution

of the contract. The bonds shall be made payable and acceptable to the City of Phoenix. The bonds shall be written or countersigned by an authorized representative of the surety who is either a resident of the State of Arizona or whose principal office is maintained in this state, as by law required, and the bonds shall have attached thereto a certified copy of Power of Attorney of the signing official. If one Power of Attorney is submitted, it shall be for twice the total contract amount. If two Powers of Attorney are submitted, each shall be for the total contract amount. Personal or individual bonds are not acceptable. Failure to comply with these provisions will be cause for rejection of the bidder's proposal.

.07 BONDING COMPANIES

All bonds submitted for this project shall be provided by a company rated A- or better by the A. M. Best Company. A bid security is necessary at the time of bid opening. An A- or better bid security shall be submitted to the Bids and Specifications Section no later than 5:00 P.M. on the third day following the bid opening. Failure to replace a substandard bond with an A- or better bond within this time frame will result in bid rejection.

.08 ALUMINUM MANHOLE COVERS

The Water Services Department has the following stated policy, "MAG Standard Detail 425: 24-inch aluminum manhole frame and cover is not approved by the City of Phoenix."

.09 DISPOSAL OF SURPLUS MATERIAL WHICH DOES NOT CONTAIN ASBESTOS

All surplus and/or waste material may be disposed of at the Contractor's discretion subject to the following conditions:

- A. If the City landfills are used, the Contractor shall pay the normal dumping fee.
- B. If private property within the City limits is used, the Contractor shall obtain written permission from the property Owner and deliver a copy of this agreement to the Engineer prior to any hauling or dumping. All disposal and grading shall be in strict conformance with the City of Phoenix Grading and Drainage Ordinance. The Contractor shall obtain and pay for the necessary permit(s).
- C. If the surplus material is disposed of outside the City limits, the Contractor shall comply with all applicable laws/ordinances of the agency concerned and be responsible for all cost incurred.

No measurement or direct payment will be made for the hauling and disposal of surplus and/or waste material. The cost shall be considered incidental to the cost of the project.

.10 MODIFICATION TO MAG UNIFORM STANDARD DETAIL 522, MANHOLE SHAFT

Reference Note 5, which calls for installation of manhole steps as required by the agency. The City of Phoenix has adopted the policy that manhole steps are NOT to be installed in any storm sewer manhole. If steps are provided, they shall be removed and the hole filled with Class "B" concrete.

.11 DEFINITIONS - MAJOR ITEMS

Section 101, page 10A of MAG Specifications - The definition of major item is changed to read:

MAJOR ITEM: A major item is any bid item of work having an original dollar value equal to or greater than the amount shown below.

<u>CONTRACT AMOUNT</u>	<u>MAJOR ITEM IS DEFINED AS ANY ITEM EQUAL TO OR GREATER THAN THE FOLLOWING</u>
Up to \$1 million	\$15,000 or 3%, whichever is greater
\$1 million to \$3 million	3% of the original contract amount to a maximum of \$75,000.00
\$3 million to \$5 million	2.5% of the original contract amount to a maximum of \$90,000.00
Over \$5 million	1.5% of the original contract amount to a maximum of \$125,000.00

CONTINGENCY ITEMS

Contingency items which fall under the definition of a major item are subject to negotiation if decreased by more than twenty (20) percent.

Contingency items shall not increase more than twenty (20) percent without being subject to renegotiation, regardless of the percentage of that item relative to the total contract amount.

.12 HAUL PERMIT

On any project, when the quantity of fill or excavation to be hauled exceeds 10,000 C.Y. or when the duration of the haul is for more than twenty (20) working days, the Contractor shall:

- A. Obtain a written (no fee) haul permit from the Development Services Department.
- B. Obtain approval of the proposed haul route, number of trucks, etc., by the Street Transportation Department.

NOTE: Obtaining the haul permit and the approval by Street Transportation does not release the Contractor from strict compliance with MAG Subsection 108.5, Limitation of Operations.

.13 MAG SUBSECTION 105.15(B) FINAL ACCEPTANCE

Delete this subsection and substitute the following:

B. Substantial Completion

The work may be judged substantially complete when all construction has been completed with the possible exception of final inspection punch list work. The purpose of granting or acknowledging substantial completion is to stop contract time. This is particularly important to the Contractor if contract time is exhausted or nearly so and/or punch list work is anticipated to extend beyond the allotted time. Granting of substantial completion will eliminate the possibility of incurring liquidated damages or additional liquidated damages beyond the substantial completion date, whichever case may apply.

In the event that the Engineer grants substantial completion, the Contractor shall have thirty (30) days thereafter to complete punch list work, unless additional time is granted-in writing--by the

Engineer. In no case shall a Contractor be granted more than thirty (30) days to complete punch list work, unless there are extenuating circumstances such as delay in shipment of a specialized piece of equipment, labor strike, or other circumstances beyond the Contractor's control which would necessitate a further time extension.

C. Penalty for Failure to Complete Punch List Work Within Specified Time

In the event the Contractor fails to complete the punch list work within thirty (30) days following the contract completion date, or in the case of specialized situations within the additional time allotted by the Engineer, the Contractor may be declared in default, and the Engineer may order the work completed by others.

In the event of default, as described herein, the Engineer shall withhold from the Contractor's final payment, an amount equal to at least twice the estimated cost of the remaining work. In addition, the Engineer shall withhold the retention deducted from contract progress payments until all punch list work has been satisfactorily completed, whereupon twice the amount of the actual cost of completing the work shall be deducted from the Contractor's final payment and the remaining funds, if any, including the contract retention, shall be released in accordance with the conditions set forth in contract retention.

D. Contract Retention

This project shall not be considered complete until all work has been completed, including punch list work. Under no circumstances shall a Contractor receive any portion of the legally retained progress payments until the City has granted a final acceptance and/or acknowledged substantial completion. The following conditions shall apply to each case:

1. Substantial Completion: The Engineer may reduce outstanding contract retention to not less than one (1) percent of the total contract amount, upon granting substantial completion, if the value of the punch list work is estimated to be less than one (1) percent of the total contract.
2. Project Acceptance: Project acceptance implies that all punch list work is done and the improvements have been accepted by the City. Under these conditions, the retention will be fully released to the Contractor subject only to the signing of the standard claims affidavit and hold harmless clause required for all contracts.

3. Final Release of Contract Retention and/or Release of More Than Ninety (90) Percent of the Contract Funds: Prior to final payment and release of monies retained and/or in the case of substantial completion where the Contractor has requested a reduction in contract retention, the Contractor will be required to sign a claims affidavit agreeing to hold the City harmless from any and all claims arising out of the contract.

.14 UNDERGROUND FACILITIES

The Contractor will make whatever investigation it deems necessary to verify the location of underground utility facilities. If such facilities are not in the location shown in the drawings, then (regardless of whether this is discovered prior to or during construction) the contractor's remedies, if any, pursuant to Art. 6.3, Chapter 2, Title 40, A.R.S. (A.R.S. 40-360.21 through 40-360.32, "Underground Facilities"), shall be the contractor's sole remedy for extra work, delays and disruption of the job, or any other claim based on the location of utility facilities. Locations of utility facilities shown on drawings furnished by the City are to be regarded as preliminary information only, subject to further investigation by the contractor. The City does not warrant the accuracy of these locations, and the contractor, by entering into this contract, expressly waives and disclaims any claim or action against the City under any theory for damages resulting from location of utility facilities.

The Contractor shall be responsible for obtaining all Blue Stake utility location information, and for performing all requirements as prescribed in A.R.S. 40-360.21 through .29, for all underground facilities, including those that have been installed on the current project, until the project is accepted by the City.

At least two (2) working days prior to commencing any excavation, the Contractor shall call the BLUE STAKE CENTER, between the hours of 7:00 a.m. and 4:30 p.m., Monday through Friday for information relative to the location of buried utilities. The number to be called is as follows:

Maricopa County 263-1100

SPECIAL PROVISIONS

.01 TRAFFIC CONTROL

Add the following to City of Phoenix Supplement to MAG, Subsection 401.10, Payment:

Payment for traffic control will be on a lump sum basis for Traffic Control Devices.

.02 TRAFFIC REGULATIONS

A. The following shall be considered major streets:

32nd Street

Utopia Road

B. All traffic and/or traffic control devices on this project shall be provided, maintained and/or controlled as specified in the City of Phoenix Traffic Barricade Manual, latest revision.

C. Permission to restrict City streets, sidewalks and alleys (street closure permits) shall be requested as specified in Section III of the Traffic Barricade Manual.

D. Unless otherwise provided for in the following "Special Traffic Regulations", all traffic on this project shall be regulated as specified in Section IV of the Traffic Barricade Manual.

E. No deviation to the "Special Traffic Regulations" will be allowed or implemented unless submitted to the Engineer for review and approval two (2) weeks prior to proposed work.

.03 SPECIAL TRAFFIC REGULATIONS

The Contractor shall maintain 32nd Street open to traffic (minimum of one lane in each direction, plus left turn lane) at all times. Utopia Road, 28th Street, 29th Street, 29th Place, 30th Street, and 30th Place may be closed to through traffic when construction requires - 8:30 A.M. to 4:00 P.M., weekdays. During other times, two lanes (one each way) shall be maintained.

Police Officer Requirements

The Contractor shall provide one off-duty police officer at the intersection of 32nd Street and Utopia Road from 6:00 a.m. to 7:00 p.m. weekdays, and during working hours nights and weekends when traffic at the intersection is restricted to less than four lanes.

When construction activities do not restrict traffic through the intersection, police officer hours may be reduced or suspended at the direction of the Engineer.

Local Access Requirements

The Contractor shall maintain local access to all side streets, access roads driveways, alleys, and parking lots at all times and shall notify residents 72 hours in advance of any restrictions which will affect their access. The Contractor shall restore the access as soon as possible. If the primary access cannot be restored in a timely manner, the Contractor shall provide an alternative which shall be pre-determined with the residents prior to imposing any restrictions. Any local street restrictions imposed shall be such that local area traffic circulation is maintained.

Business Access Requirements

Access shall be maintained to adjacent businesses at all times during their hours of operation. Access may be maintained by such measures as constructing driveways in half sections, or by providing bridging over new concrete. Properties having more than one point of access shall not have more than one access restricted for more than fourteen (14) calendar days at any given time. Access to adjacent driveways shall be provided during all non-working hours. Any business restrictions shall be coordinated with the affected business in writing at least seven (7) days prior to imposing restrictions.

Pedestrian Access Requirements

The Contractor shall ensure that all sidewalks on this project remain open and safely usable at all times. Such measures as backfilling or ramping to existing sidewalks, or providing alternate sidewalk areas adjacent to existing sidewalks may be used. In high pedestrian use areas, the Engineer may request temporary hard-surface walkways, such as plywood sheets to be installed at no additional cost to the City.

School Access Requirements

The Contractor shall provide clean and safe school zones, crosswalks, and walkways for students attending nearby schools during all hours of school use.

This may require backfilling trenches, temporary pavement, shoring, plating, or pedestrian bridges with handrails across open trenches.

In addition to school zones and crosswalks, the Contractor shall maintain accessibility to all school bus routes during all hours of school use. The Contractor shall notify the school principal(s), and the school Transportation Director at least seven (7) days prior to any restrictions, and shall restore access as soon as possible.

Sanitation Pick-up

The Contractor shall provide sanitation pick-up for affected residents by relocating trash containers, or by providing alternative measures acceptable to the Sanitation Division of the City Public Works Department.

Special Sign Requirements

The Contractor shall provide, erect, and maintain advance notification; informational; and directional access signs (for businesses, churches, hospitals, etc.) that may be required by the Engineer. The cost shall be included in the bid item for Traffic Control Devices.

Flagging of Traffic

No flagging of traffic will be permitted during the peak traffic hours of 6:00 a.m. to 8:30 a.m. and 4:00 p.m. to 7:00 p.m. weekdays. If construction requires, intermittent flagging will be allowed from 8:30 a.m. to 4:00 p.m. to facilitate access for heavy construction equipment.

Traffic Control Plan

The Contractor shall submit a traffic control plan for approval, showing placement of all traffic control devices, including all conflicting signs to be covered/removed or relocated, or other features that may conflict with the placement of temporary signage. This plan shall be professionally drawn on a 24" x 36" reproducible medium, and shall be submitted to the Engineer at the Pre-Construction meeting.

Safety Fencing Requirement for Trenches and Excavations

The Contractor shall provide safety construction fencing around all open trenches and excavations during all non-working hours.

The Contractor shall provide for the safety and welfare of the general public by adequately fencing all excavations and trenches that are permitted by the Engineer to remain open when construction is not in progress.

Fencing shall be securely anchored to approved steel posts located six (6) feet on centers, having a minimum height of six (6) feet, and shall consist of wire mesh fabric of sufficient weight and rigidity to adequately span a maximum supporting post separation of six (6) feet.

The fencing, when installed about the periphery of excavations and trenches, shall form an effective barrier against intrusion by the general public into areas of construction. The Contractor, at all times when construction is not in progress, shall be responsible for maintaining the fencing in good repair, and upon notification by the Engineer, shall take immediate action to rectify any deficiency. Prior to the start of any excavating or trenching required for the execution of the proposed work, the Contractor shall submit to the Engineer for approval, detailed plans showing types of materials and methods of fabrication for the protective fencing.

There will be no separate measurement or payment for furnishing, installing, or maintaining protective fencing. The cost shall be considered incidental to the cost of the pipe and/or structures.

.04 SEQUENCE OF CONSTRUCTION

The sequence of construction shall conform to the requirements of the Special Traffic Regulations.

The project shall follow a phasing plan approved by the Engineer. All lanes shall be maintained on a paved surface at all times during construction. This may be accomplished by using existing, new, or temporary asphalt pavement. Trenches shall be completely backfilled and either paved with temporary asphalt pavement, or covered with metal plating as necessary to comply with this requirement and the "Special Traffic Regulations".

Night work will not be allowed on this project.

The right to direct the sequence of construction is a function vested solely with the Engineer. Prior to commencement of the work, the Contractor shall prepare and submit to the Engineer, a written phasing plan and work schedule for the project. This plan and work schedule shall be submitted to the Engineer at the Preconstruction Conference for review.

When approved, the phasing plan and work schedule shall not be changed without the written consent of the Engineer. Orderly procedure of all work to be performed under this contract shall be the full responsibility of the Contractor. The work schedule shall include the hours per day and the days per week that the Contractor plans to work on the project site.

.05 WORK HOURS

The following paragraphs shall be added to Section 108.5 of the MAG Specifications:

Regular working hours shall be defined as one 8-1/2 hour shift per day, Monday through Friday, exclusive of City holidays.

Work in excess of regular working hours shall be defined as overtime. For overtime which becomes necessary, the Contractor shall make a written request to the Engineer at least eight (8) calendar days before the desired overtime. The request shall include the duration, dates, times, reason for overtime, and a statement of the consequences if overtime is not approved.

The Contractor shall not schedule any overtime work which requires inspection, survey, or material testing without written permission from the Engineer two (2) working days before the proposed overtime work. The Engineer reserves the right to deny the requested overtime. If an overtime request is denied, the Engineer may extend the contract time at no additional cost to the City, including extended overhead costs.

Unscheduled Overtime

Overtime that is not requested and approved in accordance with the above procedure shall be defined as unscheduled overtime. All costs (including appropriate overhead) shall be paid by the Contractor by deduction from the contract.

Emergency Overtime

An emergency is defined as work required for a situation that is not within the Contractor's control.

With the Engineer's approval, the Contractor will be permitted to work overtime without being responsible for paying the City's costs.

.06 BACKFILL TYPE REQUIREMENTS FOR PIPE TRENCHES

Type "B" backfill, as shown on MAG Detail 200, shall be used for all mainline pipe installations across major, collector, or other signalized intersections. At a minimum, the extent of this Type "B" backfill shall be from curb-return-to-curb-return through the intersection, unless noted otherwise on the plans or in the Special Provisions. Type "B" backfill shall also be used for all lateral pipe connections in ALL streets. Type "A" backfill, as shown on MAG Detail 200, may be used at all other locations, unless noted otherwise on the plans or in the special provisions. Type "A-modified" backfill (suitable native material as specified in City of Phoenix Supplement to MAG Specification Section 601.4.3) may be used in place of Type "A" backfill, from the top of bedding to the specified pavement subgrade level. There is no separate measurement or payment for pipe backfill. The cost is considered included in the bid price for furnishing and installing the pipe.

The pavement replacement section shall be as specified on the plans or in the special provisions, and shall be paid for by the square yard or by the ton, whichever is indicated in the special provisions and on the bid proposal.

.07 STORM SEWER PIPE SIZE OPTION

The Contractor may substitute the next larger multiple of 6-inch size storm sewer pipe for the intermediate 3-inch size pipes shown on this project at his discretion. The cost of the increase in size shall be borne by the Contractor. The intermediate 3-inch size pipe will remain in the proposal as the required size. If the Contractor elects to use the next larger multiple of 6-inch size pipe he shall be responsible for any utility or any other conflict caused by the increase in the size of the pipe. There shall be no extension of time granted for any delay caused by these conflicts.

.08 STORM SEWER CONSTRUCTION MATERIAL AND LAYOUT SUBMITTALS

Prior to the manufacturing of the pipe for any curvilinear sections, prefabricated bends, or special sections, the Contractor shall submit material and layout drawings to the Engineer in accordance with the procedures contained in the City of Phoenix Supplement, latest edition.

Submittals shall show layout, stationing, laying length, D-load, detailed fabrication drawings, and any other pertinent data.

In addition, a list of catch basin connector pipes shall be submitted. The list shall contain the following information:

- A. Inside diameter, type of material to be used, and, the D-load rating shall be shown.
- B. Station at which pipe joins mainline.
- C. Number of sections of pipe and laying length of sections.

.09 SPECIAL BEDDING FOR MAINLINE PIPE

The Contractor shall utilize a cement-enriched slurry aggregate base course bedding for all mainline storm drain pipe. The slurry aggregate base course shall be per MAG Specification Section 728. The slurry shall be placed at a minimum from the outside bottom of the pipe to the springline of the pipe. The slurry shall have a minimum 8-inch slump, and a minimum of 25 psi compressive strength and a maximum of 100 psi based on a 28 day test. Slurry aggregate base course bedding is not required for catch basin connector pipes.

The Contractor, at his option, may excavate a trench having a cross-section with a rounded bottom rather than a flat bottom. If this option is chosen, the trench cross-section must maintain a minimum of 6-inches between the outside wall of the pipe and the trench wall. The minimum trench width at the springline for each side of the pipe, as specified in Section 601, may be reduced to 6-inches for all pipe sizes if this option is used.

The Contractor, from Station 61+87 to 63+19.20 shall use and elsewhere, at his option, may use slurry aggregate base course from the springline to one (1) foot over the outside top of pipe. If the Contractor elects to use slurry from the springline to one (1) foot over the outside top of corrugated steel storm drain pipe, the leakage test will not be required.

There will be no separate measurement or payment for special cement-enriched slurry aggregate base course bedding. The cost shall be considered incidental to the cost of the pipe.

.10 PRECAST BOX CULVERT

In lieu of the ADOT standard box culvert shown on the project plans, the Contractor may install a precast box culvert conforming to the following specifications:

A. MATERIALS AND DESIGN

Sections that have been damaged in shipment will be rejected at the point of delivery.

The design of the precast box culvert shall conform to ASTM designation C-789 or C-850, "Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers" (Latest Edition), using an earth load of 140 pounds per cubic foot. Concrete shall be Class "S", $F_c=5,000$ psi, conforming to Section 1006 of the ADOT Standard Specifications (1990 Edition).

All designs shall be submitted to the Engineer for approval. Computer printouts of the designs are acceptable, provided data also is submitted verifying that the adapted computer program complies with the specified design criteria. Testing of the individual box culvert sections will not be required, but materials certification and testing will be required for the concrete and reinforcing steel, as well as an affidavit of compliance for the completed pipe sections.

Lifting devices may project above the surfaces of the sections after placement, provided they do not interfere with the backfilling of the culvert, the base courses of the new roadway, or the placement of utility crossings. lift holes may be cast in the top slab to handle the box culvert sections, in accordance with ASTM C-789, paragraph 11.1.

The maximum allowable tolerances or deviations shown on the drawings shall be in accordance with ASTM Standard C-789, paragraph 11.1.

During the precasting process, annular rings shall be installed in the walls, at the locations shown on the project plans for the connector pipes.

B. JOINTS FOR PRECAST BOX CULVERT

Connecting joints shall be made using cold applied, pre-formed plastic gaskets. These gaskets shall be the sole elements of the joints depended upon to provide watertightness. The joints shall conform to Section 9 of ASTM Designation C507-84a or Section 8 of ASTM Designation C-789 (Latest Edition), whichever is applicable. Prior to installation, a detailed design of the joint or joints, including the joint sealing compound, shall be approved by the engineer. Also, in the assembled position, on a straight alignment, the design shall include minimum and maximum interior joint openings; and in the maximum deflected position, it shall include the maximum interior joint opening.

The gasket sealing the joints shall be "Ramnek", as manufactured by K.T. Knyder Company, Inc., "ConSeal", as manufactured by Concrete Sealants, Inc., or an alternate approved by the Engineer. The gasket shall be produced from blends of refined hydrocarbon resins and plasticizing compounds, reinforced with inert mineral filler, and shall contain no solvents, irritating fumes, nor obnoxious odors. The gasket joint sealer shall not depend on oxidizing, evaporating, nor chemical action for its adhesive or cohesive strength, and shall be supplied in extruded ropeform of suitable cross-section. The size of the plastic gasket joint sealer shall be in accordance with the manufacturer's recommendations and sufficient to obtain a visible squeeze-out. The gasket joint sealer shall be protected by a suitable wrapper so designed that, when removed at the proper time, the jointing sealing compounds, as shipped, shall meet the following requirements, when tested in accordance with the test methods shown:

COMPOSITION	TEST METHOD	TYPICAL ANALYSIS
Bitumen (Petroleum PLASTIC Content)(% by Weight)	A.S.T.M. D-4	50 - 70
Ash-Inert Mineral Matter	Federal Supply Service S-210A	30 - 50
Volatile Matter @ 325 F)	A.S.T.M. D-6	2.0 Max.

The gasket joint sealing compound shall show no visible deterioration when immersed separately for 30 days at ambient room temperature in the following four solutions: 5 percent caustic potash; 5 percent hydrochloric acid; 5 percent sulfuric acid; and saturated H₂S. The physical properties of the gasket joint sealing compound, as shipped, shall meet the following requirements:

PROPERTY	TEST METHOD	TYPICAL ANALYSIS
Specific Gravity @ 77 F	A.S.T.M. D-71	1.20 Min 1.35 Max
Ductility @ 77 F (cm) Min	A.S.T.M. D-113	5.0 Min
Softening Point	A.S.T.M. D-36	275 F Min
Penetration		
32 F (300 g) 60 Sec	A.S.T.M. D-217	75 Min
77 F (150 g) 5 Sec	A.S.T.M. D-217	50 Min 120 Max
115 F (150 g) 5 Sec	A.S.T.M. D-217	150 Max
Flashpoint C.O.C. F	A.S.T.M. D-92	600 F
Fire Point C.O.C. F	A.S.T.M. D-92	625 F

In addition to the gasket, the entire depth of the finished inside joint shall be filled with mortar. Joints will not be mortared until at least the next two joints are in place. Mortar shall be in accordance with MAG Section 736.1.1.

C. BEDDING & BACKFILL FOR PRECAST BOX CULVERT

Bedding - Precast box culvert sections shall be bedded on a minimum 3 inch thick layer of ABC or Type B Select material, compacted to 95%.

Backfill - Backfill for precast box culvert sections shall be Type "B" as shown on MAG Detail 200. At the Contractor's option, cement-enriched slurry aggregate base course (as specified elsewhere in these special provisions) may be used from the bottom of the box to one foot over the top of box.

.11 ASPHALT CONCRETE PAVEMENT PERMANENT ROADWAY SECTION

The asphalt concrete for the permanent pavement replacement shall be 4 inches compacted thickness of Type C-3/4 dense grade asphalt laid in two courses. The first course shall have a compacted thickness of 2 inches. The second course shall have a compacted thickness of 2 inches.

.12 **SOILS INFORMATION**

The material boring logs shown on the plans or included in these specifications are included for the Contractor's convenience only. It is not intended to imply that the character of materials shown in the logs is representative throughout the project. **The soil borings are indicative of the soil characteristics only at the location and to the depth of each of the borings.**

Even if not specifically shown on the boring logs, the Contractor may encounter large cobbles, boulders, caliche, conglomerate, hard rock, perched groundwater, historic or prehistoric cultural resources, or other differing site conditions on this project. **No additional compensation will be made for any differing site condition that may be encountered.**

.13 **DUST PREVENTION**

The Contractor shall prevent any dust nuisance due to construction operations in accordance with MAG Specifications, Section 104.1.3, Cleanup and Dust Control.

.14 **TEMPORARY PAVEMENT**

Temporary pavement shall be asphalt concrete, Type C-3/4, 2-inches thick. The temporary pavement shall be placed as required to maintain traffic on pavement at all times, or as directed by the Engineer.

On this project, it is expected that no more than **100 tons** of Type C-3/4 temporary asphalt pavement will be required.

There will be no direct measurement or payment for furnishing, installing, maintaining, or removing the first **100 tons** of temporary asphalt pavement, the cost being considered incidental to the cost of the project. If **more** than the expected amount of temporary asphalt pavement is required by the Engineer, a fair contract unit price based on actual and recent historic unit bid prices for permanent asphalt pavement will be negotiated and paid to the Contractor.

.15 **MEASUREMENT AND PAYMENT**

Measurement and payment for all pay items in the bid proposal shall be as indicated in the applicable Standard Specification, City of Phoenix Supplement, Special Provision and the proposal sheet.

A. Sidewalk Ramps

Sidewalk ramps shall be constructed in accordance with Phoenix Standard Details or special details called out on the plans.

Payment will be made under the bid items for "SIDEWALK" and "CURB AND GUTTER" and shall include all cost for forming and finishing. The cost of the special curb at the back of sidewalk ramp shall be measured and paid for as "SIDEWALK".

B. Prefabricated Tees and Wyes

The cost of the basic pipe and material required to construct and install prefabricated tees and wyes is included in the unit price bid for main and connector pipes. Bid item for prefabricated tees and wyes is for cost of manufacturing only.

C. Catch Basins

Add to Subsection 505.10 the following:

"Storm sewer catch basins shall be paid for at the unit price bid for each type of catch basin, as represented by the respective bid item, regardless of dimensional or other differences occurring within a particular type. The unit price to be paid under these items shall be compensation in full for furnishing and placing catch basin structures as shown on the plans and as specified, including, when applicable, all removal and replacement of existing curb, gutter and sidewalk, concrete, reinforcing steel, forming, vibrating, finishing, curing, access opening frame and cover, embedded angles, grating, anchor bolts, concrete aprons, structural excavation, backfill, compaction, pavement replacement and any necessary modifications of catch basin structures during construction.

D. Manholes

Storm sewer manholes shall be paid for at the unit price bid for each type, as represented by the respective bid item, regardless of dimensional or other differences occurring within a particular type. The unit price to be paid under these items shall be compensation in full for furnishing and placing manhole structures as shown on the plans and as specified, including concrete, reinforcing steel, forming, vibrating, finishing, curing, cast iron manhole frame and

cover, frame adjustment to grade, structural excavation, backfill, compaction and any pavement replacement in excess of the applicable pay widths assigned to the adjacent pipes.

E. Concrete Pipe Collars

There shall be no measurement or payment for construction of pipe collars for pipe less than 24-inches in diameter.

For pipe collars on pipe 24-inches or larger, measurement shall be the number of such pipe collars constructed.

Payment will be made at the unit bid price for the proposal bid item "CONCRETE PIPE COLLARS FOR PIPE 24-INCHES OR LARGER, STANDARD DETAIL 505" and will be compensation in full for all labor, material, equipment and incidentals required for construction.

F. Pipe Plugs and Permanent Pipe Supports

Pipe plugs and permanent pipe supports shall be paid for at the unit price bid for each unit installed regardless of dimensional or other differences occurring within particular type. The unit price bid shall be compensation in full for furnishing and placing pipe plugs and permanent pipe supports, including brick work, concrete, reinforcing steel, forming, vibrating, grouting, curing and any required earthwork.

G. Pipe Support Option

Where sanitary sewer lines (vitrified clay pipe 12-inches or smaller) cross the mainline construction, the Contractor has the option of permanently supporting the sanitary sewer line per MAG Detail 403-1, 403-2 or 403-3.

Interior coating of the ductile iron pipe shall be per "LINING FOR DUCTILE IRON PIPE USED FOR SEWER LINES" in these Special Provisions.

H. Permanent Pavement Replacement (Asphalt Concrete)

Measurement and payment for permanent pavement replacement will be by the square yard. In computing the pay quantity, the field measurement along the centerline of the trench and the trench pay width as listed in MAG 336 will be used. When the longitudinal trench is only partially in the pavement, adjustments in the pay width will be made by the Engineer.

There will be no separate measurement and payment for trench backfill. The cost of the backfill will be included in the cost of the pipe.

Where pavement replacement takes place outside the normal pay width for a pipe trench, the cost for sawcutting, removing pavement, grading and compaction shall be incidental to the cost of pavement replacement.

I. Removal of Pipe, Backfill and Compact

The work under these items shall consist of the removal of existing pipe as specified in plans or as necessary. The work also consists of the disposal of all pipe, any broken concrete and debris, and backfilling and compacting the void. Backfill shall be in accordance with City of Phoenix Subsection 336.3. Compaction shall be in accordance with City of Phoenix Section 601.

Measurement shall be by the linear foot and payment will be made at the unit price stated in the bid proposal. There will no extra measurement or payment for removal of any pipe that may be concrete-encased.

J. Removal of Structures, Backfill and Compact

The work under this item shall consist of the removal of irrigation structures, storm water inlets, headwalls, catch basins, concrete scuppers, and manholes at the locations designated on the plans and/or as necessary for the construction of this project and shall include the disposal of the broken concrete and debris, backfilling and compacting. Backfill shall be in accordance with City of Phoenix Subsection 336.3. Compaction shall be in accordance with City of Phoenix Section 601.

Payment will be made at the lump sum price quoted in the bid proposal for bid item "REMOVE STRUCTURE, BACKFILL AND COMPACT".

K. Miscellaneous Removal and Other Work

This item includes furnishing all labor, material, tools and equipment to complete the removal and disposal of the items specified on the plans, listed in MAG Section 350 and City of Phoenix Supplement thereto and other work of a minor nature which may develop during course of construction, including any encroaching items not removed by property owners.

The work under this item shall also include, but not be limited to the following, as designated on the construction plans or directed by the Engineer.

1. Restoration of landscape irrigation systems.
2. Removal and reconstruction of brick landscape borders.
3. Restoration of existing rock surfaced, irrigated landscape retention areas.
4. Removing, backfilling and compacting existing drainage flume and spillway.
5. Removing existing guardrail.
6. Removing unusable fence materials.
7. Removing and replacing existing waterline thrust blocks.
8. Removing existing mortar channel lining (less than 12" thick).
9. Removing existing concrete block wall.
10. Removing plants and trees, 12" or less in diameter.

Payment will be made at the lump sum price quoted in the bid proposal for bid item "MISCELLANEOUS REMOVAL AND OTHER WORK".

.16 CONCRETE CHANNEL LINING

The bid item, "Concrete Channel Lining" shall include the construction of 4" thick, and 12" thick reinforced concrete channel lining as shown on the project plans. Channel lining shall be measured and paid for on a square yard basis, measured parallel to the shaped surface of the new channel lining.

.17 FILL CONSTRUCTION FROM STA. 32+07 TO STA. 36+10

Material needed to construct the fill the area outside the roadway right-of-way (Sta. 32+07 to 36+10, Right) as shown on the project plans, shall be obtained from the excess material excavated for this project. This area shall be filled and compacted in accordance with Section 211 of the MAG Uniform Standard Specifications, except that compaction density shall be 95% throughout. This material is being placed here in cooperation with the affected property owner. The City has received permission from

this property owner to place the material here, in accordance with these special provisions. If for any reason, there is not adequate material to completely fill this area as shown on the plans, the area shall be filled as far as the material will go. No material will be imported to fill this area.

There will be no separate measurement or payment for this work. It shall be considered incidental to the cost of furnishing and installing the storm drain pipe.

.18 HEADWALLS

Reinforcing steel for headwalls shall be in accordance with Section 727 of the Uniform Standard Specifications and shall be minimum grade 40 with $F_x=20,000$ psi for bar size #6 or smaller, and grade 60 with $F_x=24,000$ psi for bar size #7 or larger .

Mortar shall be Type S, $f'_c=1800$ psi and grout shall be fine, $f'_c=2500$ psi in accordance with Section 775 of the Uniform Standard specifications.

Portland Cement concrete for headwalls shall be Class "A", $f'_c=3,000$ psi conforming to Section 725 of the Uniform Standard Specifications.

All headwalls shall be paid for at the unit price bid under the items, "HEADWALL FOR 90" PIPE, PER SPECIAL DETAIL"; "INLET HEADWALL FOR 2 - 6'X3' BOX CULVERT PER SPECIAL DETAIL"; "OUTLET STRUCTURE FOR DETENTION BASIN PER SPECIAL DETAIL"; and "HEADWALL FOR 36" PIPE MAG STD. DET. 501-4 and PHOENIX SUPPLEMENT P-1562", and shall be full compensation for furnishing and placing headwall structures as shown on the plans and as specified herein, including aprons, access barriers, concrete, reinforcing steel, expansion bolts, pipe sleeves or bolts for handrail, handrail, precast cap units, forming, vibrating, finishing, curing, structural excavation, backfilling, compacting, and any other work necessary to provide a complete installation.

.19 MASONRY BLOCK WALL

The bid item, "6' Concrete Block Masonry Wall" shall include constructing a new masonry block wall with cap block from Station 36+40 to 37+00, Left, including that portion to be constructed above the new headwall and retaining wall. Only new masonry units may be installed which are compatible in texture and color with those of the existing masonry wall.

Measurement and payment shall be by the linear foot including that portion of the existing wall that must be reconstructed to tie in the new installation, as directed by the Engineer.

.20 MAINTAINING FIRE HYDRANT SERVICE

Prior to removing any fire hydrant from service, and prior to reactivating any fire hydrant, the Contractor shall notify the Engineer. The Contractor shall minimize the time the fire hydrant is out of service but in no event shall the out-of-service time exceed 24 hours. If in the opinion of the Engineer, the fire hydrant should be replaced, Water Distribution Division will provide a replacement fire hydrant at no cost to the Contractor. It shall be the Contractor's responsibility to pick up the replacement hydrant, and to return all old hydrants to the Water Distribution Division, 3045 South 22nd Avenue. The Contractor must get a written order (AVO) from the Engineer. The AVO must be approved by the Water Distribution Division, located at the Water Distribution Administration Office at 6202 North 24th Street (262-6509), prior to picking up the replacement hydrant.

The cost of removing and replacing any fire hydrant shall be considered incidental to the cost of relocating any waterline, as shown on the project plans.

.21 WATERLINE CONSTRUCTION

All water pipe and fittings shall be Class 50 Ductile iron pipe in accordance with MAG Section 750 and as modified by city of Phoenix Supplements. All pipe shall have polyethylene corrosion protection in accordance with MAG Section 610.5.

.22 WATER MAIN SHUTDOWN

For shutdowns that are necessary to accomplish the work, the Contractor shall make written request to Water Distribution at least three (3) calendar weeks before the shutdown. Requests shall specify location, size of line, duration, date, and time for each shutdown. Within one (1) week, Water Distribution will schedule shutdown and give written notification to the Contractor. Any schedule revisions requested by the Contractor must be in writing. Water Distribution's revised schedule will be available within one (1) week.

The Contractor shall be responsible for maintaining accessibility to the valve operating nuts for all valves within the project boundaries. Failure to maintain accessibility to valves shall be cause for cancelling shutdown, and the Contractor will be required to request a revised schedule.

The Water Services Department is indemnified for any and all resultant costs incurred by the Contractor such as, but not limited to traffic control, delays, loss of incentives, standby and penalties if the Contractor did not properly request a shutdown; failure to maintain accessibility to valves; or if the Contractor's scheduled work did not progress to the anticipated shutdown schedule.

.23 EXISTING WATER SERVICES AND METERS

- A. The Contractor shall replace and/or extend existing water service lines at the stations listed in these specifications or on the plans in accordance with Detail P-1342. The Engineer will determine when the existing lines are unsatisfactory and must be replaced. Generally, existing copper in good condition will be relocated.

The water service shall include, but is not limited to, locating the present tap, trenching, bedding, backfilling, furnishing and installing new service pipe, new appurtenant fittings, new curb stop and new meter coupling. The existing tapping saddle and corporation stop shall remain, but the Contractor shall not use any other salvaged service connection components. In the event there is no tapping saddle, the Contractor shall install one. The cost of the saddle and reinstallation of the corporation stop shall be considered incidental to the water service replacement.

Inserts or adapters required to connect to the corporation stop are available at the Water Services Department yard at no cost to the Contractor. The Contractor must obtain a written order (AVO) from the Engineer before picking up said items.

Bedding and backfill shall be full depth aggregate base course. Payment for furnishing and compacting the aggregate base course shall be included in the bid item for relocating existing water services.

The Contractor shall schedule his work so that no open trenches are left overnight.

Materials for water service connections shall conform to MAG Section 754 and City of Phoenix Supplement 610.4.4 and 610.4.5. Joints in the copper tubing shall be made by the use of approved fittings, properly soldered or by means of approved compression fittings such as flared joints or pack joints.

- B. Water meter relocation consists of disconnecting the meter, moving the meter, meter box and cover from the existing location to the new location and reconnecting in accordance with

Details P-1342 and P-1363. The meter box and cover shall be set to match the grade at the new location.

Any water meter boxes and/or covers damaged by the Contractor during course of construction shall be replaced in kind at his expense.

It is anticipated that some water meter boxes and/or covers may require replacement due to prior damages not due to the fault of the Contractor. The Water Services Department will furnish replacement water meter boxes and covers at no cost, however, the Contractor must obtain a written order (AVO) from the Engineer and pick up said items at a Water Services Department yard at his expense.

Water meter boxes and covers shall be Type 1, 2 or 3 in accordance with MAG Details 310, 311, 312, and 320 and P-1315.

All materials and fittings shall conform to the requirements of Section 754 and Phoenix Supplement 610.4.4 and 610.4.5. No salvaged service connection components shall be used.

- C. All valve shutdown fees will be waived for work on water services and meters under these specifications. When it becomes necessary to shut down existing water mains and services to conduct replacements, no main shall be left out of service for more than one (1) hour and no individual service will be disrupted for more than five (5) continuous hours. Main valves shall be operated by representatives of the City's Water Services Department. Shutdowns will not begin before 8:00 a.m. and will not extend past 4:00 p.m.

When it becomes necessary to shut down an existing water service in order to construct a replacement, it shall be the Contractor's responsibility to notify all customers in advance that the water service will be turned off. The customers shall be notified in writing at least 24-hours in advance and also verbally the day the shutdown will occur. Initial notification shall include the reason for the shutdown, the date, the time and duration the water service will be shut off. A copy of the notification shall be given to the Engineer.

When any construction encroaches into an improved yard area, in or outside the right of way, the Contractor shall leave these areas in as good a condition or better after work is completed.

For grass areas, the Contractor shall remove the sod in the construction area, store it, keep it moist and replace it immediately after construction is completed. At his option, the

Contractor may elect to resod the area in kind instead of storing and maintaining the original sod.

For desert landscaped areas, the Contractor shall restore the decomposed granite and rock covered areas using material to match the existing in type and quality.

All sprinkler systems disturbed during construction, shall be restored to an operational system covering the same area as before.

- D. Measurement for extending and/or replacing water services will be made to the nearest linear foot from the point of connection to the existing line or curb stop, whichever is applicable.

Payment for extending and/or replacing water services will be made at the unit price bid per linear foot under the proposal item, "3/4" and 1" Water Service Replacement per Special Provisions".

- E. Measurement for water meter relocation will be made per each water meter regardless of size up to and including 2-inch. Payment for water meter relocation will be made at the unit price bid per each under the proposal item "Relocate Existing Water Meter, Box, and Cover" which shall include all sizes encountered on the project up to and including 2-inch.

.24 WATER MAIN REALIGNMENT (CONTINGENT ITEM)

In the event of unavoidable conflict between pipeline construction with an existing water main, the Contractor shall vertically and/or horizontally realign the water main in accordance with Standard Detail 370 and Section 610.

The water main realignment shall include, but not be limited to, excavation, backfill, compaction, pipe, fittings, offsets, couplings, sleeves, blocking, joint restraint and hardware. The realigned water main shall be visually inspected for leaks under line pressure prior to backfilling.

The Contractor shall arrange with the Engineer to have the line shut down in order to perform his work. Representatives of the Water Services Department will take the line out of service, provide necessary valve cut-ins and flush the line prior to placing it back in service at no cost to the Contractor.

Materials for water main realignment shall be cast iron or ductile iron in accordance with Section 610.3.

Measurement will be made per each realignment constructed for the various water main sizes encountered.

Payment for realignment of water mains will be made at the unit price bid per each under proposal items "WATERLINE REALIGNMENT (6" AND 8")" and "WATERLINE REALIGNMENT (10" AND 12)".

.25 LINING FOR DUCTILE IRON SEWER PIPE AND FITTINGS

All ductile iron pipe for conveying sewage shall be in accordance with AWWA C-150:

- 14" inside diameter and smaller shall be pressure class 350
- 16" inside diameter thru 24" inside diameter shall be pressure class 250.
- 30" inside diameter and larger shall be pressure class 150

Ductile iron pipe with a minimum wall thickness of Class 50 may be substituted in lieu of the above.

The lining shall cover, at a minimum, the inner surfaces of the pipe and the fitting from the plain end or beveled spigot end to the rear of the gasket socket. If flanged fittings and pipe are included in the project, the lining must not be used on the face of the flange, however full face gaskets must be used to protect the ends of the pipe. At the ends of the pipe and fittings, the lining thickness shall taper for a distance of 4 inches to a minimum thickness of 10 mils.

All ductile iron sewer pipe shall have a protective lining with a nominal thickness of 40 mils and a minimum thickness of 35 mils of **Protecto 401 (ceramic epoxy)**, **Polythane (polyurethane)**, **SewerCoat (calcium aluminate)**, or approved equal throughout the barrel area of the pipe. However, the lining in the bell area shall transition to a minimum thickness of 10 mils at the edge of the gasket socket. The 10 mil lining shall extend into the gasket socket area to a point where the gasket would overlap the lining when it is compressed due to pipe assembly during construction. The 10 mil lining shall also continue from inside the barrel area, around the spigot end of the pipe and along the outside of the pipe to a point where the center of the gasket of the next pipe section would contact the edge of the lining on the spigot end of the previous pipe section. The thickness of the linings shall be determined by using a dry film thickness magnetic gauge at four quadrants.

Each section of pipe and each fitting shall be tested and shall have an absence of holidays when tested by a suitable holiday detector. In all cases, the barrel area of the pipe shall be tested using a voltage of 7,500 volts and a dry conductive probe.

Holiday testing shall conform to ASTM G 62-87 and NACE Standards RP0274-74 and RP0188-90 (latest revision).

The pipe manufacturer shall be solely responsible for the quality of the lining and shall supply a certification as to compliance to the specification. The certification shall state specifically the following items:

- 1) All ductile sewer pipe and fittings have a protective lining of 40 mils (35 mils min) in the barrel area, 10 mils in the bell area and 10 mils minimum on the exterior of the spigot end.
- 2) Each section of pipe and each fitting have been tested for holidays utilizing a test voltage of 7,500 volts with a dry conductive probe in the barrel area and a test voltage of 67.5 volts with a wet sponge in both the bell area and the exterior of the spigot end, and no holidays were found.
- 3) The lining material used meets the current specifications and that the material was applied as required by the specification.

If the contractor makes a field cut of the lined ductile pipe, the Contractor shall comply with the recommendations of the pipe manufacturer in applying a field coating to the end of the pipe ends. In all cases, as a minimum, a 10 mils coating shall be applied to the pipe end and shall overlap the lining by four inches and extend around the pipe end and along the outside of the pipe a minimum of ten inches. The coating shall be allowed to dry before assembly. In addition, the overlapped surface of the lining shall be roughed up to produce a 3 to 5 mil profile over the entire surface. The end result of this process is to secure proper adhesion of the field coating.

Repair

Repair of the damaged sections of the lining shall be in accordance with the lining manufacturer's recommendation or as specified above so that the repair area is equal to the undamaged lined area in all respects. All damaged lined areas and holidays shall be repaired immediately after discovery.

Holiday testing may be required by the Engineer before pipe assembly when deemed appropriate. The testing and repair requirements shall follow the procedures called for in this specification and all costs for such repairs will be the responsibility of the Contractor.

There will be no other provisions for repair of the lining of DIP.

Protective Collar

In order to protect the exterior spigot end against abrasion and damage during shipping and handling, the manufacturer shall install temporary collars on the exterior of each spigot end of each pipe section. The manufacturer shall secure the collars to the pipe to prevent accidental removal during shipping and normal handling by the Contractor. The collars are not to be removed from the pipe until right before the pipe section is to be installed or field cut.

.26 GUARDRAIL

If the Contractor desires, existing guardrail components may be salvaged and re-used at the locations shown on the project plans, and in accordance with the provisions specified for new guardrail in MAG Standard Specifications, and these special provisions.

All guardrail components which may be re-used shall be removed in such a manner as to prevent damage and minimize the loss of the components.

Existing posts, blocks, rail elements or hardware which are not required for guardrail reconstruction or which the Engineer deems unsuitable for reconstruction, shall be removed and disposed of as directed by the Engineer.

Where new bolt holes in rail elements are required, the holes shall be made by drilling or punching. Flame-cut holes will not be permitted.

Guardrail shall be paid for at the price bid per linear foot for the item, "GUARDRAIL, ADOT STANDARD DETAILS, C-10 SERIES", and shall be complete in place including excavation, backfill, supplying new guardrail components, reusing salvaged components and disposal of surplus material. Removal of existing guardrail shall be paid for under the bid item, "MISCELLANEOUS REMOVAL AND OTHER WORK".

.27 FENCES AND GATES

This work shall consist of installing steel tube gate with wood inserts and reconstructing chain link fence at the locations and in accordance with the details shown on the plans, and as provided in the MAG Standard Specifications and these Special Provisions.

The gate shall be an 6-foot wide swing type, six foot high with one inch by six inch redwood boards bolted to steel tube frame with a locking device as shown on the construction plans.

The gate shall be paid for at the unit price bid for the item, "6' STEEL GATE WITH WOOD INSERTS & LOCKING DEVICE", and shall be full compensation for furnishing the gate, together with the wood inserts, locking device, fittings and hardware; reconstructing adjacent concrete masonry unit wall; and doing all other work necessary to install the gate complete in place as specified.

Portions of the existing chain link fence designated for removal and replacement shall be constructed in accordance with the provisions in the MAG Standard Specifications for new chain link fence.

The Contractor may, at his option, construct new chain link fence or salvage and reconstruct existing chain link fence. If the Contractor elects to construct new chain link fence, the fence materials originally designated for relocation shall become the property of the Contractor.

All posts, pipe, fabric or hardware which are deemed by the Engineer to be unsuitable for use in reconstructing the chain link fence shall be removed and disposed of as directed by the Engineer.

Relocation of the existing chain link fence shall be paid at the price bid per linear foot for the item, "RELOCATE CHAIN LINK FENCE PER PLANS", and shall be full compensation for furnishing all labor, materials, tools, equipment to relocate the existing chain link as specified on the plans.

.28 ADJUSTING FRAMES, COVERS, CLEAN-OUTS, VALVE BOXES, AND WATER METER BOXES

The City of Phoenix Supplement to MAG Specification Subsection 345.1 DESCRIPTION shall be deleted in its entirety, and the following paragraphs shall be substituted:

Adjustment of manhole frames, covers, clean outs, valve boxes (and water meter boxes if located in the pavement) to finish grade shall be done AFTER placement of the final surface course pavement.

The concrete collar ring around the frame or valve box (as shown on MAG Details 391-1 and 422) shall be circular, Class 'A' concrete, and shall be a minimum of eight (8) inches thick, placed flush with the adjacent, new pavement surface. The concrete shall be colored black with a coloring agent approved by the Engineer. Each concrete ring shall be scored radially at quarter-circle points. Score lines shall be 1/4-inch wide by 1/2-inch deep. The concrete collar surface shall be rough broom-finished. All pavement removed for an adjustment shall be replaced with the "black" Class 'A' concrete.

A single No. 4 rebar hoop shall be placed in each adjustment collar. The hoop diameter shall be such that its placement is centered between the edge of the manhole frame or valve box, and the outside

edge of the concrete collar. The depth of the hoop shall be such that it is centered in the thickness of the collar.

Traffic shall not be allowed on the collars until the concrete has reached a minimum compressive strength of 2500 psi. On major streets, the Contractor shall use a "high-early" cement to minimize delay in re-opening the street to traffic.

Prior to commencing work on the adjustments, the Contractor shall submit a written adjustment plan and schedule to the Engineer for approval.

Sewer manhole frames and covers shall be matched, kept together, and replaced to their original locations. The Contractor shall remove existing asphalt, chip seal, or other materials from all sewer manhole covers and water valve box lids on this project. The Contractor's method for removal shall be approved by the Engineer prior to actual work. Cover cleaning shall be completed prior to adjustment of frames. In addition to cleaning, the Contractor shall drill a 3/4-inch hole near the center of all sanitary sewer manhole covers.

Missing covers will be supplied by the City of Phoenix or the appropriate private utility company when needed for replacement by the Contractor.

Measurement for adjustments shall be per each respective item. Payment for the appropriate item will be made at the unit price bid for 'ADJUST EXISTING MANHOLE FRAME AND COVER, STANDARD DETAIL 422'; 'ADJUST EXISTING TYPE 'A' WATER VALVE, STANDARD DETAIL 391-1'; 'ADJUST EXISTING TYPE 'B' WATER VALVE, STANDARD DETAIL 391-1'; 'ADJUST EXISTING TYPE 'BA' WATER VALVE, CONTINGENT ITEM'; 'ADJUST EXISTING SEWER CLEAN-OUT FRAME & COVER, STANDARD DETAIL 270'; or ADJUST EXISTING WATER METER BOX & COVER. Payment will include all labor, materials, and equipment necessary to satisfactorily clean, drill, and make complete adjustments."

.29 PUBLIC INFORMATION SERVICES (NON-BID ITEM)

The City of Phoenix shall provide a public information specialist for the community relations program on this project.

The Contractor shall cooperate with the City's public information specialist firm in the preparation of newsletters, advanced notification for service disruptions, answering questions from the public, etc.. He shall also provide schedule update information to the specialist.

The Contractor shall provide representatives as needed for all meetings with the public through out the contract period.

The cost for public information services for this project has been determined to be \$20,000.00. THIS IS NOT A BID ITEM. This cost is for P.I.S. and City use only.

The City shall pay costs associated with approved contract time extensions. However, if the Engineer determines that delays were caused by the Contractor, the additional cost for this service shall be deducted from the Contractor's final pay request.

.30 SPECIAL CONSTRUCTION REQUIREMENTS

1. The Contractor shall document existing conditions within the project area prior to construction. Documentation shall be video tape. The video tape shall not be made from a moving vehicle. One copy of the video tape shall be furnished to the City prior to the start of construction. The cost of the video taping shall be considered incidental to the cost of the project. No separate measurement or payment shall be made for this item.
2. The Contractor shall furnish the following items for City use:
 - a. Three (3) U.S. West or Bell Atlantic Mobile portable cellular phones.
 - b. Two (2) batteries for each phone.
 - c. One (1) battery charger for each phone.
 - d. U.S. West Cellular or Bell Atlantic Mobile direct 7-digit local touch tone phone service - 500 minutes per month for each phone.

The above items shall be furnished and maintained by the Contractor from the date of the Notice to Proceed to the date of Final Acceptance. The cost of these items shall be considered incidental to the cost of the project. No separate measurement or payment shall be made for these items.

3. No more than 330 linear feet of open trench shall be allowed on Utopia Road from 27th Street to 32nd Street. Trenches across driveways shall be plated to maintain access. The cost of these plates shall be considered incidental to the project.
4. The Contractor shall not be allowed to spoil trench material or store any equipment within the right-of-way of Utopia Road from 27th Street to 32nd Street.

.31 UNIFORMED, OFF-DUTY LAW ENFORCEMENT OFFICER

An hourly rate of \$21.00 has been used for the purpose of establishing a bid amount for "UNIFORMED, OFF-DUTY LAW ENFORCEMENT OFFICER". This is an allowance item and will be paid on the basis of invoiced current hourly rates.

.32 ALLOWANCE FOR EXTRA WORK

Contract allowance items are provided for the purpose of encumbering funds to cover the costs of possible change order work. The amount of the allowance item is determined by the Engineer and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project.

This allowance item provides an estimated funding to cover unforeseen changes that may be encountered and corresponding extra work needed to complete the contract per plan. Unforeseen extra work, if any, shall be as approved by the Engineer; for example, extension of unit bid prices, negotiated price or time and material, in accordance with MAG Specification Section 109.4 and 109.5.

It shall be understood that this allowance item is an estimate only and is based on change order history of similar projects. It shall not be utilized without an approved contract change order. It is further understood that authorized extra work, if any, may be less than the allowance item.

.33 MARICOPA COUNTY FLOOD CONTROL DISTRICT LICENSE

The Contractor will be responsible for obtaining a license to work in Maricopa County Flood Control District right-of-way. Work to be done in District right-of-way consists of constructing the Utopia Road Storm Drain outfall into the East Fork Cave Creek Channel, and filling and compacting a portion of a side channel that drains into the east side of the East Fork Cave Creek Channel, on the south side of Utopia Road.

In accordance with MAG Section 107.2, Permits, the Contractor will be responsible for paying all applicable fees, bonding, and insurance requirements. There will be no separate measurement or payment for obtaining this (or any other) license or permit. The cost shall be considered incidental to the cost of the project.

**BOND ISSUE OR BUDGET PROJECT
CITY OF PHOENIX, ARIZONA
ENGINEERING AND ARCHITECTURAL SERVICES DEPARTMENT**

PROPOSAL to the City Engineer of the City of Phoenix.

In compliance with the Advertisement for Bids, by the City Engineer, the undersigned bidder:

Having examined the contract documents, site of work and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute the contract documents and furnish the required bonds and certificates of insurance for the completion of said work, at the locations and for the prices set forth on the inside pages of this form.

Understands that construction of this project shall be in accordance with all applicable Maricopa Association of Governments' (MAG) Uniform Standard Specifications and Uniform Standard Details, latest revision and the City of Phoenix Supplements, latest revision to the MAG Uniform Standard Specifications and Details, except as otherwise required by the project plans and specifications.

Understands that his proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check or surety bond for an amount not less than ten (10) percent of the amount bid, as referenced in the Call for Bids.

Agrees that upon receipt of Notice of Award, from the City of Phoenix, he will execute the contract documents within 10 calendar days.

Work shall be completed within 120 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completion of the work includes lead time for obtaining the necessary materials and/or equipment and approvals.

The bidder shall acknowledge all addenda in writing. By writing the addendum number(s) below, the bidder agrees that this proposal is computed with consideration of the specification book(s) plus any addenda.

<u>ADDENDUM NO.</u>	<u>DATE</u>	<u>ADDENDUM NO.</u>	<u>DATE</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Primary : ST-930305
Index No. : ST-930305

Item No. Item ID.	Description	Unit	Approximate Quantity	Unit Price	TOTAL
Index No. : ST-930305 UTOPIA RD: 27ST -32ST					
1 M3360240	Asphalt Concrete For Permanent Pavement Replacement, Type C 3/4, 4" Thick	Sq. Yd.	4,080.00		
2 M3400400	Concrete Sidewalk, Std. Detail P-1230	Sq. Ft.	415.00		
3 M3402201	Combined Concrete Curb and Gutter, Std. Detail 220, Type "A", H=6"	Lin. Ft.	379.00		
4 M3450020	Adjust Existing Manhole Frame and Cover, Standard Detail 422	Each	1.00		
5 M3453001	Adjust Existing Type "A" Water Valve, Standard Detail 391-1	Each	3.00		
6 M3500010	Remove Portland Cement Concrete Single Curb and Curb and Gutter	Lin. Ft.	379.00		
7 M3500020	Remove Portland Cement Concrete Sidewalk, Driveway, Valley Gutter & Slab	Sq. Ft.	1,141.00		
8 M3500030	Remove Structures, Backfill & Compact	Job	1.00		
9 M3500040	Remove Pipe, Backfill & Compact	Lin. Ft.	569.00		
10 M3500055	Remove Reinforced Concrete Slab	Sq. Yd.	41.00		
11 M3500300	Miscellaneous Removal and Other Work	Job	1.00		
12 M4005206	6' Steel Gate w/Wood Inserts and Locking Device	Each	1.00		
13 M4012000	Traffic Control Devices	Job	1.00		
14 M4013000	Uniformed, Off-duty Law Enforcement Officer	Hour	100.00	21.00	2,100.00

Primary : ST-930305
Index No. : ST-930305

Item No. Item ID.	Description	Unit	Approximate Quantity	Unit Price	TOTAL
15 M4051201	Survey Marker, MAG Standard Det. 120-1, Type "A"	Each	1.00		
16 M4051202	Survey Marker, MAG Standard Det. 120-1, Type "B"	Each	4.00		
17 M4153100	Guard Rail, ADOT Standard Details, C-10 Series	Lin. Ft.	25.00		
18 M4201000	Relocate Chain Link Fence per Plans	Lin. Ft.	25.00		
19 M5051530	Concrete Catch Basin, Type "M-1, L=3-Ft" Phx. Supp. Detail P-1569-1	Each	3.00		
20 M5051540	Concrete Catch Basin, Type "M-1, L=10-Ft", Phx. Supp. Detail P-1569-1	Each	1.00		
21 M5051545	Concrete Catch Basin, Type "M-1, L=17-Ft", Phx. Supp. Detail P-1569-1	Each	5.00		
22 M5051565	Concrete Catch Basin, Type "N, Single", Phx. Supp. Detail P-1570	Each	1.00		
23 M5051579	Concrete Catch Basin, Type "N, Double, Mod", Phoenix Supp. Detail P-1570	Each	1.00		
24 M5052074	Concrete Channel Lining	Sq. Yd.	79.00		
25 M5055015	Headwall For 36" Pipe, MAG Standard Detail 501-1 And Phx. Supp. P-1563	Each	1.00		
26 M5056096	Headwall for 96" Pipe per Special Detail	Each	1.00		
27 M5057083	Outlet Structure for Detention Basin, per Special Detail	Each	1.00		
28 M5057089	Inlet Headwall for Double 6' X 3' Box Culvert, per Special Detail	Each	1.00		
29 M5057107	Box Culvert, 2 Barrel, 6' X 3', ADOT Std. B-02.20	Lin. Ft.	40.00		

Primary : ST-930305
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Item No. Item ID.	Description	Unit	Approximate Quantity	Unit Price	T O T A L
30 M5101006	6' Concrete Block Masonry Wall	L. F.	60.00		
31 M6012108	8" Waterline Replacement	Each	1.00		
32 M6014030	Permanent Pipe Support, MAG Standard Details 403-1, 403-2, or 403-3	Each	2.00		
33 M6100341	3/4" and 1" Water Service Replacement Per Special Provisions	Lin. Ft.	15.00		
34 M6101801	Relocate Existing Water Meter, Box, and Cover	Each	1.00		
35 M6103706	Waterline Realignment, 6" and 8", Contingent Item	Each	2.00		
36 M6103710	Waterline Realignment, 10" and 12", Contingent Item	Each	1.00		
37 M6104308	Cutting and Plugging Existing Water Line, 6" - 8"	Each	2.00		
38 M6180048	48" Storm Sewer Pipe	Lin. Ft.	127.00		
39 M6180054	54" Storm Sewer Pipe	Lin. Ft.	1,277.00		
40 M6180060	60" Storm Sewer Pipe	Lin. Ft.	1,255.00		
41 M6180090	90" Storm Sewer Pipe	Lin. Ft.	343.00		
42 M6180096	96" Storm Sewer Pipe	Lin. Ft.	190.00		
43 M6180427	Pipe Plug, Standard Detail 427	Each	3.00		
44 M6180505	Concrete Pipe Collar For 24" Pipe and Larger, MAG Standard Detail 505	Each	1.00		

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Item No. Item ID.	Description	Unit	Approximate Quantity	Unit Price	TOTAL
45 M6181015	15" Catch Basin Connector Pipe	Lin. Ft.	127.00		
46 M6181018	18" Catch Basin Connector Pipe	Lin. Ft.	38.00		
47 M6181024	24" Catch Basin Connector Pipe	Lin. Ft.	55.00		
48 M6181036	36" Catch Basin Connector Pipe	Lin. Ft.	34.00		
49 M6186141	48" X 48" X 18" Prefabricated Tee	Each	1.00		
50 M6186142	48" X 48" X 36" Prefabricated Tee	Each	1.00		
51 M6186043	54" X 54" X 15" Prefabricated Tee	Each	2.00		
52 M6186143	54" X 54" X 36" Prefabricated Tee	Each	1.00		
53 M6186044	60" X 60" X 15" Prefabricated Tee	Each	2.00		
54 M6186045	60" X 60" X 18" Prefabricated Tee	Each	2.00		
55 M6186070	90" X 90" X 15" Prefabricated Tee	Each	1.00		
56 M6186079	96" X 96" X 36" Prefabricated Tee	Each	1.00		
57 M6187080	90" X 90" X (Double 6' X 3' Box) Tee, per Special Detail	Each	1.00		
58 M6250010	Storm Sewer Manhole, MAG Standard Detail 521 and 522	Each	2.00		
59 M6250015	Storm Sewer Manhole Base Transition, Phoenix Supp. Detail P-1560 and MAG Std. Detail 522	Each	4.00		

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Item No. Item ID.	Description	Unit	Approximate Quantity	Unit Price	TOTAL
60 M1042005	Allowance for Extra Work	Job	1.00	80,000.00	80,000.00
61 M6009900	Pipe Price Adjustment, +/-, per Project Specifications	Job	1.00		
<p>TOTAL AMOUNT OF CONSTRUCTION BID \$ _____ <i>(Items 1 through 61 inclusive)</i> Index No. : ST-930305 UTOPIA RD: 27ST -32ST</p>					
<p>Written Words _____ & _____ /100 Dollars</p>					

THIS PROPOSAL IS SUBMITTED BY _____

a corporation organized under the laws of the State of _____

a partnership consisting of _____

a joint venture consisting of _____

or individual trading as _____

of the City of _____

Arizona Licenses _____

City of Phoenix Privilege License No. _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

PHONE _____ FAX _____

*BY _____

Officer and Title (signature)

Officer and Title (print or type)

Date

WITNESS: If Contractor is an individual
(signature)

ATTEST: If Contractor is Corporation or Partnership
(signature and title)

* See page I.B. - 4 for section on Contractor's License.

SURETY BOND

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 City of Phoenix as Obligee, in the sum of ten (10) percent of the total amount of the bid of Principal, submitted by him to the City of Phoenix 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, administrators, successors and assigns, jointly and severally, firmly by these presents and in conformance with A.R.S. #34-201.

WHEREAS, the said Principal is herewith submitting its proposal for _____

NOW, THEREFORE, if the City of Phoenix shall accept the proposal of the Principal and the Principal shall enter into a contract with the City of Phoenix in accordance with the terms of such proposal and give such Bonds and Certificates of Insurance as specified in the Standard Specifications with good and sufficient Surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such Bonds and Certificates of Insurance, if the Principal shall pay to the City of Phoenix the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____ A.D., 19 _____

Principal

Title

Surety

WITNESS:

AN IMPORTANT FIRST STEP

FOR ALL CONSTRUCTION CONTRACTORS AND THEIR SUB-CONTRACTORS

Prior to bidding on construction contracts in excess of \$10,000.00, all prime Contractors and their sub-contractors must submit three (3) reports to the Equal Opportunity Department, 550 West Washington Street, Phoenix, Arizona 85003, telephone (602) 262-6790.

The reports are:

- An Affirmative Action Plan
- An Employer's Information Report
- An Equal Employment Questionnaire

The Affirmative Action Requirement information page is included in the specification book on page A.A.R. - 1. You may pick up the report forms at the above office or call and the reports will be mailed.

These reports are required by the City Code Chapter 18-31.1, enacted by the City Council in the interest of equal employment City-wide. To demonstrate that it provides equal opportunities to minorities and women, a firm should have an Affirmative Action Program. Such a program establishes positive procedures that will assist the firm in achieving employment parity.

Your firm's Affirmative Action Program should be designed to achieve equal employment opportunity within your employee ranks which include: Blacks, Hispanics, Asians, Native Americans, and Women.

DON'T RISK THE LOSS OF A CONTRACT: FOR EVERYONE'S CONVENIENCE, SUBMIT YOUR REPORTS NOW TO THE EQUAL OPPORTUNITY DEPARTMENT.

If you have any questions, call (602) 262-6790.