

ENGINEERING DEPARTMENT



PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

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PA-79140.03 HCRS

ST-79122.00

INITIAL PARK DEVELOPMENT AND DETENTION BASIN AT
61ST STREET AND ACOMA PARK, 6102 E. ACOMA DRIVE

PA-79140.00 HCRS

ST-79123.00

INITIAL PARK DEVELOPMENT AND DETENTION BASIN AT
DESERT SPRINGS PARK, 6530 E. HEARN ROAD

MAYOR
MARGARET T. HANCE

CITY COUNCIL

HOWARD ADAMS
JOY CARTER
CALVIN GOODE

KEN O'DELL
BARRY STARR
JIM WHITE

CITY MANAGER
CITY ENGINEER

MARVIN A. ANDREWS
J.E. ATTERBERY



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Project No. PA-79140.03 HCRS and PA-79140.00 HCRS
ST-79122.00 ST-79123.00

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CALL FOR BIDS

BIDS WILL BE OPENED
THURSDAY, JANUARY 14, 1982 AT 4:00 P.M.

PROJECT NO. PA-79140.03 HCRS and PA-79140.00 HCRS
ST-79122.00 ST-79123.00

Sealed bids will be received at the office of the City Engineer, 7th Floor, Municipal Building, 251 West Washington, Phoenix, Arizona 85003 until the hour indicated for the initial development and storm sewer detention basin construction at 61st Street and Acoma Park, 6102 East Acoma Drive and Desert Springs Park, 6530 East Hearn Road. The work includes clearing and grading both sites (approximately 41.5 acres); constructing mounds and retention areas; hauling off excess material; installing fully automatic underground sprinkler systems; seeding; tree planting; 15,000 square feet sidewalk/low flow channel, 1,473 square yards grasscrete; two lighted tennis courts; five drywells; concrete pipe work and headwalls; and other related work.

Prospective bidders may examine and/or purchase plans, special provisions, and proposal pamphlets at the City Engineer's office. These documents may be purchased for \$ 10.00 per set.

Pursuant to Executive Order 11246, as amended, on Equal Employment Opportunity, a prime contractor and subcontractor who signs a contract on a Federally-assisted construction project are required to take affirmative action toward equal employment opportunity.

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 5 percent of the amount bid.

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.

MARVIN A. ANDREWS
City Manager

By J. E. Attebery DEC 15 1981
J. E. Attebery, P.E.
City Engineer

Published: Arizona Business Gazette
December 22, 1981

INFORMATION FOR BIDDERS

.01 REFUNDS FOR PLANS AND SPECIFICATIONS

No refunds will be made for the return of plans and/or specifications by prospective bidders--either before or after the bid opening date.

.02 SUBMITTING BIDS

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 5 percent of the amount bid.

The entire Specification, containing the completed proposal with the 5 percent proposal guarantee and subcontractors' list when provided, shall be submitted in a sealed envelope. The outside, lower righthand corner of which shall be marked as follows:

Bid of _____, Contractor
For Initial Development of 61st Street and Acoma Park and Desert Springs Park
City of Phoenix Project No. PA-79140.03 HCRS, PA-79140.00 HCRS
ST-79122.00 ST-79123.00

Sealed bids shall be delivered to Administrative Section Counter of the Engineering Department for application of a time-date stamp prior to the time and date specified for bid opening. Immediately after the appointed time, the bids will be taken to Room 731 where proposals will be opened and read publicly.

As this is a Federally-assisted project, it is subject to the requirements of Executive Order 11246 pertaining to Equal Employment Opportunity.

.03 PRE-BID CONFERENCE AND QUESTIONS ON PLANS AND SPECIFICATIONS

A pre-bid conference will be held in Room 731, Municipal Building, 251 West Washington Street, Phoenix, Arizona on Monday, January 4, 1981 at 10:00 a.m.

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

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

Plans, Technical/Special Provisions, or Proposal:
Project Engineer Mr. Cornell (262-4957) or Mr. Panopio (Electrical - 262-4958)

General Conditions, Bid Bonds, Insurance, Payment and Performance Bonds and Contracts: Specifications, 262-4950.

Equal Employment Opportunities and Affirmative Action Programs:
Human Relations Division, 262-7486.

Neither the Engineer/Architect nor 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.

.04 PERMITS

The Contractor shall obtain and pay for the building permit. The plans review fee has already been paid by the City. City of Phoenix Building Safety log numbers 9145E and 9305E.

.05 CONTRACT AWARD

Contract award will be made either on the low total base bid or on the low combination of the total base bid and the additive alternate(s) whichever is in the best interest of the City.

ADDITIVE ALTERNATE NO. 1 - All labor, equipment and material for the planting of 100 to 770 15 gallon trees.

.06 AS-BUILTS (Irrigation Plans Only)

The Contractor shall maintain a record set of irrigation 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.

Upon approval, the Contractor shall then make any revised changes on the original tracings, sign and date the tracings and resubmit them to the Engineer.

.07 CONSTRUCTION STAKING AND AS-BUILT QUANTITIES

A private surveying consultant shall be retained by the City of Phoenix to perform all construction staking, verify pay quantities and provide As-Built Plans (except as provided in Section .06).

.08 SPRINKLER SYSTEMS PAYMENT

The total lump sum costs for the installation of the complete sprinkler irrigation systems at the two park sites shall be divided as indicated on the bid proposal, and herewith:

61st Street and Acoma Park

50% of total cost to be included in Project PA-79140.03
(Bid Proposal Item #1)

50% of total cost to be included in Project ST-79122.00
(Bid Proposal Item #13)

Desert Springs Park

50% of total cost to be included in Project PA-79140.00
(Bid Proposal Item #14)

50% of total cost to be included in Project ST-79123.00
(Bid Proposal Item #29)

FEDERAL BID CONDITIONS
AFFIRMATIVE ACTION REQUIREMENTS
EQUAL EMPLOYMENT OPPORTUNITY

Notice of Requirement for Affirmative Action to Ensure Employment Opportunity
(Executive Order 11246).

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for Minority (Male and Female) Participation (%) 15.8

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally-assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its Federally and non-Federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is City of Phoenix, Maricopa County, Arizona.

Standard Federal Equal Employment Opportunity Construction Contract Specifications
(Executive Order 11246).

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted.
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.

c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

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

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

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

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

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provision of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

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

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or Federally-assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs' office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

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

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

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

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

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

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

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

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7 b. above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

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

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

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

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

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

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

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

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

o. Document and maintain a record of all solicitations of offers for sub-contracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

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

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a. through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a. through p. of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of action taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

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

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

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to executive Order 11246.

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

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

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

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

FEDERAL LABOR STANDARDS PROVISIONS

1. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT AND REGULATIONS:

The Contractor shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor Regulations (29 CFR, Part 5).

1. Section 103 of the Act, each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workday or workweek is permissible provided that the worker is compensated at a rate of not less than 1-1/2 times the basic rate of pay for all hours worked in excess of 8 hours in any calendar day or 40 hours in the workweek.
2. Section 107 of the Act, is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction, safety, and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchases of materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

2. CLEAN AIR ACT OF 1970 AND FEDERAL WATER POLLUTION CONTROL ACT:

The Contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970 (42 U.S.C. 1857, et. seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et. seq.) as amended on contracts in excess of \$100,000. Violations shall be reported to the Department of Housing and Urban Development and the Regional Office of the Environmental Protection Agency.

3. COST OF LIVING COUNCIL:

The Contractor shall comply with applicable regulations and standards of the Cost of Living Council in establishing wages and prices. The provision shall advise the Contractor that the submission of a bid or offer or the submittal of an invoice or voucher for property, goods, or services furnished under a contract or agreement with the City of Phoenix shall constitute a certification by him that amounts to be paid do not exceed maximum allowable levels authorized by the Cost of Living Council regulations or standards. Violations shall be reported to the Department of Housing and Urban Development and the local Internal Revenue Service field office.

ATTACHMENT TO FEDERAL LABOR STANDARDS PROVISIONS

1. SO-CALLED "ANIT-KICKBACK ACT" AND REGULATIONS PROMULGATED
PURSUANT THERETO BY THE SECRETARY OF LABOR,
UNITED STATES DEPARTMENT OF LABOR

Title 18, U.S.C., Section 874

(Replaces Section 1 of the Act of June 13, 1934 (48 Stat. 948. 40 U.S.C.,
Sec. 276b) pursuant to the Act of June 25, 1948. 62 Stat. 862)

KICKBACKS FROM PUBLIC WORKS EMPLOYEES

Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by an other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined not more than \$5,000 or imprisoned not more than five years, or both.

2. AUDIT AND INSPECTION OF RECORDS

The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the authorized representative of the Department of Labor, AORCC or the City of Phoenix to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the authorized representative as appropriate, and shall set forth what efforts it has made to obtain the information.

3. RETENTION OF RECORDS

Records and reports will be retained for a period of three years after termination of the Contract.

4. TERMINATION OF CONTRACT

In addition to the causes for termination of this Contract as set forth in MAG Section 108, the Local Public Agency or Public Body reserves the right to terminate this Contract if the Contractor or any subcontractor whose subcontract covers any of the work covered by this Contract shall breach any of these Federal Labor Standards Provisions. A breach of these Federal Labor Standards Provisions may also be grounds for debarment as provided by the applicable regulations issued by the Secretary of Labor, United States Department of Labor.

EQUAL EMPLOYMENT OPPORTUNITY

In connection with the performance of work under this project, and in compliance with Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, the Contractor agrees to abide by and to insert, in its entirety, into any and all subcontracts the following provisions:

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

"(1) The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to race, creed, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

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

"(3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

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

"(5) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

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

"(7) The Contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in event the Contractor

becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

"(8) The Contractor and any subcontractors shall submit a statement in writing, signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training with which the bidder or prospective Contractor deals, with supporting information, to the effect that the signer, practices and policies do not discriminate on the grounds of race, color, religion, sex, or national origin, and that the signer will affirmatively cooperate in the implementation of the policy and provisions of the Equal Employment Opportunity clause or that it consents and agrees that recruitment, employment, and the terms and conditions employment under the proposed contract shall be in accordance with the purposes and provisions of the Equal Employment Opportunity clause."

Equal Employment Opportunity is the Law

DISCRIMINATION IS PROHIBITED

BY THE CIVIL RIGHTS ACT OF 1964
AND BY EXECUTIVE ORDER NUMBER 11246

Title VII of the Civil Rights Act of 1964
Administered by

THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

Prohibits discrimination because of RACE,
COLOR, RELIGION, SEX or NATIONAL ORIGIN

By EMPLOYERS with 75 or more employees, by
LABOR ORGANIZATIONS with a hiring hall
or 75 or more members, by EMPLOYMENT
AGENCIES, and by JOINT LABOR-MANAGE-
MENT COMMITTEES FOR APPRENTICESHIP
OR TRAINING. After July 1, 1967, employers and
labor organizations with 50 or more employees
or members will be covered; after July 1, 1968,
those with 25 or more will be covered

ANY PERSON

who believes he or she has
been discriminated against

SHOULD CONTACT

THE EQUAL EMPLOYMENT
OPPORTUNITY COMMISSION

1800 G Street, N.W.
Washington, D. C. 20506

Executive Order Number 11246
Administered by

THE OFFICE OF FEDERAL CONTRACT COMPLIANCE

Prohibits discrimination because of RACE,
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requires affirmative action to ensure equality of
opportunity in all aspects of employment

By all FEDERAL GOVERNMENT CONTRAC-
TORS AND SUBCONTRACTORS, and by CON-
TRACTORS PERFORMING WORK UNDER A
FEDERALLY ASSISTED CONSTRUCTION
CONTRACT, regardless of the number of em-
ployees in either case

ANY PERSON

who believes he or she has
been discriminated against

SHOULD CONTACT

THE OFFICE OF FEDERAL
CONTRACT COMPLIANCE

U. S. Department of Labor
Washington, D. C. 20210

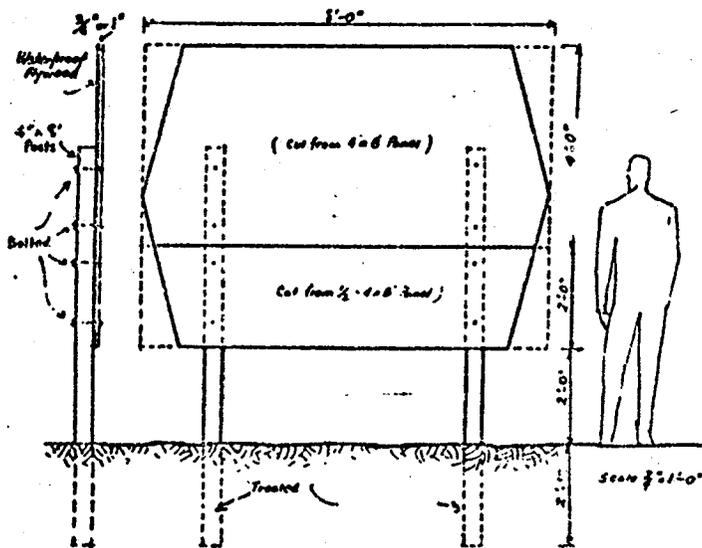
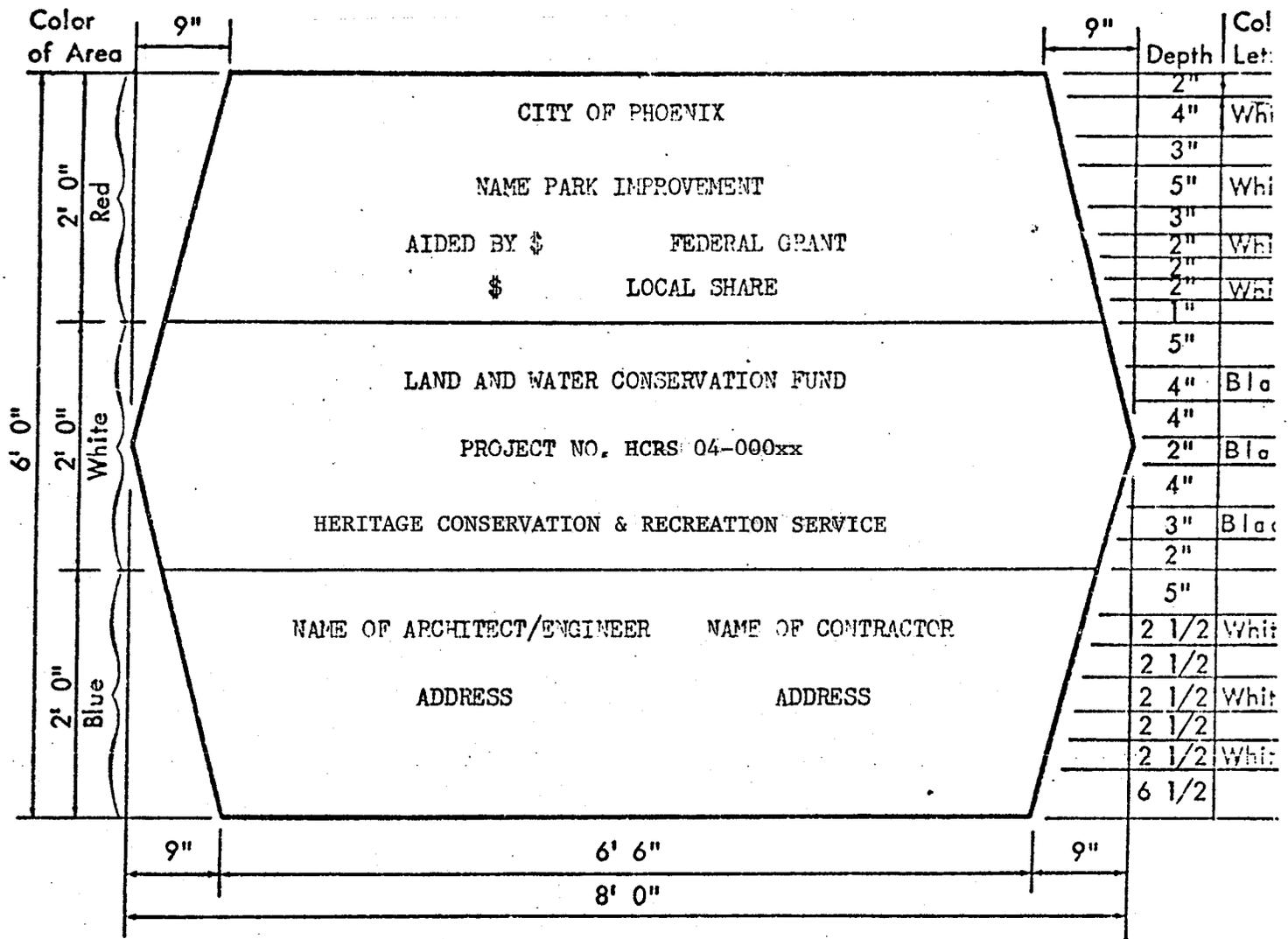
U. S. BUREAU OF OUTDOOR RECREATION

LAND AND WATER CONSERVATION FUND

The general contractor shall erect a sign at the project site identifying the project and indicating that the Government is participating in the development of the project.

The project sign shall be substantially in accordance with the drawing printed on the following sheet, and shall be made from 3/4 inch waterproof plywood, placed in a prominent location, and maintained in good condition until completion of the project.

There shall be no separate payment for the sign erection, the cost to be included in other bid item(s).



SIGN (based on design and measurements above)

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 SUSPENSIONS OF WORK

The Engineer reserves the right to suspend the work wholly or in part if deemed necessary for the best interest of the City. This suspension will be without compensation to the Contractor, other than to adjust the contract time in accordance with Section 108.

.04 HINDRANCE AND DELAYS

No charge or claim for damages shall be made by the Contractor for any delays or hindrances from any cause during the progress of any portion of the work embraced by this contract. If any delay is caused by any act or omission on the part of the Contracting Agency or by any other Contractor working for the Contracting Agency, or if due to no fault or neglect of the Contractor, the Contractor will be granted an extension of time for the completion of the work sufficient to allow for the delay. The allowable extension of time due to such delays shall be determined by the Engineer, provided the Contractor has given the Engineer immediate notice in writing of the cause of such delay.

.05 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 20 days after this date.

Where feasible, quantities may be calculated for 5 days prior to the monthly closing date and projected for the remainder of the pay period.

.06 INDEMNIFICATION OF CITY AGAINST LIABILITY

The Contractor agrees to indemnify and save harmless the City of Phoenix, its 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 attorneys' 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 construction of the improvement under 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 or those acting under Contractor to conform to any statutes, ordinances, regulations, 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. This contract of indemnity shall be interpreted to require the Contractor to indemnify for loss or damage caused by an indemnitee's negligence or fault so long as the indemnitee's negligence, gross negligence or fault was not the sole cause of the injury.

.07 CONTRACTOR'S INSURANCE REQUIREMENTS

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. Concurrently with the execution of the contract, the Contractor shall furnish the City of Phoenix the certificate of insurance form provided by the City that will give no less than the minimum limits of liability insurance required. The certificate shall be issued by an insurance company authorized by the Insurance Department of Arizona to transact business in the State of Arizona. 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.

.08 TRAFFIC REGULATIONS

A. 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, 1980 revision.

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

C. All traffic on this project shall be regulated as specified in Section IV of the Traffic Barricade Manual.

.09 MINERAL FILLER AND ANTI-STRIPPING AGENT

Either an approved mineral filler or an approved anti-stripping agent shall be used in all asphalt concrete pavements.

.10 CONTRACTOR'S OPERATION

The Contractor shall be required to clean up all work areas daily and provide sufficient numbers of warning signs and/or barricades to protect the public from any hazards.

Clearing and grubbing shall be performed in accordance with Section 201 of MAG. In addition, the Contractor shall be required to clean the wash area for a distance of approximately 100 feet south of the multiple concrete box culvert bridge (in Acoma Drive). This work shall include clearing all stumps, rubbish, debris and any other foreign material that has accumulated in the wash. The Contractor shall also grade this area, filling in any holes or low areas, as required. The Contractor shall also insure there is a smooth flowline gradient from north of the bridge to south of the bridge and shall remove any build-up of foreign material or mud in the boxes. The finished surface of the wash shall be compacted to a minimum of 95% density and shall be such it will promote the free and non-restrictive flow of water downstream.

.11 EARTHWORK CONSTRUCTION

This item shall consist of supplying all the labor and materials necessary to bring the site to the lines and grades as shown on the plans. Estimated quantities shall be as follows:

61st Street and Acoma Park

Total cut from site	56,440 cubic yards
Total fill on site *	34,100 cubic yards
Haul off to Desert Springs Park (1/2 mile, one way)	13,000 cubic yards (loose)
Haul off to Sumida Park Site ** (10 miles, one way)	9,340 cubic yards (loose)

Desert Springs Park

Total cut from site	39,000 cubic yards
Total fill on site *	50,100 cubic yards
Imported fill from 61st Street and Acoma Park	13,000 cubic yards (loose)

* - Includes shrink of 10% - 15%

** - Sumida Park is an unimproved park site located at Dreamy Draw Drive and Gardenia Avenue (north of Glendale Avenue, east of 16th Street). Representatives of Engineering and Parks Departments will specify where the fill shall be dumped. The Contractor shall be required to dump the fill at this location and keep an accurate record of how much material has been delivered. He will not be required to spread the fill.

Compaction of the fill shall be in the range of 80 to 85% of maximum dry density.

It shall be the Contractor's responsibility to check the quantities of cut/fill required and submit a bid for this "lump sum" item, based on his estimate. There will be no additional payment for grading to construct the park according to the new slopes and elevations, as shown on the plans.

The placement of all material shall be in compliance with Section 211 of MAG Standards, latest revision.

It is essential that all new slopes be established in accordance with the plans so that smooth transitions are maintained to permit easy mowing by reel-type mowers.

The payment for this item of work shall be included in the lump sum prices for "EARTHWORK."

.12 SUBGRADE PREPARATION (Under New Pavement on Hearn Road)

Subgrade preparation shall consist of the necessary grading under the new pavement to bring the subgrade to a uniform compactive state not less than 90% of the maximum dry density. There will be no separate payment for this item, all costs for this work shall be included in the bid item "2-INCH ASPHALT CONCRETE/4-INCH A.B.C."

.13 PAVEMENT SECTION

Asphalt concrete shall be Mix Designation C-3/4, using paving asphalt AR-4000 or AR-8000, as directed by the Engineer and shall conform to Sections 321, 710 and 711. Aggregate base course shall conform to Section 702 of the MAG Specifications. The pavement sections shall be 2 inches over 4 inches aggregate base.

Payment for this item of work shall be included in the bid item "2-INCH ASPHALT CONCRETE/4-INCH A.B.C.", which shall include all costs for labor, materials, saw-cutting existing pavement (minimum of one foot) and repaving to match existing grade.

.14 CONCRETE SIDEWALK/LOW FLOW CHANNEL

The work under this item shall consist of supplying all labor, materials and equipment necessary to install concrete to those areas indicated on the plans.

Concrete shall be Class "B" conforming to the applicable requirements of Section 725.

Expansion joint filler, where required, shall comply with Section 729.

The installation of all new concrete shall be at the locations indicated on the plans and as detailed on the plans, specified herein and according to Section 340.

The method of measurement shall be by the square foot of concrete actually placed, measured to the nearest square foot.

Basis of payment shall be at the contract price per square foot for concrete complete in place.

.15 RETAINING WALL (Desert Springs Park)

The work under this item shall consist of supplying all labor, materials, and equipment necessary to install a retaining wall complete in place, including excavation, backfilling and grading behind the wall.

The material for the retaining wall shall be as follows:

Concrete Class "A" according to Section 725.

Reinforcing steel shall conform to Section 727 for the size specified.

Concrete masonry block shall be according to Section 510 of MAG.

The installation and construction of the retaining wall shall be according to Section 505.

The method of measurement shall be by the linear foot of the retaining wall complete in place.

Basis of payment shall be at the contract price per linear foot of retaining wall actually placed, including excavation, backfilling and grading.

.16 REINFORCED CONCRETE PIPE

The work under this item shall consist of furnishing all labor, materials, and equipment necessary to install R.C.P. at the locations indicated and as detailed on the plans and as specified herein.

The materials, construction and installation of the pipe shall be according to Section 735.

The basis of payment for this item of work shall be at the contract price per linear foot of pipe actually installed, complete in place.

.17 CONCRETE HEADWALLS (61st Street and Acoma Drive)

The work under this item shall consist of furnishing all labor, materials and equipment necessary to construct the concrete, inlet and outlet headwalls at the locations and according to the details on the plans and as specified herein. This shall include the metal trash racks on both headwalls, the connection to the R.C.P., handrails, mowing strip, base course and any grading that is required to install them as shown on the plans.

The construction and materials for the concrete structural portion of this work shall be in accordance with Section 505. The steel fabrication shall be according to Section 520.

The basis of payment for this item shall be at the contract price each, complete in place, for concrete headwalls.

.18 GRASSCRETE SPILLWAYS

The work under this item shall consist of furnishing all labor, materials and equipment necessary to install Grasscrete spillways at the locations indicated and as detailed on the plans and as specified herein.

Contractor: The Contractor for this work shall be licensed by Bomanite Corporation, 81 Encina Avenue, Palo Alto, California 94301, (415) 321-0718 to utilize the process described in U. S. Patents No. 3,664,231 and 3,802,790. The Contractor shall provide a foreman or supervisor who has done at least 3 Grasscrete installations of high quality whose qualifications will be verified by the Engineer.

Subgrade: The subgrade shall be compacted and prepared for Grasscrete consistent with the requirements for other concrete slabs on grade on this project.

Concrete Mix: The concrete shall be Class "A", have a minimum compressive strength of 3,000 psi. Portland Cement shall conform to ASTM C 150 Type II or V, depending on soil conditions. Aggregates shall conform to ASTM C 33 and be minimum 3/8". Mixing water shall be fresh, clean, and potable.

Slab Design: The Grasscrete slab shall have a thickness of 4 inches. Reinforcing steel bar shall be 1/4" diameter and shall be spaced on 8" centers. Steel shall be supported to be located between 1/3 and 2/3 the thickness of the slab.

Grasscrete Construction Process:

- a. Sand bed of minimum thickness of 3/4" shall be placed on subgrade and screeded to a plane parallel to the grade desired for finished concrete slab.
- b. Grasscrete formers shall be placed on sand bed and reinforced steel shall be placed.
- c. Concrete shall be placed and screeded to the satisfaction of the Engineer, and to grade, as shown.
- d. The slab shall be cured with a suitable curing membrane.
- e. The plastic tops of the Grasscrete formers shall be removed after the concrete has reached its initial set.

Soil: Holes shall be filled with good topsoil or clean native fill.

Method of measurement shall be by the square yard of Grasscrete actually installed.

The basis of payment for this work shall be at the contract price per square yard for Grasscrete complete in place.

.19 DRYWELLS (Injection Wells)

The work under this item shall consist of furnishing all labor, materials and equipment necessary to install concrete drywells complete, at the locations indicated and as detailed on the plans and as specified herein.

The drywells shall be a MaxWell, Type III or approved equal, installed to a depth of 100 feet, or as directed by the Engineer.

The Contractor shall insure that the drywells are placed in the lowest area of the retention basins, so as to promote efficient transmission of nuisance, sprinkler or storm water to the drywell grates. No isolated low areas, that retain water will be permitted.

There shall also be two layers of Mirafi 140 S fabric installed below the grates. This fabric shall not be removed until the new lawn has been planted and starts growing.

The basis of payment for this item of work shall be at the contract price each for concrete drywells, complete in place.

.20 TENNIS COURTS

SCOPE OF WORK

The work covered by these specifications consists of furnishing all labor, equipment, tools, appliances, materials and performing all operations in connection with constructing two lighted tennis courts.

SUBGRADE PREPARATION AND COURT CONSTRUCTION

A. Subgrade for tennis courts shall be compacted to 80-90% of the relative density as determined by AASHTO T-99, Method A, at 0-4% above optimum moisture content, and then fine graded to blue tops set to the elevations shown on the plans for the entire area under courts.

B. Backfill and Sub-base

Under all tennis court slab area, cover with 4" of compacted ABC and 1" of sand. Consolidate to AASHTO T-99, Method "A" density of not less than 95%. Dampen before placing concrete. Place and compact soil from court slab outward on a 10-to-1 slope to the terrace or surrounding grade.

C. Expansion Beam

A one-foot square expansion beam shall be installed directly beneath the net area. Four No. 4 deformed steel reinforcing bars shall be placed near the top and the bottom of the beam for strength. The top of the beam shall be trowelled smooth and poured separately from the pouring of the slabs. Fifteen-pound black felt building paper shall then be placed on top of the beam to prevent a bond with the court slabs.

D. Expansion Construction and Control Joints

All court joints shall be placed as shown on the plan. Any changes or variations from the plan shall require written approval from the Engineer before construction starts. The Contractor shall also be responsible to insure that no joint material extrudes above the finished concrete surface.

E. Reinforcing

Slab reinforcing shall be standard #4 bars, 12 inches on center, both ways.

F. Concrete (Class 'A' Concrete, Table 725 of MAG)

1. Portland Cement: ASTM Design, C-150, Type 2, Low Alkali. Aggregates: Section 206 (ACI 318-56) and ASTM C-33. Mixing Water: AASHTO T-26, clean, fresh and free from deleterious amounts of acids, alkalies, oils, silts, and organic matter.
2. Strength: Concrete strength 3000 #/sq. in. minimum at 28 days. Transit Mix concrete shall be used throughout the project and shall conform to ASTM C-94. No water added after truck leaves plant unless specifically approved at the site.

3. Mix: Concrete mix shall be proportioned 1 : 2-1/2 : 3-1/2 :, and the maximum permissible slump shall be 2 inches. Slab thickness shall be a constant 4" over a 1" sand course, which will provide the required precision level finish surface.

Table 725 of MAG shall be modified as follows:

Class A concrete, use minimum cement content (520 pounds per cubic yard) and ADD maximum water content to be 30 gallons per cubic yard of concrete.

The mix design shall be a low slump concrete to reduce the shrinkage to a minimum. An approved admixture may be used to make the mix workable. A complete concrete mix design from the Contractor shall be submitted for approval by the Engineer a maximum of 14 days before pouring.

Darex concrete admixture "WRDA-19" Superplasticizer, or equal, may be added to the concrete mixture for use on the slab. The admixture shall contain no chloride and will conform to the testing requirements of ASTM C-494. Contractor shall have a representative of the manufacturer supervising dispersing procedures.

Weather and Temperature Limitations: Placing concrete shall cease when the air temperature exceeds 90 degrees, and/or the wind velocity reaches 15 mph. When the rate of evaporation exceeds 0.10 per square foot per hour precautionary measures should be taken. These measures may be any or all of the following:

- a) Dampen the subgrade
 - b) Erect windbreaks to reduce wind velocity over the concrete surface
 - c) Erect sunshades to reduce concrete surface temperatures
 - d) Lower the fresh concrete temperature by using cool aggregates and mixing water (ice).
4. Do not tamp concrete. In lieu thereof, use a ROLLER BUG with a limit of two passes. Do not walk in fresh concrete. If screened board is used and lies in concrete, vibrate inner faces between adjacent concrete faces when screen is removed. If there is a time lapse in the pouring of concrete so that the first pour concrete begins its initial set, use a vibrator where the pours meet, as directed by the Engineer. Next, float with an aluminum float, trowel lightly with a steel trowel, finally hand finish with a steel trowel to a rosebud or "Swirl" finish as directed by the Engineer. The slabs shall have a "rough swirl" finish similar to the basketball and volleyball courts at El Reposo Park, 302 East Alta Vista, however, the Contractor shall verify the finish with the Engineer before proceeding. The Contractor shall pour one - 8' x 8' section of the sidewalk adjacent to the court, as a test section for the court. This test section shall be finished exactly as the court is to be finished, and shall be inspected and approved by the Engineer and a representative of the Parks Department, prior to construction of the court. This test section shall not be removed. Finish surface shall be true to grade and have no "pockets" or "duck ponds." The finished

surface shall vary not more than 1/8" at any point from true grade, nor more than 1/8" in ten feet in any direction. Concrete slabs poured which fail to meet these requirements may be rejected, and upon written instructions from the Engineer, shall be removed and replaced by the Contractor at his expense.

G. Curing and Protection. Cover all surfaces after initial setup, with black polyethylene and 1" (minimum) of concrete sand. After the courts have been cured, by keeping the sand constantly saturated and covered for 21 days, they shall be uncovered and left to air dry and cure for additional 7 days without any protective coating or water on it. No membrane curing compound shall be used to cure the concrete.

H. Preparation

1. Concrete surface must be clean and free of oil and other coatings, then acid etched with one part of muriatic acid to four parts of water which shall be spread by means of a push broom or squeegee. When the bubbling action stops, the area shall be thoroughly scrubbed and cleaned with a floor machine and clear water with a small amount of cloudless ammonia (one cup per gallon). The entire area shall then be allowed to thoroughly dry after it has been rinsed with clear water.
2. Kemiko Col-R-Tone Finish: Two applications of Kemiko Col-R-Tone shall then be applied at the rate of 250 square feet per gallon per coat, or approximately 60 gallons per court. The color on the interior court shall be Evergreen (E-1), and the color on the surrounding area shall be Colorado Brown (C-1). Col-R-Tone shall be applied liberally and then rolled in an even, straight, back and forth pattern. A minimum time of four hours shall ensue between applications. The second coat shall be applied in the same manner as the first, but rolled crosswise from the first application. Edges and areas around posts shall be brushed before rolling the court. The dry-film thickness for the two-coat application shall be approximately 4 mils. Roller covers for the application of Col-R-Tone shall be #1 grade lamb's wool with 1/2" nap unless otherwise approved by the Engineer.
3. Playing Lines: The court shall be laid out as shown on the plans in conformance with the USLTA regulations and dimensions, and then striped, using Kemiko's A-1 Col-R-Tone (white) for striping. Playing lines shall be measured and snapped with a chalk line. Base lines shall be not more than 4" wide and playing lines shall be not more than 2" wide. Lines shall then be applied with a soft brush between smooth rails. Lines may also be applied with a small spray rig between strips of wood and any smooth edge wide enough to prevent overspray on the court finish. Traffic lacquer or enamel will not be accepted. A period of four days cure shall follow before courts are opened for play.

TENNIS COURT POSTS AND SLEEVES

- A. Tennis Court posts shall be 3" square posts fabricated from 3/16" heavy gauge steel with a tough baked on vinyl, hunter green finish inside and outside. The posts shall be 60 inches long with an eye bolt approximately

1" from court surface. One post shall include internally geared net cable winding mechanism (all internal gears shall be brass, jam resistant and rust proof) with a removable winding handle. The other post shall have a removable slotted head cap drilled and tapped for an Allen set screw encased with a protective sleeve through the open slot. See plan detail. Manufactured by Chevron Asphalt Company.

- B. Sleeve for the post shall be 3-1/2" x 3/16" x 30" long with a hole for a 1/2" bolt drilled 12" from the bottom of the sleeve.
- C. The sleeve shall be set in the anchor and welded to the reinforcing steel of the transverse beam so that there will be 42 inches of post above the court surface. A one-half inch bolt shall be placed through the sleeve to ensure the limitation of penetration of the post into the sleeve. See plan detail. Manufactured by Chevron Asphalt Company.
- D. Posts set shall also include a Center Net Anchor approximately 8" long with a welded cross pin.

TENNIS COURT NETS

A. Construction

The tennis court nets shall be constructed of double-coated nylon impregnated top binding. Top binding shall be bound by four rows of stitching. Synthetic tape bottom and ends. Maple dowel at each side for net bracing. The net shall be suspended with a white vinyl impregnated steel cable to fit internal winding mechanism in post.

B. Size

Net size shall be 42" x 3-1/4", tapered towards the center. Weight shall be not less than 20 pounds.

C. Center Strap

Center strap shall be 2-1/8" wide, impregnated nylon, with weather-resistant hardware.

D. One Center Anchor

The net shall have a center anchor, 8" long, embedded in the concrete with a welded cross pin.

E. Manufacturer

Nets and associated hardware shall be as supplied by Chevron Asphalt Company, Phoenix, Arizona, telephone number 258-7996.

TENNIS COURT FENCING

General

Wire mesh fencing shall be 144" high x 9 gauge x 1-3/4" mesh and shall be electrically welded, cold drawn, steel wire, conforming to the requirements of ASTM A-82, and shall be constructed as shown on the plans.

- A. Fabric: One and three-fourths inch mesh, No. 9 gauge (W&M) hot dipped galvanized after fabrication. Standard finish, knuckled selvage top and bottom. Minimum 1.2 ozs. of zinc per square foot of wire surface in accordance with ASTM A-392.
- B. Posts: 2-3/8 inches O.D. pipe, 3.65 pounds per linear foot, 10'-0" o.c maximum.
- C. Top and Middle Rail: 1-7/8 inches O.D. pipe, 2.72 pounds per linear foot.
- D. End, Corner and Gate Posts: 2-7/8 inches O.D. pipe, 5.79 pounds per linear foot.
- E. Ties: Twelve one-half gauge galvanized steel wire. For line posts, furnish one for each 12" of fabric; for rail and braces, furnish 24" apart.
- F. Fittings: All posts furnished with tops and required fittings for attaching fabric and rail, also braces where necessary. Transom panel over gate with fabric to match fence.
- G. Gate Frame: Three-foot wide by seven-foot high, 1-7/8 inch O.D. pipe, 2.72 pounds per linear foot. Gate fabric to match fence. Gates shall have a lockable gate latch welded to the frame.
- H. Expansion Coupling: Provide expansion coupling in top and middle rail at 100'-0" O.C. in all runs of fencing over 100 feet long.
- I. Net Posts: Net posts and anchors shall be according to TENNIS NET POST detail shown on the plans and described in these specifications.
- J. Tennis Court Lights shall be installed in accordance with the plans, and Section .28 ELECTRICAL SPECIFICATIONS, of these Supplementary Conditions.

Payment for this item of work shall be at the lump sum price for "Two Lighted Tennis Courts Complete."

.21 DISPOSAL OF SURPLUS MATERIAL

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 incidental to the cost of the project.

.22 UTILITIES

Location of Underground Utilities

The Contractor shall notify the interested "Utilities" prior to the start of construction, and shall ascertain the locations of the various underground utilities either shown on the plans and/or as may be brought to his attention. The exact locations of these underground utilities shall be determined by excavations made by the Contractor prior to any trenching operations.

Damage to Existing Utilities

The Contractor shall assume full responsibility for all damage to all utilities due to his operations, and shall repair the damaged utilities as required herein, at his own expense. Damaged waterlines shall be replaced in kind in accordance with the requirements of Section 610.

.23 SPRINKLER IRRIGATION SYSTEM INSTALLATION

Shall conform to Section 440 with the following exceptions:

Subsection 440.1 - The City shall pay for making application to the power company to supply power to the controller. Billing of power usage can be verified by calling the Parks, Recreation and Library Department, 262-6861, using the following address(es) for the controller site(s):

61st Street and Acoma Park - 6102 East Acoma Drive
Desert Springs Park - 6530 East Hearn Road

The Contractor shall be the customer for the water from the time the meter is installed until the end of the plant establishment period or the final project acceptance, whichever occurs later, at which time the Parks, Recreation and Library Department shall become the customer.

Subsection 440.3(c) - Delete the paragraph beginning "The plastic pipe will be snaked . . . "

Subsection 440.6 - Each controller shall have a ground wire independent of all other controllers, and all valves shall be connected to the ground wire of the controllers by which they are controlled.

Each valve shall be connected by a separate hot wire to its controller.

Subsection 440.8 - Add the following:

The total lump sum cost for installation of the complete sprinkler irrigation system shall be divided, as shown on the bid proposal, and herewith:

61st Street and Acoma Park

- 50% of cost to Project No. PA-79140.03
- 50% of cost to Project No. ST-79122.00

Desert Springs Park

- 50% of cost to Project No. PA-79140.00
- 50% of cost to Project No. ST-79123.00

.24 SPRINKLER IRRIGATION SYSTEM

Shall conform to Section 757.

Subsection 757.2.2 should read:

Plastic pipe shall be rigid, unplasticized polyvinyl chloride Type I, PVC 1120 or 1220, with an SDR of 26 or less, complying with ASTM D-1785.

.25 LANDSCAPING AND PLANTING

Shall conform to Section 430 with the following additions:

- Subsection 430.2 - The only means to be used to eliminate weeds is chemical control. Chemicals to be applied according to manufacturer's recommendations. Once kill is established to the satisfaction of the Engineer, dead weeds and debris shall be removed.

Subsection 430.3.1 - Delete the second paragraph and replace with the following:

"After clearing and grubbing and initial cultivation has been completed, the following procedure shall be followed:

61st Street and Acoma Park

- 1) East of Tennis Courts (16.5 acres) - Preplant 15 pounds of ammonium phosphate (16-20-0) per 1,000 square feet and apply 7-1/2 pounds of ammonium sulfate (21-0-0) or 3-1/2 pounds of urea (45-0-0) per 1,000 square feet after a healthy stand of grass has been established.
- 2) West of Tennis Courts (5.5 acres) - Preplant 9-1/2 pounds of ammonium sulfate (21-0-0) or 4-1/2 pounds of urea (45-0-0) per 1,000 square feet and make a duplicate application after a healthy stand of grass has been established.

Desert Springs Park

- 1) East of Retaining Wall (11 acres) - Preplant 15 pounds of ammonium phosphate (16-0-0) per 1,000 square feet and apply 7-1/2 pounds of ammonium sulfate (21-0-0) or 3-1/2 pounds of urea (45-0-0) per 1,000 square feet after a healthy stand of grass has been established.

- 2) West of Retaining Wall (8 acres) - Preplant 15 pounds of ammonium phosphate (16-0-0) per 1,000 square feet and apply 2 pounds of ammonium sulfate (21-0-0) or 1 pound of urea (45-0-0) per 1,000 square feet after a healthy stand of grass has been established.

After spreading, the fertilizer shall be cultivated into the top six inches of soil (preplanting) using suitable equipment. The resulting soil shall be in a friable condition, suitable for planting."

Subsection 430.3.2 Seeding: Delete the first two paragraphs and replace with:

"Lawn seeding shall provide for seasonal planting as follows:

April 1st to August 31st - Seed with common bermuda grass at 80-90 pounds per acre with Certified Seed, 98% purity, 90% germination and 0.05% or less weed and other crop seed.

October 1st to November 30th - Seed with Roughstalk Bluegrass, Poa Trivialis, at 125 pounds per acre with Certified Seed, 98% purity and 85-90% germination.

Turf shall not be established during September, December, January, February or March unless special permission is granted from the Parks Department Horticulturist and District Administrator."

Subsection 430.3.3 Maintenance: Delete the first sentence and replace with: "The Contractor shall be responsible for maintenance of the lawn areas for a period of 60 days after the plant establishment date has been established, in accordance with Section 430.9 of MAG. When the grass reaches a height of 3 inches, it shall be cut to two inches."

.26 LANDSCAPE MATERIAL

Shall conform to Section 795 with the following alterations:

Subsection 795.7.1 - For inspection and identification, durable labels stating in weather-resistant ink, the correct plant name as specified in the plant list, shall be securely attached to a representative sample of each species of plant material delivered to the site.

Subsection 795.8.1 - Price for this item shall include stakes and galvanized nails installed per plans."

.27 ADDITIVE ALTERNATE - TREE PLANTING

Tree planting, in accordance with the plans and specifications, shall be an additive alternate and the Contractor shall include in his bid proposal his cost to install them. The City of Phoenix reserves the right to include this alternate in the Contract, pending the availability of funds.

SECTION 16010

GENERAL PROVISIONS

1. GENERAL. This section describes in general, requirements of the electrical and related items and work necessary for the complete job indicated by the contract documents. The general conditions are applicable to this section and shall form a part of the contract.

2. GENERAL LIST OF WORK: The work of this section and related work described in other sections is indicated on the Drawings and includes, but is not necessarily limited to:

2.1 Electric service, complete, to point of connection with the utility company's facilities;

2.2 Main distribution panel with metering equipment and feeder switches or circuit breakers;

2.3 Complete branch circuit wiring system for lighting, motors, receptacles, junction boxes and similar uses;

2.4 Lighting fixtures;

2.5 Trenching and backfilling for underground electrical installation;

2.6 All other electrical equipment and services needed to complete a usable and operable facility in accordance with all pertinent codes and regulations;

3. PERMITS

3.1 Secure and pay for all necessary permits and licenses, services, meter, current transformer and underground service charges, and all inspection fees as required by the job or by power company.

4. QUALITY ASSURANCE

4.1 Qualifications of installers:

4.1.1 For the actual fabrication, installation, and testing of the work of this Section, use only thoroughly trained and experienced personnel who are completely familiar with the requirements of this work and with the installation recommendations of the manufacturers of the specified items.

4.1.2 In acceptance or rejection of installed electrical system, no allowance will be made for lack of skill on the part of installers.

5. CODES AND ORDINANCES

5.1 Install all work in accordance with the National Electrical Code and its latest revisions, with the City of Phoenix Electrical Code, latest edition, and with all pertinent requirements and standard specifications of the local power company.

6. CERTIFICATES

6.1 All work included shall comply with all State and Local rules and regulations. Furnish to the Owner all certificates of inspection and approval as required.

7. EXAMINATION OF PREMISES

7.1 Prior to submitting proposal, the bidder shall examine all general construction drawings and visit construction site to become familiar with existing conditions under which he will have to operate and which will in any way affect the work under this contract. No subsequent allowance will be made in this connection in behalf of the Contractor for any error or negligence on his part.

7.2 Prior to ordering any materials or doing any work, verify dimensions at the site; correctness of dimensions will be this Contractor's responsibility. No extra charges or compensation will be allowed for differences between actual dimensions and dimensions indicated on drawings. Immediately report differences to Engineer and do not proceed with work until Engineer renders his decision.

8. CONCRETE, EXCAVATION, FILL AND BACKFILL

8.1 Furnish all concrete, excavation, fill and backfill, and steel required for this work unless specifically noted otherwise.

8.2 Concrete shall be Class "A", 3000 p.s.i. and shall be mixed, placed and cured in conformance with M.A.G. Specifications.

9. ELECTRICAL DRAWINGS

9.1 The drawings are generally diagrammatic and indicate the manner, method and nature of the installation. The Specifications denote the style and quality of material and workmanship. Where a conflict exists between the Drawings and Specifications, promptly notify the Engineer. The Engineer will make the proper interpretation and his decision will be final.

9.2 Any items not mentioned in these specifications or not indicated on the plans but which are necessary for successful and efficient operation of the work shall be held to be implied and shall be furnished and installed as part of the contract.

10. STANDARD OF MATERIAL AND WORKMANSHIP

10.1 All materials shall be new and shall conform to UL standards in every case where such a standard has been established and shall bear the UL label. All work shall be performed in a workmanlike manner in accordance with the best accepted standards and shall present a neat mechanical appearance when completed.

10.2 Ratings of all electrical equipment shall be in accordance with National Electrical Manufacturer's Association (NEMA).

11. PAINTING

11.1 All exposed electrical equipment, conduit, flush panel fronts, transformers, switches, switchboards, panels, and similar items shall be painted as specified under the Painting Section of the M.A.G. Specifications.

12. CLEANING UP PREMISES

12.1 At all times keep the premises free from accumulation of waste materials or rubbish caused by employees. Metal floor pans shall be provided for pipe threading machines and benches and shall be used at all times to prevent concrete floors from becoming oil soaked. Upon completion of the job remove all debris, clean all switchplates, fixtures, panel trims and in general leave the premises in a clean and tidy condition.

13. FINAL INSPECTION AND TESTS

13.1 Furnish all meters, cable, connections and apparatus necessary for making tests.

13.2 Test system for shorts and grounds. Faulty wiring shall be removed and replaced. Any device, apparatus or fixture installed showing substandard performance shall be removed and replaced as directed by the Engineer.

14. GUARANTEE

14.1 Fully guarantee all work under this Section for a period of one year from the date of final acceptance by the Owner, against imperfect workmanship or failure or malfunction of materials and/or equipment due to faulty or imperfect workmanship. Give this guarantee in writing to the Owner at the time of issuing final certificate. Work found to be defective within this period shall be replaced without cost to the Owner.

15. SHOP DRAWINGS

15.1 All data shall be submitted at one time, bound and indexed in an orderly manner. Prior to starting work, submit to the Engineer for approval, six (6) sets of shop drawings of service entrance section, lighting fixtures and all other equipment to be fabricated.

SECTION 16100

BASIC MATERIALS AND METHODS

1. WIRE AND CABLE

1.1 GENERAL: Soft-drawn, annealed copper having conductivity of not less than 98% of that pure copper, uniform in cross-section, free from flaws, scale and other imperfections.

1.1.1 All interior branch wiring shall be Type "THW", "THHN", or "THWN" 600 volt, and a minimum of #12 except for control wiring which shall be stranded and a minimum of #14.

1.1.2 Wire #8 and larger shall be stranded. Wire #2 and larger or as noted, shall be Type "XHHW".

1.1.3 Manufacturers shall be Simplex, General Cable, Okonite, Rome Cable, Anaconda, General Electric and Kaiser.

1.2 INSTALLATION: Install all wire and cable in conduit.

1.2.1 Wire single phase equipment and lighting so there is a minimum of unbalance between current carrying conductors. Conductors shall be continuous and of such lengths that no splice occurs except within outlet, junction or pullbox, panelboard, switch, motor starter, conduit fittings, or other similar devices of equipment. Splices shall join conductors securely together both mechanically and electrically.

1.2.2 Make connections and splices for #10 wire and smaller with Buchanan "B-Cap", 3-M "Scotchlok", or Ideal "Wing Nut" pre-insulated wire connectors (sizes as recommended by manufacturer). Make connections and splices for #8 conductors and larger with solderless pressure or compression type connectors by O.Z., Burndy, Buchanan, T & B, or Illsco. Tape all splices with plastic so insulation is at least equivalent to insulation of conductor. Thoroughly clean ends before splicing. Where plastic tape is used and there is any danger of insulation damage from pressure of joint against non-current carrying metal parts, use friction tape for additional protection. Vinyl plastic tape shall be Scotch #33 or Plymouth.

1.2.3 All wires in panelboards, gutters, switchboards, wireways and pull boxes shall be neatly arranged with terminations located directly opposite terminals and routed in a neat and workmanlike manner through spaces where the wire passes.

1.2.4 Exercise due care when pulling wire and cable through raceways, to prevent conductors from kinking and injuring insulation.

1.2.5 UL approved pulling compounds may be applied to the conductors to insure ease of pulling. Under no circumstances shall any medium containing water, acid, or petroleum base be used.

1.2.6 Leave no less than 6" of wire at each outlet for connection to lighting fixture, switch receptacle, and other pieces of equipment. Where wires feed through an outlet or junction box, neatly tuck a 6" long loop in bottom of box.

1.2.7 All branch circuit conductors shall be color coded as follows:

For all 120V to ground circuits;
Phase A - black, Phase B - red, Phase C - blue, Neutral - white.

1.2.8 Control wiring and all other stranded wiring to screw connections shall be provided with T & B "STA-KON" terminals.

1.2.9 Solid conductors shall loop tightly and completely around terminal screws on all wiring devices.

2. CONDUIT RACEWAYS

2.1 Conduit systems shall be rigid galvanized steel, Intermediate Metallic Conduit (IMC), non-metallic fiber or Polyvinylchloride (PVC) plastic as specified herein, or as indicated on the plans. All systems shall be continuous.

2.2 Rigid steel conduit shall be heavy walled, hot dipped, galvanized or sherardized. Use rigid steel conduit in concrete slabs on grade, in exposed locations such as tunnels and equipment rooms, where exposed to weather, and where buried in earth. Make all joints with standard couplings or unions; use of running threads is prohibited. Ream conduit ends after cutting. Use double lock nuts at terminations. Use insulated bushings throughout.

2.3 No conduit placed in a concrete slab shall be greater than 3/4" trade size diameter and no conduit smaller than 3/4" shall be installed underground. No conduit shall be imbedded in a slab that is less than 3-1/2" thick except for local offsets. Make bends of 45 degrees and larger with rigid galvanized steel conduit and coat with two coats of Koppers Bitumastic or half lap with Scotch Wrap #50. Unless otherwise noted or specified, tops of underground conduit and ducts shall not be less than 24" below grade.

2.4 PVC electrical conduit, UL listed, 2" and smaller may be used for direct burial of underground branch circuits (with bond wire), sound, telephone and signal conduits. Furnish and install expansion joints approximately 75 feet on centers for full length of underground runs. All bends shall be manufactured, not field made.

2.5 GENERAL: Stubs and risers above grade to panels and cabinets shall be rigid steel conduit and shall be grounded as described under "Grounding."

2.5.1 All conduit bends 45 degrees and larger, and 2 inches and above shall be manufactured bends or field made with hydraulic bender.

2.5.2 Coat metallic conduit below grade or encased in concrete with two coats of Koppers Bitumastic, or half lap with Scotch Wrap #50, minimum thickness to be 40 mils.

3. CONDUIT FITTINGS

3.1 Provide double locknuts and bushings at all rigid conduit terminations except at threaded hubs. Bushings shall be O.Z. type "A" molded bakelite except for 2" conduit and larger shall be O.Z. type "B" or type "BL" where grounding is required.

4. GUTTERS, PULLBOXES AND JUNCTION BOXES

4.1 Boxes shall be fabricated from code gauge steel without knockouts and a minimum 14 gauge front cover. Finish shall be galvanized steel or phosphate undercoating, with 2 finish coats hammer gray or baked enamel.

4.2 Junction boxes shown outside flush or surface mounted shall be watertight all welded construction with neoprene gasketed screwed covers NEMA Type 3R.

5. FUSES

5.1 Shall be high capacity, current limiting, low peak or dual element as indicated. Dual element fuses shall be used for all motor loads. Furnish to the Owner, at each switchboard, 2 sets of spare fuses for each size used below 100 amps and 1 set for each size 100 amps and above.

5.2 Approved Manufacturers are: Bussman, Economy Fuse, and Chase-Shawmut.

6. SAFETY SWITCHES

6.1 Safety switches, unless otherwise indicated on the drawings, shall be heavy duty type, 600 volt, of the number of poles required. Safety switches for air conditioning use shall be of the fusible type where recommended by equipment manufacturer. The switch size shall be as required by code and as indicated on the Drawings. Where outside the building, the switches shall be raintight type NEMA 3R.

6.2 Switches shall be as manufactured by General Electric, Square D, or Westinghouse.

SECTION 16400

SERVICE AND DISTRIBUTION

1. ELECTRICAL SERVICE

1.1 The electrical service shall be 400 A, 120/240 V, 1Ø 3W at Desert Springs Park and 400 A, 277/480 V, 3Ø, 4W at 61st Street and Acoma Park to the service entrance equipment as shown on the drawings.

1.2 Provide all necessary material and labor required by the serving utility for delivering power to the service entrance equipment.

2. SERVICE ENTRANCE EQUIPMENT

2.1 Service entrance shall be 12 gauge standardized, modular, formed steel, dead front construction, front-accessible.

2.2 The enclosure shall be factory painted gray enamel over primer and rust inhibitor undercoat.

2.3 The service entrance shall have space and necessary provisions for metering current transformer and testing as required by the power company and P.U.E.S.R. Standards.

2.4 Main and branch feeder over current devices shall be fusible or circuit breaker type and size as noted on the drawings.

2.5 The switchgear assembly shall be braced for short circuit stress as noted on the drawings.

2.6 All distribution equipment shall be of the same manufacturer. Approved manufacturers are: Federal Pacific, General Electric, Square D, Sylvania or Westinghouse.

3. LIGHTING PANELS

3.1 Lighting panels shall be circuit breaker type. Cabinets shall have doors fastened to trim with concealed hinges and be provided with flush type combination latch and lock - three keys for each. All panels shall be keyed alike. Cabinets and trims shall be factory painted two finish coats and be flush or surface mounted as indicated. Each circuit shall be numbered and completely identified by means of a typewritten card placed in directory holder on inside of door. All directory holders shall be six inches wide. Before installing, tighten all bolted connections that may have become loose in shipping.

3.2 Circuit breakers shall be bolted connection type, 10,000 AIC minimum rating. All breakers for 2 and 3 pole circuits shall be common trip.

3.3 All panels containing ground or bonding wires shall be equipped with a ground bus for terminating all such wires.

4. GROUNDING

4.1 The neutral conductors and all other exposed non-current carrying metal parts as required by Code shall be grounded. Grounding bushings shall be used as required and shall be O.Z. insulated Type "BL", or approved equal. No grounding shall be made to gas piping. Where equipment or devices are served by non-metallic ducts, enclosures shall be grounded by means of a code size bare or green insulated equipment ground wire installed in the duct with the current carrying conductors and be bonded securely in each cabinet terminating the ground wire. Copper jumpers shall bridge flexible conduit and be installed with ground wire. All service grounds shall be in accordance with the "UFER" ground.

SECTION 16500

LIGHTING

1. LIGHTING FIXTURES

1.1 Fixtures shall be complete with lamps of proper wattage, in accordance with the drawings. Provide all fittings, hangers, supports, plaster frames, and other necessary appurtenances.

1.2 All fluorescent fixtures shall be UL approved and have protected ballasts, UL Class "P" rated, C.B.M. approved, ETL tested.

2. LIGHTING FIXTURE INSTALLATION

2.1 Fixtures shall be wired complete with color-coded wires to indicate polarity. White fixture wire shall be connected to shell terminals of sockets and connected to neutral wire of lighting system.

2.2 Install and connect lighting fixtures on all outlets in building. Non-designated outlets shall be equipped with fixtures similar to like areas.

2.3 All fixtures shall be tested before and after installation and shall show free of grounds, shorts, etc.

2.4 All fixtures and fixture supports shall be cleaned, painted where necessary and left in first-class operating condition upon completion of the work. This Contractor shall make good all breakage of lamps, glass and fixture bowls or other damage or arrange for replacement with the Engineer. All debris, fixture crates, etc., shall be removed promptly.

2.5 Circuit wires for fluorescent fixtures that run through the raceways of said fixtures shall be type THHN, RHH, or MTW. Minimum size shall be #12.

.29 POWER COMPANY REQUIREMENTS

The Contractor shall perform all the work required by Arizona Public Service Company to bring power into both park sites, in accordance with the project plans and specifications and the power company drawings. Work to be included in this item involves:

61st Street and Acoma Park Site

1. 1,230 feet of 60" deep x 12" wide trench/backfill on Acoma Drive from west property line to 10 feet east of bridge plus 150 feet of 5-inch, Schedule 40 P.V.C. and 6-inch thick by 2-foot wide concrete cap along Acoma Drive, under the bridge.
2. 480 feet of 48" deep x 12" wide trench/backfill in Acoma Drive from west property line to 480 feet west.
3. 605 feet of 48" deep x 12" wide trench/backfill from west property line at Acoma Drive to new service entrance section location.

Desert Springs Park

1. 380 feet of 48" deep x 12" wide trench/backfill, 152 feet west of eastern park property line, from south right-of-way line on Hearn Road, north. Perform pavement replacement on Hearn Road, approximately 5 square yards of Type 'A', T-Top and replace curb and gutter on Hearn Road, as required.
2. 10 feet of 30" deep x 6" wide trench/backfill to transformer from and of mainline trench.

The Contractor shall coordinate with the power company on scheduling of all work affiliated with bringing power in the parks and insure that the power company inspects all work, as required. Power company routing and trenching drawings will be given to the Contractor at the Pre-Construction Meeting.

Payment for work required to bring power into the parks, as described herein, shall be paid for under the Bid items, "ELECTRICAL SYSTEM."

The Contractor shall also make direct payment to Arizona Public Service Company for the cable and three-phase power at 61st Street and Acoma Park. This cost has been included in the bid proposal and the Contractor shall make payment in full prior to A.P.S. laying any cable to the park site. Contact with A.P.S. is Milt Moenich (271-7052).

.30 IRRIGATION COMPUTATIONS (For 61st Street and Acoma Park Site,
Project No. PA-79140.03)

Precipitation Rate:

55' Spacing: 2.25"/Week

Fulls: P.R. = $96.3 \times 15 / 55' \times 47.3$
P.R. = 0.555"/Hr.

Parts: P.R. = 1.11"/Hr. (Twice Full Rate)

Watering Time:

Fulls: $2.25''/0.56/7 = .58$ Hr./Day

Parts: $2.25''/1.11/7 = .29$ Hr./Day

THE WATERING SCHEDULE FOR CONTROLLER 'A' AND 'B' ARE AS FOLLOWS:

(FULL AND PART CIRCLE CIRCUITS ARE SET UP TO ALLOW BOTH CONTROLLERS TO OPERATE SIMULTANEOUSLY.)

Phase I

Watering Time:

'A' Controller Station A/3 - A/16

8 Valves Operating Part Circle Heads
Station #11 - Two Valves @ .29 Hr/Day
Station #12 - Two Valves @ .29 Hr/Day
Station #13 - Two Valves @ .29 Hr/Day
Station #14 - Two Valves @ .29 Hr/Day
1.16 Hr/Day

1 Valve Operating Bubblers
Station #16 - One Valve @ .29 Hr/Day

17 Valves Operating Full Circle Heads
Station #3 - Two Valves @ .58 Hr/Day
Station #4 - Two Valves @ .58 Hr/Day
Station #5 - Two Valves @ .58 Hr/Day
Station #6 - Two Valves @ .58 Hr/Day
Station #7 - Two Valves @ .58 Hr/Day
Station #8 - Two Valves @ .58 Hr/Day
Station #9 - Two Valves @ .58 Hr/Day
Station #10 - Two Valves @ .58 Hr/Day
Station #15 - One Valve @ .58 Hr/Day
5.22 Hr/Day

Total Watering Time for
Controller 'A' 6.67 Hr/Day
OR 2.25"/Week

'B' Controller Station B/3 - B/15

9 Valves Operating Part Circle Heads
Station #11 - Two Valves @ .29 Hr/Day
Station #12 - Two Valves @ .29 Hr/Day
Station #13 - Two Valves @ .29 Hr/Day
Station #14 - Two Valves @ .29 Hr/Day
Station #16 - One Valve @ .29 Hr/Day
1.45 Hr/Day

16 Valves Operating Full Circle Heads
Station #3 - Two Valves @ .58 Hr/Day
Station #4 - Two Valves @ .58 Hr/Day
Station #5 - Two Valves @ .58 Hr/Day
Station #6 - Two Valves @ .58 Hr/Day
Station #7 - Two Valves @ .58 Hr/Day
Station #8 - Two Valves @ .58 Hr/Day
Station #9 - Two Valves @ .58 Hr/Day
Station #10 - One Valve @ .58 Hr/Day
Station #15 - One Valve @ .58 Hr/Day
5.22 Hr/Day

Total Watering Time for
Controller 'B' 6.67 Hr/Day
OR 2.25"/Week

Future Water Time:

'A' Controller Station A/1 - A/16

12 Valves Operating Part Circle Head
Station #10 - Two Valves @ .29 Hr/Day
Station #11 - Two Valves @ .29 Hr/Day
Station #12 - Two Valves @ .29 Hr/Day
Station #13 - Two Valves @ .29 Hr/Day
Station #13 - Two Valves @ .29 Hr/Day
Station #14 - Two Valves @ .29 Hr/Day
Station #15 - Two Valves @ .29 Hr/Day
1.86 Hr/Day

1 Valve Operating Bubblers Program (B)

Station #16 - One Valve @ .29 Hr/Day

18 Valves Operating Full Circle Heads

Future Station #1 - Two Valves @ .58 Hr/Day
Future Station #2 - Two Valves @ .58 Hr/Day
Station #3 - Two Valves @ .58 Hr/Day
Station #4 - Two Valves @ .58 Hr/Day
Station #5 - Two Valves @ .58 Hr/Day
Station #6 - Two Valves @ .58 Hr/Day
Station #7 - Two Valves @ .58 Hr/Day
Station #8 - Two Valves @ .58 Hr/Day
Station #9 - Two Valves @ .58 Hr/Day
5.22 Hr/Day

Total Watering Time For
Controller 'A'

7.37 Hr/Day
OR 2.25"/Week

'B' Controller Station B/1 - B/15

10 Valves Operating Prt Circle Heads
Station #10 - One Valve @ .29 Hr/Day
Station #11 - Two Valves @ .29 Hr/Day
Station #12 - Two Valves @ .29 Hr/Day
Station #13 - Two Valves @ .29 Hr/Day
Station #14 - Two Valves @ .29 Hr/Day
Station #15 - One Valve @ .41 Hr/Day
1.86 Hr/Day

18 Valves Operating Full Circle Heads

Future Station #1 - Two Valves @ .58 Hr/Day
Future Station #2 - Two Valves @ .58 Hr/Day
Station #3 - Two Valves @ .58 Hr/Day
Station #4 - Two Valves @ .58 Hr/Day
Station #5 - Two Valves @ .58 Hr/Day
Station #6 - Two Valves @ .58 Hr/Day
Station #7 - Two Valves @ .58 Hr/Day
Station #8 - Two Valves @ .58 Hr/Day
Station #9 - Two Valves @ .58 Hr/Day
5.22 Hr/Day

Total Watering Time For
Controller 'B'

7.08 Hr/Day
OR 2.25"/Week

PA-79140.03 HCRS
ST-79122.00
Project No. PA-79140.00 HCRS
ST-79123.00

BOND ISSUE OR BUDGET PROJECT
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

PROPOSAL to the City Engineer of the City of Phoenix.

In compliance with the Advertisement for Bids, by the City Engineer, the under-
signed 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 Uniform Standard Specifications and Standard Details except as
otherwise required by the Project Plans and Special Provisions.

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 5 percent of the amount bid.

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

Work shall be completed within 180 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 neces-
sary materials and/or equipment.

The Bidder hereby acknowledges receipt of and agrees his proposal is based
on the following Addenda.

BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT		
			UNIT PRICE	AMOUNT
<u>61st Street and Acoma Park</u>				
<u>PROJECT NO. PA-79140.03 HCRS</u>				
1.	50% of Cost for Total Sprinkler System Installation (Includes Trenching, Wiring, Valves, Heads, Backflow Prevention Units, Cabinets, Controllers, Pipe and Any Other Related Work)	1 Job		
2.	Seeding and Fertilizing Entire Park (Approximately 21.9 Acres)	1 Job		
3.	Electrical System (Includes all Trenching, Backfilling, Conduit, Wire, Service Entrance Equipment, Concrete Foundation for SES, Power Company Requirements and Any Other Related Work)	1 Job		
4.	4-inch Water Tap and Turbine Meter (By City of Phoenix)	1 Ea.	5,325.00	5,325.00
5.	Direct Payment to A.P.S. for Cable and 3-Phase Power	1 Job	L.S.	8,129.00
TOTAL AMOUNT OF BID, ITEMS 1 - 5, INCLUSIVE			\$	
			&	/100 Dollars
<u>Written Words</u>				
<u>PROJECT NO. ST-79122.00</u>				
6.	Clear and Grub Site (Approximately 22 Acres)	1 Job		
7.	Earthwork (Includes Approximately: 56,440 C.Y. Total Cut From Site 34,100 C.Y. Total Fill on Site (Compacted) 13,000 C.Y. Excess Fill Haul Off to Desert Springs Park, 1/2 mile, one way; 9,340 C.Y. Excess Fill Haul-Off to Sumida Park Site, 10 miles, one way)	1 Job		
8.	Concrete Walk, Low Flow Channel and Combination Walk/Channel	11,094 S.F.		
9.	30-inch R.C.P.	250 L.F.		

BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT		
			UNIT PRICE	AMOUNT
11.	Grasscrete	1,068 S.Y.		
12.	Drywell (Injection Well)	3 Ea.		
13.	50% of Cost for Total Sprinkler System (Includes Trenching, Wiring, Valves, Heads, Backflow Prevention Units, Cabinets, Con- trollers, Pipe and Any Other Related Work)	1 Job		
TOTAL AMOUNT OF BID, ITEMS <u>6</u> THROUGH <u>13</u>		INCLUSIVE	\$	
Written Words			& /100 Dollars	
<u>Desert Springs Park</u> <u>PROJECT NO. PA-79140.00 HCRS</u>				
14.	50% of Cost for Total Sprinkler System Installation (Includes Trenching, Wiring, Valves, Heads, Backflow Prevention Units, Cabinets, Controllers, Pipe and Any Other Related Work)	1 Job		
15.	Seeding and Fertilizing Entire Park (Approxi- mately 17.3 Acres)	1 Job		
16.	Electrical System (Includes All Trenching, Backfilling, Conduit, Wire, Service Entrance Equipment, Concrete Foundation for SES, Power Company Requirements and Any Other Related Work)	1 Job		
17.	Two Lighted Tennis Courts (Includes Courts, Base Course, Light Poles, Fixtures and Wire, Trenching and Backfilling for Electrical Connection to SES)	1 Job		
18.	2-inch Water Tap and Meter (by City of Phoenix)	4 Ea.	1,000.00	4,000.00
TOTAL AMOUNT OF BID, ITEMS <u>14</u> THROUGH <u>18</u>		INCLUSIVE	\$	
Written Words			& /100 Dollars	

BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT		
			UNIT PRICE	AMOUNT
<u>PROJECT NO. ST-79123.00</u>				
19.	Clear and Grub Site (Approximately 19.5 Acres)	1 Job		
20.	Earthwork (Includes Approximately: 39,000 C.Y. Total Cut From Site 50,100 C.Y. Total Fill on Site (Compacted) 13,000 C.Y. Excess Fill Delivered from 61st Street and Acoma Park, to be Spread)	1 Job		
21.	Concrete Low Flow Channel/Sidewalk Combina- tion	4,075 S.F.		
22.	12-inch R.C.P.	113 L.F.		
23.	Catch Basin (Standard Detail 535 "F")	1 Ea.		
24.	Cut-Off Wall (6" x 18" x 55' Long)	1 Job		
25.	Grasscrete	405 S.Y.		
26.	2-inch Asphalt Concrete/4-inch A.B.C.	81 S.Y.		
27.	Drywell (Injection Well)	2 Ea.		
28.	Retaining Wall	120 L.F.		
29.	<u>50% of Cost</u> for Total Sprinkler System In- stallation (Includes Trenching, Wiring, Valves, Heads, Backflow Prevention Units, Cabinets, Controllers, Pipe and Any Other Related Work)	1 Job		
TOTAL AMOUNT OF BID, ITEMS 19 - 29, INCLUSIVE			\$	
Written Words			& /100	Dollars
TOTAL AMOUNT OF BID, ITEMS 1 - 29, INCLUSIVE			\$	
Written Words			& /100	Dollars

BID SCHEDULE

PAY ITEM NO.	DESCRIPTION	APPROX. QUANTITY & UNIT		
			UNIT PRICE	AMOUNT
	<p><u>ADDITIVE ALTERNATE #1 *</u></p> <p>For All Labor, Equipment and Material for the Planting of 15 Gallon Trees at the Two Sites</p> <p>*Note: Pending the availability of funds, less than 770 trees may be able to be planted. The City reserves the right to decrease the number of trees, to a minimum of 100, and establish the cost predicated on the unit cost per tree, herein affixed by the Contractor.</p>	<p>770</p> <p>Ea.</p>		
	<p>61 & Acoma 79122</p>		\$220,628	
	<p>65 & Hearn 79123</p>		\$122,670 ⁵⁰	
			343,298 ⁵⁰	
	<p>inspection 6%</p>		20,597 ⁹¹	
			363,896 ⁴¹	

THIS PROPOSAL IS SUBMITTED BY _____,

a corporation organized under the laws of the State of _____, a partnership con-
sisting of _____

or individual trading as _____

of the City of _____

Respectfully submitted,

FIRM _____

ADDRESS _____

BY _____

Officer and Title

Date

ATTEST:

Officer and Title

Witness: If Bidder is an
Individual

Project No. _____

SURETY BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____,
_____, as Principal, (hereinafter called the Principal),
and the _____, a corporation duly organized under the
laws of the State of _____, as Surety, (hereinafter called the Surety),
are held and firmly bound unto the City of Phoenix as Obligee, in the sum of five percent (5%) 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 Specifica-
tions 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 In-
surance, if the Principal shall pay to the City of Phoenix the sum of money set forth above as
liquidated damages for failure of the Principal to enter into the contract, 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

WITNESS:

SURETY

TITLE

WITNESS:
